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DAVID Y. IGE
GOVERNOR

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EXECUTIVE DIRECTOR

STATE OF HAWAII
DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT AND TOURISM
HAWAII HOUSING FINANCE AND DEVELOPMENT CORPORATION
677 QUEEN STREET, SUITE 300
Honolulu, Hawaii 96813
FAX: (808) 587-0600

IN REPLY REFER TO:

20:PECB/79

October 29, 2020

Ms. Kathleen Ho, Director
Office of Environmental Quality Control
Department of Health, State of Hawai'i
235 S. Beretania Street, Room 702
Honolulu, Hawai'i 96813

Dear Ms. Ho:

Subject: Publication of the Final Environmental Assessment (FEA-FONSI) for the Proposed Hale Makana O Mo'ili'ili, Honolulu, Oahu, TMK No. (1) 2-7-007:016 and 051

With this letter, the Hawaii Housing Finance and Development Corporation (HHFDC) hereby transmits the Final Environmental Assessment and Finding of No Significant Impact (FEA-FONSI) for the proposed Hale Makana O Mo'ili'ili situated at TMK No. (1) 2-7-007:016 and 051, in the Honolulu District on the island of Oahu for publication in next available edition of The Environmental Notice.

HHFDC has included copies of public comments and the corresponding responses from the applicant that were received during the 30-day public comment period on the Draft Environmental Assessment.

Enclosed is a completed OEQC Publication Form, one hard copy of the FEA-FONSI, an Adobe Acrobat PDF file of the same, and an electronic copy of the publication form in MS Word. Simultaneous with this letter, we have submitted the summary of the action in a text file by electronic mail to your office.

If there are any questions, please contact Janice Takahashi, Chief Planner, at (808) 587-0639.

Sincerely,

Francis Paul Keeno

for Denise Iseri-Matsubara
Executive Director

Enclosures

c: Kali Watson, Hawaiian Community Development Board

21-078

From: webmaster@hawaii.gov
To: HI Office of Environmental Quality Control
Subject: New online submission for The Environmental Notice
Date: Friday, October 30, 2020 12:12:54 PM

Action Name

Hale Makana O Moʻiliʻili

Type of Document/Determination

Final environmental assessment and finding of no significant impact (FEA-FONSI)

HRS §343-5(a) Trigger(s)

- (1) Propose the use of state or county lands or the use of state or county funds

Judicial district

Honolulu, Oʻahu

Tax Map Key(s) (TMK(s))

(1) 2-07-07:016 & 051

Action type

Applicant

Other required permits and approvals

Building Grading & Grubbing 201H Street Usage Sewer Usage Water Connection Water Quality ALR Acceptance Accessibility Plan

Discretionary consent required

N/A

Approving agency

Hawaiian Housing Finance Development Corporation

Agency contact name

Janice Takahasi

Agency contact email (for info about the action)

janice.n.takahashi@hawaii.gov

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Map It

Applicant

Hawaiian Community Development Board

Applicant contact name

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Was this submittal prepared by a consultant?

Yes

Consultant

Environmental Planning & Assessments

Consultant contact name

Patti Barbee

Consultant contact email

pattibarbee@gmail.com

Consultant contact phone

(808) 358-3633

Consultant address

P.O Nox 6082
Kaneohe, Hawaii 96744
United States
Map It

Action summary

This project will involve the demolition of an outdated (circa 1928) low-density apartment complex and a small single-family home with a total of 27 rental units and transformation of the site into a modern kupuna 105-unit mid-rise rental housing project with covered parking stalls and an onsite Community Resource Center. The project will provide 80 studio units and 25 one-bedroom units at rental rates affordable to households earning 30%-60% AMI, in a location that offers convenient access to a wide range of retail businesses, health and social services, public facilities, and community resources. The project will remain affordable for 61 years. All of the planning for the project has focused on the objective of developing safe, secure, long-term rental housing for low-income seniors that provides a positive, supportive living environment and enables them to maintain independence in their “golden years”.

Reasons supporting determination

6.1.1 Irrevocable Loss
During operation, there would be no irrevocable commitment, loss or destruction of identified natural or cultural resources. There would be no significant cumulative adverse impact on natural and cultural resources.

6.1.2 Curtails Beneficial Uses
The proposed action does not curtail the range of beneficial uses of the environment in the short or long term. The project site is within the Urban boundary on the State Land Use District Boundary Map, and the proposed action is consistent with land use designated as Urban. The development will provide much-needed affordable rental units for very low and extremely low-income families and individuals.

6.1.3 Conflicts with State's Long-Term Goals
The proposed action does not conflict with the long-term environmental policies, goals, and guidelines of the State of Hawaii. The project's potential adverse impacts are associated only with short-term construction-related activities and can be mitigated through adherence to standard construction mitigation practices.

6.1.4 Welfare of Community or State
The proposed action has short-term beneficial impacts on socio economics during construction related to employment opportunities and the purchase of materials. The proposed project would also positively impact the social welfare of the community by providing additional affordable housing, which is in high demand.

6.1.5 Public Health
The construction and development of the project may pose temporary impacts to noise and air quality levels. Potential impacts will be short-term and are not expected to affect public health significantly. Construction and operation will be in compliance with all federal, state, and county regulations and appropriate mitigation measures will be implemented. The proposed land use is compatible with the surrounding residential community.

6.1.6 Effects on Public Facilities
The proposed action will result in 104 new affordable rental units for very low and extremely low-income kupuna. The proposed unit mix is 80 studios and 25 1-bedroom apartments. HUD regulations limit the number of people who can occupy a space based on a number of factors, including the gender and age of the residents, but they generally follow a two-person per bedroom rule. Based on the unit mix and HUD regulations, the maximum occupancy of the project is 210 people, provided every house was comprised of the correct demographics to allow maximum use. HD estimates a more accurate rate of occupancy for the project, accounting for normal household composition, size, and a vacancy rate of 5%, to be 200 people. HD anticipates that many residents of the proposed project will be from the greater urban Honolulu area.
Letters from the City and County of Honolulu Board of Water Supply indicates sufficient capacity in the existing water systems to accommodate the project (Appendix E). The project has also secured an approved Sewer Connection Application from the Department of Planning and Permitting indicating there is sufficient wastewater capacity (Appendix P). Additionally, the Department of Parks and Recreation concludes the "proposed project will have no impact on any of program or facility of the Department." (Appendix E).

6.1.7 Degradation of Environmental Quality
Construction activities associated with the proposed project are anticipated to result in relatively insignificant, short-term impacts to noise, air quality, and traffic in the immediate project area. Appropriate mitigation measures will be implemented during the construction period, and the project will not degrade environmental quality.

6.1.8 Cumulative Effect or Larger Actions
The proposed project will not result in considerable cumulative effects upon the environment or involve a commitment for larger actions. The proposed rental project will not generate future developments on this site or in the surrounding area that would create a cumulative impact.

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

6.1.10 Air or Water Quality and Ambient Noise
Operation of construction equipment will temporarily elevate ambient noise and concentrations of exhaust emission in the immediate vicinity of the project site. Appropriate mitigation efforts will occur, including notifying the community of anticipated activities as necessary.
While the site is designed to have minimum ground disturbed areas,dust control measures appropriate to the situation will be employed by the contractor, including spraying water up to three times a day in disturbed areas and erecting perimeter barriers. The State DOH administers rules and regulations relating to hours during which construction is permitted and the noise levels permitted during those hours. The contractor will be required to abide by the nose regulations.
Long-term noise impact from the proposed development are expected to be minimal and the minimal increase in traffic projected. The proposed development will not have an adverse impact on aquifers or water resources. Operation of the proposed project will have no significant impact on air or water quality or ambient noise levels in the vicinity.

6.1.11 Damage from Environmentally Sensitive Location
Based on the Flood Insurance Rate Maps published by the Federal Emergency Management Agency, the subject property is located in flood hazard Zone X. Zone X is an area determined to be outside 500-year floodplain and is outside the 1% and 0.2% annual chance floodplains as shown in Appendix D.

6.1.12 Scenic Vistas and Viewplanes
This proposed action does not affect any scenic vista or view planes identified in county or state plans or studies.

6.1.13 Energy Consumption
he proposed action does not require a substantial energy consumption during any phase of the project. To further decrease the energy consumed by the project, Photovoltaic is being installed as alternative energy sources for the project. The project will pursue LEED Silver certification.

Attached documents (signed agency letter & EA/EIS)

- Hale-Makana-O-Moiliili_OEQC-Transmittal-FEA-FONSI.pdf

Shapefile

- The location map for this Final EA is the same as the location map for the associated Draft EA.

Action location map

- AnyConv.com__Moiliili-map.zip

Authorized individual

Patti Barbee

Authorization

- The above named authorized individual hereby certifies that he/she has the authority to make this submission.

HALE MAKANA O MO'ILI'ILI

FINAL ~~DRAFT~~ ENVIRONMENTAL ASSESSMENT

TMK: 2-07-07:16 & 2-07-07:51
Honolulu, Hawaii, 96826

Applicant:
Ho'okahua Mo'ili'ili, LP
1188 Bishop Street Suite 907
Honolulu, Hawaii 96813

Accepting Authority:
Hawaii Finance Development Corporation
677 Queen Street
Honolulu, Hawaii 96813

Prepared by: Environmental Planning & Assessments
Kaneohe, HI 96744

October ~~August~~ 2020

DRAFT ENVIRONMENTAL ASSESSMENT

HALE MAKANA O MO'ILI'ILI

Mo'ili'ili, Oahu, Hawaii

Prepared For:
Ho'okahua Mo'ili'ili, LP
1188 Bishop Street, Suite 907
Honolulu, HI 96813

Prepared By:
Environmental Planning & Assessments
P.O. Box 6082
Honolulu, HI 96744

October ~~August~~ 2020

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List of Acronyms

ALR	Archaeological Literary Review
AMI	Area Median Income (as Defined by HUD)
AMP	Archaeological Monitoring Plan
BMPs	Best Management Practices
BWS	City and County of Honolulu Board of Water Supply
CFS	Cubic Feet Per Second
CPR	Condominium Property Regime
DBEDT	Department of Business and Economic Development
DHHL	Department of Hawaiian Home Lands
DOH	Department of Health
DPP	City and County of Honolulu Dept. of Planning and Permitting
DPP	Department of Planning and Permitting
DTS	Department of Transportation Services
EA	Environmental Assessment
ERA	Environmental Risk Analysis
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
FWS	U.S. Dept. of the Interior Fish and Wildlife Service
HACCP	Hazard Analysis and Critical Control Point Plan
HAR	Hawaii Administrative Rules
HCDA	Hawaiʻi Community Development Authority
HCDB	Hawaiian Community Development Board
HDOH	Hawai'i Department of Health
HECO	Hawaiian Electric Company
HFD	Honolulu Fire Department
HHFDC	Hawaii Housing Finance & Development Corporation
HMoM	Hale Makana o Mo'ili'ili
HM	Ho'okahua Mo'ili'ili, LP
HPD	Honolulu Police Department
HRHP	Hawaii Register of Historic Places
HRS	Hawaii Revised Statutes

HUD	U.S. Department of Housing and Urban Development
HD	Ho'okahua Development, LLC
LCA	Land Commission Awards
LEED	Leadership in Energy and Environmental Design
LIHTC	Low Income Housing Tax Credits
LLC	Limited Liability Company
LUO	Land Use Ordinance
LUST	Leaking Underground Storage Tank
MSL	Mean Sea Level
NAGPRA	National American Graves Protection and Repatriation Act
NASBP	Naval Air Station Barber's Point
NFA	No Further Action
NOAA	National Oceanic and Atmospheric Administration
NRHP	National Register of Historic Places
PCSI	Pacific Consulting Services, Inc.
PPA	Power Purchase Agreement
PV	Photovoltaic
RECs	Recognized Environmental Conditions
RHRF	HHFDC's Rental Housing Revolving Fund
ROW	Right-Of-Way
SHPD	State Historic Preservation Division
SHWS	State Hazardous Waste Sites List
SLR	Sea Level Rise
TMK	Tax Map Key
UST	Underground Storage Tank

Section 1: Executive Summary

Project Name:	Hale Makana O Mo'ili'ili (HMoM)
Proposed Action:	105-Unit Affordable Rental Housing Project Serving Low-Income seniors at 30%, 50% and 60% AMI
Location:	Mo'ili'ili, Honolulu, Oahu, Hawaii
Tax Map Key:	2-07-07:16 & 2-07-07:51
Project Area:	17,743 sq. ft.
Developer / Applicant:	Kali Watson, Executive Director Hawaiian Community Development Board, General Partner Member, Ho'okahua Mo'ili'ili, LP (HM) 1188 Bishop Street, Suite 907 Honolulu, HI 96813
Approving Agency:	Hawaii Housing Finance & Development Corporation (HHFDC) 677 Queen Street, Suite 300 Honolulu, HI 96813
Preparer:	Environmental Planning & Assessments P.O. Box 6082 Kaneohe, HI 96744
Contact:	Patti Barbee (808) 464-7084
Recorded Fee Owner:	HM has an Executed Option to Purchase Agreement with University Park Apartments HI, LP 220 S. King Street, Suite 1800 Honolulu, HI 96813
State Land Use:	Urban
County Zoning:	Apartment (A-2)
Flood Zone:	Zone X
Special Designations:	None
Chapter 343 Action:	Use of State Funds—Rental Housing Revolving Fund administered by HHFDC, State of Hawaii 201H Application
Anticipated Determination:	Finding of No Significant Impact (FONSI)

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Section 2: Project Description

2.1 Purpose & Introduction

The use of low-income housing tax credits required a special purpose entity, Ho'okahua Mo'ili'ili, LP (HM), to take ownership of the property. This entity is also the applicant of this Draft Environmental Assessment (DEA). The developer, Ho'okahua Development LLC (HD), is a team comprised of experienced community development and affordable housing professionals and will employ "smart growth" land use principles to develop the Hale Makana O Mo'ili'ili affordable rental housing project serving kupuna (seniors aged 55) and above in the urban community of Mo'ili'ili, Oahu. HD is proposing Hale Makana O Mo'ili'ili (HMoM), a 105-unit affordable kupuna rental housing development on a 17,743 square foot parcel in the community of Mo'ili'ili, in the Kona ahupuaʻa, in the district of Waikiki on the island of Oʻahu. (Figs 1-2).

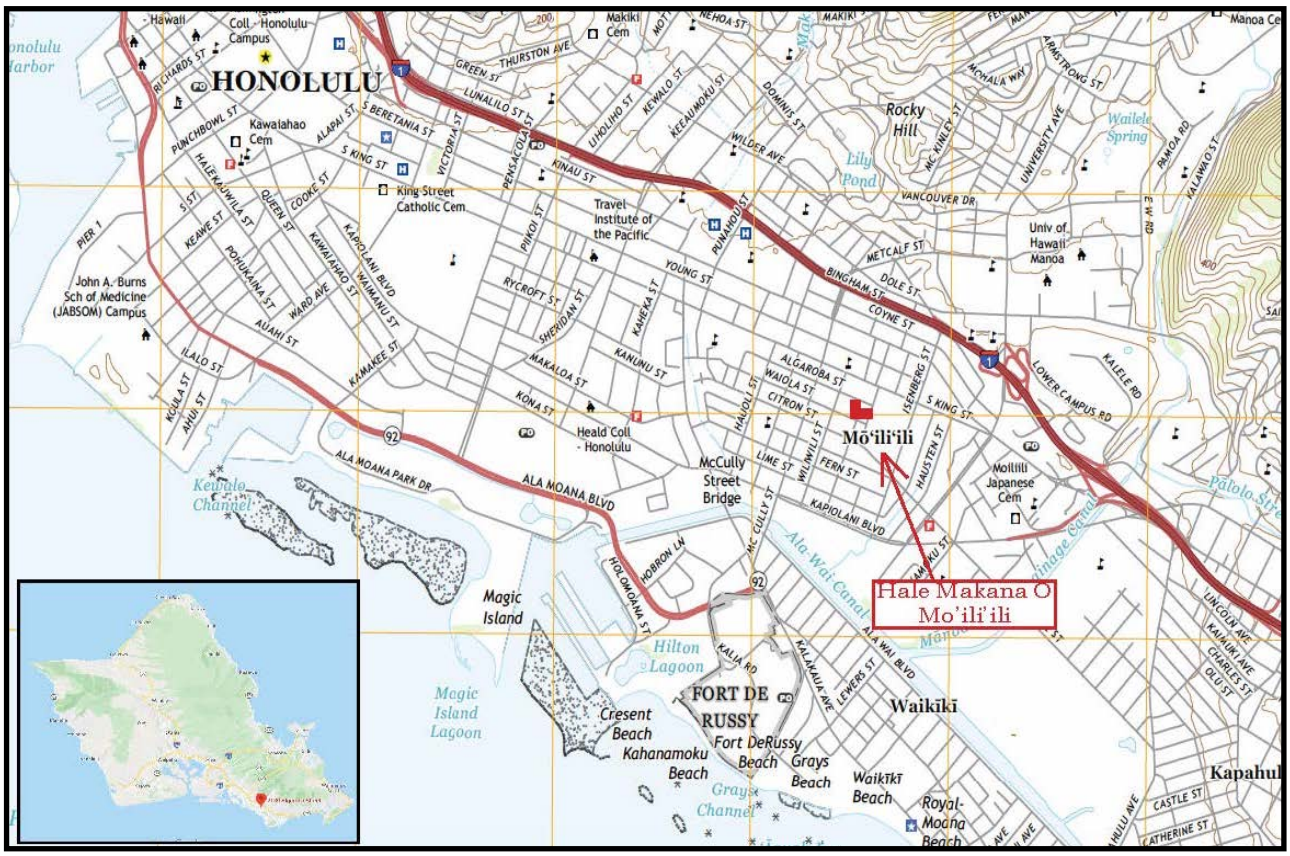

Figure 1: Site Location on 2017 USGS Topo Map, with Oahu Inset.

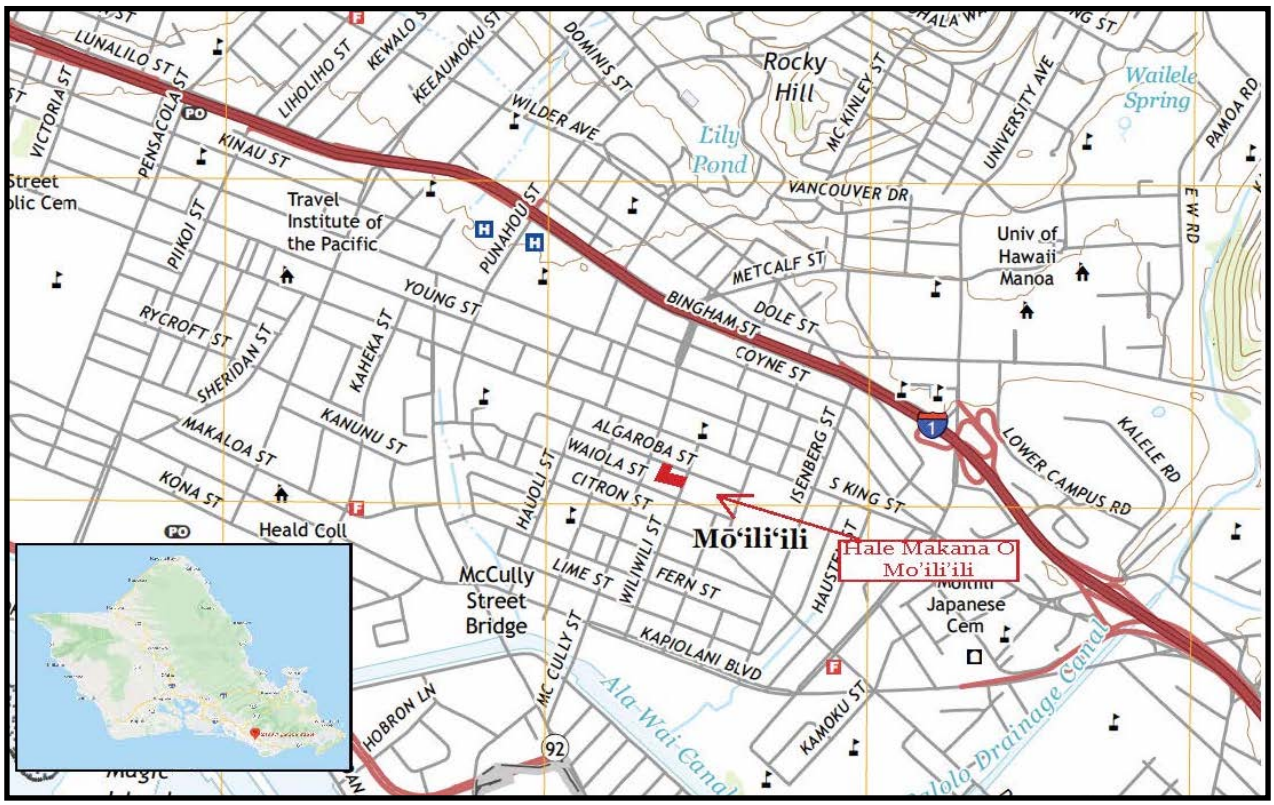

Figure 2: Site Location on 2017 USGS Topo Map, Focused on Mo'ili'ili.

This project will involve the demolition of an outdated (circa 1928) low-density apartment complex and a small single-family home with a total of 27 rental units and transformation of the site into a modern 105-unit mid-rise rental housing project serving seniors aged 55 and above with covered parking stalls and an onsite Community Resource Center. The project will provide 80 studio units and 25 one-bedroom units at rental rates affordable to households earning 30%- 60% AMI, in a location that offers convenient access to a wide range of retail businesses, health and social services, public facilities and community resources. The project will remain affordable for 61 years. All of the planning for the project has focused on the objective of developing safe, secure, long-term rental housing for low-income seniors that provides a positive, supportive living environment and enables them to maintain independence in their “golden years”. Site plans included as Appendix A.

When the project is completed and occupied, in addition to providing safe, suitable long-term rental housing for low-income seniors, management will work closely with residents to organize and coordinate various on-site programs and activities aimed at addressing common needs and interests such as health and social services assistance, recreational

activities, cultural education opportunities and social gatherings. Management will also encourage and facilitate outreach activities provided by local service agencies and charitable organizations that offer specialized assistance for seniors residing at the project such as meal services, home health care, legal services and life management.

This draft environmental assessment is prepared in compliance with Chapter 343, HRS, and in accordance with the provisions of the Hawaii Administrative Rules (HAR), Title 11, Department of Health, Chapter 200, Environmental Impact Statement Rules. It is intended to address all current and future actions requiring environmental review as a result of the HMoM project.

2.2 Ho'okahua Mo'ili'ili, LP (HM) & Ho'okahua Development, LLC (HD)

Hale Makana O Mo'ili'ili will be developed by Ho'okahua Development, LLC (HD), a limited liability company that combines the strength and solid experience of Hawaiian Community Development Board (HCDB) and 3 Leaf Holdings, Inc. (3 Leaf). These partners have developed a combined total of over 550 affordable housing units in Hawaii and each partner brings years of experience and specialized expertise in the planning, development and management of affordable housing projects targeting low-income households. HCDB has been actively engaged in community development initiatives focused on the Waianae Coast communities for over 10 years and taken the lead role in successfully completing several major projects including the Kahikolu Homeless Resource Center, Kauhalepono Home Replacement Project (Nanakuli, Kula), Kewalo Apartments (rehab), Halawa View Apartments (rehab) and the 48 unit Hale Makana O Nanakuli affordable rental housing project.

Together, the partners of HD have successfully utilized a combination of Low Income Housing Tax Credits (LIHTC), Rental Housing Revolving Funds (RHRF), and other sources to begin construction on a low-income housing project on Oahu. The HD partners are currently working on two other low-income rental projects at this time. Headquartered in Honolulu, HCDB serves as its managing partner. Additional information about the partners of HD is included in Appendix B.

HD is not only the developer of this affordable rental housing project, but also a general partner in the limited partnership, Ho'okahua Mo'ili'ili, LP which is the owner of this project and applicant of this DEA. This single purpose limited partnership was formed to serve as the project owner with a low-income housing tax credit investor. Ho'okahua Development, LLC will be developing the affordable housing on this property for Ho'okahua Mo'ili'ili, LP.

2.3 Hale Makana O Mo'ili'ili (HMoM) Location & Access

The proposed HMoM development lies within U.S. Census Tract 24.02 in Honolulu, Hawaii. The project site is bounded by Algaroba Street to the east, Makahiki Way to the south, and residential uses to the north and west and is further identified as Tax Map Keys (TMKs): 2-7-007:016 and 051. The total square footage of the property is 17,743 square feet and roughly 0.41 acres. The existing site is comprised of 2 parcels that include a low-density apartment complex and a small single-family home with a total of 27 rental units. The proposed project entails the replacement of the existing uses with a new multi-story senior housing development to accommodate 105 affordable dwelling units. There will be a total of 31 parking stalls with 1 loading stall provided on-site with access to be provided via a new driveway off Makahiki Way. Figure 3 shows the project location in relation to the neighborhood of Mo'ili'ili on a regional map. Property Information from the City and County of Honolulu is included as Appendix C.

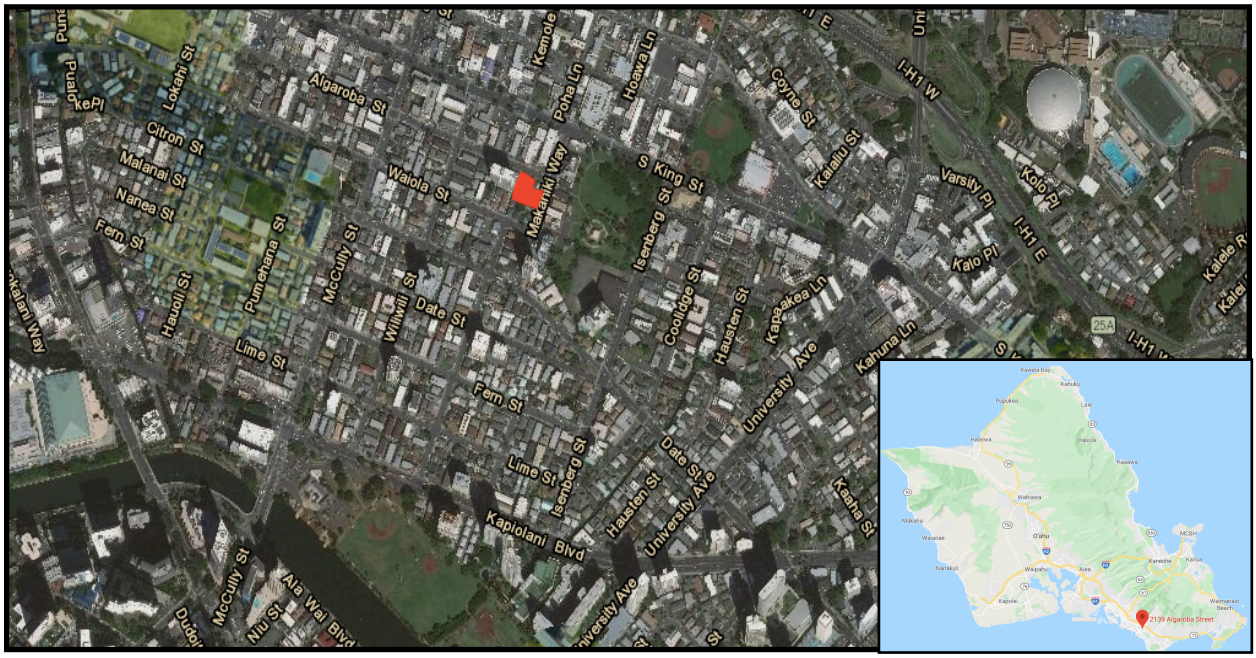

Figure 3: Project Location on a Regional Map

2.4 Physical & Environmental Characteristics of the Project

The project area is designated as urban, zoned A-2 Apartments, and located outside the 500-year floodplain in Zone X (Appendix D). The project site has a Flood Insurance Rate Map (FIRM) Number 15003C0366G (1/19/2011) and insurance is available, but not required. The project site has access to all utilities, including water, sewer, electricity, cable, and telephone. All utilities except water and sewer are above ground and overhead. The building height limit is 150 ft.

The immediate community area is already well integrated, in terms of income levels and the mix of residential and commercial properties. The project site is next to a large high-rise condominium complex with mid-range market sales prices and rents and there are several small (2-3 story) apartment buildings and duplexes in the immediate vicinity, most of which are dated and in various stages of deterioration. They primarily house low-moderate income individuals and families working in the area. There are also several small office buildings, service businesses and retail shops scattered throughout the neighborhood. (Fig. 4). The proposed project will result in a positive improvement for a community in bad need of

rejuvenation, since it will replace an unsightly, outdated 27-unit apartment complex with an attractive new mid-rise affordable housing project offering 105 modern rental housing units. The development will consist of a seven-story building that sits above the parking area and a community resource center. It will have accessible roof space for the residents to enjoy fresh air and the views and a perimeter fence to make them feel safe and secure. The total developed area will be 53,126 sq. ft. The complete site renderings are included in Appendix A.

Figure 4: Site Location and Surrounding Area for Hale Makana O Mo'ili'ili

2.4.1 Unit Mix & Configuration

Hale Makana O Mo'ili'ili will include 80 studio/1 bath units and 25 one-bedroom/1 bath

units, all of which will have walk-in closets, a fully equipped kitchen with modern energy efficient appliances, granite countertops and ceiling fans. All fixtures (plumbing, electrical)

will meet Energy Star standards. These energy efficient features designed into living units will promote energy conservation and minimize the monthly utility costs paid by the low-income residents. Each unit was designed to provide a comfortable living environment with efficient use of space in each of the unit's interiors. There are ~~four~~ two different layouts for the project's one-bedroom units and another two layouts for the studio units. The various configurations are shown in Figure 5.

Figure 5: Studio and One-Bedroom Unit Configurations Updated

Because "home" is the foundation that empowers people to build better lives for themselves, the project is designed to provide residents with a safe, secure and aesthetically-appealing place to live. By elevating the standard of living for the vulnerable populations this project serves, "home" becomes a source of pride in themselves and where they come from, and fosters a positive sense of community critical to cultural life in Hawaii. Table 1 identifies the project's unit mix.

Table 1: Unit Mix

Level	Studio	One-Bedroom	Total Units
Level 2	~~12~~ 16	5	~~17~~ 21
Level 3	~~14~~ 16	~~4~~ 5	~~18~~ 21
Level 4	~~13~~ 16	~~4~~ 5	~~17~~ 21
Level 5	~~14~~ 16	~~4~~ 5	~~18~~ 21
Level 6	~~14~~ 16	~~4~~ 5	~~18~~ 21
~~Level 7~~	~~13~~	~~4~~	~~17~~

Total	80	25	105

2.4.2 ADA Requirement

The project will comply with the Department of Justice's 2010 ADA Standards for Accessible Design, the 2004 Americans with Disabilities Act Accessible Guidelines, Disability and Communication Access Board (DCAB) interpretive opinions, and the Federal Fair Housing Act Accessibility Guidelines. The units designed with mobility features and communication features will be dispersed throughout the unit types, as required. Table 2 identifies the federal requirements.

Table 2: ADA Required Accessible Units Calculation

Federal Assisted Housing Requirements	**Units Required**
Hearing or Visual Disability: 2% of 105 units	3
Mobility Disability: 5% of 105 units	6
Total Disability Units	9

Source: Lester Ng, Architects Hawaii, Ltd.

2.4.3 Resource Center, Parking & Other Services

The project includes a ~~2,594~~ 1,579 sq. ft. Resource Center, which will provide residents with a variety of useful spaces, including a pantry, a computer center, a multi-purpose room and laundry facilities. Additionally, the center will include a reception and lounge, ~~two~~ one offices, and a restroom. ~~A minimum of 972 sq. ft. of accessible roof space above the building will be dedicated to a courtyard / park and community garden for the residents to enjoy.~~ A 500 sq. ft. Lounge on the ground floor with natural light and ventilation as well as access to an outdoor garden is available for the residents to enjoy.

To increase the use of renewable energy resources and reduce the overall cost of electricity to the project, the development will include the installation of a solar photovoltaic and solar water heating system. Increased wall and roof insulations minimize overall building heat gain. The pitched roof design provides attic space to further insulate the building residential units. Efficient fixtures will be installed and water efficient practices will

be implemented throughout the development to reduce the included demand on the area's freshwater resources.

Parking for the residents will be on the first level underneath the apartment building. The parking area includes 31 parking stalls, one loading area, ~~16~~ 12 secured bike stalls, and an area for a turnaround. The trash bins for the complex will be located next to the loading stalls and in front of the two elevators behind the resource center.

2.4.4 LEED Silver Certification

HD is focused around the principles of malama ‘aina (environmental stewardship) and effective and efficient resource use. Leadership in Energy and Environmental Design (LEED) is a project rating system that encourages and rewards malama ‘aina in building design and construction. Projects pursuing LEED certification are awarded points towards a certification level by addressing sustainability issues across several areas. Projects can earn one of four ratings: certified, silver, gold or platinum.

In designing and constructing HMoM, HD is committed to pursuing the LEED Silver certification and shall adopt landscape irrigation conservation best management practices endorsed by the Landscape Industry of Council of Hawaii.

2.4.5 Street Design Elements

This project is compliant with County and State Complete Streets policies, pursuant to Act 54, Session Laws of Hawaii 2009, HRS Section 264-20.5 and RPH 12-15. the project incorporates Complete Street principles: safety, Context Sensitive Solutions, accessibility and mobility for all, use and comfort of all users, consistency of design guidelines and standards, energy efficiency, and health and green infrastructure.

In a letter dated January 30, 2020 the City and County of Honolulu, Department of Transportation Services recommended the following design elements which were incorporated into the project (Appendix E):

- Securable on-site bicycle parking for residents
- A pedestrian entrance with adequate visibility to and from sidewalk for safety.

- Eliminated the driveway on Makahiki Way and provided adequate passenger load area for pick-ups and drop offs.

2.5 Social & Economic Characteristics of HMoM

The primary purpose for HMoM is to create affordable rental units for the most difficult-to-serve populations, targeting extremely / very low-income seniors. The U.S. Department of Housing and Urban Development (HUD) establishes thresholds to classify households based on a percentage of AMI (Appendix F). Table 3 provides HUD's 2020 classifications and identifies how it is applied to a two-person household in the county of Honolulu and the estimated rents by AMI for this project.

Table 3: HUD's Income Classifications and 2020 Family of Two Example

Income Classification	% of AMI	Limit for a 2-Person Household	Studio	1-Bedroom
Extremely Low Income	30%	$30,240	$612	$656
Very Low Income	50%	$50,400	$1,021	$1,093
Low Income	60%	$60,480	$1,225	$1,312

Sources: www.huduser.org and https://dbedt.hawaii.gov/hhfdc/files/2020/05/2020-hud-income-rents-and-sales-price-by-counties.pdf

Table 4 outlines the income classification by household size for the three populations targeted by the HMoM affordable housing project.

Table 4: Income Classification by Household Size

Household Size	Low < 60% AMI	Very Low < 50% AMI	Extremely Low < 30% AMI
1	$52,920	$44,100	$26,460
2	60,480	50,400	30,240
3	68,040	56,700	34,020
4	75,540	62,950	37,770
5	81,600	68,000	40,800
6	87,680	73,050	43,830
7	93,720	78,100	46,860

8	99,720	83,100	49,860

Source: https://dbedt.hawaii.gov/hhfdc/files/2020/05/2020-hud-income-rents-and-sales-price-by-counties.pdf

2.5.1 Unit Affordability for Very Low and Extremely Low Income Households

According to the "Affordable Rental Market Study, For Hale Makana O Mo'ili'ili project" produced by Ricky Cassiday in Appendix G:

> Hawaii has one of the lowest percentage ownership housing markets in the nation and is among one of the least affordable. Such can be attributed to the limited supply of land, very high costs of production and very strong housing demand, resulting in low housing production and high prices.
>
> The problem is exacerbated by the fact that housing prices have exceeded household incomes widely. For more than two generations, the gap between what the average person in Honolulu makes, and what they can afford as housing has widened. Today, there a very large shortfall of affordable housing, both for-sale and for rent – there is a lot of unmet demand that is pent-up with nowhere to go.
>
> Given high demand and low supply, there are large numbers of low- to moderate-income households currently who have very few options for housing. Further, this condition has existed for over 25 years, since the implementation of land zoning regulations at the county level (supply constraints) and the dramatic rise in the price of housing, fed by the Japanese visitor and housing demand explosion. These conditions, high prices and low supply, continue on today, with Honolulu being named as the least affordable housing market in the nation by a number of national institutions and studies. (Appendix G, 5).
>
> According to the same study, almost 35% of the County's population makes 60% of AMI and below – and 20% of the County's population are renters. (Appendix G, 18). These statistics illustrate the need for more affordable housing availability in Mo'ili'ili and the County of Honolulu.

Just as HUD uses household size and income to determine whether a person/family is very / extremely low income, HUD has established guidelines about the maximum rent that can be charged based on unit size. This key constraint ensures the units remain in the affordable range for very / extremely low-income families, and is a key challenge for

developers to resolve in order make the project viable. Establishing the right unit mix is critical to the success of any housing project working to serve very and extremely low income people, and the HMoM unit mix reflects HD's focus on a kupuna-oriented project.

2.5.2 Resource Center Uses & Residents Support

The project has planned to include a ~~2,594~~ 1,579 square foot Resource Center in order to provide sufficient and appropriate space to:

- support meeting the unique requirements of operating a project serving very / extremely low income households like periodic income certifications;
- provide residents with access to computers and the internet (which has become critical to effectively accessing other available services and seeking and maintaining employment);
- enable partnerships with other service providers serving very / extremely low income kupuna with supportive services like home health care, meal services, legal services, and life management; and
- foster a sense of community and provide spaces for tenant association meetings, recreational activities, social gatherings, special events, and cultural activities.

HD anticipates offering the following types of resources to support resident needs and interests at HMoM:

- CBASE Program (diploma equivalent) in coordination with Honolulu Community Action Program;
- Computer skills training;
- Pili Ohana (healthy living / healthy choices program);
- Using Coupons & Smart Shopping Class;
- Garden to Table Program;
- Family Resource Kit (documentation organization);
- VITA Site (tax filing preparation assistance);
- Food Bank Delivery to Kupuna and Other Residents;
- Resident Garage Sales;
- Resident Movie Nights;
- RENT Match Program;
- Financial Literacy and Financial Counseling;

- Punawai IDA Program;
- Toys for Tots;
- Parenting Education & Support Group

Management will work closely with the Tenant's Association to identify common tenant needs and interests, network with local providers and coordinate an appropriate range of social services and special activities for tenants. Examples of the types of programs and services that can be offered through the resource center include senior services (examples: nutrition, mental health counseling, health care assistance, meals programs), cultural education opportunities (hula, arts and crafts, music appreciation), computer literacy programs, recreational activities (i.e. Exercise programs, Tai Chi, line dancing bocce ball, shuffleboard, hula etc.) and social functions (birthdays and holiday, celebrations). To ensure a high level of tenant participation in onsite programs and activities, it is important that tenants play a major role in determining the best utilization of the Community Center and the outdoor gathering area based on their actual needs and interests.

2.6 Technical Characteristics of HMoM

This subsection will overview key technical aspects of the project, including the primary sources of funding, development schedule, and permits, approvals or variances required by the project.

2.6.1 Funding Sources

Primary sources of project funding are identified in Table 5.

Table 5: Sources of Project Funding

Source	Type	Status	Amount
Low Income Housing Tax Credit (LIHTC), Federal & State	Tax Equity	Approved	$12,439,220.00
Rental Housing Revolving Fund (RHRF)	Loan	Approved	$13,600,000.00

Source	Type	Status	Amount
Hula Mae Multi-Family Revenue Bond Program (RHRF)	Bond	Approved	$16,500,000 Construction, $5,330,000 Permanent

2.6.2 Development Schedule

Table 6 lists the key steps in the development process, and the anticipated schedule.

Table 6: General Development Schedule

Process	Timeframe
Tax Credit Application Submittal	February 2019
Tax Credit Award	December 2019
Plans to DPP	August 2020
Contractor Procurement	March 2020
Sign Construction Contract	June 2021
DPP Issues Permits	January 2021
Close on Financing/COE	July 2021
Notice to Proceed	July 2021
Construction Start	July 2021
Construction Completion	July 2022
Marketing and Rent UP	June 2022 to August 2022

2.6.3 List of Permits and Approvals

Table 7 identifies the permits and approvals required, along with the approving agency.

Table 7: Permits & Approvals Required

Permit / Approval Required	Approving Agency
Chapter 201H, HRS	City & County of Honolulu, City Council
LIHTC & RHRF, Chapter 343 HRS, GET Exemption	HHFDC
Building, Grading & Grubbing Permits	City & County of Honolulu, Dept of Planning and Permitting

Street Usage & Stockpiling	City and County of Honolulu Dept. of Planning and Permitting
Sewer Connection Permits	City and County of Honolulu Dept. of Planning and Permitting
Water Connection	City and County of Honolulu Board of Water Supply
Water Quality / NPDE Permit	State of Hawaii Dept. of Health
ADA Requirements	Disability and Communication Access
Bus Stops	DTS - Transportation Mobility Division
Mail Delivery	United States Postal Service
Street Usage Permit	Department of Transportation Services
Conditional Permit	City and County of Honolulu Dept. of Planning and Permitting

2.6.4 201H A-2 Exemption to A-3 High-Density Apartment District

Currently, the project site is zoned A-2 Apartment. According to the Land Use Ordinance (LUO), the purpose of an apartment district is to allow for a range of apartment densities and a variety of living environments. The primary use includes multifamily dwellings, such as common wall housing, walkup apartments and high-rise apartments. Uses and activities that complement apartment use are permitted (p. 52). HD is proposing a high-density, multi-family dwelling project consistent with the zoning requirements under Ordinance 19-8 in order to provide affordable housing options serving very and extremely low-income seniors. The HMoM will meet the A-3 zoning requirements, and does not alter the character of Mo'ili'ili as an apartment district. The approval of the City Council will be sought under the 201H process, intended specifically for long-term affordable housing.

Consistent with the 2004 Primary Urban Center Development Plan, the proposed project is makai of the Urban Community Boundary line. HMoM also advances the goals of promoting people-scaled, pedestrian-friendly multifamily housing, reducing the costs of apartment dwellings, improving the feasibility of building on small lots, and expanding the supply of affordable housing (p. ES-3).

2.6.5 201H Parking Reduction Request

The number of required accessible parking stalls will be provided and the project will comply with DCAB's Interpretive Opinion "DCAB 2014-05 Definition of "Parking Facility". The project's design complies with Article 6 in Chapter 21 of the Land-Use Ordinance.

According to the Land Use Ordinance (LUO), one parking stall is required per four dwelling units and one guest parking stall per ten dwelling units in this specific project (p. 106). Based on the LUO, this project requires 38 parking stalls. Under the approval of the 201H, we are requesting a waiver of this parking count and are asking for the approval of having 31 parking stalls. This special needs housing project is for low-income seniors and HD believes the reduction in required parking is justifiable according to the resident's demographics.

Based on HD's experience with other affordable rental housing projects in operation, renters in the very low and extremely low income brackets are often unable to afford to purchase and maintain a vehicle and many of the required parking stalls remain vacant. Another factor we took into consideration is that this is an age-restricted project. Vehicle ownership rates of citizens aging from 55 and above are often lower than their younger counterparts. Seniors are also more willing and likely to use multiple modes of transportation. The surrounding area has plenty of nearby transportation methods for the residents to take advantage of. For these reasons, the project will request, through the 201H process, a reduction of the required minimum number of parking stalls. Table 8 outlines the considerations below.

Table 8: LUO Required Parking Stalls vs Proposed in 201H Application

Unit Size	Number. of Units	LUO Required	Proposed 201H	Variance
Studio	80	20	20	0
1 BR	25	7	~~8~~ 7	~~1~~ 0
Guest		11	3	-8
Loading		1	1	0
Total Stalls		39	~~32~~ 31	~~-7~~ -8

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Section 3: The Affected Environment

3.1 Brief History of the Project Area and Community

The project site sits on a residential block, immediately west of Old Stadium Park. It exists in the ahupuaʻa of Waikiki, in the neighborhood of Mo'ili'ili on the island of Oʻahu. HMoM is in or near the three 'ili of Keauhou, Kapa'akea, and Wahinalo.

The name of the neighborhood, Mo'ili'ili, is deeply rooted in a Hawaiian cultural legend. It was formally called Kamo'ili'ili, which means "the pebble lizard". According to this legend, a mo'o (supernatural lizard) of manoa valley attacked Pele's sister Hi'iaka when she was on her way to Hawai'i Island with her companion Wahineoma'o and a Kaua'i chief named Lohiau. She cut the lizard up into pieces using her bolts of lightning from her skirt. When she slayed the mo'o, the lizard was severed into many little pieces, like pebbles. These pebble-like pieces became a low rising hill, which is where Kuhio Elementary is today.

According to the cultural impact assessment conducted for this project, the McCully-Mo'ili'ili area was historically used for lo'i (irrigated taro field) and rice cultivation (Appendix H, 5). The area was primarily used for agriculture and fish ponds were scattered throughout. A historical map dated in 1883 shows a heiau (temple) and a spring to the northeast of the project area. The heiau stood at the foot of the slope dividing the Manoa and Palolo Valleys, Kamoiliili, and it was closely associated with the upbringing of Chief Kiha-a-Pi'ilani (Appendix H, 8). It is suggested that the spring may have been Kumulae Spring, which was a legendary pool associated with the karst caves of Mo'ili'ili.

There was a long history of productive wetland agriculture and aquaculture in the area prior to the dredging of the Ala Wai Canal (Appendix H, 16). However, the construction of this canal marked the end of the wetlands and the beginning of the Waikiki Land Reclamation Project in 1921. During this time, property owners were required to drain and fill-in their ponds and irrigated fields with the dredged coral from the canal (Appendix H, 23). Development began to take over and streets were taking their form.

The HMoM project site falls within the tract originally known as the Stadium Tract (Appendix H). The story of the Stadium Tract began in 1925 with an American settler named

John Ashman Beaven. Beaven owned a 14-acre parcel in Mo'ili'ili that contained the subject property. This parcel also contained a nearby field that served as a popular venue for sporting events and carnivals, which prompted the development of a stadium with a seating capacity of 23,000. In 1926 Beaven sold a tract of roughly 4 acres, which included the subject property. By 1927, single and multi-family wood dwellings were constructed and occupied in the current project area (Appendix H, 23). About 26 years later, the neighborhood streets were completed and the Honolulu Stadium sat directly to the east of the project site. In 1976 the stadium was taken down and it became Old Stadium Park (Appendix H, 23).

The project area has been utilized for urban, residential development since then. The project site has been utilized in its present manner as it has consisted of wooden single and multi-family dwellings since the late 1920s (Appendix H, 28).

3.2 The Natural, Physical Environment

Following is a brief summary of the natural, physical environment of the project area and project site.

3.2.1 Topography and Soil

According to the Phase I Environmental Site Assessment conducted by Environmental Risk Analysis, “The United States Department of Agriculture (USDA) Soil Conservation Service classifies the soil within the Site as Ewa silty clay loam (EmA) with slopes ranging from 0 to 2 percent. Ewa silty loam is described as well drained, prime for farmland if irrigated. Ewa silty clay loam is described as well drained with low run off. Ewa silty loam belongs to hydrologic soil group C. The typical soil profile is silty clay loam between 0 and 29 inches below ground, from 29 to 39 inches it becomes bedrock with a depth to water table greater than 80 inches. (USDA, 2019)". (Appendix I)

Shinsato Engineering, Inc. performed six (6) percolation tests to determine the rates of the underlying soils, "Test boring were drilled at the site for a geotechnical investigation. In general, the borings encountered very dense CORAL beneath the existing pavement areas at Borings 1, 3, 4, and 5 and at depths of 1 to 2 feet below the existing grade at Borings 2

and and 6. The CORAL extended to 6.0 feet below grade and was followed by medium dense to dense, silty GRAVEL with sand to depths of 13.5 to 19.0 feet. Probing below these depths disclosed medium dense to very dense material to the final depths of the borings. Groundwater was encountered at approximately 5.3 to 7.1 feet below grade at the time of the filed investigation on June 17 and 18, 2020. The locations of the tests are located in the Geotechnical Investigation from Shinsato Engineering dated June 29, 2020 (Appendix J).

3.2.2 Water

The Phase I Environmental Site Assessment, conducted by Environmental Risk Analysis, states:

> The Site overlies the Palolo aquifer system of the Honolulu aquifer sector. The upper aquifer is a basal (fresh water in contact with sea water), unconfined (where water table is upper surface of saturated aquifer), sedimentary (nonvolcanic lithology) aquifer. It is classified as a potentially used, replaceable, and highly vulnerable to contamination, with moderate salinity (1,000 – 5,000 milligrams per liter [mg/l] chloride [Cl-]). It is considered neither a drinking water source or ecologically important. (Mink and Lau, 1990).
>
> The lower aquifer is a basal (fresh water in contact with sea water), confined (aquifer bounded by impermeable or poorly permeable formations and top of saturated aquifer is below groundwater surface), flank (horizontally extensive lavas) aquifer. It is classified as a currently used, drinking water source, irreplaceable, low vulnerable to contamination, with fresh water salinity (<250 milligrams per liter [mg/l] chloride [Cl-]) (Mink and Lau, 1990).
>
> According to the EDR report, there are seventy-one (71) United States Geological Survey (USGS) wells within a 1-mile radius of the Site. All seventy-one (71) water wells were identified in the State Database Well Information located within a 1-mile radius of the subject property (EDR, 2018e). The Site is up-gradient of the Underground Injection Control (UIC) line (Figure 3) as such; the underlying aquifer is considered a drinking water source and permit limitations governing the use of these waters may be imposed (Appendix I).

3.2.3 Sea-Level Rise

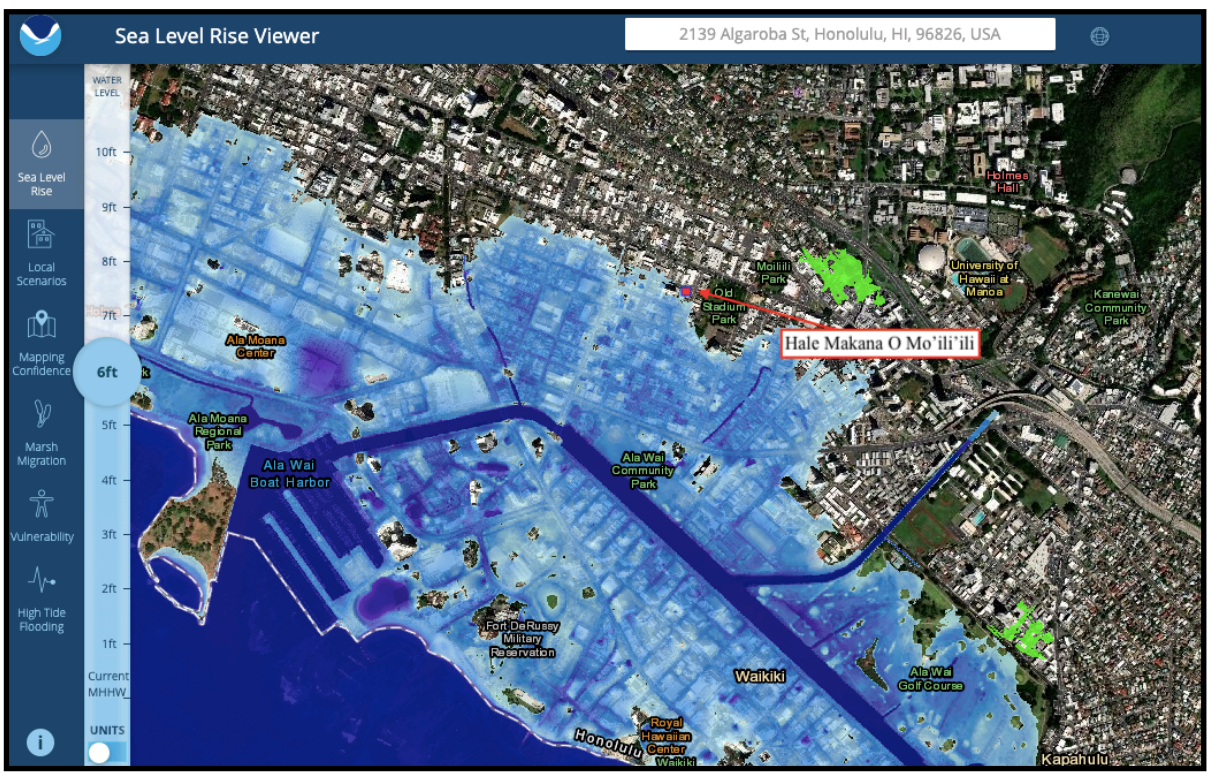
There is a growing awareness as to the impact of sea-level rise (SLR) on Hawaii, particularly in the low-lying coastal areas. According to an article called “Sea Level Rise Hawaii,” the physical effects of SLR may be inundation, erosion, salt intrusion, and drainage

problems. The two most significant in terms of potential impacts to the project are inundation and drainage problems.

Inundation may cause storm surges, wave over-topping and tsunami inundation resulting in negative impacts for coastal communities and ecosystems. SLR may increase flooding frequency during the life cycle of the proposed project. SLR can create drainage problems if it results in raising the groundwater table and leads to “increased flooding, poor drainage, and storm damage where rainfall and high ocean levels converge.” (Lim and Fletcher 2017).

According to the National Oceanic and Atmospheric Administration (NOAA) Sea Level Rise Viewer, the subject site is on the perimeter of the 6-foot SLR inundation area as depicted in Figure 6.

Figure 6: Sea Level Rise Potential



3.2.4 Sensitive Areas

The project site is not within a Special District or the Special Management Area. As noted earlier, the project site is located in the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM) Zone X, outside of the 500-year floodplain (Appendix D).

~~This project is not located inside the Tsunami Evacuation Zone (Appendix C).~~ The project location is in the "Extreme Tsunami Evacuation Zone", therefore, will require the building's structure to be designed with additional Tsunami loads and effects per the 2012 International Building Code. A map from the American Society of Civil Engineers Tsunami Hazard Tool website shows the project location is within the "offshore Tsunami Amplitude" area (Appendix C). A tsunami is a series of water waves caused by displacement of a large volume of water typically caused by earthquakes, volcanic activity, or landslides. There is no tsunami season. A tsunami is an unpredictable event that can happen at any time. Most tsunamis that strike the Hawaiian Islands are generated in the oceanic trenches around the border of the Pacific Ocean. Additionally, the Central Pacific Hurricane season runs from June 1 to November 30.

3.2.5 Recognized Environmental Conditions (RECs)

The Phase I Environmental Site Assessment by Environmental Risk Analysis (ERA) completed a comprehensive review to identify the presence of RECs within and around the Site. A REC is defined as "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment." (Appendix I).

The City and County of Honolulu Department of Planning website were examined for review of building permits for the Site and adjacent properties. Permit records are examined in order to identify any associated RECs. No building permits were found for the Site to represent a REC for the Site (Appendix I).

ERA visually assessed areas adjacent to the Site from public thoroughfares. The surrounding area was a mix of residential and commercial properties. Adjacent to west side of the Site is McCully Villa, a condominium complex, which appears to be residential in nature. Across Algaroba Street to the North is the Korea Adventist Church and McCully-Moili'ili Public Library. These residential and commercial sites are not anticipated to affect the environmental condition of the subject Site. McCully Service station is located up gradient, approximately 1/8-mile from the Site. The McCully Union Service site, located at 2105 S King Street, is listed as an SHWS site with found petroleum and benzo(a)pyrene in soil. This Site is also listed in the LUST database with a release and site cleanup completed with EHMP. This Site received an NFA for both registered releases but listed as hazards managed with controls. This Site has three (3) USTs currently in use, a 15,000-gallon gasohol tank, a 10,000-gallon gasoline tank, and a 5,000-gallon gasohol tank. The presence of currently in use USTs in close proximity and at a higher elevation than the subject Site is a potential environmental concern.

Forty-four (44) SHWS are located ¼-mile of the Site. Of the forty-four (44) sites, thirty-seven (37) sites are listed as either NFA or No Hazard and do not pose an environmental risk to the Site. The seven (7) remaining sites were further investigated by a review of HDOH records. None of the open investigation SHWS sites were determined to pose a potential environmental threat to the subject Site.

ERA observed two (2) pole-mounted transformers in the vicinity of the property on Algaroba Street. No releases were observed associated with this equipment. Electrical transformers may contain polychlorinated biphenyls (PCBs). All untested mineral oil transformers purchased prior to July 1, 1979, must be considered PCB-contaminated. ERA sent an inquiry to HECO to obtain the PCB status of the transformers observed however no response was received. One (1) pole-mounted transformer was located on the street adjacent to the Site on Algaroba Street. One (1) pole-mounted transformer was located across Algaroba Street to the north on a commercial property. Releases from either of these transformers are unlikely to impact the subject Site.

ERA visually assessed areas adjacent to the Site from public thoroughfares. The surrounding area was a mix of residential and commercial properties. Adjacent to west side of the Site is McCully Villa, a condominium complex, which appears to be residential in nature across Algaroba Street.

Records from the Real Property Tax Office were reviewed for the Site to assess the chain of title to determine historical uses that may indicate RECs. No information found in the tax records researched reveals a REC or Historical REC for the Site.

Past land use was evaluated by reviewing historical topographic maps and photos. Representative documents were selected to show the evolution of the Site and the surrounding area.

The historical photos and topographic maps reviewed showed that the Site was developed as early as 1968, This assessment has not revealed evidence of REC visually assessed areas adjacent to the Site from public thoroughfares. The surrounding area was a mix of residential and commercial properties. Adjacent to the west side of the Site is McCully Villa, a condominium complex, which appears to be residential in nature.

At the time of the inspection, the interior of the residential structures was observed to be partially occupied with some furnishings. Fluorescent light bulbs were observed in the dwellings, along with vinyl flooring and drywall. A water heater is located on the exterior of one of the structures. Located in the under-home storage area was a single container of pesticide along with two (2) containers containing fuel/gasoline. No releases from the pesticide bag were observed and the quantity was considered de minimis. The yard was observed to be vegetated. No dead or stressed vegetation was observed and recommends "a hazardous materials assessment be conducted on the units prior to renovation or demolition of units at the Site in order to determine if lead paint, asbestos or any other suspected hazardous building materials are present." (Appendix I).

3.2.6 Flora & Fauna

The project area is urban, in an established residential neighborhood. Structures on the parcels are densely built. There is sparse vegetation which consists of small trees and

shrubs. All vegetation have been introduced and because the site is so disturbed, it is highly unlikely that the site is suitable for any native animal species or critical habitat.

3.2.7 Public Infrastructure and Services

Potable Water & Sewer Access

The project site has access to County-supplied potable water and sewer systems. On January 13, 2020, the Board of Water Supply (BWS) responded to the pre-assessment consultation with a letter confirming that "the existing water system is adequate to accommodate the proposed high rise development." The BWS noted that the determination is based on current data, and that a final decision on the availability of water will be confirmed during the building permit approval process (Appendix E). Water demands and calculations will be provided to County's Engineering Division so it can be included in the State Water Projects Plan Update projections and the County's Water Use and Development Plan.

An approved sewer application was secured for this project on from the Department of Planning and Permitting on February 4, 2019 indicating there is sufficient sewer capacity.

Public Safety and Emergency Response Services

In its letter dated December 19, 2019, the Honolulu Fire Department (HFD) noted three regulatory requirements related to access roads and clearance to the property, and an adequate water supply approved by the county. The project fronts both Algaroba and Makahiki and will have unobstructed width and vertical clearance of a fire apparatus. Civil drawings will be submitted to HFD for review and approval (Appendix E).

The Honolulu Police Department (HPD) Waikiki Station is located approximately 1.6 miles from the site, at 2425 Kalakaua Avenue. In a letter dated December 23, 2019, the HPD raised concerns regarding short and long-term impacts to pedestrian and vehicular traffic in and around the project area, especially during peak traffic hours, street parking, and an increase in calls for the service area which have been addressed in the traffic mitigation plan in Section 6 (Appendix E).

Roadways, Traffic, Transportation & Pedestrian Circulation

The City and County of Honolulu Department of Transportation Services(DOTS), on January 30, 2020 requested a standard Transportation Impact Assessment (TIA) for the project to be included in the draft EA. However, since there have been no significant development in the vicinity to generate an increase in trips and due to the disruptions to both residential and visitor traffic as a result of the impacts of the COVID-19 pandemic, collecting new traffic count data this time would be atypical. Therefore, City and County stated that they would accept a brief Traffic Assessment(TA) and an abridged TA was prepared by Austin, Tsusumi, & Associates, Inc. The following are brief descriptions of the existing roadways within the vicinity of the Project:

Makahiki Way is a north-south, two-way roadway which begins to the north at a T-intersection with South King Street and extends southward where it terminates to the south in a dead-end near Waiola Street. Street parking is allowed on both sides of Makahiki Way.

Algaroba Street is an east-west, two-way roadway that runs parallel to South King Street and Waiola Street and begins to the east at a T-intersection with Makahiki Way and extends westward until it transitions into Lokahi Street near Washington Middle School. In the vicinity of the Project, street parking is allowed on both sides of Algaroba Street.

Waiola Street is an east-west, two-way roadway that runs parallel to South King Street and Algaroba Street and begins to the east at its intersection with Makahiki Way and extends westward until it transitions into Philip Street at its intersection with Kuikahi Street. In the vicinity of the Project, street parking is allowed on both sides of Waiola Street.

South King Street is an east-west, one-way roadway that runs parallel to Algaraoba Street and Waiola Street in the vicinity of the Project and begins to the west in Downtown at its intersection with North King Street and Nuuanu Avenue and extends eastward until it transitions into Harding Avenue near the Market City Shopping Center.

The report states, "The Project is anticipated to generate 6(9) trips during the AM(PM) peak hours, which is well below the ITE minimum trip generation criteria of 100 new trips in

the peak direction, and is not anticipated to have a significant impact on traffic operations within the vicinity of the Project." (Appendix K).

3.3 The Social and Cultural Environment

Following is a brief summary of the social and cultural environment of the project area and project site.

3.3.1 Demographics Profile

According to Census QuickFacts, there is an estimate of 345,064 people living in Urban Honolulu. Of this population, 19.7% are 65 years of age and older. The Urban Honolulu community is predominantly Asian alone (53.3%), White alone (17.5%) and Native Hawaiian or other Pacific Islander alone (8.2%). The area is 60.52 square miles in size and the 2018 median household income from 2014-2018 was $68,873. Another notable statistic from Census QuickFacts is that the median gross rent from 2014-2018 was $1,465 in Urban Honolulu. A complete list of the area's demographics is included as Appendix L.

3.3.2 Political and Regulatory Environment

The proposed project is located within the Primary Urban Center Development Plan area, in the City and County of Honolulu, State of Hawaii. The proposed project is aligned with governmental priorities and applicable regulations at all levels.

3.3.2.1 City and County of Honolulu

According to a letter from the City and County of Honolulu Department of Planning and Permitting (DPP) dated February 7, 2020, this DEA should include a discussion on how the proposed project is consistent with the General Plan and the Primary Urban Center Development Plan (Appendix E) Our Response:

1. The proposed low-income affordable rental Project is consistent with the following objectives and policies in Chapter IV (Housing) of the General Plan.
    1. Objective A: To provide decent housing for all the people of Oahu at prices they can afford (p. 21).
        - Policy 1: Develop programs and controls which will provide decent homes at the least possible cost.

- Policy 2: Streamline approval and permit procedures for housing and other development projects.
- Policy 3: Encourage innovative residential development which will result in lower costs, added convenience and privacy, and the more efficient use of streets and utilities.
- Policy 5: Make full use of State and Federal programs that provide financial assistance for low- and moderate-income homebuyers.
- Policy 10: Promote the construction of affordable dwellings which take advantage of Oahu's year-round moderate climate.
- Policy 12: Encourage the production and maintenance of affordable rental housing.
- Policy 13: Encourage the provision of affordable housing designed for the elderly and the handicapped.
- Policy 14: Encourage equitable relationships between landowners and leaseholders, between landlords and tenants, and between condominium developers and owners.

2. Objective C: To provide the people of Oahu with a choice of living environments which are reasonably close to employment, recreation, and commercial centers and which are adequately served by public utilities (p. 23).
    - Policy 1: Encourage residential developments that offer a variety of homes to people of different income levels and to families of various sizes.
    - Policy 2: Encourage the fair distribution of low- and moderate-income housing throughout the Island.
    - Policy 3: Encourage residential development near employment centers.
    - Policy 6: Preserve older communities through self-help, housing-rehabilitation, improvement districts, and other governmental programs.

2. The proposed Project is consistent with the Primary Urban Center Development Plan (PUC DP) in several ways. It is consistent with the vision for the Primary Urban Center as the project facilitates more in-town housing choices for people of all ages and incomes. The proposed Project is consistent with the land use policy which supports preserving and expanding the current inventory of affordable rental housing units.

   Section 3.3.2 (Policies intended to promote housing choices in livable in-town neighborhoods) of the Plan are aligned with the project's primary purpose and objectives. These policies are outlined below (p. 3-36).

   - Reduce costs for apartment homes
   - Preserve the current inventory of affordable rental housing units
   - Provide incentives and cost savings for affordable housing

3.3.2.2 State of Hawaii

The Hawaii Land Use Commission, HRS Chapter 205: Coastal Zone Management is not applicable to this project, as it is located outside the coastal management zone.

The Hawaii State Plan and Statewide Planning System, HRS Sections 226-5 through 226-27 shows that the proposed project is either compatible with the requirement, or the requirement does not apply to the project. A complete review of these requirements is presented in tabular form in Appendix M.

As described in the Hawaii State Functional Plan - Housing (Chapter 226 HRS), Hawaii is faced with a shortage of safe, decent, and affordable rental housing. This project is consistent with the objectives and strategies for affordable rental housing.

3.3.3 Archaeological and Historical Environment

State Historic Preservation Division (SHPD) did not respond to a pre-consultation request dated December 4, 2019. Therefore, based on the comments and draft studies of the property, an Archaeological Literature Review (ALR) was conducted by Pacific Consulting Services, Inc. (PCSI) to evaluate any potential effect on historic properties and to recommend mitigation of any effect, if warranted. The ALR has been forwarded to SHPD for review and acceptance. This work was carried out in accordance with Hawaii Revised Statutes (HRS) Chapter 6E, and Title 13 of the Hawaii Administrative Rules (HAR), Subtitle 13 (State Historic Preservation Division Rules), Chapter 275 (Rules Governing Procedures for Historic Preservation Review for Governmental projects Covered Under Sections 6E-7 and 6E-8, HRS).

Background research indicates that the project area fell within the Waikiki Reclamation District and may be been wetlands. Historical land use in the area, which known from 18th and 19th century maps and LCA descriptions, included taro lo'i and rice agriculture, pu'uone, kula, and pahale. Historic period construction began on the project in the 1920s when single and multi-family residences were built. The properties at 2139 Algaroba Street, and 918 Makahiki Way are not listed on the Hawai'i or National Registers of Historic Places, nor have they been nominated.

It is currently unknown to what extent previous residential construction in the project area has disturbed subsurface soils, including to what depth fill deposits extend. An archaeological inventory survey has not previously been conducted on the property and the demolition work will extend beyond the existing dwellings' footprints. The recommended SHPD determination is no historic properties affected with commitment for archaeological monitoring (under the guidance of an SHPD-approved Archaeological Monitoring Plan) to ascertain the subsurface conditions in the project area and an architectural assessment and recordation of the existing structures on the properties that are over 50 years old. (Appendix N)

3.3.4 Cultural Environment

A Cultural Impact Assessment was prepared in compliance with Title 13 of the Hawaii Administrative Rules (HAR), Subtitle 13 (State Historic Preservation Division Rules), Chapter 275 (Rules Governing Procedures for Historic Preservation Review for Governmental Projects Covered Under Sections 6E-8, Hawaii Revised Statues). Through document research and cultural consultation efforts this report provides information pertinent to the assessment of the proposed Project's impacts to cultural practices and resources (per the Office of Environmental Quality Control's Guidelines for Assessing Cultural Impacts). According to this CIA, no traditional cultural places or practices or archaeological sites were identified in the project area. As part of the consultation process, PCSI has sought the input from the following (Appendix H):

- The Office of Hawaiian Affairs (OHA)
- The Archaeology Bank of the Department of Land and Natural Resources State Historic Preservation Division.
- The History and Culture Branch of the Department of Land and Natural Resources State Historic Preservation Division
- The Honolulu Civic Club
- The McCully/Mo'ili'ili Neighborhood Board

Today, Mo'ili'ili is a densely populated community minutes from Downtown Honolulu and Waikiki. One can easily find that there are apartments of every size and density (Appendix

H).There are many options for transportation with accessible bus routes and walkable streets. Many local businesses and government facilities are nearby. Parks provide the much needed recreational space for community members living in the urban city. The community is lively and filled with people that have resided in the area for a very long time (Appendix H).

The area's residents live in homes that are over fifty years old and also dilapidated and unsightly. Crowding and doubling up is also an issue that occurs frequently in several of these older homes in the urban Honolulu area (Appendix G). There are many instances where homes are filled with multi-generational family members as housing is expensive and out of reach. More often than not the elderly, the most vulnerable member of the family, struggle to live a healthy lifestyle when their household is overcrowded. HD believes there is a clear need to provide our seniors over the age of 55 with a home that is modern, spacious and affordable.

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Section 4: Potential Impacts and Alternatives Considered

4.1 Project's Relationship to the Environment

HMoM is designed to create decent, safe and secure affordable rental opportunities for the people of Oahu, and particularly the older residents of Mo'ili'ili and the Waikiki area. Developed on the cultural tradition of malama 'aina (stewardship of the land and environment), HMoM is rooted in the predominant culture of the community. The planned building is aesthetically beautiful, and the project will provide much-needed access to affordable rentals for one of the most difficult to serve, low-income populations.

The project will provide our kupuna with a home they can be proud of, feel secure in, and be empowered by. The resource center will provide socio-economic supports needed to help residents improve their lives and achieve a standard of living of their own choosing. The project may help to alleviate existing overcrowding in the community, and provide a viable option for people transitioning from homelessness. The development plan for this project advances the community's development goals, as articulated in the Primary Urban Center Development Plan.

4.2 Direct Impacts & Alternatives Explored

4.2.1 Project Location

HD considered locating this project on four different sites. Following is an overview of the three alternate properties considered and the reasons they were not selected:

- Site 1: An option agreement was executed on a property on Ala Wai Boulevard in Waikiki. Two grants were won for site acquisition but financing could not be finalized within the agreement deadline.
- Site 2: An LOI was presented to a land owner on Kapahulu Blvd. The owner did not accept the offer.
- Site 3: An option agreement was executed on School Street. However, during the due diligence period, it was determined that the project was not financially feasible.

In addition, two other properties were considered in the area but the developer considered taking no action, which would result in not constructing the 105-unit affordable housing rental project for the elderly. This alternative was dismissed based

on: 1) the overwhelming need for additional affordable housing opportunities for the elderly on the island of Oahu as a whole; and 2) the fact that there are no significant impacts that the project would create if located on the proposed site.

4.2.2 Topography & Soil

While no post-construction impacts to the topography or soil of the project site are anticipated, the site will be grubbed and graded, and excavation may occur under each building and the parking lot. Excavated soil which cannot be used on-site may be moved off-site, and there is a potential for loss of soil by stormwater runoff and/or wind erosion. Additional possible impacts may include dust pollution. A range of best management practices have been considered and will be implemented during every phase of construction.

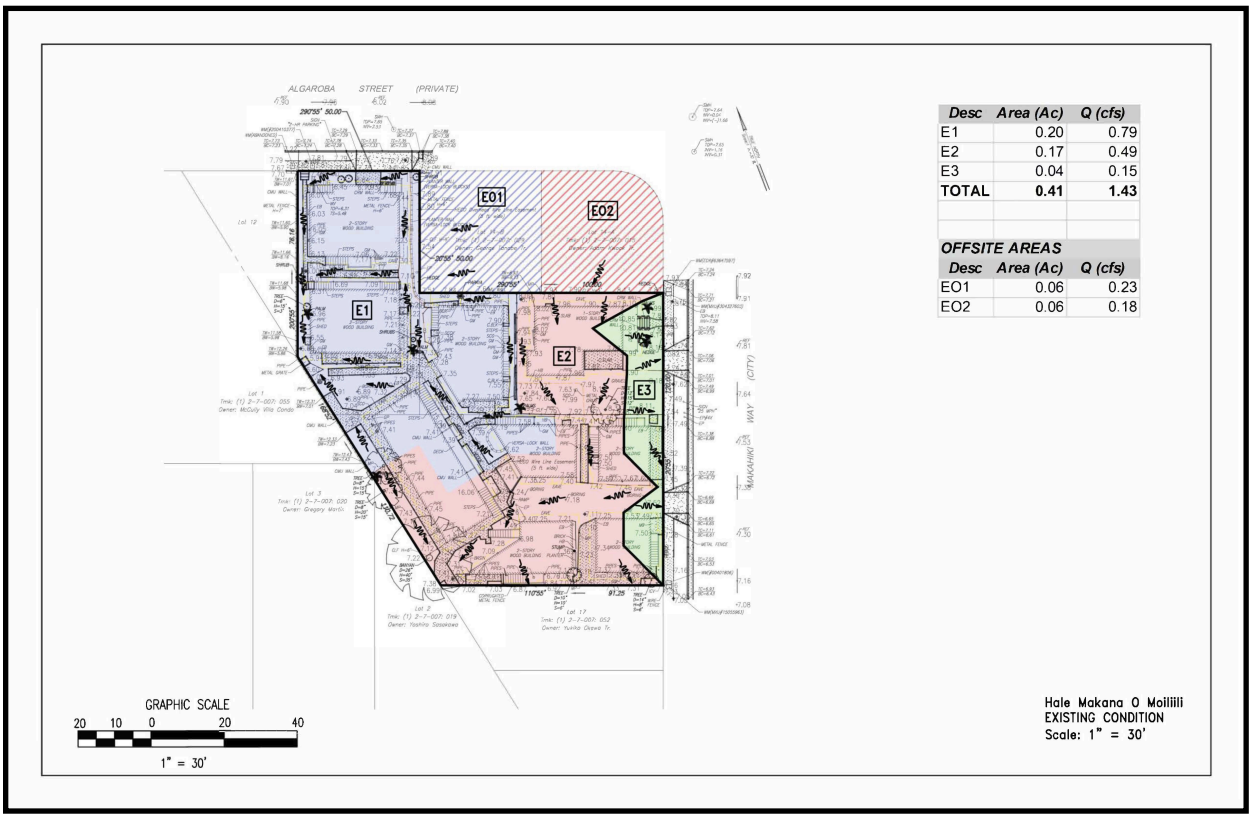
4.2.3 Water: Runoff & Discharge

The drainage at the site shall conform to the requirements of the City's Rules Relating to Storm Drainage Standards and Rules Relating to Water Quality. The site is composed of T.M.K.: (1) 2-7-007:016 & 051 with a total area of 17,743-sf. The project site wraps around T.M.K.: (1) 2-7-007:015 & 029 which are at the corner of Algaroba Street and Makahiki Way with frontages on each Right-Of-Way (ROW).

All runoff quantities are estimated using a 1-hour, 10-year storm event. Storm runoff generally runs southwest from the northeast corner of the block T.M.K.: (1) 2-7-002:015 to the intersection of Waiola Street and Paani Street fronting T.M.K.: (1) 2-7-007:020. Runoff from approximately half of the site, Drainage Area E1, is collected by a drain sump at the southwest corner of the site. Additionally, runoff from T.M.K.: (1) 2-7-007:029 sheet flows across Drainage Area E1 and into the drain sump. The drain sump pumps a total of 1.02-cfs to Algaroba Street though an under-walk pipe culvert.

An estimated 0.49-cfs of runoff from the middle portion of the site, Drainage Area E2, sheet flows southwest onto adjoining lots T.M.K.: (1) 2-7-007:019, 020 and 052. An additional 0.18-cfs of runoff from T.M.K.: (1) 2-7-007: 015 sheet flows across Drainage Area E2 and onto the adjoining lots to the southwest. Existing & Proposed Conditions and its

analysis was prepared by Wes Toyota, Construction Management & Engineering, LLC in Figure 7 below.



Desc	Area (Ac)	Q (cfs)
E1	0.20	0.79
E2	0.17	0.49
E3	0.04	0.15
TOTAL	**0.41**	**1.43**

OFFSITE AREAS		
Desc	Area (Ac)	Q (cfs)
EO1	0.06	0.23
EO2	0.06	0.18

Figure 7: Existing Drainage Conditions

Approximately 0.15-cfs of runoff from the Makahiki Way frontage, Drainage Area E3, sheet flows onto the Makahiki Way ROW.

The total storm runoff generated by the site under the existing condition is 1.43-cfs. The study found that under the drainage conditions created by the proposed project, the total discharge generated will increase nominally by 0.03-cfs (Figure 7).

4.2.4 Sea Level Rise

Sea level rise is inevitable, and for cities surrounded by the ocean like Hawai'i, the consequences will be devastating. When sea level rise is more than one meter, then impacts or inundation will occur.

Alternatives considered include: utilizing landscaping features and pervious surfaces for better retention and drainage; raising the buildings to sit at a higher elevation to account for an anticipated sea level rise above one meter; build the buildings at the current elevation of the site, assuming a potential sea level rise of one meter; or continue to investigate the issue of sea level rise to determine there is information available to better predict the sea level rise in the area.

The City and County of Honolulu adopted the 2012 International Building Code that has new requirements for buildings located in the Tsunami Design Zone. Measures to ensure compliance will be employed by adding expert consultants as well as specific modeling of possible Tsunami surges. If necessary, specific design loads and effects will be incorporated into the structural design of the Hale Makana O Mo‘ili‘ili buildings.

4.2.5 Sensitive Areas: Tsunami & Hurricane Evacuation

In the event of a significant earthquake in the Pacific Basin, the Pacific Tsunami Warning Center (PTW) may issue notifications. The City and County of Honolulu Department of Emergency Management provides public safety information by address (Appendix O).

An emergency evacuation plan will be prepared to guide residents safely off-site in the event of an emergency, including a tsunami or hurricane, and residents will be provided with information regarding shelters and refuge areas, and any available public transportation to these areas. Updated plans will be distributed to the residents annually. Emergency evacuation facilities in the vicinity of this project are as follows:

- Hurricane Shelter - Lunalilo Elementary School
- Tsunami Refuge Area - Lunalilo Elementary School
- Hospital - Kapiolani Medical Center
- Fire Station - McCully Fire Department
- Police Station - Alapai Police Headquarters

4.2.6 Recognized Environmental Conditions (RECs)

While the Phase I Environmental Site Assessment did not find any historical or current RECs on the project site, it noted that the residential units on the property were not

inspected, and may contain hazardous materials like asbestos or lead paint. It recommends that an assessment of the units be conducted prior to renovation or demolition. (Appendix I).

4.2.7 Traffic

The proposed project is not expected to result in any significant adverse impacts to vehicular circulation, or surrounding pedestrian, bicycle, and transit facilities. At the request of the city, a Traffic Management Plan, which is included in this DEA as Appendix Q, will be jointly reviewed and accepted by DTS and DPP.

4.3 Indirect and Cumulative Impacts & Alternatives Explored

4.3.1 School Population Increase

Based on the The Affordable Market Study for Hale Makana O Mo'ili'ili Project (Appendix G), it is believed that the demand for this project will be absorbed by the existing Mo'ili'ili population and will not likely create any impact on student enrollment on the surroundings schools. The project was designed so that its tenants would be 55 years of age and older. It was not predicted that any younger family members would be staying with their kupuna as the units are small studios and one-bedrooms. The only resident that may have a child attending school in the area would be the project's property manager, who will have a room designated in this project as the manager's unit.

If required under Act 245, the project would pay a school impact fee prior to the issuance of the building permit. If required by the State of Hawaii, Department of Education, the project will pay a fair share contribution.

4.3.2 Alleviate Overcrowding / Homelessness

As discussed earlier, one potential indirect benefit of the project is that it will alleviate overcrowding in existing housing in Mo'ili'ili and the surrounding areas. Statistically speaking, overcrowding is a “hidden homelessness,” in that it is generally the result of a lack of affordable housing and used as an alternative to true homelessness. It is difficult to find statistics that can identify the need for additional affordable housing solutions based on the

number of kupuna or persons in need, but currently residing in an overcrowded home (Appendix G).

There is a significantly high number of people living in poverty in urban Honolulu. An increased number of affordable housing options in the area will increase the ability of people struggling with homelessness to move into long-term affordable housing. Additionally, the proposed project will be able to serve individuals with issues of homelessness as it is going to provide support and resources in order to combat their struggle with homelessness.

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Section 5. Mitigation Measures

5.1 Topography & Soil

Best Management Practices (BMP) to control dust during construction are required by the City and County of Honolulu's grading and grubbing permit conditions. Dust fences will be used to keep the dust on-site, and watering will minimize dust. All construction activities would comply with regulations for fugitive dust control under HAR Section 11-60.1-33 that require reasonable precautions to prohibit visible fugitive dust beyond the property line. If generators are used, a stationary source permit would be obtained from the Department of Health Clean Air Branch.

Construction BMPs will minimize direct and indirect impacts to ambient air quality, and no significant adverse impacts on air quality are anticipated during operations. Construction emissions will be less than significant with implementation of the proposed action. No other operational emissions are anticipated.

5.2 Water: Runoff & Discharge

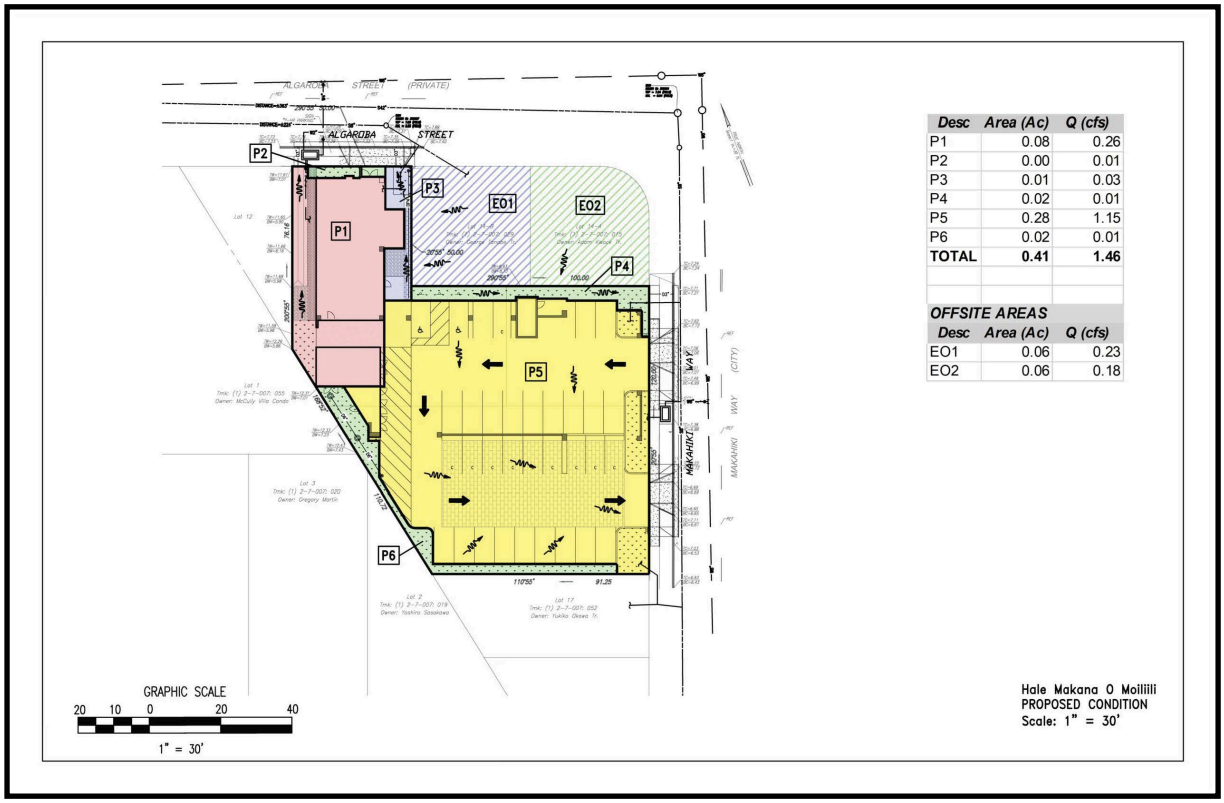
The existing site will be completely cleared. BMP for stormwater management will minimize the impact of the project to the existing area's hydrology while maintaining on-site infiltration and preventing polluted runoff from storm events. The proposed drainage redirects storm runoff flowing onto adjoining lots under the existing condition toward the right of way to the maximum extent feasible. The storm runoff flowing onto the adjoining lots to the southwest is reduced to from 0.67-cfs (Drainage Areas E2 and EO2) to 0.01-cfs (Drainage Area P6).

The onsite runoff flowing to Algaroba Street decreases from 0.79-cfs (Drainage Area E1) to 0.30-cfs (Drainage Areas P1, P2, and P3). Under-walk pipe culverts convey runoff from Drainage Areas P1 and P3 onto Algaroba Street. Drainage Area P3 also redirects 0.23-cfs of runoff from Drainage Area EO1 to Algaroba Street. Drainage Area P3 sheet flows onto the ROW. The total runoff flowing onto Algaroba Street under the proposed condition is 0.53-cfs.

The onsite runoff flowing to Makahiki Way increases from 0.15-cfs (Drainage Area E3) to 1.16-cfs (Drainage Areas P4 and P5). An under-walk pipe culvert conveys runoff from

Drainage Area P4 onto Makahiki Way. Drainage Area P4 also collects and redirects the 0.18-cfs of runoff flowing onto the site from T.M.K.: (1) 2-7-007:015 toward Makahiki Way. The total runoff flowing onto Makahiki Way under the proposed condition is 1.34-cfs. The proposed drainage conditions are shown in Figure 8.

Figure 8: Proposed Drainage Conditions



Desc	Area (Ac)	Q (cfs)
P1	0.08	0.26
P2	0.00	0.01
P3	0.01	0.03
P4	0.02	0.01
P5	0.28	1.15
P6	0.02	0.01
TOTAL	**0.41**	**1.46**

OFFSITE AREAS		
Desc	*Area (Ac)*	*Q (cfs)*
EO1	0.06	0.23
EO2	0.06	0.18

The total storm runoff generated under the proposed condition is 1.46-cfs. The proposed changes to the drainage patterns will reduce the impact of the site upon adjoining parcels to the southwest while still allowing runoff from adjoining lots to the northeast to continue flowing onto the site. The overall runoff generated by the site will increase nominally by 0.03-cfs. In addition to these measures, whenever possible, porous pavers, vegetative strips and other strategies and materials will be employed to address runoff in place.

5.3 Sea Level Rise

To mitigate potential adverse impacts to the project due to sea level rise, a combination of the following design strategies will be implemented:

1) Utilization of resilient building materials – precast concrete, permeable walkways and driving surfaces, and resistant landscaping;

2) The building's structural system is designed with increased protection to withstand the above code requirements;

3) All residential units are above the ground floor;

4) The project's resource center, a space not continuously occupied, is planned for the ground floor but can be relocated to the upper level and roof when necessary. Additionally, the ground floor has a floor-to-floor height of 16.5', therefore, it can be retrofitted to accommodate the new story at elevation +3.2' without any structural changes.

5) Permeable paver walkways can be removed and replaced at elevation +3.2'.

6) Building's elevators can be reprogrammed and recalibrated to have the ground floor start at elevation +3.2'.

7) All ground floor mechanical and electrical equipment are raised 3.2'.

5.3 Recognized Environmental Conditions (RECs)

Consistent with the recommendation in the Phase I Environmental Site Assessment (Appendix I), HD will inspect the residential units for hazardous materials prior to renovation or demolition and account for the findings of that inspection in its renovation or demolition process.

5.4 Traffic Mitigation Plan

During the construction of the various phases of the project, trucks, heavy equipment, and other vehicles will use existing roads and signalized intersections whenever available to import and export materials and access construction areas. The increased traffic is not expected to be significant, but may cause some minor inconveniences to residents in the vicinity. Construction of water and sewer connections to lines in roadways may also cause temporary inconvenience. Coordination of work hours to avoid peak traffic hours will mitigate short-term traffic impacts. Construction vehicles will park within the project site, and will not affect traffic flow except while traveling to and from the site. Contractors will be required to

mitigate potential vehicular and pedestrian traffic impacts through appropriate traffic control measures and safety devices.

The following are the Traffic Assessment recommendations (Appendix K):

Loading Area

- Establish a traffic management plan for move-in day.
- Set a time limit for loading.

Parking Area

- Reserve one (1) stall for the on-site resident manager.
- Clearly mark stalls for residents of the building.

Management

- The on-site manager and/or security guard should regularly monitor the loading and parking areas.
- The on-site manager should coordinate all deliveries.

Transportation Demand Management Strategies

- Transportation Allowance Program
- Unbundled Parking
- Rideshare/Carpooling Programs
- Education and Information

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Section 6: Anticipated Determination

6.1 Section 11-200-12, HAR

The Hawaii Administrative Rules, Title 11 Chapter 200, Section 12 establishes the criteria for determining the "significance of potential environmental effects." A proposed action "shall be determined to have a significant effect on the environment" if it meets any of the following 13 criteria.

6.1.1 Irrevocable Loss

Criteria: Involves an irrevocable commitment to loss or destruction of any natural or cultural resource.

The proposed action does not involve an irrevocable commitment to loss or destruction of any natural or cultural resource. Neither the Cultural Impact Assessment or the Archaeological Literary Review for the project identified any evidence of cultural resources located on the project site, or located off-site but impacted by the project. The reports found that the property is extensively disturbed by modern use, and no archaeological remains were found on surface. There are no natural resources on the project site.

BMPs will be implemented to mitigate against potential adverse impacts, and any potential adverse impacts that could result do not constitute an "irrevocable commitment to loss or destruction" of a natural resource.

During operation, there would be no irrevocable commitment, loss or destruction of identified natural or cultural resource. There would be no significant cumulative adverse impact on natural and cultural resource.

6.1.2 Curtails Beneficial Uses

Criteria: Curtails the range of beneficial Uses of the environment.

The proposed action does not curtail the range of beneficial uses of the environment in the short or long term. The project site is within the Urban boundary on the State Land Use District Boundary Map, and the proposed action is consistent with land use designated as

Urban. The development will provide much-needed affordable rental units for very low and extremely low income families and individuals.

6.1.3 Conflicts with State's Long-Term Goals

Criteria: 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 proposed action does not conflict with the long-term environmental policies, goals, and guidelines of the State of Hawaii. The project's potential adverse impacts are associated only with short-term construction related activities and can be mitigated through adherence to standard construction mitigation practices.

6.1.4 Welfare of Community or State

Criteria: Substantially affects the economic welfare, social welfare, and cultural practices of the community or State.

The proposed action has short-term beneficial impacts on socio economics during construction related to employment opportunities and purchase of materials. The proposed project would also positively impact the social welfare of the community by providing additional affordable housing, which is in high demand.

6.1.5 Public Health

Criteria: Substantially affects public health.

The construction and development of project may pose temporary impacts to noise and air quality levels. Potential impacts will be short-term and are not expected to affect public health significantly. Construction and operation will be in compliance with all federal, state, and county regulations and appropriate mitigation measures will be implemented. The proposed land use is compatible with the surrounding residential community.

6.1.6 Effects on Public Facilities

Criteria: Involves substantial secondary impacts, such as population changes or effects on public facilities.

The proposed action will result in 104 new affordable rental units for very low and extremely low income kupuna. The proposed unit mix is 80 studios and 25 1-bedroom apartments. HUD regulations limit the number of people who can occupy a space based on a number of factors, including gender and age of the residents, but they generally follow a two-person per bedroom rule. Based on the unit mix and HUD regulations, the maximum occupancy of the project is 210 people, provided every house was comprised of the correct demographics to allow maximum use. HD estimates a more accurate rate of occupancy for the project, accounting for normal household composition, size, and a vacancy rate of 5% , to be 200 people. HD anticipates that many residents of the proposed project will be from the greater urban Honolulu area.

Letters from the City and County of Honolulu Board of Water Supply indicates sufficient capacity in the existing water systems to accommodate the project (Appendix E). The project has also secured an approved Sewer Connection Application from the Department of Planning and Permitting indicating there is sufficient wastewater capacity (Appendix P). Additionally, the Department of Parks and Recreation concludes the "proposed project will have no impact on any of program or facility of the Department." (Appendix E).

6.1.7 Degradation of Environmental Quality

Criteria: Involves a substantial degradation of environmental quality.

Construction activities associated with the proposed project are anticipated to result in relatively insignificant, short-term impacts to noise, air quality, and traffic in the immediate project area. Appropriate mitigation measures will be implemented during the construction period, and the project will not degrade environmental quality.

6.1.8 Cumulative Effect or Larger Actions

Criteria: Is individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions.

The proposed project will not result in considerable cumulative effects upon the environment or involve a commitment for larger actions. The proposed rental project will not generate future developments on this site or in the surrounding area that would create a cumulative impact.

6.1.9 Species or Habitat

Criteria: Substantially affects a rare, threatened, or endangered species, or its habitat.

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

6.1.10 Air or Water Quality and Ambient Noise

Criteria: Detrimentally affects air or water quality or ambient noise levels.

Operation of construction equipment will temporarily elevate ambient noise and concentrations of exhaust emission in the immediate vicinity of the project site. Appropriate mitigation efforts will occur, including notifying the community of anticipated activities as necessary.

While the site is designed to have minimum ground disturbed areas,dust control measures appropriate to the situation will be employed by the contractor, including spraying water up to three times a day in disturbed areas and erecting perimeter barriers. The State DOH administers rules and regulations relating to hours during which construction is permitted and the noise levels permitted during those hours. The contractor will be required to abide by the nose regulations.

Long-term noise impact from the proposed development are expected to be minimal and the minimal increase in traffic projected. The proposed development will not have an adverse impact on aquifers or water resources. Operation of the proposed project will have no significant impact on air or water quality or ambient noise levels in the vicinity.

6.1.11 Damage from Environmentally Sensitive Location

Criteria: Affects or is likely to suffer damage by being 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.

Based on the Flood Insurance Rate Maps published by the Federal Emergency Management Agency, the subject property is located in flood hazard Zone X. Zone X is an

area determined to be outside 500-year floodplain and is outside the 1% and 0.2% annual chance floodplains as shown in Appendix D.

6.1.12 Scenic Vistas and Viewplanes

Criteria: Substantially affects scenic vistas or view planes identified in county or state plans or studies.

This proposed action does not affect any scenic vista or view planes identified in county or state plans or studies.

6.1.13 Energy Consumption

Criteria: Requires substantial energy consumption.

The proposed action does not require a substantial energy consumption during any phase of the project. To further decrease the energy consumed by the project, Photovoltaic is being installed as alternative energy sources for the project. The project will pursue LEED Silver certification.

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Section 7: Consultation

7.1 Pre-Assessment Consultation Efforts

In preparation of the Draft EA, a pre-assessment consultation letter was sent to agencies and organizations on December 4, 2019. Any comments received were considered in the preparation of this draft EA, and were addressed in Sections 3-6. The correspondence received is included as Appendix E.

7.1.1 Federal Government Agencies Consulted

- U.S. Department of Agriculture National Resources Conservation Service
- U.S. Geological Survey Pacific Islands Water Science Center
- Environmental Protection Agency Pacific Islands Office
- U.S. Fish & Wildlife Service
- Department of the Interior National Parks Service
- U.S. Army Corps of Engineers Pacific Ocean Division
- Department of Transportation Federal Aviation Administration

7.1.2 State of Hawaii Agencies Consulted

- Hawaii Community Development Authority Environmental Planning Office
- Department of Education
- Office of Environmental Quality Control
- Department of Land & Natural Resources Land Division
- Department of Land & Natural Resources Historic Preservation Division
- Department of Business, Economic Development, & Tourism Hawaii State Land Commission
- Office of Planning Hawaii Coastal Zone Management Program
- Department of Health Office of Hazard Evaluation & Emergency Response
- Department of Transportation
- University of Hawaii Manoa Environmental Center
- University of Hawaii Manoa Water Resources Research Center
- Department of Agriculture
- Department of Accounting and General Services
- University of Hawaii Office of Capital Improvement
- Department of Hawaiian Home Lands

- Department of Health Environmental Health Administration
- Office of Hawaiian Affairs

7.1.3 City & County of Honolulu Agencies Consulted

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

7.1.4 Elected Officials Consulted

- Senator Mazie Hirono, U.S. Senate
- Senator Brian Schatz, U.S. Senate
- Governor David Ige, State of Hawaii
- Representative Scott Y. Nishimoto, House District 21, State of Hawaii Legislature
- Senator Sharon Y. Moriwaki, Senate District 12, State of Hawaii Legislature
- U.S. Representative Ed Case, Hawaii's First Congressional District
- Mayor Kirk Caldwell, City & County of Honolulu
- Councilmember Ann Kobayashi, District 5, City & County of Honolulu Council

7.1.5 Community Groups Consulted

- McCully/Moiliili Neighborhood Board No. 8, Neighborhood Commission Office (Appendix S)

7.2 Post-Assessment Consultation Plans

~~Copies of the Draft EA will be sent to the following agencies and officials for review~~.

Draft EA was available on OEQC's website for review.

7.2.1 Federal Government Agencies Consulted

- U.S. Department of Agriculture National Resources Conservation Service

- U.S. Geological Survey Pacific Islands Water Science Center
- Environmental Protection Agency Pacific Islands Office
- U.S. Fish & Wildlife Service
- Department of the Interior National Parks Service
- U.S. Army Corps of Engineers Pacific Ocean Division
- Department of Transportation Federal Aviation Administration

7.2.2 State of Hawaii Agencies Consulted

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- Department of Education
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- Department of Land & Natural Resources Land Division
- Department of Land & Natural Resources Historic Preservation Division
- Department of Business, Economic Development, & Tourism Hawaii State Land Commission
- Office of Planning Hawaii Coastal Zone Management Program
- Department of Health Office of Hazard Evaluation & Emergency Response
- Department of Transportation
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- Honolulu Fire Department
- Department of Community Services
- Department of Planning and Permitting
- Department of Parks and Recreation

- Department of Transportation Services
- Board of Water Supply
- Department of Design and Construction

7.2.4 Elected Officials Consulted

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- Senator Brian Schatz, U.S. Senate
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- Councilmember Ann Kobayashi, District 5, City & County of Honolulu Council

7.2.5 Community Groups Consulted

- McCully/Moiliili Neighborhood Board No. 8, Neighborhood Commission Office (Appendix S)

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Section 9: Appendix

Schematic Drawings of the Proposed Project - UPDATED ..... A
Overview of Ho'okahua Development, LLC ..... B
Property Information for TMK: (1)2-07-07:16 & (1)2-07-07:51 C
FEMA FIRM Map ..... D
Responses to Pre-Assessment Consultation ..... E
- City and County of Honolulu, Board of Water Supply
- City and County of Honolulu, Dept. of Parks and Recreation
- City and County of Honolulu, Dept. of Planning and Permitting
- City and County of Honolulu, Dept. of Transportation Services
- City and County of Honolulu, Dept. of Design and Construction
- City and County of Honolulu, Dept. of Community Services
- City and County of Honolulu, Honolulu Fire Dept.
- City and County of Honolulu, Police Dept.
- State of Hawaii Dept. of Transportation
- State of Hawaii Dept. of Education
- State of Hawaii Dept. of Land and Natural Resources, Land Division
- State of Hawaii Dept. of Accounting and General Services
- University of Hawaii Water Resources Research Center
- Council member Ann Kobayashi, District 5, City & County of Honolulu Council

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Affordable Rental Market Study, February 2019 ..... G
Cultural Impact Assessment - DRAFT ..... H
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Geotechnical Investigation ..... J
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Comments & Responses to the Draft Environmental Assessment ..... R
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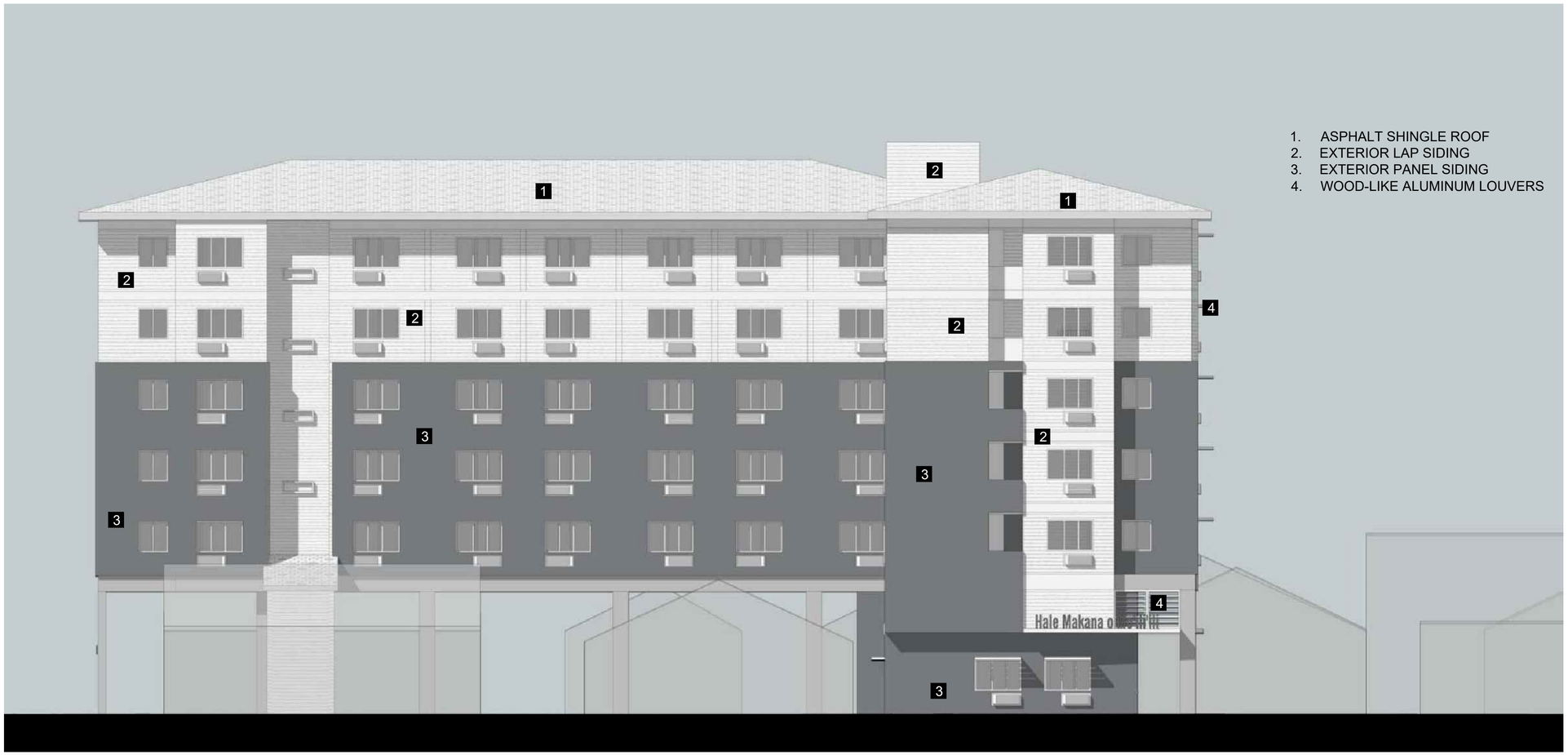
Appendix A

Schematic Drawings of the Proposed Project - UPDATED



1. ASPHALT SHINGLE ROOF
2. EXTERIOR LAP SIDING
3. EXTERIOR PANEL SIDING
4. WOOD-LIKE ALUMINUM LOUVERS

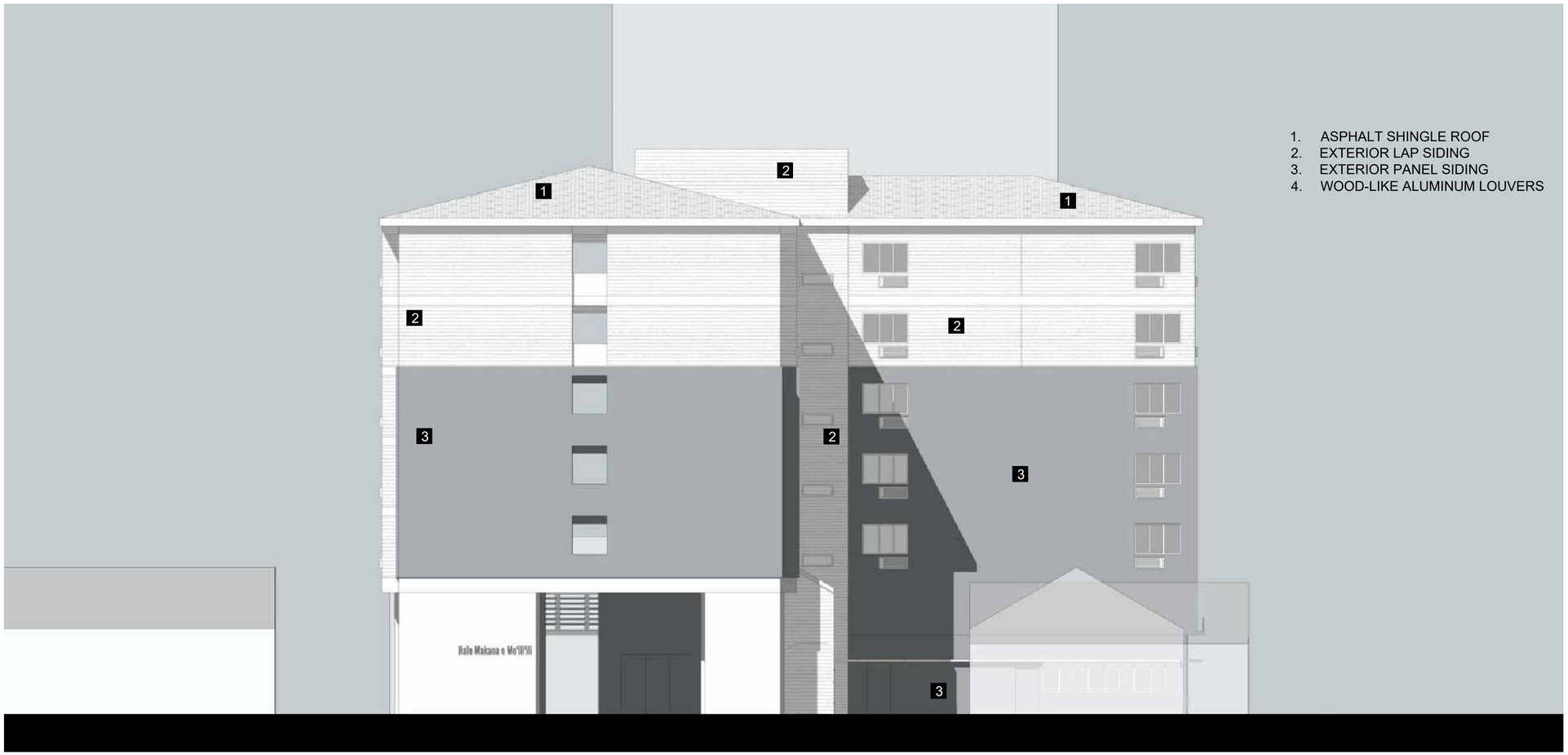
NORTH ELEVATION

Hale Makana o Mo'ili'ili

REVISED SCHEME
SEPTEMBER 2020

0' 5' 10' 20'

ahl.



1. ASPHALT SHINGLE ROOF
2. EXTERIOR LAP SIDING
3. EXTERIOR PANEL SIDING
4. WOOD-LIKE ALUMINUM LOUVERS

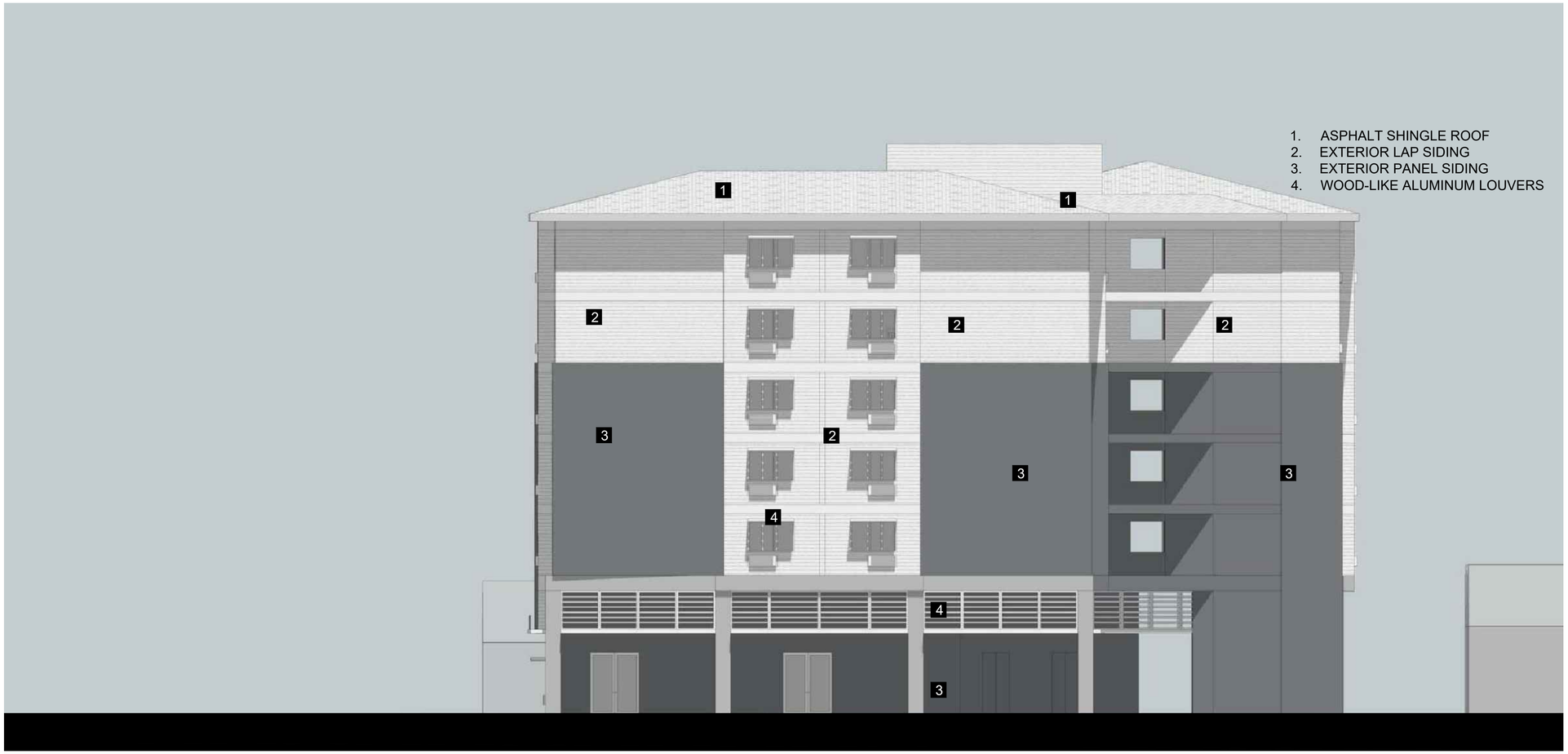
EAST ELEVATION

Hale Makana o Mo'ili'ili

REVISED SCHEME
SEPTEMBER 2020

0' 5' 10' 20'

ahl.



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2. EXTERIOR LAP SIDING
3. EXTERIOR PANEL SIDING
4. WOOD-LIKE ALUMINUM LOUVERS

WEST ELEVATION

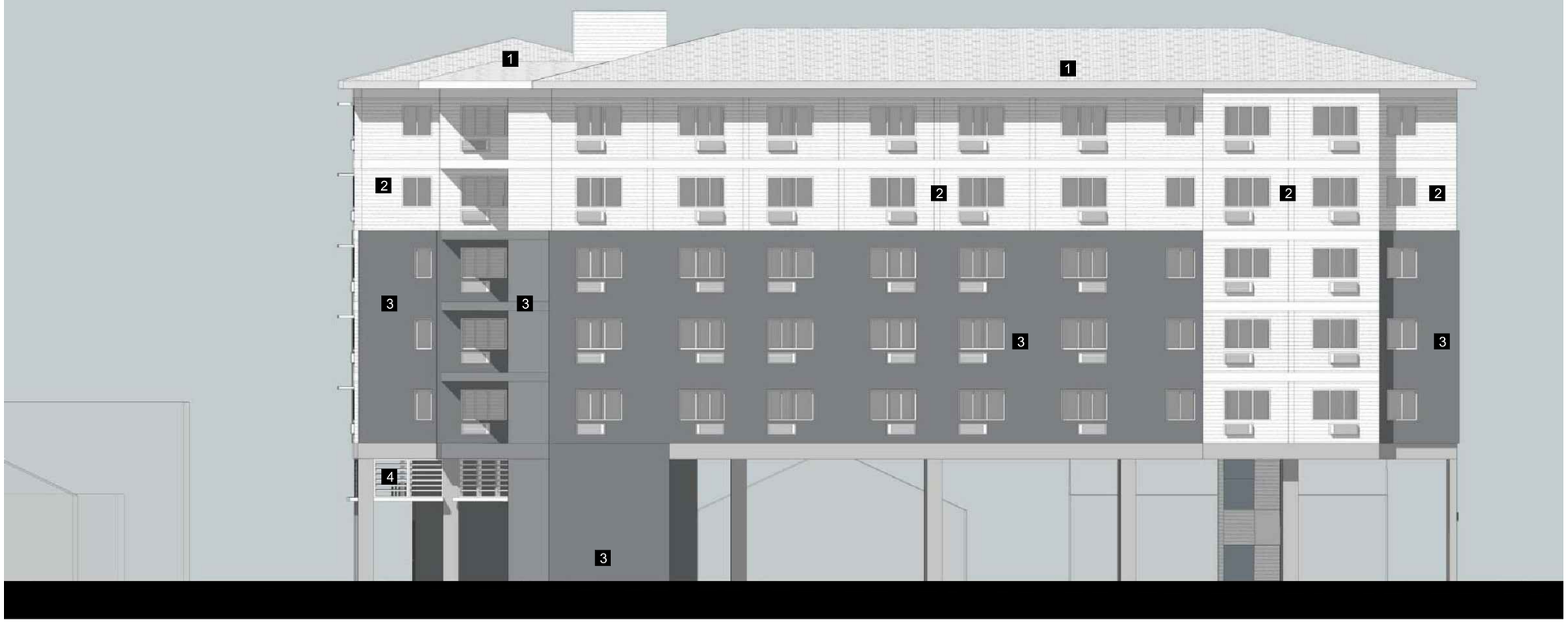
Hale Makana o Mo'ili'ili

REVISED SCHEME
SEPTEMBER 2020

0' 5' 10' 20'

ahl.

1. ASPHALT SHINGLE ROOF
2. EXTERIOR LAP SIDING
3. EXTERIOR PANEL SIDING
4. WOOD-LIKE ALUMINUM LOUVERS



SOUTH ELEVATION

Hale Makana o Mo'ili'ili

REVISED SCHEME
SEPTEMBER 2020

0' 5' 10' 20'

ahl.

AERIAL VIEW 1

Hale Makana o Mo'ili'ili

REVISED SCHEME
SEPTEMBER 2020

ahl.

AERIAL VIEW 2

Hale Makana o Mo'ili'ili

REVISED SCHEME
SEPTEMBER 2020

ahl.

AERIAL VIEW 3

Hale Makana o Mo'ili'ili

REVISED SCHEME
SEPTEMBER 2020

ahl.

STREET VIEW 2

Hale Makana o Mo'ili'ili

REVISED SCHEME
SEPTEMBER 2020

ahl.

STREET VIEW 1

Hale Makana o Mo'ili'ili

REVISED SCHEME
SEPTEMBER 2020

ahl.

STREET VIEW 3

Hale Makana o Mo'ili'ili

REVISED SCHEME
SEPTEMBER 2020

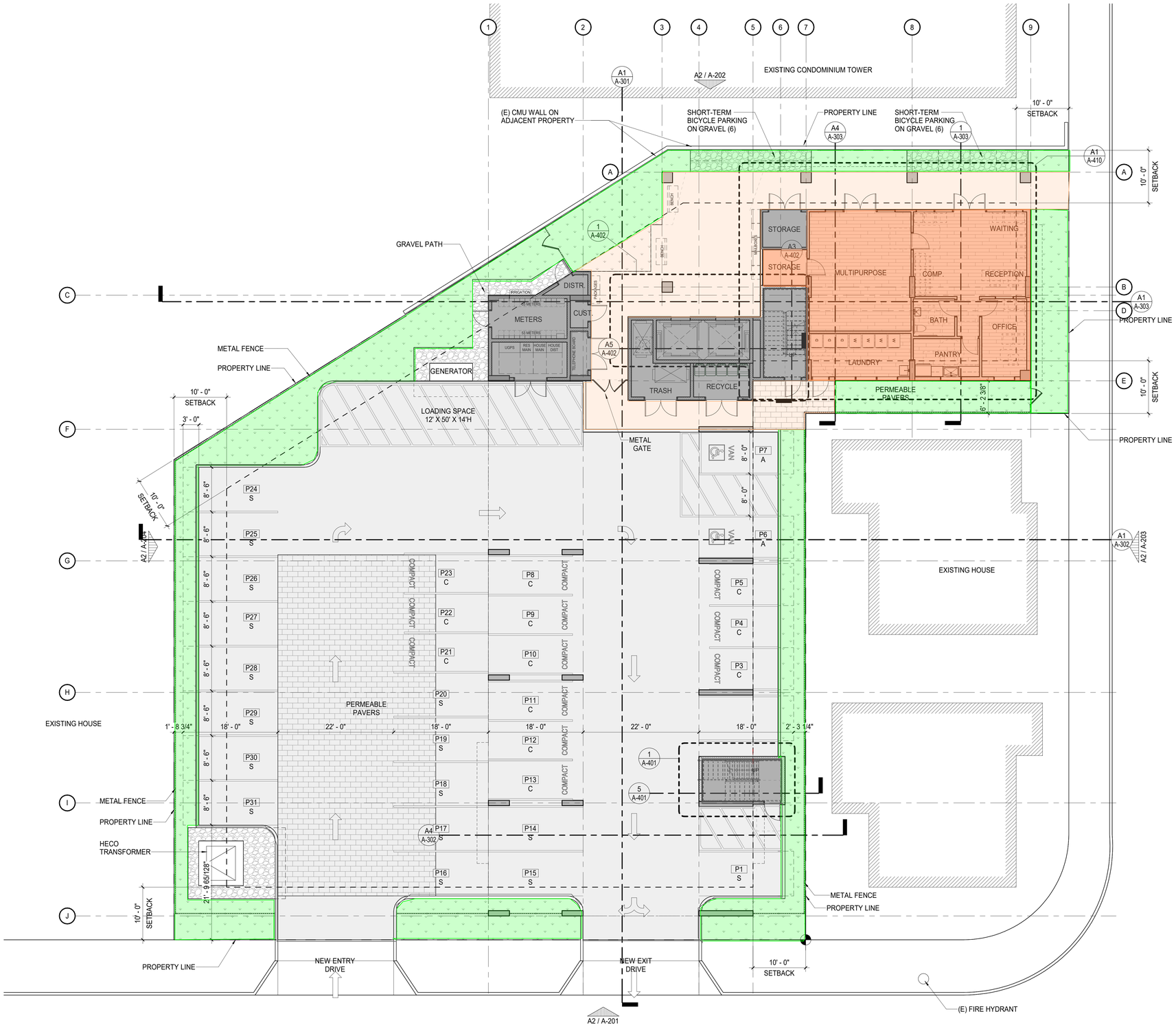
ahl.

STREET VIEW 4

Hale Makana o Mo'ili'ili

REVISED SCHEME
SEPTEMBER 2020

ahl.



FLOOR PLAN NOTES

NOT FOR CONSTRUCTION

08/17/2020

HALE MAKANA O MO'ILI'ILI

DESIGN DEVELOPMENT

A1 LEVEL 1 - FLOOR PLAN

SCALE: 1/8" = 1'-0"

1/8" = 1'-0"

OWNER

HCDB
Hawaiian Community Development Board

HAWAIIAN COMMUNITY DEVELOPMENT BOARD
1188 BISHOP ST, SUITE 907
HONOLULU, HAWAII 96813
TELEPHONE: (808) 529-0404
www.hawndev.org

ARCHITECT

ahl.

ARCHITECTS HAWAII LTD.
733 BISHOP ST, SUITE 3100
HONOLULU, HAWAII 96813
TELEPHONE: (808) 523-9636
www.ahl.design

CONSULTANT

REVISIONS

NO.	DATE	REVISION
	12.31.20	CONSTRUCTION SET

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE OBSERVED UNDER MY OBSERVATION (OBSERVATIONS OF CONSTRUCTION AS DEFINED IN CHAPTER 16-115, SUBCHAPTER 1 DEFINITIONS OF THE HAWAII ADMINISTRATIVE RULES, "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS, AND LANDSCAPE ARCHITECTS.")

APRIL 30, 2022

SIGNATURE | EXPIRATION DATE OF LICENSE

NOTE:
CONTRACTOR TO CHECK AND VERIFY DIMENSIONS AT JOB BEFORE PROCEEDING WITH WORK.

HALE MAKANA O MO'ILI'ILI
2139 ALGAROBA
HONOLULU, HAWAII 96822

SHEET DATE: 08/17/2020
PROJECT NO: 7065.000

LEVEL 1 - FLOOR PLAN

A-101

© ahl. ARCHITECTS HAWAII LTD.

DATE: 10/5/2020 9:31:29 AM

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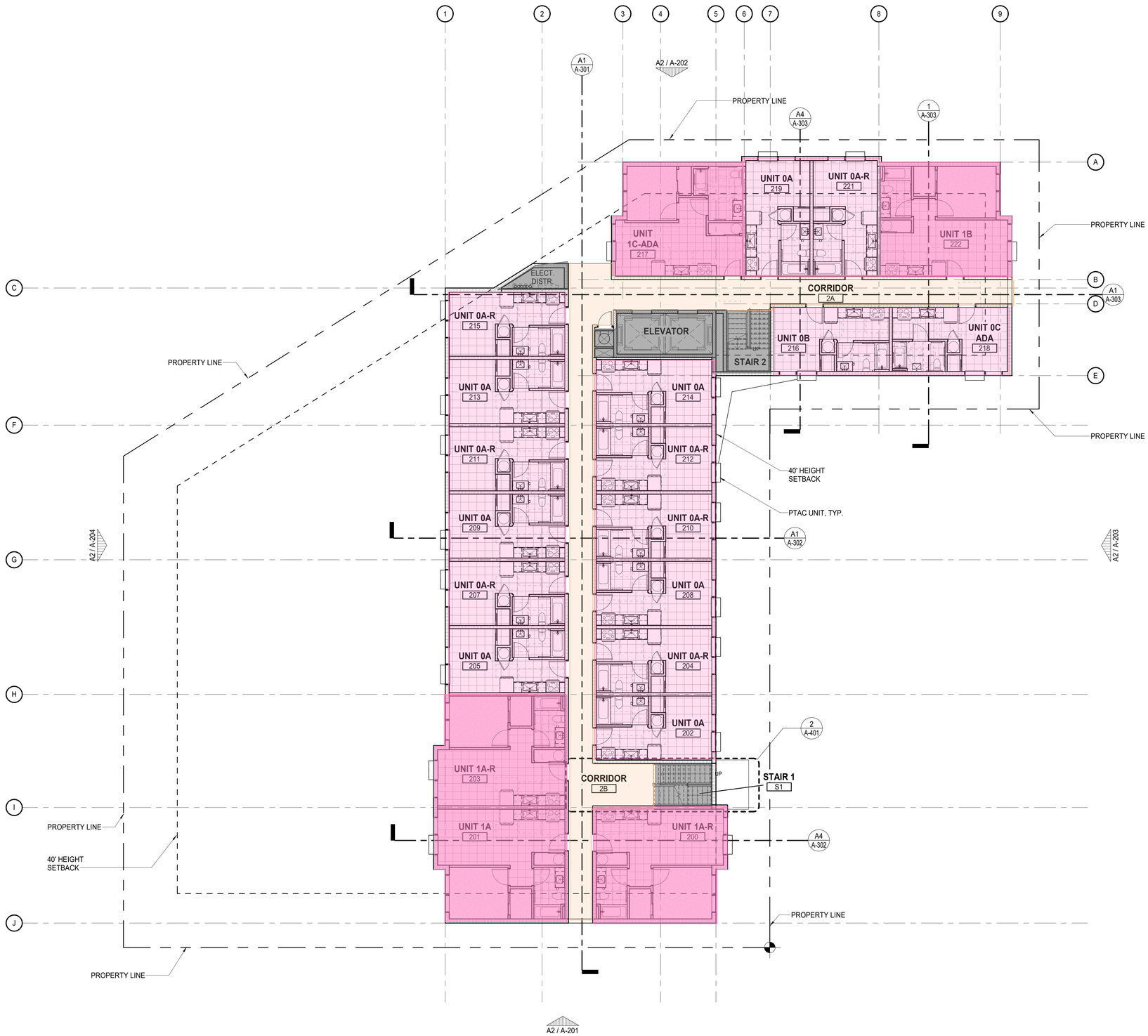

FLOOR PLAN NOTES

A1 LEVEL 2 - FLOOR PLAN
SCALE: 1/8" = 1'-0"

OWNER

HCDB
Hawaiian Community Development Board

HAWAIIAN COMMUNITY DEVELOPMENT BOARD
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TELEPHONE: (808) 523-9636
www.ahl.design

CONSULTANT

NOT FOR CONSTRUCTION

08/17/2020

HALE MAKANA O MO'ILI'ILI

DESIGN DEVELOPMENT

REVISIONS

NO.	DATE	REVISION

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISON AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. (OBSERVATIONS OF CONSTRUCTION AS DEFINED IN CHAPTER 16-115, SUBCHAPTER 1 DEFINITIONS OF THE HAWAII ADMINISTRATIVE RULES: "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS, AND LANDSCAPE ARCHITECTS.")

APRIL 30, 2022
SIGNATURE EXPIRATION DATE OF LICENSE

NOTE:
CONTRACTOR TO CHECK AND VERIFY DIMENSIONS AT JOB BEFORE PROCEEDING WITH WORK.

HALE MAKANA O MO'ILI'ILI
2139 ALGAROBA
HONOLULU, HAWAII 96822

SHEET DATE: 08/17/2020
PROJECT NO: 7065.000

LEVEL 2 - FLOOR PLAN

A-102

© ahl. ARCHITECTS HAWAII LTD.

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Appendix B

Overview of Ho'okahua Development, LLC

Ho'okahua
DEVELOPMENT

AFFORDABLE HOUSING

HO'OKAHUA DEVELOPMENT is the combined strength and experience of Hawaiian Community Development Board (HCDB) and 3 Leaf Holdings, Inc. (3 Leaf). "Ho'okahua" means "to lay the foundation." It is a Hawaiian word that symbolizes the goals of the partnership: to create affordable housing opportunities for low-income families across O'ahu. Kali Watson, as Executive Director of HCDB, serves as the managing member, and Ho'okahua Development is headquartered in Honolulu, Hawai'i.

LAYING A FOUNDATION

Ho'okahua works to truly meet the needs of the low-income families. Together the members bring complementary strengths to deliver a high-value product to a market that is traditionally the hardest to serve. Effective low-income housing requires a vision for how a dwelling can become a home and transform a family's future. In order to achieve that goal, it is necessary to coalesce public and private funding sources, contractors, consultants, and professionals to assess all possibilities, and ascertain a high-value project that yields positive results.

Ho'okahua
DEVELOPMENT

The Ho'okahua team brings a strong financial standing and history to the proposed project. Combined, the members of Ho'okahua have successfully completed a mix of developments in excess of $541.8 million, and have another $364.7 million in developments in progress in Hawaii and California. The members of Ho'okahua have proven track record of leveraging Low Income Housing Tax Credits (LIHTC) to bring affordable housing solutions to low-income families.

Together, the members of Ho'okahua will have utilized more than $105.3 million in LIHTC to build affordable housing units in Hawaii, and more than $301.7 million for developments in Hawaii and California combined.

Selected LIHTC Projects Completed, In-progress, or in Pre-Development

Medici Artist Lofts	Stockton, CA
Tracy Avenue 50 Apartments	Tracy, CA
San Joaquin Senior Veterans Homes	Stockton, CA
Turlock 40 Senior Apartments	Turlock, CA
14th Saint Family Apartments	Los Angeles, CA
Hartberg Senior Apartments	Gridley, CA
Hallmark Apartments	Shafter, CA
Hale Makana O Nanakuli	Nanakuli, HI
Turlare Arms Apartments	Shafter, CA
Kalama Valley Senior Apartments	Hawaii Kai, HI
Cal Weber 40	Stockton, CA
Cottage Village Apartments	Manteca, CA
Firestone Apartments	Los Angeles, CA
Oakhurst Apartments	Oakhurst, CA
Dinuba Senior Apartments	Dinba, CA
Pleasant Valley Pines	Coalinga, CA
Garden Valley Apartment Houses	Fresno County, CA
Halawa View Apartments	Aiea, HI
Kewalo Apartments	Honolulu, HI

Kewalo Apartments

Kewalo Apartments is a 38 unit affordable housing property located at 1407 Kewalo Street near Lunalilo Street. This property was built in the early 1960's under the HUD 236 Loan Program and currently has thirty project based Section 8 residents. The remaining eight residents pay the U.S. Department of Housing and Urban Development (HUD) approved rents.

The project site consists of two buildings and contains two bedroom units only. Unit interiors include bathrooms, kitchens, bedrooms and living areas. Many of the residents of Kewalo Apartments have been there for several years.

Hawaii Community Development Board, in partnership with Pacific Development Group, have purchased the property and have been awarded Federal and State tax credits through Hawaii Housing Finance & Development Corporation (HHFDC). Securing tax credits has made the rehabilitation of the project and preservation of the rental units possible.

Halawa View Apartments

Halawa View Apartments is a 121 unit affordable housing property located at 99-009 Kalaloa Street near the entrance to Pearl Harbor. This 14 story property was built in the early 1970's under the HUD 236 Loan Program and currently has 24 project based Section 8 residents. The remaining 97 residents pay the U.S. Department of Housing and Urban Development (HUD) approved rents.

The project site consists of one high rise and two mid-rise buildings and contains two, three and four bedroom units. Unit interiors include bathrooms, kitchens, bedrooms and living areas. Many of the residents of Halawa View Apartments have been there for many years.

HCDB and 3 Leaf Holdings have a combined experience of development consisting of over 30 projects across Hawaii and California, with over 1,000 units developed and or currently in the development pipeline. The projects include a variety of housing developments - including single family, multi-family, senior units - subdivision developments, as well as commercial retail, industrial and agricultural projects. In the last three years the Ho'okahua team has completed159 units of affordable housing projects, with another 396 units underway. Among these projects is the Halawa View Apartments project, which developed 121 units of affordable housing. Three significant projects which demonstrate the efficiency and strong working relationship between Ho'okahua members are summarized below.

Hale Makana O Nanakuli

The Nanakuli Hawaiian Homes Community Association approached HCDB with a concern that too many members of their community lived in overcrowded or homeless situations and asked HCDB to find a solution. In 2009, HCDB partnered with Urban Housing Communities (UHC) to create a 48-unit multi-family project designed to meet the needs of low-income families whose household income levels fall between 30% and 40% of the area median income (AMI). Creating affordable housing options is an acknowledged development challenge, and meeting the needs of this particular low-income population is particularly difficult because of the reduced income in the form of rents.

Because the project was funded through the 4% tax credit program, HCDB secured adequate bond revenues and needed to leverage a variety of funding and financing sources to complete the project. HCDB was able to leverage $1.5 million from the Hawai'i Community Reinvestment Corporation (HCRC) and $249,300 in a soft loan from the Nanakuli Hawaiian Homes Community Association (NHHCA). In partnership with the University of Hawai'i West Oahu, NHHCA secured a grant through the HUD Native Hawaiian Institutions Assisting Communities (NHIAC) program, enabling it to provide a 50-year soft loan to the project. One critical element of ensuring the continuing viability and success of the Hale Makana O Nanakuli project is to ensure sufficient resources are available to subsidize a tenant's ability to pay the full rental rate when their income and ability to pay is diminished. The Hale Makana o Nanakuli project receives approximately $400,000 to $700,000 each year in USDA 521 rental subsidies.

Kapolei Mixed Use Development Phase II is the second phase of this development will include 143 units of family housing targeted to households earning 30%-60% of AMI. Hawaiian Community Development Board is working with Costal Rim Properties Inc. and Highridge Costa Development Company LLC to develop this portion of the Project.

The development will include 2,705 sf of ground floor retail, 2,500 sf dedicated to a Community Center, 16,500 sf allotted for a recreation deck, lobby offices, laundry room, and 159 parking stalls. On Sept. 14, 2017 HHFDC approved financing of $63,796,716: Hula Mae tax exempt bond-backed construction and permanent Loans, 4% Low Income Housing tax credits, and Rental Housing will be close to public transit, shopping, recreation, and civic amenities. Groundbreaking is scheduled for 2019.

Hale Makana O Maili is a 52-unit multi-family affordable rental housing development on a 1.95 acre portion of a 2.78 acre parcel in the ili of Maili, in the ahupuaʻa of Lualualei, in the district of Waiʻanae on the island of Oʻahu. The development will consist of 6 buildings, a central park, parking and a perimeter fence. Development funding was recently obtained for this $22 million project from the City & County of Honolulu and the State's Hawaii Housing Finance and Development Corp.

The project includes a 2,463 sq. ft. ResourceCenter, which will provide residents with a variety of useful spaces, including a library and computer center, two multi-purpose rooms and laundry facilities. Additionally, the center will include a reception and lounge, a manager's office, storage spaces, a public restroom, a covered waiting area and picnic area. Construction will commence in June 2019.

Hawaiian Community Development Board

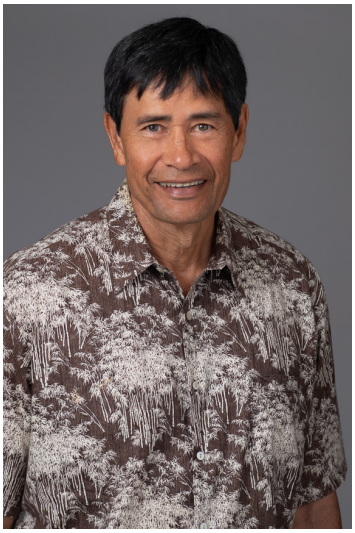
Incorporated in 2000, Hawaiian Community Development Board (HCDB) is a non-profit organization specializing in developing projects that provide low-income families with affordable housing and other opportunities.

It is governed by an 7-member Board of Directors, all of whom are Native Hawaiian. A majority of the board members are beneficiaries of the Hawaiian Homes Commission Act, and leaders in their respective communities. HCDB has a strong connection with Hawaiian communities across the state, and a demonstrated track record of developing projects that serve the needs of the beneficiaries in ways they want to be served.

HCDB was founded by its CEO, Kali Watson as a continuation of his passion for providing families with affordable housing options. Watson served as the Chairman of the Hawaiian Homes Commission and the Director of the Department of Hawaiian Home Lands (DHHL) between 1995 and 1998. Under his leadership, DHHL began work to develop creative ways to provide pathways for applicants to become lessees, including the incorporation of self-help housing solutions, Habitat for Humanity, rental and kupuna housing, and traditional developer-built subdivisions. Originally passed in 1996,

Watson was instrumental in laying the groundwork for the 2000 Amendment to the Native American Housing and Self-Determination Act that provides services to Native Hawaiian communities on Hawaiian Home Lands.

Kali Watson, CEO



Watson is the President and Founder of Hawaiian Community Development Board, the former Chairman of the Hawaiian Homes Commission / Director of the State of Hawaii Department of Hawaiian Home Lands, and licensed attorney. Watson has an extensive background in development issues, particularly on Hawaiian Home Lands. He and his team have successfully administered affordable housing and economic development projects on and off Hawaiian Home Lands.

Patti Barbee, Senior Vice President

Barbee is the Senior Vice President of Hawaiian Community Development Board and has over 20 years of successfully planning, executing, monitoring, and closing various types of projects throughout the state of Hawaii. She is an expert in project and program management. She is trained in environmental reviews, real estate, appraisal, mortgage financing, state and federal procurement. She is seasoned in working with a wide range of programs, services and funding sources designed to improve Native Hawaiian conditions, particularly in the area of affordable housing, credit counseling and economic development projects.

3-Leaf Holdings

Founded by its current Chairman and CEO, Christopher Michael Flaherty, 3 Leaf Holdings, LLC (3 Leaf) is an investment company with holdings in three distinct industries: agriculture, energy and real estate. Flaherty owns Trinity Development & Construction, Inc., a General Contracting construction management and development company licensed in Hawaii and California. Trinity has completed in excess of $100 million in construction projects since 2000. Attention to detail in quality craftsmanship, on-time project delivery and careful consideration to the client's budget is paramount to Trinity's success.

Subsidiary DFA Development, LLC, is lead by its Founder and current President Daniel Fred, a key member of the LOLP team. DFA's focus is in resolving the issues that make affordable housing projects difficult. Since 1982, DFA has provided development, planning and financial consulting services to public agencies, nonprofit organizations and private firms as they work to address the critical need of affordable housing. DFA has served as co-developer and/or financial advisor/development consultant with these agencies in determining the appropriate focus for their efforts. DFA has helped in providing affordable housing solutions, and designing and implementing programs to meet those objectives.

DFA has utilized financing from Low Income Housing Tax Credits (LIHTC), tax-exempt bonds, city redevelopment funds, HUD HOME funds, and existing permanent loans from USDA Rural Development, as well as through private equity and conventional lending sources. Quite often, DFA has been retained by housing development corporations, housing authorities, cities, counties and for profit development companies interested both in restructuring their existing debt and in financing the construction of new affordable housing and the infrastructure serving that housing.

In the new construction and acquisition category, DFA has served as financial advisor in accessing 9% low income housing tax credits as well as 4% low income housing tax credits together with private activity mortgage revenue bonds. This work also has involved securing the financing from a variety of other funding sources (e.g., HUD and FHA financing, California Dept. of HCD, Joe Serna Jr. Farmworker Housing Grant Program, USDA/RD 514 and 515 programs, 501(c)3 bonds, CalHFA, HOME, CDBG, Federal Home Loan Bank's Affordable Housing Program, private foundations and private lenders).

DFA currently serves as financial advisor to a number of housing authorities in California and is responsible for evaluating portfolios and advising the housing authority staffs and Boards of Commissioners on all of their development projects. DFA has assisted these housing authorities in the disposition and demolition of outdated public housing and the redevelopment of the sites.

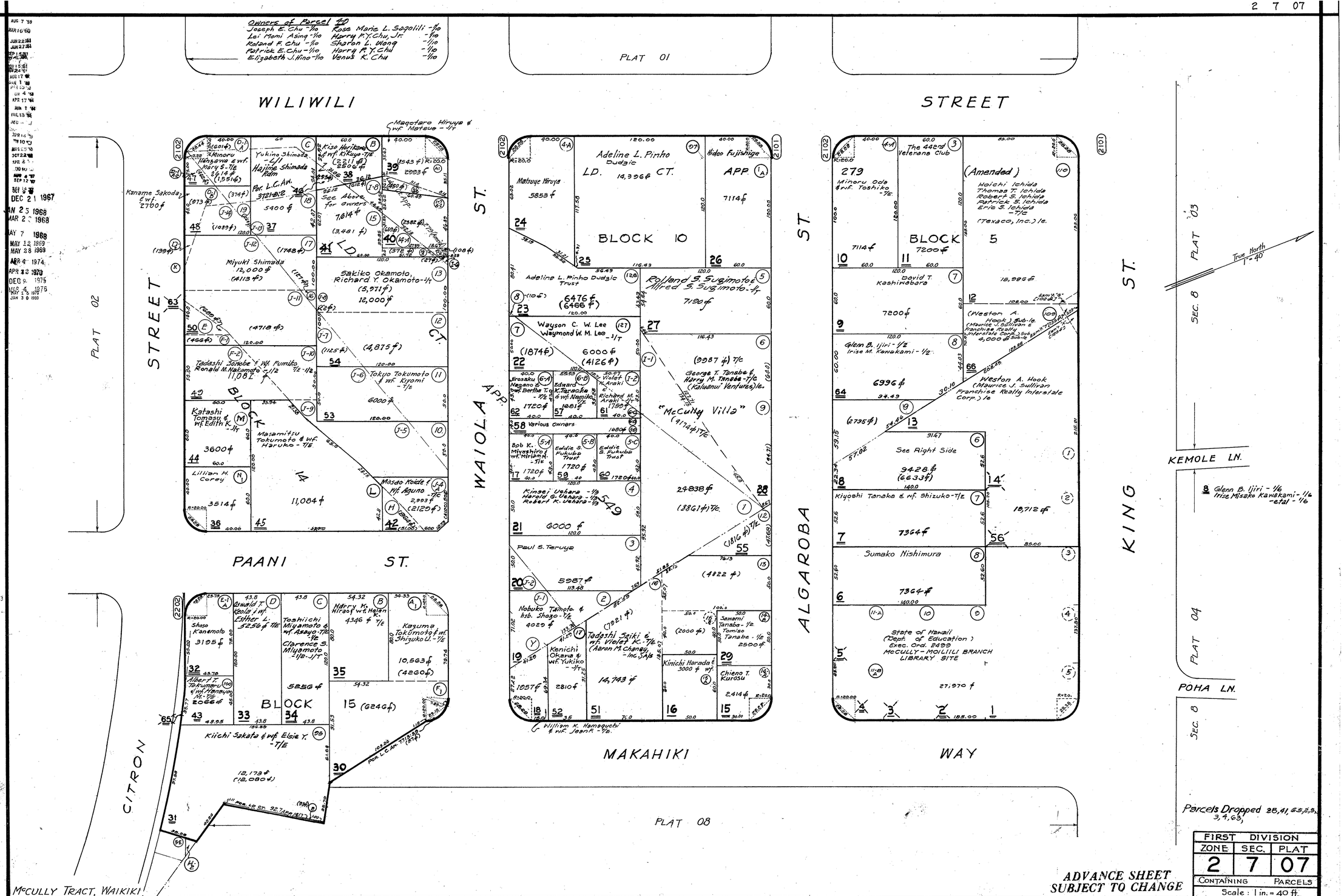
Christopher Flaherty, President

Christopher Flaherty is Chairman and CEO, of 3 Leaf Holdings, and sole shareholder in Trinity Construction. Flaherty's experience over the past 25 years includes construction and development in apartment, commercial, residential and agricultural properties. Flaherty is a 1991 Graduate of Fresno State University with a Bachelor of Science degree in Business Administration.

Appendix C

Property Information for TMK: (1)2-07-07:16 & (1)2-07-07:51

City & County of Honolulu Department of Planning & Permitting


Owners of Parcel 40
Joseph E. Chu -1/10
Lei Momi Asing -1/10
Roland F. Chu -1/10
Patrick E. Chu -1/10
Elizabeth J. Hino -1/10
Rose Marie L. Sagolili -1/10
Harry F.T. Chu, Jr. -1/10
Sharon L. Wong -1/10
Harry F.T. Chu -1/10
Venus K. Chu -1/10
PLAT 01
WILIWILI STREET
PAANI ST.
WAIOLA ST.
ALGAROBA ST.
KING STREET
MAKAHIKI WAY
CITRON
PLAT 02
PLAT 03
PLAT 04
PLAT 08
SEC. 8
KEMOLE LN.
POHA LN.
True North 1-40
BLOCK 14
BLOCK 10
BLOCK 5
McCULLY TRACT, WAIKIKI
McCully Villa
State of Hawaii (Dept. of Education) Exec. Ord. 2499 McCULLY-MOILILI BRANCH LIBRARY SITE
Parcels Dropped 28, 41, 65, 2, 3, 9, 3, 4, 63,
FIRST DIVISION
ZONE 2 SEC. 7 PLAT 07
CONTAINING PARCELS
Scale: 1 in. = 40 ft.
ADVANCE SHEET SUBJECT TO CHANGE
PRINTED

ASCE Tsunami Hazard Tool

ASCE Tsunami Design Geodatabase Version 2016-1.0

Measure Basemap Share

Enter Structure Information

Enter Location

ADDRESS | LAT/LONG | FIND ON MAP

2139 Algaroba St, Honolulu, SEARCH

Select Criteria

Tsunami Risk Category

Risk Category

Measurements

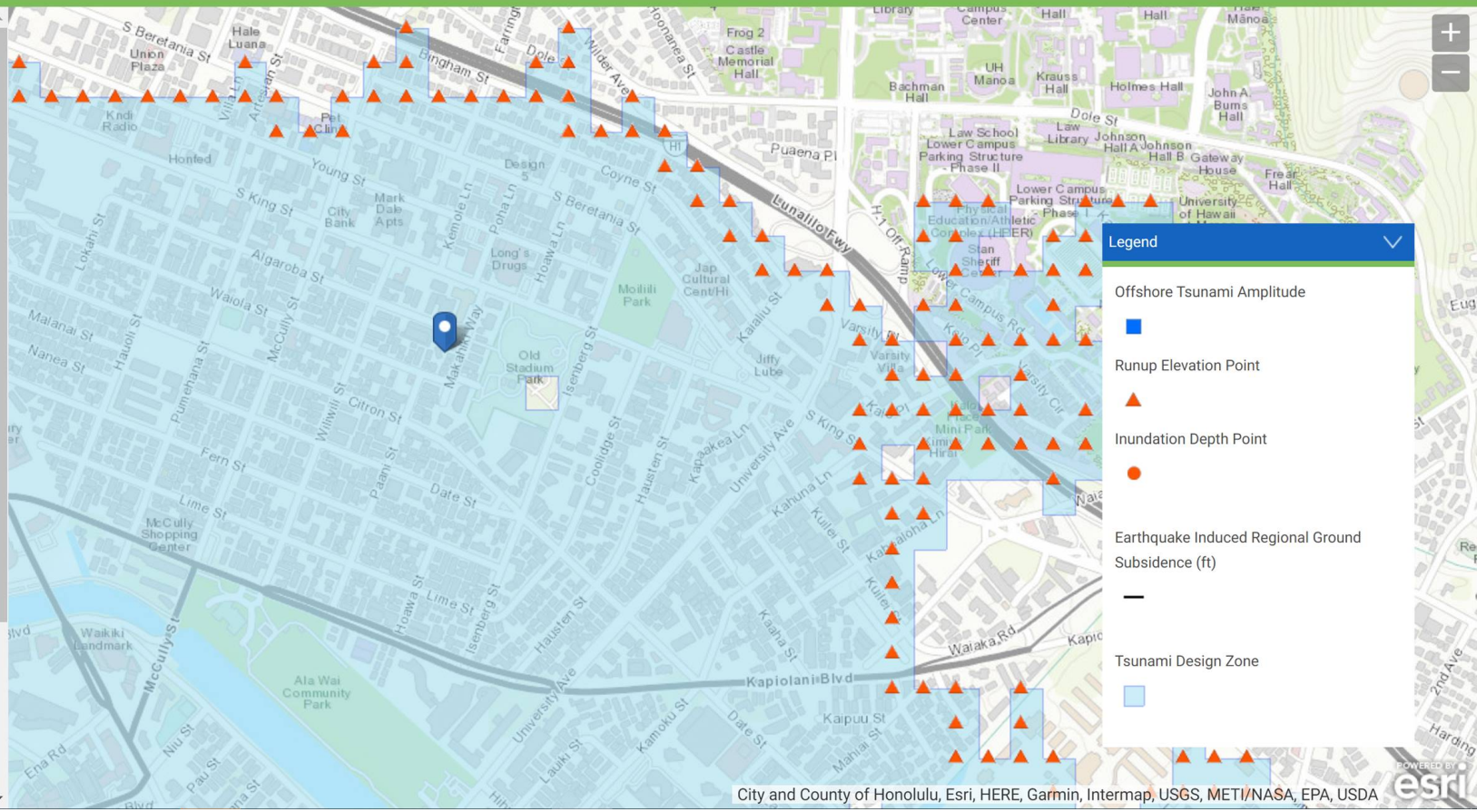
Customary SI

Select Data Type for Analysis

DATA POINTS | TRANSECT

Click on points or DRAW A BOX over multiple to view point data.

Note: Offshore Tsunami Amplitude points may be some distance off-shore so zooming out may be required.



Appendix D

FEMA FIRM Map

National Flood Hazard Layer FIRMette

FEMA

157°50'W 21°17'51"N

157°49'22"W 21°17'17"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- B 20.2 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- 8 Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 8/1/2020 at 4:55 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Appendix E

Responses to Pre-Assessment Consultation

City and County of Honolulu, Board of Water Supply
City and County of Honolulu, Dept. of Parks and Recreation
City and County of Honolulu, Dept. of Planning and Permitting
City and County of Honolulu, Dept. of Transportation Services
City and County of Honolulu, Dept. of Design and Construction
City and County of Honolulu, Dept. of Community Services
City and County of Honolulu, Honolulu Fire Dept.
City and County of Honolulu, Police Dept.
State of Hawaii Dept. of Transportation
State of Hawaii Dept. of Education
State of Hawaii Dept. of Land and Natural Resources, Land Division
State of Hawaii Dept. of Accounting and General Services
University of Hawaii Water Resources Research Center
Council member Ann Kobayashi, District 5, City & County of Honolulu Council

CITY COUNCIL
CITY AND COUNTY OF HONOLULU
530 SOUTH KING STREET, ROOM 202
HONOLULU, HAWAII 96813-3065
TELEPHONE: (808) 768-5010 • FAX: (808) 768-5011

ANN H. KOBAYASHI
COUNCIL VICE CHAIR
DISTRICT 5
TELEPHONE: (808) 768-5005
FAX: (808) 768-1227
EMAIL: akobayashi@honolulu.gov

December 12, 2019

Pattie Barbee
Hawaiian Community Development Board
1188 Bishop Street, Suite 907
Honolulu, Hawaii 96813

Dear Ms. Barbee,

Thank you for your letter of December 2, 2019, regarding information on the Hawaiian Community Development Board's proposed 105 unit low-income kupuna housing project in Moiliili, and providing me the opportunity to offer my comments on the project.

As the Councilmember for the area, I am aware of the many homeless in and around Moiliili. By providing much needed rentals for low-income residents and formerly homeless families, this project should benefit the community and help reduce the number of homeless persons in the area.

I look forward to hearing further details on this project as it proceeds through the environmental assessment process.

Sincerely,

Ann H. Kobayashi
Councilmember, District V

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843
www.boardofwatersupply.com

KIRK CALDWELL, MAYOR

BRYAN P. ANDAYA, Chair
KAPUA SPROAT, Vice Chair
KAY C. MATSUI
RAY C. SOON
MAX J. SWORD

ROSS S. SASAMURA, Ex-Officio
JADE T. BUTAY, Ex-Officio

ERNEST Y. W. LAU, P.E.
Manager and Chief Engineer

ELLEN E. KITAMURA, P.E.
Deputy Manager and Chief Engineer

January 13, 2020

Ms. Patti Barbee
Hawaiian Community Development Board
1188 Bishop Street, Suite 907
Honolulu, Hawaii 96813

Dear Ms. Barbee:

Subject: Your Letter Dated December 2, 2019 Requesting Comments on the Environmental Assessment Pre-Consultation for Hale Makana O Moiliili off Algaroba Street – Tax Map Key: 2-7-007: 016 & 051

Thank you for the opportunity to comment on the proposed 105-unit affordable housing rental project.

The existing water system is adequate to accommodate the proposed high-rise development. However, please be advised that this information is based upon current data, and therefore, the Board of Water Supply (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.

The applicant will be required to pay our Water System Facilities Charges for resource development, transmission, and daily storage.

BWS may waive the Water Systems Facilities Charges and new meter costs for qualified on-site affordable and homeless dwelling units, up to 500 dwelling units per year. The wavers will be granted when the building permit is submitted for approval. To qualify, the dwelling units must be certified as either affordable or homeless dwelling units by the appropriate agency of the City and County of Honolulu and the certification provided when the building permit application is submitted for review and approval.

Water conservation measures are required for all proposed developments. These measures include utilization of nonpotable water for irrigation using rain catchment, drought tolerant plants, xeriscape landscaping, efficient irrigation systems, such as a drip system and moisture sensors, and the use of Water Sense labeled ultra-low flow water fixtures and toilets.

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

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

KIRK CALDWELL
MAYOR

MARK YONAMINE, P.E.
DIRECTOR DESIGNATE

HAKU MILLES, P.E.
DEPUTY DIRECTOR

December 20, 2019

Hawaiian Community Development Board
ATTN: Patti Barbee
1188 Bishop Street, Suite 907
Honolulu, Hawaii 96813

Ms. Barbee:

Subject: Chapter 343, Environmental Assessment for 105 unit low-income Kupuna Affordable Housing Rental Moiliili, Oahu

Thank you for the opportunity to review and comment. The Department of Design and Construction does not have any comments at this time.

Should you have any further questions, please contact me at 768-8480.

Sincerely,

for Mark Yonamine, P.E.
Designate Director

MY:ms
(769077)

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 • web: www.honolulu.gov

KIRK CALDWELL
MAYOR

WES FRYSZTACKI
DIRECTOR

JON Y. NOUCHI
DEPUTY DIRECTOR

TP12/19-797075

January 30, 2020

Ms. Patti Barbee
Hawaiian Community Development Board
1188 Bishop Street, Suite 907
Honolulu, Hawaii 96813

Dear Ms. Barbee:

SUBJECT: Agency Pre-Consultation for a HRS Chapter 343 Environmental Assessment for the Proposed 105-Unit Affordable Rental Housing Project Serving Low-Income seniors at 30%, 50%, and 60% AMI, District of Honolulu, Island of Oahu, Hawaii

Thank you for the opportunity to provide written comments on the Hale Makana O Moiliili project description. In response to your letter dated December 2, 2019, we have the following comments.

1. **Complete Streets Design Elements**. The Application should discuss compliance with County and State Complete Streets policies, pursuant to Act 54, Session Laws of Hawaii 2009, HRS §264-20.5 and ROH 12-15. The project incorporate Complete Streets principles: safety, Context Sensitive Solutions, accessibility and mobility for all, use and comfort of all users, consistency of design guidelines and standards, energy efficiency, and health and green infrastructure. Specific complete street design elements recommendations are listed below:

   a. Provide secure on-site bicycle parking for residents. Refer to Section No. 21-6.150 Bicycle Parking in the City and County of Honolulu Land Use Ordinance.

   b. Ensure pedestrian entrance has adequate visibility to/from sidewalk for safety.

c. Eliminate the used driveway on Makahiki Way, and reconstruct curb to provide additional on-street parking or a passenger loading area for pick-ups and drop-offs.

2. **Transportation Impact Assessment (TIA).** A multi-modal TIA should be completed instead of a Traffic Impact Analysis Report in the Environmental Assessment. The TIA should determine the impacts to vehicle, pedestrian, bicycle, and public transit at nearby intersections and project access driveways. The TIA should identify corresponding improvements to mitigate these impacts by applying Complete Streets principles.

   a. Use person and vehicle trip rates from the Institute of Traffic Engineer's Trip Generation Manual and assign these trips to the transportation system. This will require analysis of crossing treatments using National Cooperative Highway Research Program 562 methodology for pedestrian measures.

   b. The calculated and observational Level of Service (LOS) should be provided.

   c. Define performance measures for use in the study:

      i. V/C ratio targets that are >1 for 1st and/or 2nd highest peak hours;

      ii. Identify where vehicle LOS will not be used;

      iii. Pedestrian LOS;

      iv. Bicycle Level of Traffic Stress;

      v. Transit Capacity and Quality of Service.

   d. Discuss access management and loading. Specifically, the TIA should evaluate the consolidation of driveway. Additionally, all commercial loading and unloading activities should be provided on site.

3. **Parking and Service Strategy and Plan.**

   a. A Parking and Service Strategy shall be required as part of the TIA plan.

   b. The number of parking spaces shall be justified and consistent with the trip generation method used in the TIA.

   c. The Department of Transportation Services (DTS) requires a Shared Parking Analysis, based on the Urban Land Institute Shared Parking model, and a

shared parking strategy. The analysis should include a qualitative description of how the Applicant will monitor and manage opportunities for shared parking between the various users (employees and visitors) of the parking structure and lots.

d. Pedestrian, bicycle, transit, and rideshare circulation plans shall be provided for all parking strategies.

e. Provide preferred parking for carpool or shared-use vehicle parking spaces equivalent to at least 10% of the total off-street parking spaces for each nonresidential and mixed-use building on the site. Such parking spaces must be marked and within 200 feet walking distance of entrances to the building served.

f. Discuss Traffic Demand Management strategies to minimize the demand for parking. These strategies may include purchasing City bus passes to encourage residents to use public transit.

4. **Traffic Management Plan (TMP).** A TMP should be prepared for this project that is jointly reviewed and accepted by the DTS and the Department of Planning and Permitting. The TMP shall include the following:

a. A discussion of the traffic impacts that the project may have on any surrounding City roadways and facilities, including short-term impacts during construction with corresponding measures to mitigate these impacts by applying Complete Streets principles.

b. 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 adjoining streets.

c. Roadway, Sidewalk and Crosswalk Closures. If there are any roadway, sidewalk or crosswalk closures, alternate routes should be provided for vehicles, pedestrians, and bicyclists that are safe and clearly marked.

d. Vehicle/Pedestrian Crossing. Any existing pedestrian, bicycle and vehicle access/crossing shall be maintained with the highest safety measures during construction.

e. Best Management Practice (BMP) Controls. BMP controls should be included at the construction site to prevent trailing of dirt and debris onto adjacent roadways.

f. Roadway Damage. Any damage to the existing roadway and sidewalk area caused by the project should be repaired to current City standards as well as meet Americans with Disabilities Act (ADA) requirements.

5. **Street Usage Permit**. A street usage permit from the DTS should be obtained for any construction-related work that may require the temporary closure of any traffic lane or pedestrian mall on a City street.

6. **Neighborhood Impacts**. The area representatives, neighborhood board, as well as the area residents, businesses, emergency personnel (fire, ambulance, and police), Oahu Transit Services, Inc. (TheBus and TheHandi-Van), etc., should be kept apprised of the details and status throughout the project and the impacts that the project may have on the adjoining local street area network.

7. **Bus Stops**. The project site is in the immediate vicinity of bus stops located on King Street. Submit project plans to DTS – Transportation Mobility Division (TMD) for review and approval. Contact DTS-TMD at TheBusStop@honolulu.gov

8. **Disability and Communication Access Board (DCAB)**. Project plans (vehicular and pedestrian circulation, sidewalks, parking and pedestrian pathways, vehicular ingress/egress, etc.) should be reviewed and approved by DCAB to ensure full compliance with ADA requirements.

Thank you for the opportunity to review this matter. Should you have any questions, please contact Mike Motoki, of my staff, at 768-6684.

Very truly yours,

Wes Frysztacki
Director

DAVID Y. IGE
GOVERNOR

CURT T. OTAGURO
COMPTROLLER

AUDREY HIDANO
DEPUTY COMPTROLLER

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
P.O. BOX 119, HONOLULU, HAWAII 96810-0119

(P) 19.259

DEC 23 2019

Ms. Patti Barbee
Hawaiian Community Development Board
1188 Bishop Street, Suite 907
Honolulu, Hawaii 96813

Dear Ms. Barbee:

Subject: Hale Makana O Moiliili Affordable Rental Housing Project
Moiliili, Honolulu, Hawaii
Tax Map Key (TMK): 2-07-07:16 and 2-07-07:51
Request for Comment on Pre-Draft Environmental Assessment Project Description

Thank you for the opportunity to provide comments on the subject project. The project does not impact any of the Department of Accounting and General Services' projects or existing facilities, and we have no comments to offer at this time.

If you have any questions, your staff may call Mr. Dennis Chen of the Public Works Division at 586-0491.

Sincerely,

CURT T. OTAGURO
Comptroller

DYKC:jl

DEPARTMENT OF COMMUNITY SERVICES
CITY AND COUNTY OF HONOLULU
925 DILLINGHAM BOULEVARD, SUITE 200•HONOLULU, HAWAII 96817
PHONE: (808) 768-7762 • FAX: (808) 768-7792
www.honolulu.gov/dcs

KIRK CALDWELL
MAYOR

PAMELA A. WITTY-OAKLAND
DIRECTOR

REBECCA J.'I. SOON
DEPUTY DIRECTOR

January 27, 2020

Ms. Patti Barbee
Senior Vice President
Hawaiian Community Development Board
1188 Bishop Street, Suite 907
Honolulu, Hawaii 96813

Dear Ms. Barbee:

SUBJECT: Preparation for a Draft Environmental Assessment for the proposed development of a 105 unit, low-income kupuna affordable housing rental project in Moiliili

Thank you for your letter regarding preparation of a Draft Environmental Assessment for the proposed 105 unit, low-income kupuna affordable housing rental project located in Moiliili, TMK: 2-07-07:16 & 2-07-07:51.

Our review of the documents indicate that the proposed project will have no adverse impacts on any Department of Community Services' activities or projects in the surrounding neighborhood.

Thank you for providing us the opportunity to comment on this matter.

Sincerely,

Pamela A. Witty-Oakland
Director

DAVID Y. IGE
GOVERNOR

JADE T. BUTAY
DIRECTOR

Deputy Directors
LYNN A.S. ARAKI-REGAN
DEREK J. CHOW
ROSS M. HIGASHI
EDWIN H. SNIFFEN

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

IN REPLY REFER TO:
DIR 1241
STP 8.2828

January 8, 2020

Ms. Patti Barbee
Hawaiian Community Development Board
1188 Bishop Street, Suite 907
Honolulu, Hawaii 96813

Dear Ms. Barbee:

Subject: Hale Makana O Moiliili
Early Consultation for Draft Environmental Assessment (DEA)
Moiliili, Oahu, Hawaii
TMK: (1) 2-7-007:016 and 051

The Hawaii Department of Transportation (HDOT) understands that Hookahua Development, LLC is proposing to develop a 105-unit affordable rental housing project for low-income seniors. Vehicular access to the project will be from Makahiki Way and Algaroba Street, both of which are under City and County of Honolulu jurisdiction.

HDOT has determined that based on the information provided, the project is not anticipated to have significant impacts to State facilities. We recommend that the DEA should include the following:

1. The jurisdiction of roadways in the vicinity of the project.

2. Number of parking spaces being provided onsite.

3. Anticipated vehicle trips generated by the project, including employees, residents, and visitors.

4. Description of anticipated routes to and from the project site.

If there are any questions, please contact Mr. Blayne Nikaido of the HDOT Statewide Transportation Planning Office at (808) 831-7979 or via email at blayne.h.nikaido@hawaii.gov.

Sincerely,

JADE T. BUTAY
Director of Transportation

DAVID Y. IGE
GOVERNOR

DR. CHRISTINA M. KISHIMOTO
SUPERINTENDENT

STATE OF HAWAI`I
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAI`I 96804

OFFICE OF FACILITIES AND OPERATIONS

January 24, 2020

Patti Barbee
Hawaii Community Development Board
1188 Bishop Street, Suite 907
Honolulu, Hawaii 96813

Re: Early Consultation for the Preparation of a Draft Environmental Assessment (DEA) For Hale Makana O Moiliili, Moilili, Oahu, Hawaii TMKs: 2-7-007:016 & 051

Dear Ms. Barbee:

The Hawaii State Department of Education has the following early consultation comments for the proposed Hale O Makana Moiliili (Project). According to the information provided, Hookahua Development, LLC proposes to develop 105 unit rental housing project targeting seniors earning between 30 percent to 60 percent of the Area Median Income at Moiliili, Island of Oahu, TMKs 2-07-007:016 & 051.

The DEA should clarify whether school age children will be allowed to reside in the manager unit.

Additional comments will be provided during the DEA review.

Thank you for the opportunity to comment. Should you have questions, please contact Robyn Loudermilk, Acting Land Use Planner, Facilities Development Branch, Planning Section, at 784-5093 or via email at robyn.loudermilk@k12.hi.us.

Respectfully,

Kenneth G. Masden II
Public Works Manager
Planning Section

KGM:rll

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

KATHY K. SOKUGAWA
ACTING DIRECTOR

TIMOTHY F. T. HIU
DEPUTY DIRECTOR

EUGENE H. TAKAHASHI
DEPUTY DIRECTOR

2019/ELOG-2453(jl)
1812253

February 7, 2020

Ms. Patti Barbee
Hawaiian Community Development Board
1188 Bishop Street, Suite 907
Honolulu, Hawaii 96813

Dear Ms. Barbee:

SUBJECT: Pre-Environmental Assessment Consultation
Hale Makana O Moiliili, Honolulu, Hawaii
Tax Map Key (TMK): 2-7-007: 016 & 051

This is in response to your letter dated December 2, 2019, regarding preparation of a Draft Environmental Assessment (DEA) for the proposed Hale Makana O Moiliili.

We have the following comments:

1. This project may be eligible for exemption from the requirement to prepare an environmental assessment under the new Environmental Impact Statement Rules, Hawaii Administrative Rules, Section 11-200.1-15(c)(10).

2. The DEA should include a discussion on how the proposed project address policies and guidelines of the Oahu General Plan (GP) and the Primary Urban Center Development Plan (PUC DP).

3. The DEA should disclose if the Applicant is seeking any exemptions or waivers, pursuant to Section 201H-38 of the Hawaii Revised Statues (HRS), or applicable City ordinances.

4. The DEA should indicate the length of time the rental housing units will remain affordable to low income households, and what the preliminary rent limits will be.

5. The DEA should include a proposed development schedule for the project.

6. The DEA should include the number of units by unit type (bedroom/bathroom) and include a site plan, elevations, floor plans, and photographs of site and surrounding area.

   a. This project spans two zoning lots and requires either a subdivision and consolidation, a Conditional Use Permit (CUP) for the joint development of the lots, or a CUP for off-site parking.

   b. Land Use Ordinance Section 21-4.70 of the Revised Ordinance of Honolulu (ROH) requires that:

      i. Parking lots of five or more spaces have a minimum five-foot landscape strip adjacent to any adjoining street right-of-way);

      ii. Parking lots of more than 10 spaces have canopy trees; and

      iii. Outdoor trash storage areas have a wall or hedge at least six feet in height on a minimum of three sides, as required by Subsection (e).

7. Building permits associated with TMK 2-7-007:051 must be routed to the Department of Land and Natural Resources, State Historic Preservation Division, due to the presence of a structure(s) over 50 years old.

8. The subject site is within the projected 6-foot sea level rise (SLR) inundation area, as depicted by the National Oceanic and Atmospheric Administration (NOAA) Sea Level Rise Viewer. The NOAA Sea Level Rise Viewer is a screening tool that depicts the potential scale of flooding and does not include erosion or subsidence, or depict exact locations.

   Include an exhibit from the NOAA SLR Viewer (https://coast.noaa.gov/slr/)

   Based on Guidance from the Honolulu Climate Change Commission, the City and County of Honolulu has found that a planning benchmark of 6 feet of SLR is appropriate for projects with a life-span beyond mid-century, and for critical infrastructure. High tide flooding and nuisance flooding may be present and precede global mean sea level rise by decades.

   The DEA should include an analysis of the possible chronic and acute impacts of SLR on the project during the life of the proposed structure(s), and should discuss how the project design, proposed operations, and/or other site adaptation measures will mitigate these impacts. An appropriate analysis may include considerations such as: site planning, adaptive design elements, drainage improvements, storm and storm surge readiness, or other measures.

Project assessments should review and address the City and County of Honolulu Climate Change Commission's June 5, 2018, Sea Level Rise Guidance and Climate Change Brief (both can be found at: resilientoahu.org/about-the-commission);

The December 2017 Hawai'i Sea Level Rise Vulnerability and Adaptation Report (climateadaptation.hawaii.gov/wp-content/uploads/2017/12/SLR-Report_Dec2017.pdf);

And the NOAA Sea Level Rise Viewer (https://coast.noaa.gov/slr/).

These resources are screening and reference tools and do not replace more detailed modeling and analysis at the site level.

The Honolulu Climate Commission recommends disclosure in all real estate transactions for properties in areas projected to be affected by up to 6 feet of sea level rise. The foregoing comments are pursuant to City and County of Honolulu Directive 18-2 (July 16, 2018), and may be updated as needed.

9. The DEA should include a list of all required City, State, and Federal approvals for the proposed project.

Should you have further questions, please contact Jeffrey Lee, of our staff, at 768-8202.

Very truly yours,

Eugene H. Takahashi
Deputy Director

EHT:jl

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

December 19, 2019

Ms. Patti Barbee
Hawaiian Community Development
1188 Bishop Street, Suite 907
Honolulu, Hawaii 96813

Dear Ms. Barbee:

Subject: Draft Environmental Assessment (DEA)
Hale Makana O Moiliili Affordable Housing Project
2139 Alagaroba Street
Honolulu, Hawaii 96815
Tax Map Keys: 2-7-007: 016 and 051

In response to your letter dated December 2, 2019, regarding the abovementioned subject, the Honolulu Fire Department (HFD) reviewed the submitted information and 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 (45 meters) 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; 2012 Edition, Sections 18.2.3.2.2 and 18.2.3.2.2.1.)

   A fire department access road shall extend to within 50 feet (15 meters) of at least one exterior door that can be opened from the outside and that provides access to the interior of the building. (NFPA 1; 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 millimeters) 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; 2012 Edition, Section 18.3.1, as amended.)

3. The unobstructed width and unobstructed vertical clearance of a fire apparatus access road shall meet county requirements. (NFPA 1; 2012 Edition, Sections 18.2.3.4.1.1 and 18.2.3.4.1.2, as amended.)

4. Submit civil drawings to the HFD for review and approval.

Should you have questions, please contact Battalion Chief Wayne Masuda of our Fire Prevention Bureau at 723-7151 or wmasuda@honolulu.gov.

Sincerely,

JASON SAMALA
Assistant Chief

JS/TC:gl

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

SUSAN BALLARD
CHIEF

JOHN D. McCARTHY
~~XXXXXXXXXXXXXXXX~~
DEPUTY CHIEFS

OUR REFERENCE GLL-DK

December 23, 2019

Ms. Patti Barbee
c/o Hawaiian Community Development Board
1188 Bishop Street, Suite 907
Honolulu, Hawaii 96813

Dear Ms. Barbee:

This is in response to a letter from Hawaiian Community Development requesting input on a pre-consultation, Draft Environmental Assessment, for the proposed 105-unit, low-income kupuna affordable housing rental project in Moiliili.

Based on the project summary, site plan, and map provided, the Honolulu Police Department anticipates short- and long-term impacts to pedestrian and vehicular traffic in and around the project area, especially during peak traffic hours. These impacts may cause an increase in calls for service to the area. Parking conditions will also be adversely affected as street parking in this area is already limited.

If there are any questions, please call Acting Major Gordon Lum Kee of District 7 (East Honolulu) at 723-3369.

Thank you for the opportunity to review this project.

Sincerely,

ALLAN T. NAGATA
Assistant Chief
Support Services Bureau

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

December 20, 2019

Ms. Patti Barbee
Hawaiian Community Development
1188 Bishop Street, Suite 907
Honolulu, Hawaii 96813

Dear Ms. Barbee:

SUBJECT: Draft Environmental Assessment-Pre-Assessment Consultation
Kapuna Affordable Housing Rental Project in Moiliili, Oahu

Thank you for the opportunity to review and comment at the pre-consultation stage of the subject Draft Environmental Assessment.

The Department of Parks and Recreation has no comment. As the proposed project will have no impact on any program or facility of the Department, 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
(796106)

W/Kapuna Affordable Housing Rental Housing Project in Moiliili

UNIVERSITY of HAWAI'I®
MĀNOA

Water Resources Research Center

January 6, 2020

To Whom It May Concern,

This is to acknowledge receipt of your letter requesting a review of an environmental assessment (EA) or environmental impact statement (EIS). The Environmental Center at the University of Hawai'i at Mānoa, which for a time was linked to the Water Resources Research Center (WRRC), has been discontinued. As a result of the closure of the Environmental Center, we regret that WRRC no longer has the capacity to review environmental documents.

Sincerely,

Thomas Giambelluca
Director

Attachment

2540 Dole Street, Holmes Hall 283
Honolulu, Hawai'i 96822
Telephone: (808) 956-7847
Fax: (808) 956-5044
An Equal Opportunity/Affirmative Action Institution

HAWAIIAN
COMMUNITY DEVELOPMENT

1188 Bishop Street Suite 907
Honolulu, Hawaii 96813
Phone: (808) 529-0404
Fax: (808) 312-6379
www.hawndev.org

December 2, 2019

Thomas W. Giambellluca, Director
Water Resources Research Center
University of Hawaii
2540 Dole Street, Holmes Hall 283
Honolulu, HI 96822

Dear Director Giambellluca,

Hawaiian Community Development Board (HCDB) is proposing to develop a 105 unit low-income kupuna affordable housing rental project in Mo'ili'ili, O'ahu. The proposed project location is in the Mo'ili'ili, Honolulu area of Oahu. In accordance with the Hawai'i Revised Statutes, Chapter 343, HCDB is preparing an Environmental Assessment (EA) for the proposed development, evaluating the potential impacts of the construction and operation of this project.

The Project will be developed in Mo'ili'ili and that will provide new rental housing units targeting low-income Oahu residents (30%- 60% AMI), including formerly homeless families transitioning to permanent housing from emergency shelters and/or transitional housing programs. The project will consist of 7 residential buildings, laundry facilities, a community resource center, a parking lot, and landscaped grounds. The unit mix includes 80 studios, 24 one bedroom/one bath units, and one manager's unit.

There is a critical shortage of affordable rental housing for low-income Oahu residents and this project will address low-income individuals that lack affordable rental units in that area. Because of the acute demand, the Hale Makana O Mo'ili'ili affordable rental housing project will target the elderly with 60% AMI or less.

We request your written comments on the project description to assist us in preparing the Draft EA. A property information sheet, site plan, and map are enclosed. Please provide comment by January 30, 2020. Subsequently, there will be an opportunity for review and comment on the Draft EA. A notice of the availability of the Draft EA will be published in the Office of Environmental Quality Control's "Environmental Notice".

Please forward comments to Hawaiian Community Development Board, c/o Patti Barbee, 1188 Bishop Street, Suite 907, Honolulu, Hawaii 96813 or email pbarbee@hawndev.org. Thank you for your assistance.

Sincerely,

Patti Barbee

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 30, 2020

(CY 2019) LD 2191

Hawaiian Community Development Board
Attn: Patti Barbee
1188 Bishop Street, Suite 907
Honolulu, HI 96813

via email: pbarbee@hawndev.org

Dear Ms. Barbee:

SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment for **Hale Makana O Mo'ili'ili Affordable Rental Housing Project,** 2139 Algaroba Street, Mo'ili'ili, Honolulu, Island of Oahu; TMKs: (1) 2-7-007:016 and -051

Thank you for the opportunity to review and comment on the subject project. The Land Division of the Department of Land and Natural Resources (DLNR) distributed copies of your request to DLNR's various Divisions for their review and comments.

Enclosed are responses from our (a) Engineering Division, (b) Commission on Water Resource Management, and (c) Land Division—Oahu District. Should you have any questions about the attached comments, please feel free to contact Barbara Lee at (808) 587-0453 or barbara.j.lee@hawaii.gov. Thank you.

Sincerely,

Russell Y. Tsuji
Land Administrator

Enclosure(s)
cc: Central Files

L02191

HAWAIIAN
COMMUNITY DEVELOPMENT

1188 Bishop Street Suite 907
Honolulu, Hawaii 96813
Phone: (808) 529-0404
Fax: (808) 312-6379
www.hawndev.org

RECEIVED
LAND DIVISION

2019 DEC -6 AM 10: 59

DEPT. OF LAND &
NATURAL RESOURCES
STATE OF HAWAII

December 2, 2019

Russell Y. Tsuji, Administrator
Land Division
Department of Land & Natural Resources
1151 Punchbowl St., Rm. 220
Honolulu, HI 96813

RE: Hale Makana O Mo'ili'ili
Affordable Rental Housing Project

Dear Administrator Tsuji,

Hawaiian Community Development Board (HCDB) is proposing to develop a 105 unit low-income kupuna affordable housing rental project in Mo'ili'ili, O'ahu. The proposed project location is in the Mo'ili'ili, Honolulu area of Oahu. In accordance with the Hawai'i Revised Statutes, Chapter 343, HCDB is preparing an Environmental Assessment (EA) for the proposed development, evaluating the potential impacts of the construction and operation of this project.

The Project will be developed in Mo'ili'ili and that will provide new rental housing units targeting low-income Oahu residents (30%- 60% AMI), including formerly homeless families transitioning to permanent housing from emergency shelters and/or transitional housing programs. The project will consist of 7 residential buildings, laundry facilities, a community resource center, a parking lot, and landscaped grounds. The unit mix includes 80 studios, 24 one bedroom/one bath units, and one manager's unit.

There is a critical shortage of affordable rental housing for low-income Oahu residents and this project will address low-income individuals that lack affordable rental units in that area. Because of the acute demand, the Hale Makana O Mo'ili'ili affordable rental housing project will target the elderly with 60% AMI or less.

We request your written comments on the project description to assist us in preparing the Draft EA. A property information sheet, site plan, and map are enclosed. Please provide comment by January 30, 2020. Subsequently, there will be an opportunity for review and comment on the Draft EA. A notice of the availability of the Draft EA will be published in the Office of Environmental Quality Control's "Environmental Notice".

Please forward comments to Hawaiian Community Development Board, c/o Patti Barbee, 1188 Bishop Street, Suite 907, Honolulu, Hawaii 96813 or email pbarbee@hawndev.org. Thank you for your assistance.

Sincerely,

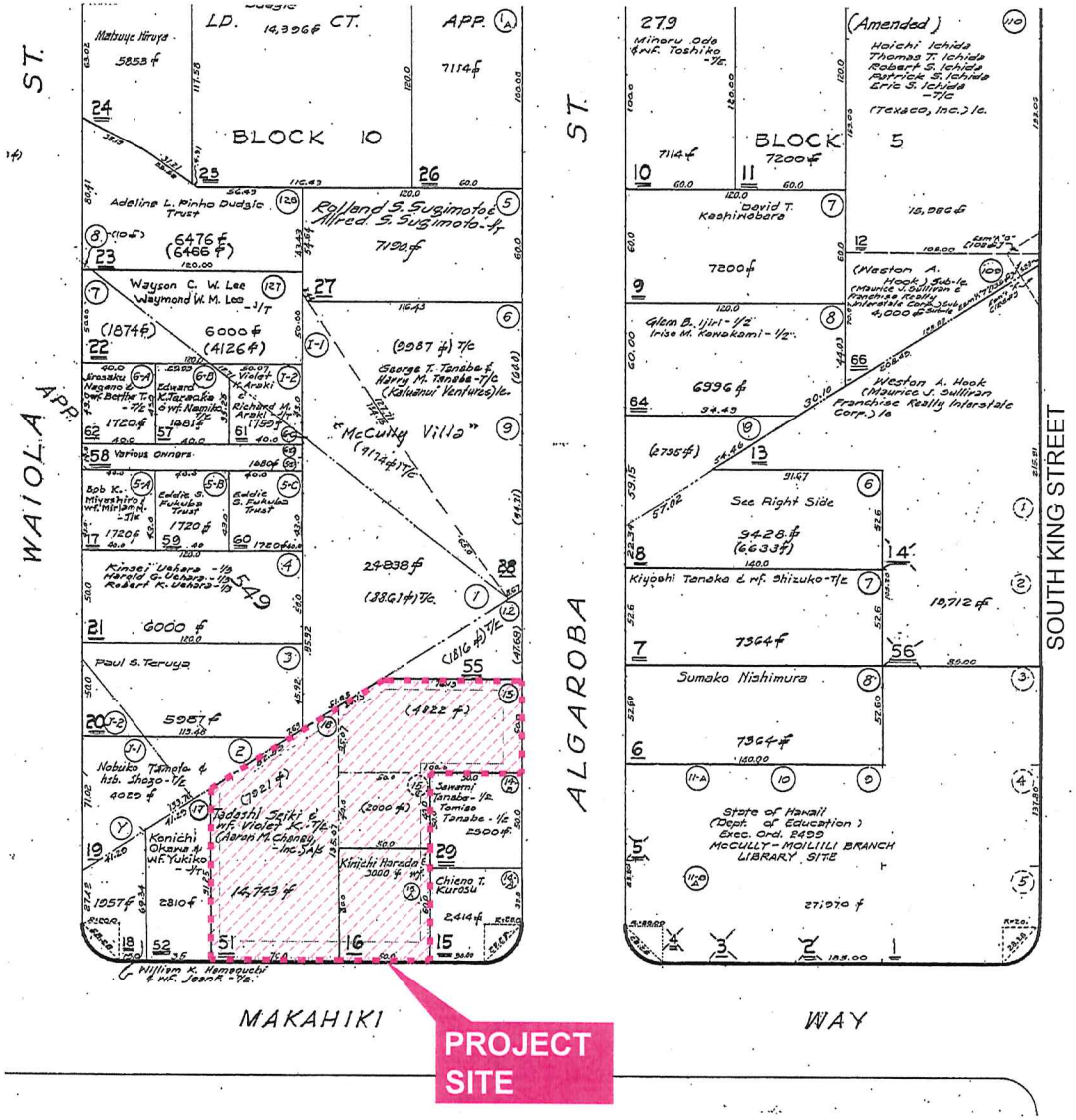
Patti Barbee

Executive Summary

Project Name:	Hale Makana O Moiliili
Proposed Action:	105-Unit Affordable Rental Housing Project Serving Low-Income seniors at 30%, 50%, and 60% AMI
Location:	Moiliili, Honolulu, Hawaii
Address:	2139 Algaroba Street, Honolulu, HI 96815
Tax Map Key:	2-07-07:16 & 2-07-07:51
Lot Area:	17,743 sq. ft.
Developer:	Ho'okahua Development, LLC 1188 Bishop Street, Suite 907 Honolulu, HI 96813
Owner:	Ho'okahua Moiliili, LP 1188 Bishop Street, Suite 907 Honolulu, HI 96813
Contact:	Patti Barbee (808) 529-0404
State Land Use:	Residential
County Zoning:	A-2
Development Plan:	Mid-rise apartment building with new construction; 5 stories over of residential over 1 podium deck, which is a total of 6 stories

Restriction/Occupancy (AMGI=Average Median Gross Income)	**Studio Units**	**1 Bedroom Units**
30% AMGI (Income & Rent Restricted)	4	2
50% AMGI (Income & Rent Restricted)	72	20
60% AMGI (Income & Rent Restricted)	4	2
Manager's Unit		1

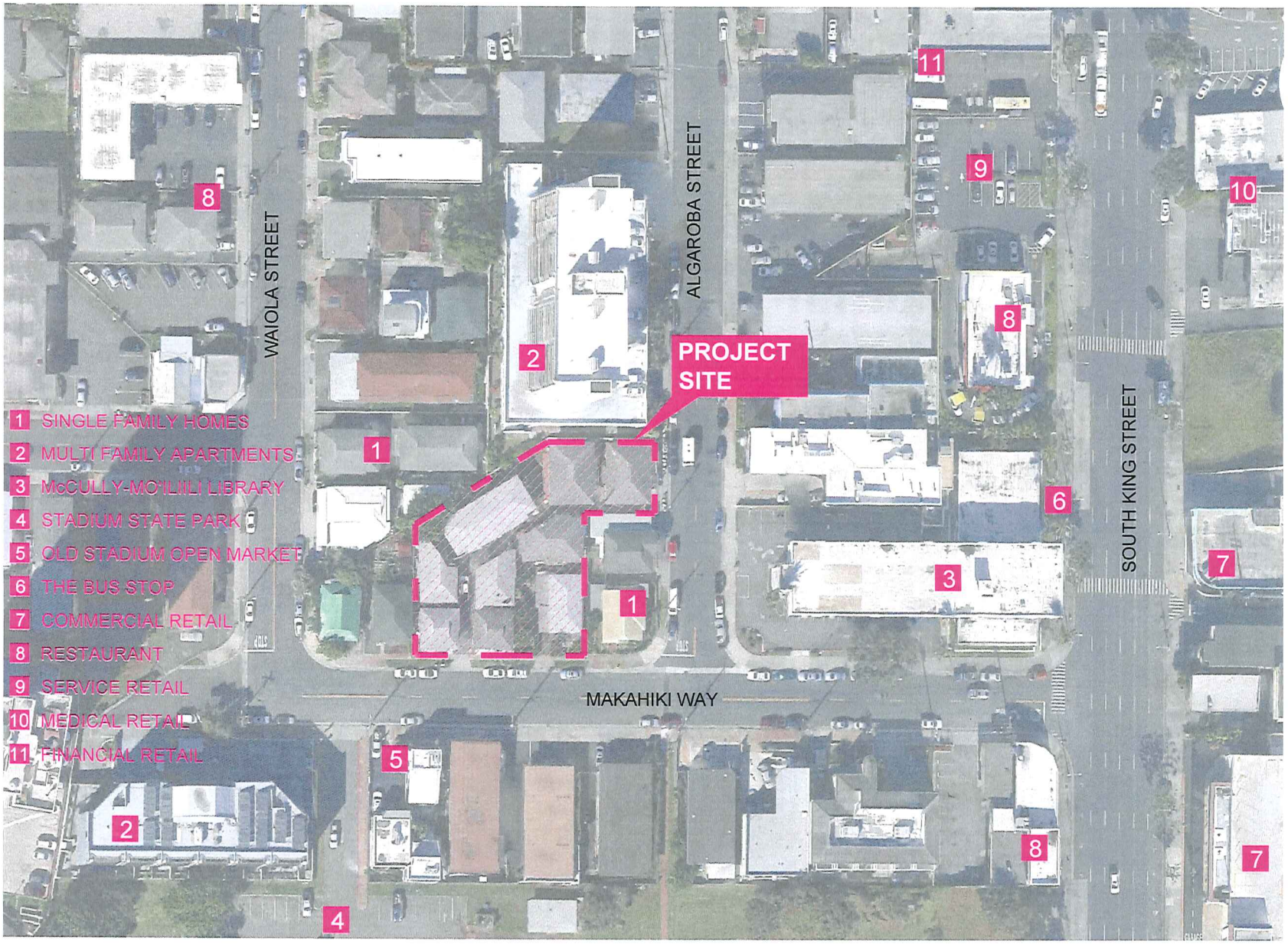
Address	2139 Algaroba	
TMK	27007051	14,743 SF
TMK	27007016	3,000 SF
Land Area	17,743 SF	
FEMA Flood Designation	X	
Tsunami Evacuation Zone	No	
Zoning Designation	A-2	
Front yard setback	10' for dwellings	
Side and rear yard setback	10' for multifamily dwellings	
Maximum building area	50% of zoning lot	
Maximum density (FAR)	(.00002 x lot area)+1.1	
	4.65	
	82,480 SF	
Maximum height	150'	
Additional height setback	*Any portion of a structure over 40' in height must be set back 1' for each 10' of additional height or portion thereof*	



PROJECT INFORMATION

2139 Algaroba Street
HONOLULU, HAWAII

February 6, 2019

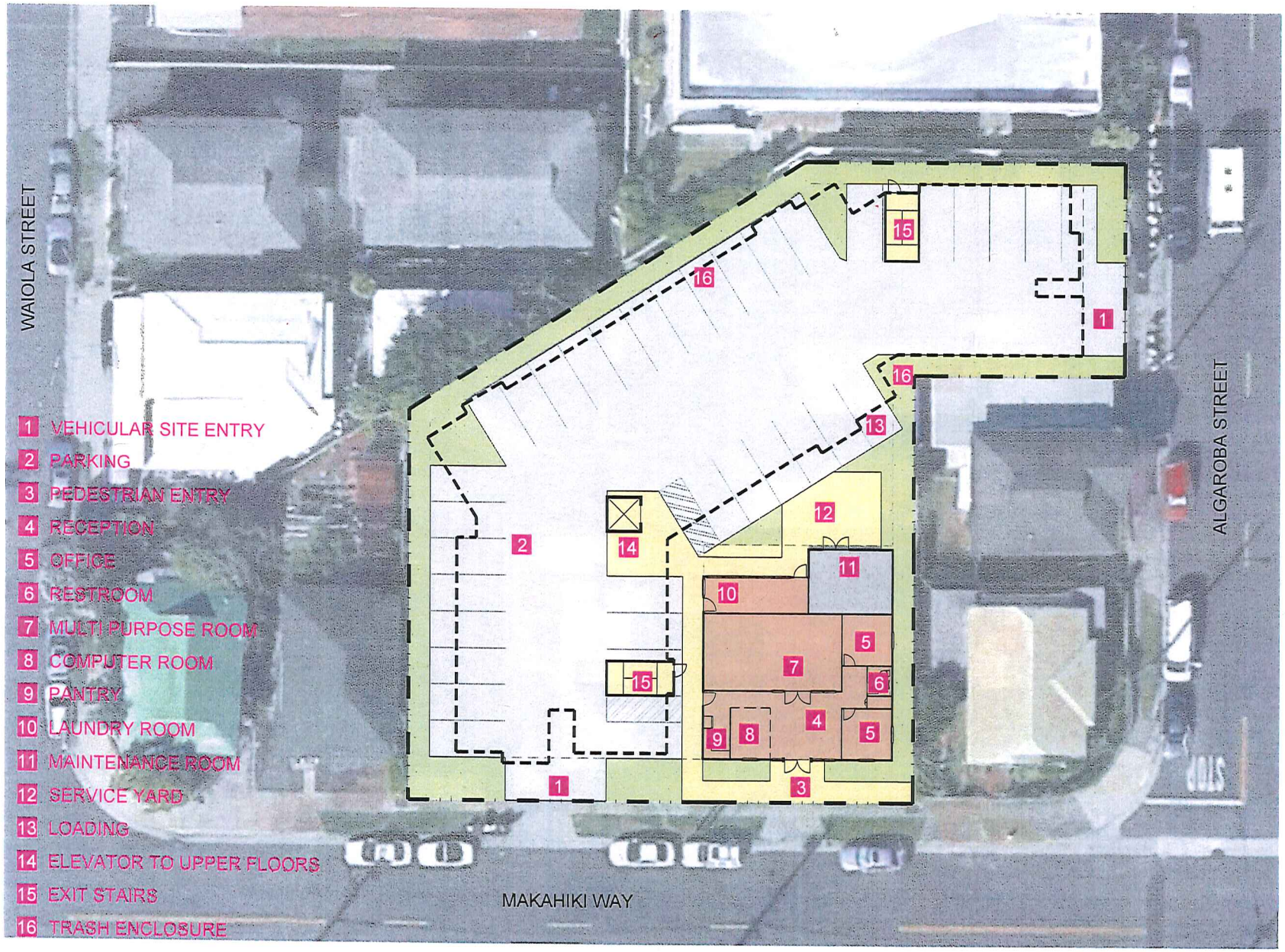


VICINITY PLAN

2139 Algaroba Street
HONOLULU, HAWAII

February 6, 2019

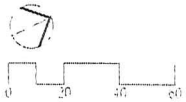
0 20 40 60



SITE / GROUND FLOOR PLAN

2139 Algaroba Street
HONOLULU HAWAII

February 6, 2019



ALGAROBA STREET ELEVATION

2139 Algaroba Street
HONOLULU, HAWAII

February 6, 2019

LD 2293

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

'19 DEC 19 AM08:53 ENGINEERING

December 12, 2019

LD 2191

MEMORANDUM

FROM

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
___Office of Conservation & Coastal Lands
_X_Land Division – Oahu District
_X_Historic Preservation

TO

FROM: Russell Y. Tsuji, Land Administrator

SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment for **Hale Makana O Mo'ili'ili Affordable Rental Housing Project**

LOCATION: 2139 Algaroba Street, Mo'ili'ili, Honolulu, Island of Oahu; TMKs: (1) 2-7-007:016 and -051

APPLICANT: Hawaiian Community Development Board on behalf of developer Ho'okahua Development LLC for owner Ho'okahua Moiliili, LP

Transmitted for your review and comments is updated information on the above-referenced subject matter.

Please submit any comments to the Land Division by **January 28, 2020.** 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 Barbara Lee at 587-0453 or barbara.j.lee@hawaii.gov. Thank you.

( ) We have no objections.
( ) We have no comments.
(✓) Comments are attached.

Signed:
Print Name: Carty S. Chang, Chief Engineer
Date: 12/20/19

Attachments
cc: Central Files

LD 2293

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/Russell Y. Tsuji
Ref: Pre-Assessment Consultation for Draft Environmental Assessment for Hale Makana O Mo'ili'ili Affordable Rental Housing Project
Location: 2139 Algaroba Street, Mo'ili'ili, Honolulu, Island of Oahu
TMK(s): (1) 2-7-007:016 and -051
Applicant: Hawaiian Community Development Board on behalf of developer Hookahua Development LLC for owner Ho'okahua Mo'ili'ili, LP

COMMENTS

The rules and regulations of the National Flood Insurance Program (NFIP), Title 44 of the Code of Federal Regulations (44CFR), are in effect when development falls within a Special Flood Hazard Area (high risk areas). State projects are required to comply with 44CFR regulations as stipulated in Section 60.12. Be advised that 44CFR reflects the minimum standards as set forth by the NFIP. Local community flood ordinances may stipulate higher standards that can be more restrictive and would take precedence over the minimum NFIP standards.

The owner of the project property and/or their representative is responsible to research the Flood Hazard Zone designation for the project. Flood Hazard Zones are designated on FEMA's Flood Insurance Rate Maps (FIRM), which can be viewed on our Flood Hazard Assessment Tool (FHAT) (http://gis.hawaiinfip.org/FHAT).

If there are questions regarding the local flood ordinances, please contact the applicable County NFIP coordinating agency below:

- Oahu: City and County of Honolulu, Department of Planning and Permitting (808) 768-8098.
- Hawaii Island: County of Hawaii, Department of Public Works (808) 961-8327.
- Maui/Molokai/Lanai County of Maui, Department of Planning (808) 270-7253.
- Kauai: County of Kauai, Department of Public Works (808) 241-4896.

The applicant should include water demands and infrastructure required to meet project needs. Please note that the projects within State lands requiring water service from their local Department/Board of Water Supply system will be required to pay a resource development charge, in addition to Water Facilities Charges for transmission and daily storage.

The applicant is required to provide water demands and calculations to the Engineering Division so it can be included in the State Water Projects Plan Update projections.

Signed: _____
CARTY S. CHANG, CHIEF ENGINEER

Date: 12/20/19

LD 068

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

RECEIVED LAND DIVISION 2020 JAN 13 PM 5:35 DEPT. OF LAND & NATURAL RESOURCES STATE OF HAWAII

December 12, 2019

LD 2191

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
___Office of Conservation & Coastal Lands
X Land Division – Oahu District
X Historic Preservation

ER.

TO:

RECEIVED COMMISSION ON WATER RESOURCE MANAGEMENT 2019 DEC 13 PM 4:18

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment for **Hale Makana O Mo'ili'ili Affordable Rental Housing Project**
LOCATION: 2139 Algaroba Street, Mo'ili'ili, Honolulu, Island of Oahu; TMKs: (1) 2-7-007:016 and -051
APPLICANT: Hawaiian Community Development Board on behalf of developer Ho'okahua Development LLC for owner Ho'okahua Moiliili, LP

Transmitted for your review and comments is updated information on the above-referenced subject matter.

Please submit any comments to the Land Division by **January 28, 2020.** 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 Barbara Lee at 587-0453 or barbara.j.lee@hawaii.gov. Thank you.

( ) We have no objections.
( ) We have no comments.
(x) Comments are attached.

Signed: /s/ M. Kaleo Mauel
Print Name: Deputy Director
Date: December 31, 2019

Attachments
cc: Central Files

FILE ID: RFD.5296.3
DOC ID: 22076

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON

BRUCE S. ANDERSON, PH.D.
KAMANA BEAMER, PH.D.
MICHAEL G. BUCK
NEIL J. HANNAHS
WAYNE K. KATAYAMA
PAUL J. MEYER

M. KALEO MANUEL
DEPUTY DIRECTOR

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

December 31, 2019

REF: RFD.5296.3

TO: Mr. Russell Tsuji, Administrator
Land Division

FROM: M. Kaleo Manuel, Deputy Director
Commission on Water Resource Management

SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment for Hale Makana O Moiliili Affordable Rental Housing Project

FILE NO.: RFD.5296.3
TMK NO.: (1) 2-7-007:016 and -051

Thank you for the opportunity to review the subject document. The Commission on Water Resource Management (CWRM) is the agency responsible for administering the State Water Code (Code). Under the Code, all waters of the State are held in trust for the benefit of the citizens of the State, therefore all water use is subject to legally protected water rights. CWRM strongly promotes the efficient use of Hawaii's water resources through conservation measures and appropriate resource management. For more information, please refer to the State Water Code, Chapter 174C, Hawaii Revised Statutes, and Hawaii Administrative Rules, Chapters 13-167 to 13-171. These documents are available via the Internet at http://dlnr.hawaii.gov/cwrm.

Our comments related to water resources are checked off below.

[X] 1. We recommend coordination with the county to incorporate this project into the county's Water Use and Development Plan. Please contact the respective Planning Department and/or Department of Water Supply for further information.

[ ] 2. We recommend coordination with the Engineering Division of the State Department of Land and Natural Resources to incorporate this project into the State Water Projects Plan.

[ ] 3. We recommend coordination with the Hawaii Department of Agriculture (HDOA) to incorporate the reclassification of agricultural zoned land and the redistribution of agricultural resources into the State's Agricultural Water Use and Development Plan (AWUDP). Please contact the HDOA for more information.

[X] 4. We recommend that water efficient fixtures be installed and water efficient practices implemented throughout the development to reduce the increased demand on the area's freshwater resources. Reducing the water usage of a home or building may earn credit towards Leadership in Energy and Environmental Design (LEED) certification. More information on LEED certification is available at http://www.usgbc.org/leed. A listing of fixtures certified by the EAP as having high water efficiency can be found at http://www.epa.gov/watersense.

[X] 5. We recommend the use of best management practices (BMP) for stormwater management to minimize the impact of the project to the existing area's hydrology while maintaining on-site infiltration and preventing polluted runoff from storm events. Stormwater management BMPs may earn credit toward LEED certification. More information on stormwater BMPs can be found at http://planning.hawaii.gov/czm/initiatives/low-impact-development/

[X] 6. We recommend the use of alternative water sources, wherever practicable.

[ ] 7. We recommend participating in the Hawaii Green Business Program, that assists and recognizes businesses that strive to operate in an environmentally and socially responsible manner. The program description can be found online at http://energy.hawaii.gov/green-business-program.

[X] 8. We recommend adopting landscape irrigation conservation best management practices endorsed by the Landscape Industry Council of Hawaii. These practices can be found online at

http://www.hawaiiscape.com/wp-content/uploads/2013/04/LICH_Irrigation_Conservation_BMPs.pdf.

☐ 9. There may be the potential for ground or surface water degradation/contamination and recommend that approvals for this project be conditioned upon a review by the State Department of Health and the developer's acceptance of any resulting requirements related to water quality.

☐ 10. The proposed water supply source for the project is located in a designated water management area, and a Water Use Permit is required prior to use of water. The Water Use Permit may be conditioned on the requirement to use dual line water supply systems for new industrial and commercial developments.

☐ 11. A Well Construction Permit(s) is (are) are required before the commencement of any well construction work.

☐ 12. A Pump Installation Permit(s) is (are) required before ground water is developed as a source of supply for the project.

☐ 13. There is (are) well(s) located on or adjacent to this project. If wells are not planned to be used and will be affected by any new construction, they must be properly abandoned and sealed. A permit for well abandonment must be obtained.

☐ 14. Ground-water withdrawals from this project may affect streamflows, which may require an instream flow standard amendment.

☐ 15. A Stream Channel Alteration Permit(s) is (are) required before any alteration can be made to the bed and/or banks of a steam channel.

☐ 16. A Stream Diversion Works Permit(s) is (are) required before any stream diversion works is constructed or altered.

☐ 17. A Petition to Amend the Interim Instream Flow Standard is required for any new or expanded diversion(s) of surface water.

☐ 18. The planned source of water for this project has not been identified in this report. Therefore, we cannot determine what permits or petitions are required from our office, or whether there are potential impacts to water resources.

☐ OTHER:

If you have any questions, please contact Lenore Ohye of the Commission staff at 587-0216.

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

December 12, 2019

LD 2191

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
___Office of Conservation & Coastal Lands
_X_Land Division – Oahu District
_X_Historic Preservation

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment for **Hale Makana O Mo'ili'ili Affordable Rental Housing Project**
LOCATION: 2139 Algaroba Street, Mo'ili'ili, Honolulu, Island of Oahu; TMKs: (1) 2-7-007:016 and -051
APPLICANT: Hawaiian Community Development Board on behalf of developer Ho'okahua Development LLC for owner Ho'okahua Moiliili, LP

Transmitted for your review and comments is updated information on the above-referenced subject matter.

Please submit any comments to the Land Division by **January 28, 2020.** 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 Barbara Lee at 587-0453 or barbara.j.lee@hawaii.gov. Thank you.

( ) We have no objections.
(x) We have no comments.
( ) Comments are attached.

Signed: Darlene Bryant-Takamatsu
Print Name: Darlene Bryant-Takamatsu
Date: 12/10/19

Attachments
cc: Central Files

Appendix F

2020 HHFCD Income Limits for the City & County of Honolulu

Issued by HHFDC

DAVID Y. IGE
GOVERNOR

DENISE ISERI-MATSUBARA
INITERM EXECUTIVE DIRECTOR

STATE OF HAWAII
DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM
HAWAII HOUSING FINANCE AND DEVELOPMENT CORPORATION
677 QUEEN STREET, SUITE 300
HONOLULU, HAWAII 96813
FAX: (808) 587-0600

20:FIN/1059

May 1, 2020

Dear Interested Party:

SUBJECT: Low-Income Housing Tax Credit (LIHTC) Program
Rental Housing Revolving Fund (RHRF) Program
Hula Mae Multi-Family Tax-exempt Bond (HMMF) Program
Rental Assistance Revolving Fund (RARF) Program

The U.S. Department of Housing and Urban Development (HUD) released its 2020 Multifamily Tax Subsidy Projects (MTSP) Income Limits on April 1, 2020. Pursuant to your property's Declaration of Land Use Restrictive Covenants, Regulatory Agreement, and/or IRS Ruling 94-57 regarding the effect of changes in area median income, project owners may rely on income limits previously issued by HUD for 45 days after HUD releases its new income limits. Accordingly, these new limits are effective May 15, 2020.

Attached, please find a chart showing the Maximum Income by Household and Maximum Tenant Contribution by county. The chart is provided as a convenience by the Hawaii Housing Finance and Development Corporation and should be used only as a guide. Project owners and interested parties are ultimately responsible for ensuring the accuracy of, and compliance with, (i) income limits, (ii) rent limits, and (iii) eligibility under the hold-harmless provision for existing MTSP under Section 3009 of the Housing and Economic Recovery Act of 2008 (HERA). Also attached is a copy of notice PDR-2020-01 issued on April 1, 2020.

Should you have any questions, please contact Jocelyn Iwamasa at (808) 587-0576, Patrick Inouye at (808) 587-0797, or Dean Sakata at (808) 587-0575.

Sincerely,

Darren K. Ueki
Finance Manager

Enclosures

c: Donna Ho, Property Management Coordinator

MULTIFAMILY TAX SUBSIDY PROJECT
INCOME LIMITS

This chart is provided as a guide only for the following programs:
Low Income Housing Tax Credit (LIHTC)
Hula Mae Multi-Family Bonds (HMMF)
Rental Housing Revolving Fund (RHRF)
Rental Assistance Revolving Fund (RARF)

You are responsible to ensure the accuracy of the numbers.

MAXIMUM INCOME BY HOUSEHOLD

	1 Person	2 Person	3 Person	4 Person	5 Person	6 Person	7 Person	8 Person
Honolulu, HI								
30% of Median	$26,460	$30,240	$34,020	$37,770	$40,800	$43,830	$46,860	$49,860
40% of Median	$35,280	$40,320	$45,360	$50,360	$54,400	$58,440	$62,480	$66,480
50% of Median	$44,100	$50,400	$56,700	$62,950	$68,000	$73,050	$78,100	$83,100
55% of Median	$48,510	$55,440	$62,370	$69,245	$74,800	$80,355	$85,910	$91,410
60% of Median	$52,920	$60,480	$68,040	$75,540	$81,600	$87,660	$93,720	$99,720
75% of Median*	$66,150	$75,600	$85,050	$94,425	$102,000	$109,575	$117,150	$124,650
80% of Median*	$70,560	$80,640	$90,720	$100,720	$108,800	$116,880	$124,960	$132,960
100% of Median*	$88,200	$100,800	$113,400	$125,900	$136,000	$146,100	$156,200	$166,200
110% of Median*	$97,020	$110,880	$124,740	$138,490	$149,600	$160,710	$171,820	$182,820
140% of Median*	$123,480	$141,120	$158,760	$176,260	$190,400	$204,540	$218,680	$232,680
Hawaii								
30% of Median	$17,520	$20,010	$22,500	$24,990	$27,000	$29,010	$30,990	$33,000
40% of Median	$23,360	$26,680	$30,000	$33,320	$36,000	$38,680	$41,320	$44,000
50% of Median	$29,200	$33,350	$37,500	$41,650	$45,000	$48,350	$51,650	$55,000
55% of Median	$32,120	$36,685	$41,250	$45,815	$49,500	$53,185	$56,815	$60,500
60% of Median	$35,040	$40,020	$45,000	$49,980	$54,000	$58,020	$61,980	$66,000
75% of Median*	$43,800	$50,025	$56,250	$62,475	$67,500	$72,525	$77,475	$82,500
80% of Median*	$46,720	$53,360	$60,000	$66,640	$72,000	$77,360	$82,640	$88,000
100% of Median*	$58,400	$66,700	$75,000	$83,300	$90,000	$96,700	$103,300	$110,000
110% of Median*	$64,240	$73,370	$82,500	$91,630	$99,000	$106,370	$113,630	$121,000
140% of Median*	$81,760	$93,380	$105,000	$116,620	$126,000	$135,380	$144,620	$154,000
Kauai								
30% of Median	$20,400	$23,310	$26,220	$29,130	$31,470	$33,810	$36,150	$38,460
40% of Median	$27,200	$31,080	$34,960	$38,840	$41,960	$45,080	$48,200	$51,280
50% of Median	$34,000	$38,850	$43,700	$48,550	$52,450	$56,350	$60,250	$64,100
55% of Median	$37,400	$42,735	$48,070	$53,405	$57,695	$61,985	$66,275	$70,510
60% of Median	$40,800	$46,620	$52,440	$58,260	$62,940	$67,620	$72,300	$76,920
75% of Median*	$51,000	$58,275	$65,550	$72,825	$78,675	$84,525	$90,375	$96,150
80% of Median*	$54,400	$62,160	$69,920	$77,680	$83,920	$90,160	$96,400	$102,560
100% of Median*	$68,000	$77,700	$87,400	$97,100	$104,900	$112,700	$120,500	$128,200
110% of Median*	$74,800	$85,470	$96,140	$106,810	$115,390	$123,970	$132,550	$141,020
140% of Median*	$95,200	$108,780	$122,360	$135,940	$146,860	$157,780	$168,700	$179,480
Maui								
30% of Median	$21,540	$24,600	$27,690	$30,750	$33,210	$35,670	$38,130	$40,590
40% of Median	$28,720	$32,800	$36,920	$41,000	$44,280	$47,560	$50,840	$54,120
50% of Median	$35,900	$41,000	$46,150	$51,250	$55,350	$59,450	$63,550	$67,650
55% of Median*	$39,490	$45,100	$50,765	$56,375	$60,885	$65,395	$69,905	$74,415
60% of Median	$43,080	$49,200	$55,380	$61,500	$66,420	$71,340	$76,260	$81,180
75% of Median*	$53,850	$61,500	$69,225	$76,875	$83,025	$89,175	$95,325	$101,475
80% of Median*	$57,440	$65,600	$73,840	$82,000	$88,560	$95,120	$101,680	$108,240
100% of Median*	$71,800	$82,000	$92,300	$102,500	$110,700	$118,900	$127,100	$135,300
110% of Median*	$78,980	$90,200	$101,530	$112,750	$121,770	$130,790	$139,810	$148,830
140% of Median*	$100,520	$114,800	$129,220	$143,500	$154,980	$166,460	$177,940	$189,420

*For purposes of the Rental Housing Revolving Fund Program only.

NOTE: This chart is provided as a guide only. You are responsible to ensure the accuracy of the numbers.

MULTIFAMILY TAX SUBSIDY PROJECT
INCOME LIMITS

This chart is provided as a guide only for the following programs:
Low Income Housing Tax Credit (LIHTC)
Hula Mae Multi-Family Bonds (HMMF)
Rental Housing Revolving Fund (RHRF)
Rental Assistance Revolving Fund (RARF)

You are responsible to ensure the accuracy of the numbers.

MAXIMUM TENANT CONTRIBUTION (Incl. Utilities)
CALCULATED BY NUMBER OF BEDROOMS

Area	Studio	1 Bdrm	2 Bdrm	3 Bdrm	4 Bdrm
Honolulu, HI					
30% of Median	$661	$708	$850	$982	$1,095
40% of Median	$882	$945	$1,134	$1,309	$1,461
50% of Median	$1,102	$1,181	$1,417	$1,636	$1,826
55% of Median*	$1,212	$1,299	$1,559	$1,800	$2,008
60% of Median	$1,323	$1,417	$1,701	$1,964	$2,191
75% of Median*	$1,653	$1,771	$2,126	$2,455	$2,739
80% of Median*	$1,764	$1,890	$2,268	$2,619	$2,922
100% of Median*	$2,205	$2,362	$2,835	$3,273	$3,652
110% of Median*	$2,425	$2,598	$3,118	$3,601	$4,017
140% of Median*	$3,087	$3,307	$3,969	$4,583	$5,113
Hawaii					
30% of Median	$438	$469	$562	$649	$725
40% of Median	$584	$625	$750	$866	$967
50% of Median	$730	$781	$937	$1,083	$1,208
55% of Median*	$803	$860	$1,031	$1,191	$1,329
60% of Median	$876	$938	$1,125	$1,299	$1,450
75% of Median*	$1,095	$1,172	$1,406	$1,624	$1,813
80% of Median*	$1,168	$1,251	$1,500	$1,733	$1,934
100% of Median*	$1,460	$1,563	$1,875	$2,166	$2,417
110% of Median*	$1,606	$1,720	$2,062	$2,382	$2,659
140% of Median*	$2,044	$2,189	$2,625	$3,032	$3,384
Kauai					
30% of Median	$510	$546	$655	$757	$845
40% of Median	$680	$728	$874	$1,010	$1,127
50% of Median	$850	$910	$1,092	$1,262	$1,408
55% of Median*	$935	$1,001	$1,201	$1,388	$1,549
60% of Median	$1,020	$1,092	$1,311	$1,515	$1,690
75% of Median*	$1,275	$1,365	$1,638	$1,893	$2,113
80% of Median*	$1,360	$1,457	$1,748	$2,020	$2,254
100% of Median*	$1,700	$1,821	$2,185	$2,525	$2,817
110% of Median*	$1,870	$2,003	$2,403	$2,777	$3,099
140% of Median*	$2,380	$2,549	$3,059	$3,535	$3,944
Maui					
30% of Median	$538	$576	$692	$799	$891
40% of Median	$718	$769	$923	$1,066	$1,189
50% of Median	$897	$961	$1,153	$1,332	$1,486
55% of Median*	$987	$1,057	$1,269	$1,465	$1,634
60% of Median	$1,077	$1,153	$1,384	$1,599	$1,783
75% of Median*	$1,346	$1,441	$1,730	$1,998	$2,229
80% of Median*	$1,436	$1,538	$1,846	$2,132	$2,378
100% of Median*	$1,795	$1,922	$2,307	$2,665	$2,972
110% of Median*	$1,974	$2,114	$2,538	$2,931	$3,269
140% of Median*	$2,513	$2,691	$3,230	$3,731	$4,161

*For purposes of the Rental Housing Revolving Fund Program only.
NOTE: This chart is provided as a guide only. You are responsible to ensure the accuracy of the numbers.

U. S. Department of Housing and Urban Development

Special Attention of:

Regional Directors, Field Office Directors, Economists, Public & Indian Housing Division Directors, Multifamily Hub Directors, Multifamily Program Center Directors

NOTICE PDR-2020-01

Issued: April 1, 2020
Expires: Effective until superseded

Cross References:

Subject: Estimated Median Family Incomes for Fiscal Year (FY) 2020

This memorandum transmits median family incomes for FY 2020. They are calculated for each metropolitan and nonmetropolitan area using the Fair Market Rent (FMR) area definitions applied in the Section 8 Housing Choice Voucher Program. The national median family income for the United States for FY 2020 is $78,500, an increase of almost four percent over the national median family income in FY 2019. Twice this change is 7.9 percent which is greater than five percent, so this higher value is used as the cap on increases.

For FY 2020, there are no changes to the geographic area definitions used last year. There is, however one fewer record in the EXCEL files because Bedford city in VA is no longer incorporated and is now part of Bedford County, VA. It remains part of the Lynchburg, VA MSA but is no longer listed separately as a Virginia city.

The 2017 American Community Survey (ACS) and Puerto Rico Community Survey (PRCS) median family income data (as opposed to household income data) are the basis of FY 2020 median family incomes for all areas of geography, except for the U.S. Virgin Islands and the Pacific Islands. The Consumer Price Index forecast published by the Congressional Budget Office (CBO) is used to bring the ACS and PRCS data forward from mid-2017 to the mid-point of the fiscal year, April 2020. The median family incomes in the U.S. Virgin Islands and the Pacific Islands (Guam, American Samoa and the Northern Marianas) are based on 2010 Decennial Census data which is the most current information available. The decennial data used for the U.S. Virgin Islands and the Pacific Islands is trended forward using the change in national median family incomes between 2009 (which is the year of the income in the decennial census) and 2017 (from the ACS). The same CBO forecast is then applied from mid-2017 to the mid-point of the fiscal year, April 2020.

HUD is considering a change that would replace the CBO forecast with the economic forecast of the Office of Management and Budget (OMB), beginning with the calculation of the FY 2021 Medians. This OMB forecast would match the economic assumptions used in the calculation of HUD median family income estimates with assumptions used in the formulation of the Administration's Budget. HUD has not used OMB forecasts previously because they have not been available for public release.

An explanation of the procedures used to develop FY 2020 median family incomes and related documents are attached. Attachment 1 provides an explanation of the estimation methods used; Attachment 2 provides state-level median family income estimates. The Section 8 Income Limits and income limits for the Section 221(d)(3) Below Market Interest Rate (BMIR) rental program, the Section 235 program, and the Section 236 program, that are not part of this transmittal notice, may be provided to you or your staff electronically.

Please note that the use of the HUD median family incomes is subject to individual program guidelines covering definitions of income and family, family size, effective dates, and other factors. If you have any questions concerning these matters, please refer them to our website at **http://www.huduser.gov/portal/datasets/il.html**.

HUD median estimates are also available at the Department's Internet site, which provides a menu from which you may select the year and type of data of interest **http://www.huduser.gov/portal/datasets/il.html**.

/s/
Seth D. Appleton
Assistant Secretary for Policy Development
and Research

Attachments

ATTACHMENT 1

HUD PROCEDURE FOR ESTIMATING FY 2020 MEDIAN FAMILY INCOMES

The FY 2020 median family incomes, which HUD is publishing at this time, use the median family[1] income data (as opposed to median household income data) from the 2017 American Community Survey (ACS) and the Puerto Rico Community Survey (PRCS). The Consumer Price Index forecast published by the Congressional Budget Office (CBO) is used to bring the ACS and PRCS data forward from mid-2017 to the mid-point of the fiscal year, April 2020. These medians are calculated for each metropolitan and nonmetropolitan area using the Fair Market Rent (FMR) area definitions applied in the Section 8 Housing Choice Voucher Program.

As mentioned above, the FY 2020 median family incomes incorporate the 2017 ACS and PRCS data into the calculation process. Specifically, for each metropolitan area, subarea of a metropolitan area, and non-metropolitan county, HUD determines if a statistically valid one-year ACS income estimate is available. If one-year data is not available, then statistically valid five-year ACS data (data collected from 2013 through 2017) is used. There are cases where statistically valid five-year ACS data is not available. In those cases, an average of at least two of the past three years of income estimates is used. If at least two years of median income estimates are not statistically valid, the state nonmetro median is used.

Statistically Valid Estimate

For the FY 2020 medians, HUD requires that the margin of error be less than half of the estimate **and** that the survey median is based on at least 100 responses (as identified by a count indicator value of 4 or more in HUD's special tabulations of ACS data). If the current year estimate does not meet both conditions, the previous years' estimates must meet the margin of error condition to be used in averaging. In the few cases where the statistical confidence interval for the 5-year ACS estimate of median family income is greater than half the estimate for more than one of the three years used in averaging (the current year and the two previous years), HUD assigns the state nonmetropolitan median.

CPI Inflation and Trend Factor

HUD uses a CPI forecast from CBO to inflate the 2017 ACS data to the mid-point of FY 2020. The CBO projection of fiscal year CPI, published in January 2020, is used to inflate the 2017 data.

HUD is considering a change that would replace the CBO forecast with the economic forecast of the Office of Management and Budget (OMB), beginning with the calculation of the FY 2021 Medians. This OMB forecast would match the economic assumptions in used in the calculation of HUD median family income estimates with assumptions used in the formulation of the Administration's Budget. HUD has not used OMB forecasts previously because they have not been available for public release.

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[1] Family refers to the Census definition of a family, which is a householder with one or more other persons living in the same household who are related to the householder by birth, marriage, or adoption. The definition of family excludes one-person households and multi-person households of unrelated individuals.

Median Calculations

Median family incomes start with the development of median family incomes for the nation (with national metropolitan and nonmetropolitan median family incomes) for each state and territory (again including national metropolitan and nonmetropolitan median family incomes) and for each metropolitan area and nonmetropolitan area using the FMR area definitions for the United State and its territories.

The major steps are as follows:

HUD uses 2017 ACS or PRCS median family incomes as the basis for FY 2020 medians for all areas designated as Fair Market Rent areas in the United States and Puerto Rico.[2] In areas where there is a statistically valid 2020 one-year survey estimate, that is used. If not, statistically valid 2017 five-year data is used. Where statistically valid five-year data is not available, HUD will average the valid income estimates from the current (where there is valid margin of error of the estimate) and two previous years of ACS or PRCS data or for two of these three years.

The 2016 five-year data and the 2015 five-year data are considered valid if the margin of error of the estimate is less than one-half of the estimate. These are inflated to 2017 using the change in national CPI calculated between 2015 or 2016 and 2017.

Metropolitan subareas, HUD Metro FMR Areas (HMFAs), do not use averaged data from the current and two previous years (adjusted to the current year) if the five-year data is not statistically valid. These subareas use the 2017 ACS data for the larger metropolitan area.

For all places in the United States and Puerto Rico:

All estimates (using either one-year data or five-year data) are then trended from 2017 to April 2020 using the CPI forecast produced by CBO.

For the non-Puerto Rico Insular Areas of the United States,[3] which currently lack the annual survey of ACS or PRCS, 2010 Decennial Census data were used for the first time in the FY 2016 median family incomes and income limits. This continues to be the basis of the FY 2020 median family incomes and income limits. National ACS median family income changes are used to update 2010 Decennial Census data (which is 2009 median family income data) to 2017 and then the same CBO forecast trend factor is applied to bring the data forward to the midpoint of FY 2020.

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[2] When HUD's Fair Market Rent area definitions match a standard census geography, the ACS data HUD uses to calculate median family income estimates may be obtained from ACS table B19113: Median Family Income in the Past 12 Months.
[3] The areas without ACS coverage are the U.S. Virgin Islands, Guam, American Samoa, and the Northern Marianas Islands. Puerto Rico is covered by the ACS-equivalent Puerto Rico Community Survey.

ATTACHMENT 2

FY 2020 Median Family Incomes for States, Metropolitan and Nonmetropolitan Portions of States

	FY 2020		
	TOTAL	METRO	NONMETRO
Alabama	65300	69400	53600
Alaska	92200	95000	86500
Arizona	72100	73500	49300
Arkansas	61000	67400	52500
California	87100	87500	70700
Colorado	90200	93300	71000
Connecticut	99700	99400	102600
Delaware	81900	81900	62300*
District of Columbia	113100	113100	62300*
Florida	68000	68700	52800
Georgia	72200	76700	54700
Hawaii	97100	100700	81600
Idaho	68200	72300	60900
Illinois	84100	86700	67700
Indiana	72300	75000	65300
Iowa	79700	85700	72500
Kansas	76500	83400	64600
Kentucky	65400	75900	53400
Louisiana	64300	66800	50100
Maine	76600	84300	67300
Maryland	104500	105700	72800
Massachusetts	104900	105300	85400
Michigan	74000	76800	63900
Minnesota	91800	98700	72600
Mississippi	59400	67500	52700
Missouri	71500	78200	56100
Montana	73300	76700	71400
Nebraska	79800	85600	71600
Nevada	72500	72100	75000
New Hampshire	96700	106000	85300
New Jersey	103300	103300	62300*
New Mexico	61900	66200	54900
New York	85100	86700	67200
North Carolina	70000	74200	58100
North Dakota	86900	91000	83600
Ohio	73900	76500	65100
Oklahoma	65300	69900	57200
Oregon	77700	81700	61400
Pennsylvania	80700	83400	64900
Rhode Island	89800	89800	62300*
South Carolina	66300	69000	52400
South Dakota	77800	82100	73100
Tennessee	66800	71600	54800
Texas	74500	76300	58900
Utah	82800	83900	74100
Vermont	79000	89700	74600
Virginia	91600	98100	60400
Washington	89800	92900	67300
West Virginia	59600	63600	54900
Wisconsin	80100	83700	70800
Wyoming	79500	78600	79700
US	78500	81200	62300

* US non-metropolitan median

Appendix G

Affordable Rental Market Study, February 2019

By Ricky Cassiday

A CUSTOM MARKET ANALYSIS OF

The Affordable Rental Market Study

For Hale Makana O Moiliili Project

CLIENT

Ho'okahua Moiliili, LP

Pacific PGK, LLC

4480 Ahukuni Road

Lihue, HI 96766

I. OVERVIEW

The Hale Makana O Moiliili is proposing to build an affordable rental housing project in Moiliili, Hawaii. They have engaged Pacific PGK, LLC and Ricky Cassiday to describe and analyze the market for affordable housing rentals by families on the island of Oahu, relative to the guideline provided by the Hawaii Housing Finance & Development Corporation (HHFDC) for performing such studies.

II. SCOPE OF WORK

As stipulated by the Hawaii Housing Finance and Development Corporation, this Market Study will include:

- A statement of the competence of the market analyst.
- A description of the proposed site.
- Geographic definition and analysis of the market area.
- Identification of the project including location, unit counts, income levels and target population.
- Analysis of household sizes and types in market.
- Demographic analysis of the number of households in the market area, which are income eligible, and can afford to pay the rent. Estimate of capture rates for the market areas.
- A description of comparable developments in the market area.
- Analysis of practically available rents, vacancy rates, operating expenses and turnover rates of comparable properties in the market area.
- Analysis of practically available rents, vacancy rates and turnover rates of market rate properties in the market area.
- Expected market absorption of the proposed rental housing, including a description of the effect of the market area.
- Identification and commentary of proposed projects in the market areas.

III. DESCRIPTION OF MARKET ANALYST

Since 1991, Ricky Cassiday has provided the residential l real estate markets of Hawaii with real estate consulting services. A list of clients and studies is attached hereto as Exhibit A.

Note that the data and statements herein are based on independent research and are in no way contingent upon outside findings or recommendations.

IV. PROJECT IDENTIFICATION

Project Name will be Hale Makana O Moiliili. The TMK is 2-07-07:51 and 2-07-07:16, and the address is 2139 Algaroba Street, Honolulu, Hawaii. The project consists of approximately 105 units in a 5-story building. The residences will be built from level 2 to level 5 (concrete podium over retail and community space). There will be a ground floor community/resource center and ground level parking stalls. The target market will be Independent Seniors. Rents will be restricted to senior tenants aged 55 and over earning 30, 50 and 60 percent of the AMI or below.

PROJECT SUPPLY, BY TYPE, COUNT AND AMI

Unit type	Counts	Target AMI	Sq. Ft.
Studio	4	30%	308
Studio	72	50%	308
Studio	4	60%	308
1 Bedroom	2	30%	508
1 Bedroom	20	50%	508
1 Bedroom	2	60%	508

The subject property is located on the Island of Oahu, in the state of Hawaii, within the Honolulu, HI MSA. Oahu is the third largest of the Hawaiian Islands and the most populous island in the state. Oahu has a total land area of 896.7 square miles. The City and County of Honolulu are consolidated, and it is the only incorporated city in the state of Hawaii.

The project's strongest selling points:

- Affordability
- Newly built units
- Purpose-built and purpose-operated for seniors
- Close to major medical and other vital services
- Safe neighborhood, vibrant community

V. GEOGRAPHIC DEFINITION OF AND ANALYSIS OF MARKET AREA

The City and County of Honolulu will serve as the market area for this study. Such a definition was analyzed and deemed appropriate for the following reasons:

- There are no natural boundaries in Honolulu to inhibit relocation;
- The entire island's population lives in close proximity to one another, within a 22-mile radius; and
- There is an acute need for affordably priced shelter on the island.

Further analysis determined that the Principle Market Area (PMA) would encompass the entire island of Oahu.

An analysis of the housing market, rental housing in particular, will illustrate that the supply is low while demand continues to rise.

STATE HOUSING CHARACTURISTICS

The following are highlights from the 2017 American Community Survey 1-Year Estimates:

In 2017, the median household income for Hawaii was $77,765, the fourth highest among the fifty states and District of Columbia. It was a 2.4% increase from 2016 in real terms, but the increase was not statistically significant.

Hawaii's median family income was $91,460. This was a statistically significant increase of 3.0% from 2016 in real terms. Hawaii's median family income was the sixth highest in the United States. (Note: All families are also households, but not all households are families).

The percent of people in poverty in Hawaii was 9.5%, which was not statistically different than the previous year. Hawaii ranked the third lowest in the nation for percent of people in poverty in 2017.

In 2017, the percent of families in poverty was 7.4%. This was a statistically significant increase from the 6.0% of Hawaii families in poverty in 2016.

The percent of the civilian population with no health insurance coverage was 3.8%, which ranks Hawaii the second lowest in the nation for the civilian uninsured rate. The 2017 rate was not statistically different than in 2016.

Hawaii has had the highest median housing values in the nation since 2007. In 2017, Hawaii's median housing value was $617,400. Among the states, Hawaii had the third highest median housing costs for owners with mortgages.

Hawaii remained the state with the highest median monthly housing costs for renter-occupied units. The state's median renter costs were $1,573 in 2017. Adjusting for inflation, this was a statistically significant increase of 4.4% from the previous year's renter costs of $1,506.

In essence, Hawaii has the highest housing costs in the nation, which then contributed to it having one of the highest number of people living in a household.

VI. ANALYSIS OF HOUSEHOLD TYPES IN THE MARKET

The study guidelines call for an analysis of household sizes and types in the market. Thus, the following table describes this.

HOUSING STOCK, OAHU, BY AREA, BY TYPE AND BY UNIT COUNT

	Ewa	Kahuku-Kaawa	East Oahu	Central Oahu	North Shore	Waianae	Honolulu	East Honolulu	Total
Single Family	175,128	2,796	26,403	22,967	11,082	5,658	72,708	13,744	330,485
Condominium	44,375	369	1,628	1,378	423	1,668	35,790	1,237	86,867
Townhouse	23,240	0	2,604	6,737	1,859	595	5,159	1,184	41,378
Apartment	44,436	192	2,315	4,823	1,822	1,622	30,147	813	86,169
Duplex/Multiplex	21,705	30	2,279	842	2,540	2,065	12,897	141	42,499
Co-op	1,661	0	398	38	258	0	967	0	3,322
Other	6,540	302	543	1,493	258	47	3,385	512	13,080
Unreported	374	0	0	0	166	12	161	35	748
Total	317,459	3,688	36,169	38,278	18,408	11,666	161,214	17,666	604,548

Since the project is categorized as attached housing, the study will focus on this type of dwelling. Our analysis of household types and sizes will employ housing statistics provided by the City and County of Honolulu's Real Property Assessment and Property Assessment Division.

The majority of the attached housing stock on the island is old. The table shows that 60% of the attached dwellings on Oahu were built before 1980.

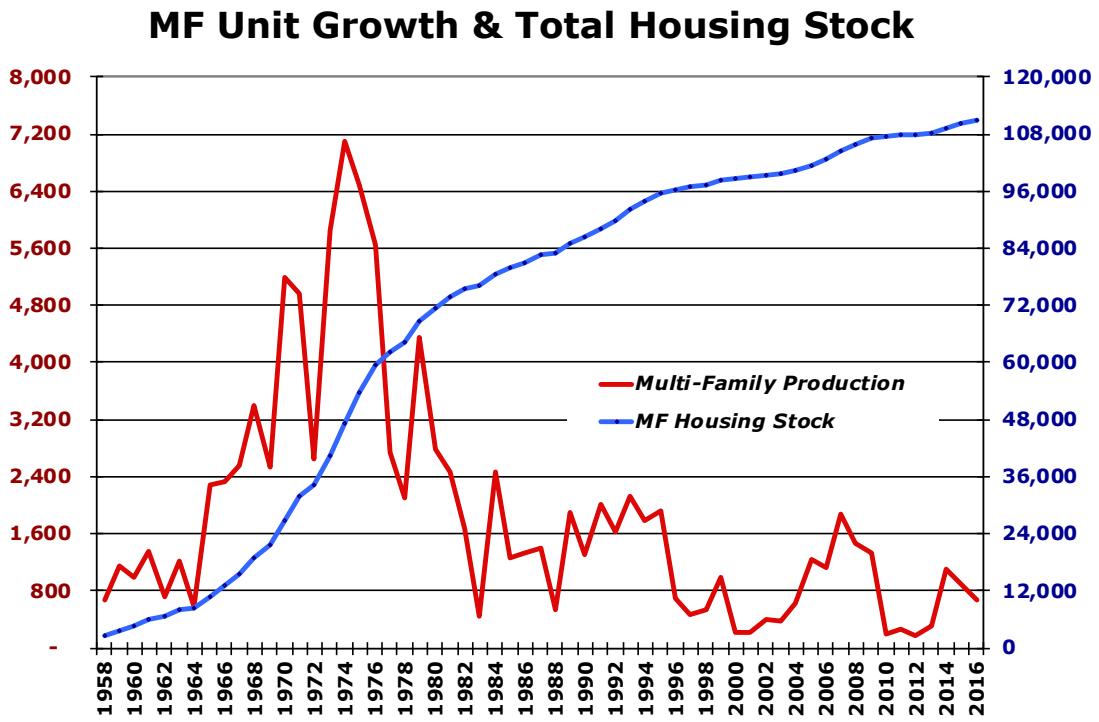
DESCRIPTION OF THE HOUSING STOCK ISLAND-WIDE: As seen below, most of Oahu's condominium housing stock is quite old:

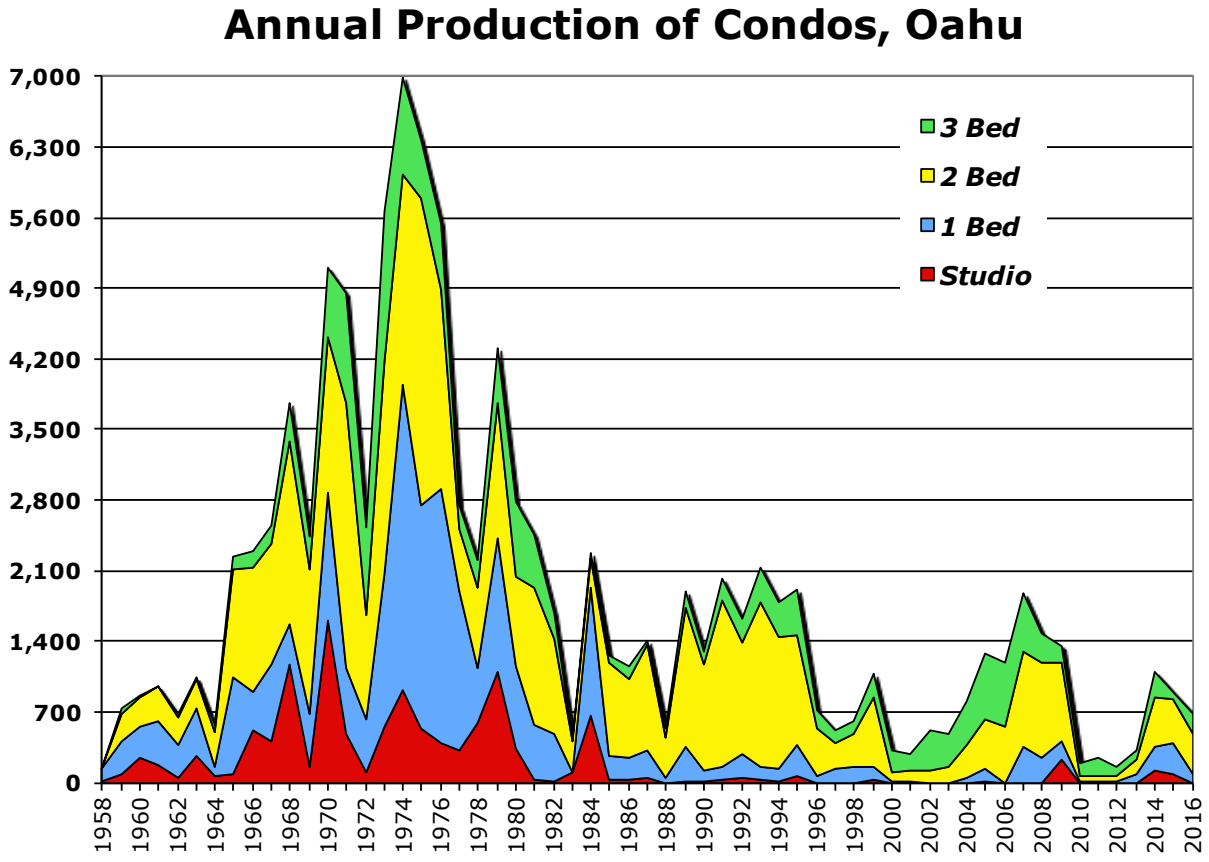
ATTACHED HOUSING INVENTORY, BY YEAR OF PRODUCTION ON OAHU

Year Unit Built	Unit Counts	Ave Int. Sq. Ft.	Ave Assessed $
<1955	289	503	$346,326
1955-1959	2,429	589	$449,458
1960-1964	4,867	618	$410,882
1965-1969	13,088	721	$415,926
1970-1974	25,730	803	$387,334
1975-1979	21,326	714	$379,057
1980-1984	9,847	815	$426,401
1985-1989	6,440	834	$427,274
1990-1994	8,859	917	$448,083
1995-1999	4,605	826	$524,536
2000-2004	1,836	1,143	$594,289
2005-2009	7,024	1,062	$833,913
2010-2014	2,050	1,056	$892,611
2015-2019	1,590	891	$586,329

As seen:

- Production of attached housing has plummeted since the 2005-2009 period
- The average size of the units has fallen
- The assessed value of each unit has risen significantly





When examining the attached housing stock by bedroom count, one can see that it is comprised primarily of one and two-bedroom units.

CONDOMINIUM HOUSING BEDROOM TYPES, ISLAND WIDE

	Units	Ave. Sq Ftg	Ave. Assessed Values	Ave. Values Per Sq Ft
Studios	8,439	361	$202,080	$561
1 Bed	23,800	582	$309,853	$533
2 Bed	45,103	882	$412,141	$467
3 Bed	16,882	1,245	$493,991	$397
4 Bed	1,623	1,517	$525,142	$346

Hawaii has one of the lowest percentage ownership housing markets in the nation and is among one of the least affordable. Such can be attributed to the limited supply of land, very high costs of production and very strong housing demand, resulting in low housing production and high prices. The problem is exacerbated by the fact that housing prices have exceeded household incomes for over 25 years.

Per the 2010 Census, the total number of housing units in Honolulu was 329,724, with 92% of them occupied. This left some 26,000 units vacant, with about one-third of them or 9,477 accessible to those seeking a residential housing unit. Most of these are in locations and in a condition conducive to high rental rates, such as Waikiki (high visitor demand) and Makiki (high demand for middle- and upper-income households, due to close proximity to employment centers and good schools). Thus, they remained unaffordable to households with low- to moderate-incomes.

Given high demand and low supply, the large numbers of low- to moderate-income households currently have very few options for housing. Further, this condition has existed for over 25 years, since the implementation of land zoning regulations at the county level (supply constraints) and the dramatic rise in the price of housing, fed by the Japanese visitor and housing demand explosion. These conditions, high prices and low supply, continue on today, with Honolulu being named as the least affordable housing market in the nation in a number of studies.

For instance, in 2016, Hawaii ranked #1 in the nation for having the widest gap between wages and the price of rental housing by The National Low-Income Housing Coalition's annual report, Out of Reach. It showed that in 2016, the national Housing Wage is $20.30 for a two-bedroom rental unit, assuming a 40-hour workweek, 52 weeks per year. In comparison, Hawaii's Housing Wage is $32.44 for a two-bedroom rental unit.

HOUSEHOLD CONDITIONS, SIZE AND OWNERSHIP: A major effect of high housing costs on families is that they re-rent part of their shelter to friends or family. The US Census measures evidence of this, and they define crowding as 2 or more persons per bedroom.

They also measure doubling up via surveys and define that as 'more than one family group' in a household. In the last Housing Planning Study, such a survey was performed and the results from Oahu show the following:

CROWDING & DOUBLING UP, ALL OAHU HOUSEHOLDS SURVEYED

	Owners	Renter
Crowded	5.00%	21.60%
Doubled up	12.30%	10.70%
Crowded & Doubled Up	16.50%	26.80%

The following tables show the data by area.

HOUSEHOLDS DOUBLING UP, BY AREA

	Ewa	Central Oahu	Waianae	Honolulu	Total
Yes	4,495	4,096	2,298	18,378	37,778
No	25,875	34,182	9,368	142,836	279,681

OAHU HOUSEHOLDS CROWDING, BY AREA

People / Bedroom	Ewa	Central Oahu	Waianae	Honolulu	Total
Less than 2	27,880	35,445	10,091	137,354	281,269
More than 2	2,490	2,833	1,575	23,860	36,190

Another way that this condition is made apparent is the measurement of household size. Indeed, as households cannot afford housing, then overtime pent-up demand increases, household formation is delayed, and the average household size grows. The statewide average for household size increased by 2.8% from 2.88 persons per household to 3.11. This is consistent with a housing market where demand was greater than supply. The following table shows that Oahu had highest increase in average household size over the 10-year period.

HOUSEHOLDS DOUBLING UP & CROWDING, BY AREA

	Population Growth	Household Growth	Housing Size Growth
Hawaii	19.1%	17.0%	0.3%
Honolulu	10.9%	3.5%	8.8%
Kauai	14.3%	11.7%	2.3%
Maui	19.3%	12.5%	5.8%

VII. ANALYSIS OF HOUSING DEMAND AND MARKET CONDITIONS

HOUSING DEMAND: Numerous factors affect the demand for housing, the primary being population, household formations and job creation. In the short run, job creation is the most important, as it leads to in-migration (meaning population growth and household formation).

Currently, job creation (as well as income generation, mainly wages) in the island economy is very strong. The table below shows that the rate of unemployment has been steadily falling since 2009-2010. This coincides with the rise in hotel occupancy as well as hotel room rates and is in synch with the general excise tax trend, which is an indicator of overall business activity.

SELECTED HONOLULU ECONOMIC TRENDS

	Unemployment Rate	Hotel Occupancy	Hotel Room Rates	Ave GE Tax ($000)
1995	4.6%	80%	$102	$97,433
2000	4.1%	76%	$115	$110,441
2005	2.8%	86%	$139	$158,946
2006	2.5%	83%	$156	$171,301
2007	2.6%	77%	$168	$180,857
2008	3.9%	75%	$170	$178,448
2009	6.0%	73%	$169	$161,174
2010	6.0%	78%	$150	$168,270
2011	5.9%	81%	$150	$187,260
2012	5.4%	85%	$165	$203,370
2013	4.4%	84%	$183	$208,946
2014	4.1%	85%	$207	$213,399
2015	3.4%	86%	$211	$227,377
2016	3.1%	87%	$221	$231,377
2017	2.2%	89%	$241	$236,538
2018	1.9%	89%	$242	$237,118

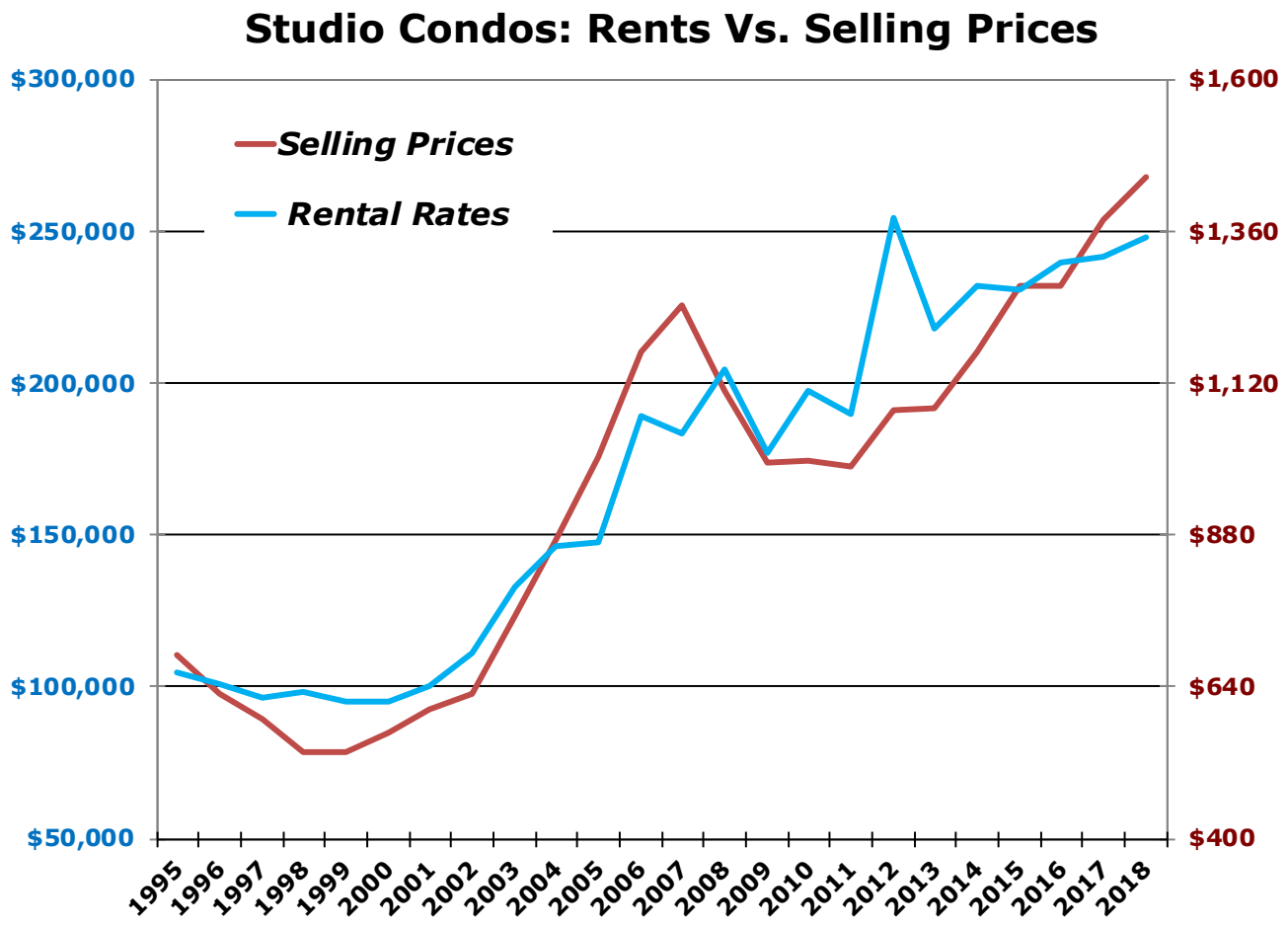
Such growth in economic activity has led to growing demand for housing, both for-sale and for-rent units. In addition, this growth exerts pressure on for-sale prices and for-rent rental rates. This makes it more difficult for households with fixed or low-incomes to secure affordable shelter. There are other factors which serve to increase housing demand overall such as vacationers and military households.

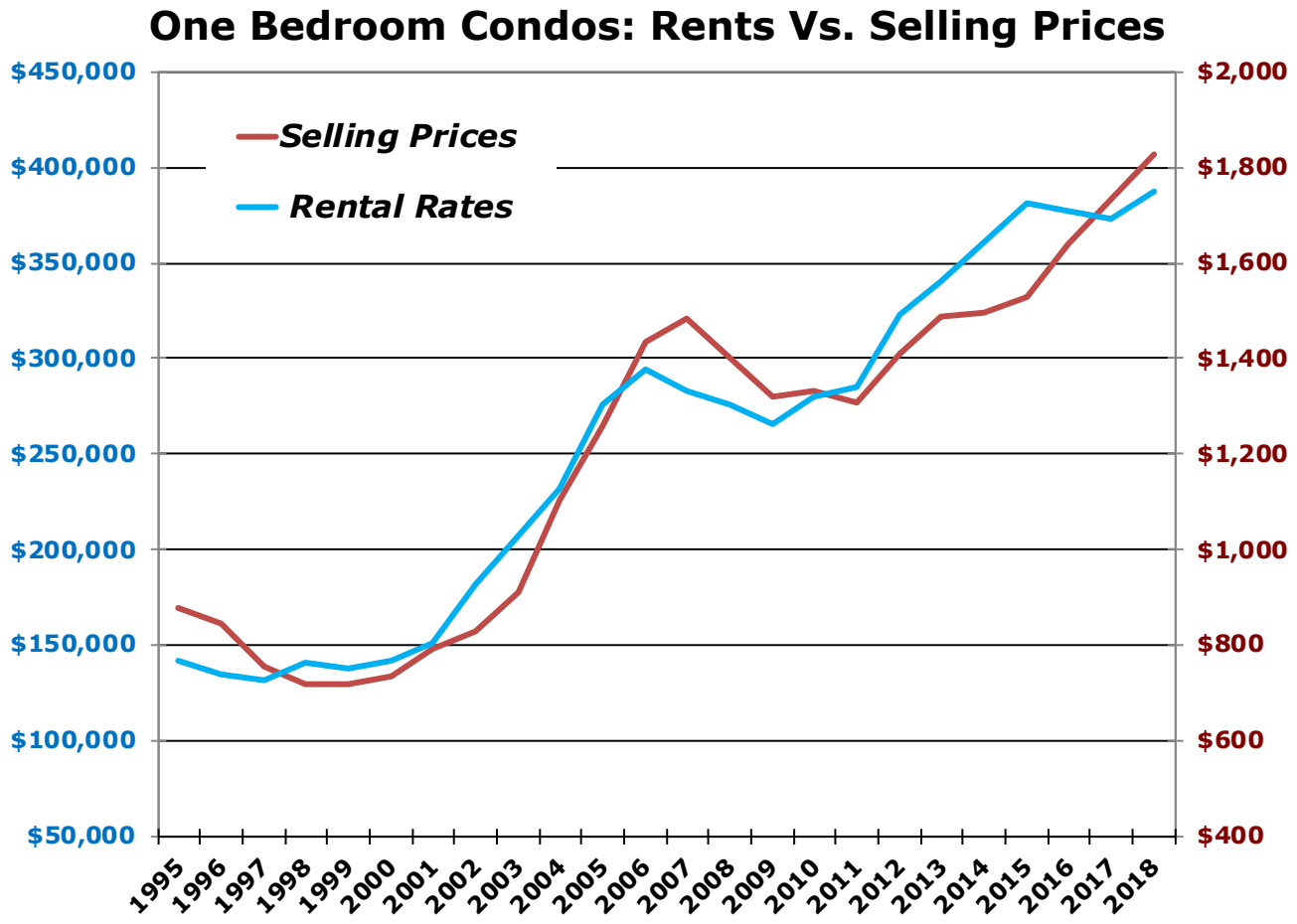
CURRENT MARKET CONDITIONS: The condominium market is well into the upward swing of the housing cycle in terms of sales activity and price levels (data source is the MLS of the Honolulu Board of Realtors and the Bureau of Conveyances of the State). The last such swing started in 1998 and ended in 2005, ran for some 7 to 8 years and then had 4 to 5 years of falling sales and prices. It turned in 2011-2012, with a reversal of the trend for lower

sales and prices, as demand grew at a time of shrinking inventory. Going forward, we foresee that this cycle's sales and price levels will run for the next several years and exceed the peaks of the last cycle.

This will negatively impact the rental market in a number of ways. Higher for-sale housing prices usually encourage landlords to sell to owner occupants removing rental units from the market. Also, higher housing prices paid by investors for rental units translate into higher rental rates to consumers, as the investor needs a higher cash flow.

The next chart illustrates how sale and rent prices are trending using MLS data for the resale prices and HUD Fair Market Rent data for the rental data. It shows that the prices paid for for-sale studio and one-bedroom units serves as a leading indicator for rental prices for the same sized rental units.





While historically there has been a fairly close relationship between the average price of these resale units and the HUD given rate for Fair Market Rents on Oahu, it appears that the last 2 years, this rental rate trend has been lagging the resale price trend. This leads us to expect rents will resume their upward trend.

VIII. OVERVIEW OF HONOLULU'S RENTAL MARKET

HISTORY: As described above, the rental market in the County is expensive. Unlike most urban areas in the United States where large rental operators are common, the island of Oahu consists of many small developments. Most multifamily development for local renter households occurred on small parcels of land by small groups of local investors due to the ease of financing. As a result, the rental market is predominantly comprised of small rental operations and/or mom-and-pop landlords. The large number of two-story walk-ups most commonly located in and around Moiliili, Kalihi, Makiki, Kapahulu and Kaimuki serve as evidence of such small rental operations.

All of these factors have contributed to Honolulu continually being named one of the least affordable cities in the US (using US Census data). The flipside of that is that, in terms of the vacancy rate of rental units, historically it is one of the lowest in the nation.

RENTAL MARKET CURRENT CONDITIONS: As previously stated, Honolulu is a small market with very few large rental operators and therefore data describing rental rates of specific projects is not readily available. There are, however, general sources that can be used. The US Census has data detailing vacancy rates of all housing types for Oahu. The following table illustrates the trend for the vacancy rate:

US CENSUS RENTAL UNIT VACANCY RATES, HONOLULU

	Hawaii State	Oahu, County	National Rate
2000	5.3%	4.9%	8.0%
2001	8.2%	8.0%	8.4%
2002	7.3%	5.5%	9.0%
2003	8.9%	7.0%	9.8%
2004	7.7%	5.8%	10.2%
2005	5.1%	3.9%	9.9%
2006	5.5%	3.9%	9.7%
2007	6.3%	5.1%	9.8%
2008	7.2%	5.1%	10.0%
2009	9.2%	6.9%	10.6%
2010	8.1%	7.2%	10.2%
2011	9.4%	6.9%	9.5%
2012	10.2%	6.3%	8.7%
2013	10.1%	6.0%	8.3%
2014	8.4%	5.6%	7.6%
2015	8.7%	7.5%	7.1%
2016	11.4%	9.2%	6.8%
2017	8.7%	8.1%	7.2%
4Q 2018	8.2%	6.8%	6.9%

Looking at the rental rates in the market, the next table describes the trend overtime on Oahu. It is drawn from the US Housing and Urban Development department, HUD's Fair Market Rent. It is an annual estimate of the gross rents for an area (and encompasses the shelter rent plus the cost of all tenant-paid utilities, minus conveniences, like telephone).

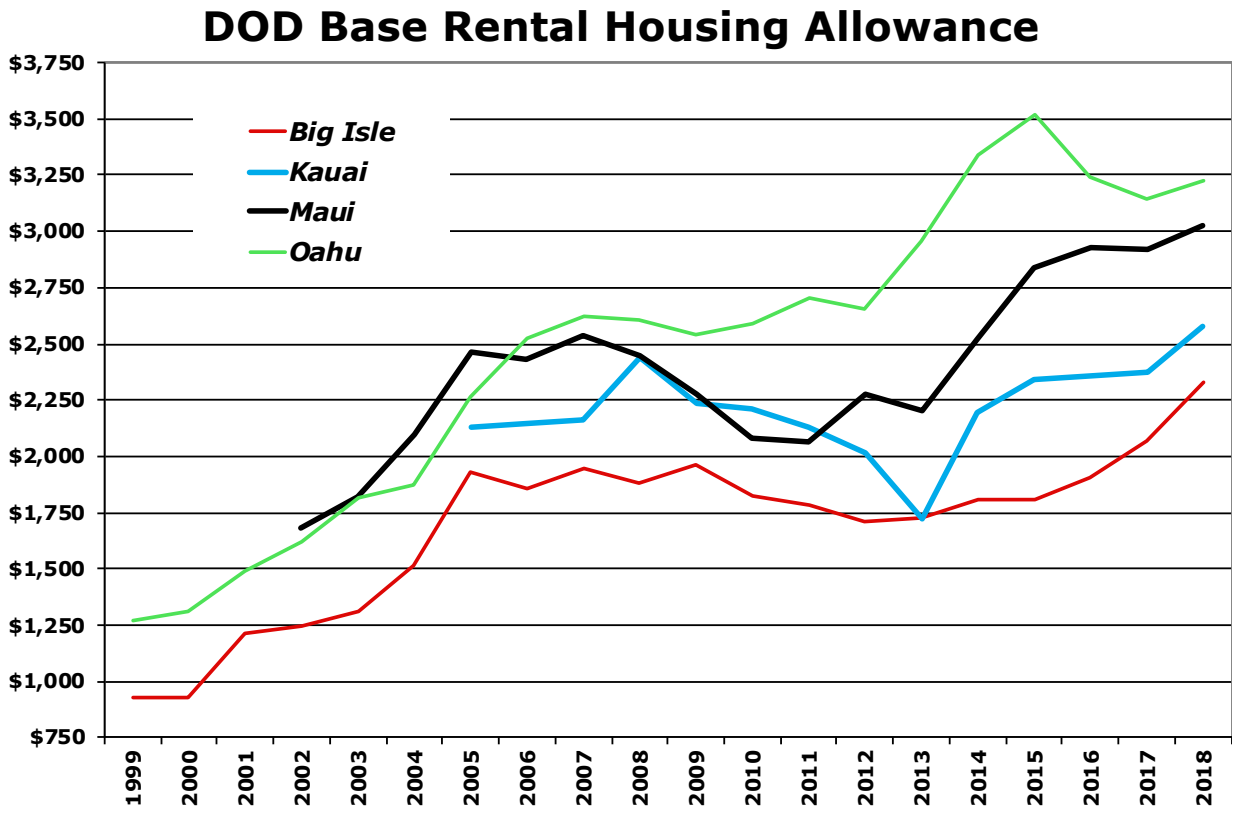
FAIR MARKET RENTAL RATES, FOR HONOLULU

Year	Studios	1-Bedroom	2-Bedroom	3-Bedroom	4-Bedroom
2001	$595	$713	$839	$1,134	$1,226
2002	$596	$714	$840	$1,135	$1,227
2003	$599	$717	$844	$1,142	$1,235
2004	$642	$769	$905	$1,225	$1,325
2005	$760	$891	$1,087	$1,577	$1,765
2006	$836	$997	$1,205	$1,757	$2,069
2007	$888	$1,058	$1,279	$1,865	$2,196
2008	$1,131	$1,348	$1,630	$2,377	$2,799
2009	$1,140	$1,337	$1,631	$2,367	$2,649
2010	$1,191	$1,397	$1,704	$2,473	$2,767
2011	$1,190	$1,396	$1,702	$2,470	$2,764
2012	$1,235	$1,449	$1,767	$2,564	$2,870
2013	$1,276	$1,392	$1,833	$2,701	$3,100
2014	$1,267	$1,382	$1,820	$2,682	$3,078
2015	$1,260	$1,374	$1,810	$2,667	$3,061
2016	$1,334	$1,507	$1,985	$2,893	$3,140
2017	$1,333	$1,492	$1,982	$2,885	$3,473
2018	$1,352	$1,527	$2,031	$2,954	$3,525
2019	$1,390	$1,563	$2,067	$2,989	$3,631

Note that the trend is generally higher. Note also that these rents are above those proposed by this subject development.

Another source of rental trend information from a public agency comes from the Department of Defense. It is called the BAH, or Base Allowance for Housing, and it is their description of the rental market rates, done in conjunction with providing their personnel based in the county with a rental allowance. This is done for all counties where military personnel are based and adjusted for a cost of living.

The following chart shows the average allowance that the military provides to its households when stationed in an area, in this case, Hawaii, and the counties. As seen, this allowance has almost tripled between 1999 and 2014, and – contrary to the Fair Market Rent trend of HUD.



IX. AREA HOUSEHOLDS DEMOGRAPHIC ANALYSIS

OVERVIEW: The scope of work calls for a demographic analysis of the number of households in the market area that are income eligible and can afford to pay the rent. The target market is comprised of those elderly households who satisfy the income restrictions and other requirements for entering into a rental contract for these units. The project will be producing one-bedroom unit rentals for those making approximately 30%, 50% and 60% of the Area Median Income (AMI).

The table below describes the project's number of units by AMI count.

PROJECT SUPPLY, BY TYPE, COUNT AND AMI

Unit type	Counts	Target AMI	Sq. Ft.
Studio	4	30%	308
Studio	72	50%	308
Studio	4	60%	308
1 Bedroom	2	30%	508
1 Bedroom	20	50%	508
1 Bedroom	2	60%	508

The target AMI income limits per family, according to the HUD 2018 AMI definition, are described below.

MULTIFAMILY TAX SUBSIDY PROJECT INCOME LIMITS, 2018

AMI	1 Person	2 Person	3 Person	4 Person	5 Person
30%	$24,510	$27,990	$31,500	$34,980	$37,800
50%	$40,850	$46,650	$52,500	$58,300	$63,000
60%	$49,020	$55,980	$63,000	$69,960	$75,600

Using the above guidelines, the table below depicts the total population of households in the County (meaning, on the island) who are renting, categorized by income bracket according to the number of people in the household.

This data comes from Ribbon Demographics, a firm that specializes in taking US Census data and separating it into segments that are useful for projecting the demographic demand for affordable housing. It defines the relevant target markets of the project. This table shows the demand just for households whose head is 55 years or older.

RENTER ONLY ELDERLY HOUSEHOLDS BY AMI AND SIZE, 2018

AMI	1-Person	2-Person
30%	7,646	2,927
50%	3,113	1,803
60%	1,182	1,171

Of note here is that that the data is only for households that are currently renting, as opposed to those owning – and not owning - as having the potential for renting one of these units. The reader should keep in mind that there are current homeowners who would qualify, given their average income. However, since they probably will not relocate from their home to a rental unit, and they need to dispose of their ownership interest to qualify, they are not considered here. That said, they well could do so, particularly in the case of parents deeding their home to their children.

The next step is to determine the number of people in the household who would qualify to live in a unit. This is done relative to the number of bedrooms, per the project's unit supply.

The rules regulating the rental of the studios and one bedrooms say that no less than one person and no more than two people can rent a one-bedroom unit.

OCCUPANCY REQUIREMENT

Bedrooms	Occupancy Range
Studio	1-2 Persons
1 Bedroom	1-2 Persons

From this one can derive the number of households in the market area who make the allowable income or less. This becomes the number of households that constitutes the total potential demand for the project's supply. This analysis begins with deriving the demand for the studio unit.

STUDIO UNITS: The supply by bedroom and target AMI is defined below.

PROJECT SUPPLY, BY TARGET AMI

Target AMI	Unit Count
30%	4
50%	72
60%	4

The next table describes the maximum income that a household qualifying for a studio unit can make.

LIMITS OF INCOME BY HOUSEHOLD SIZE

One Bedroom Limits	30% of AMI	50% of AMI	60% of AMI
1 Person	$24,510	$40,850	$49,020
2 Person	$27,990	$46,650	$55,980

With this, one can get to the number of one and two-person households who reside within the market area who satisfy income limit restrictions. This represents the potential number of households that would be able to rent one of these units.

The table below shows this potential demand for one and two-person households by AMI.

RENTER HOUSEHOLDS POTENTIAL DEMAND FOR STUDIO UNITS

AMI	Renter Population
30%	10,572
50%	4,916
60%	2,353

The next table shows the total potential demand relative to the project's actual supply.

STUDIO SHARE OF TOTAL POTENTIAL MARKET, BY AMI

AMI	Unit Supply	Potential Demand
30%	4	10,572
50%	72	4,916
60%	4	2,353

Next, we consider what an appropriate capture rate could be for the units of this project.

Given the location of this project, as well as the fact this is new construction, we think the rate easily could be 50% of total potential demand. We then apply a factor of 50%, the midway point between the ranges, and arrive at the number of households that would apply for these units.

STUDIO CAPTURE RATE, BY AMI

Target AMI	Unit Supply	Potential Demand	Capture Rate 50%
30%	4	10,572	5,286
50%	72	4,916	4,916
60%	4	2,353	2,353

Using either total potential demand or lower capture rate potential demand, the demographic composition of the County says that there is more potential demand than supply.

ONE BEDROOM UNITS: The supply by bedroom and target AMI is defined below.

PROJECT SUPPLY, BY TARGET AMI

Target AMI	Unit Count
30%	2
50%	20
60%	2

The next table describes the maximum income that a household qualifying for a one-bedroom unit can make.

LIMITS OF INCOME BY HOUSEHOLD SIZE

One Bedroom Limits	30% of AMI	50% of AMI	60% of AMI
1 Person	$24,510	$40,850	$49,020
2 Person	$27,990	$46,650	$55,980

With this, one can get to the number of one and two-person households who reside within the market area who satisfy income limit restrictions. This represents the potential number of households that would be able to rent one of these units.

The table below shows this potential demand for one and two-person households by AMI.

RENTER HOUSEHOLDS POTENTIAL DEMAND FOR ONE BEDROOM UNITS

AMI	Renter Population
30%	10,572
50%	4,916
60%	2,353

The next table shows the total potential demand relative to the project's actual supply.

ONE BEDROOM SHARE OF TOTAL POTENTIAL MARKET, BY AMI

AMI	Unit Supply	Potential Demand
30%	2	10,572
50%	20	4,916
60%	2	2,353

Next, we consider what an appropriate capture rate could be for the units of Meheula Vista. Given the location of this project, as well as the fact this is new construction, we think the rate easily could be 50% of total potential demand. We then apply a factor of 50%, the midway point between the ranges, and arrive at the number of households that would apply for these units.

ONE BEDROOM CAPTURE RATE, BY AMI

Target AMI	Unit Supply	Potential Demand	Capture Rate 50%
30%	2	10,572	5,286
50%	20	4,916	4,916
60%	2	2,353	2,353

Using either total potential demand or lower capture rate potential demand, the demographic composition of the County says that there is more potential demand than supply.

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X. DESCRIPTION OF COMPARABLE UNITS IN THE MARKET AREA

OVERVIEW: By way of overview, the Oahu marketplace within which "market rate properties" compete is comprised of very few large unit rental properties and a great many small unit properties. Relative to other US urban centers, this is a unique characteristic and has much to do with the development of the visitor industry and the nature of the urbanization (or the lack thereof) on Oahu.

As short a while ago as 40 years, Oahu was primarily an agrarian economy, at least in terms of the dispersion of population near the plantation areas. As such, there was no real urban core around which people lived. Thus, there is no real core area with lots of large condominium projects, other than hotel and luxury units.

The main area for that was in Waikiki, which targeted short-term visitors. The rest of condominium development was small-scale, due to the rugged topography on Oahu, due to the lack of capital for building large projects, and due to the lack of land for development (leasehold system). As such, the rental marketplace was dispersed as well as highly fragmented, and the result of that is that Oahu's rental market contains a great many 10-20 unit two-story 'walk-ups' (no elevator necessary, due to the limitation to two stories).

As a practical matter for this study, there are no large operators to call and survey for their rents, vacancy rates, operating expenses and turnover rates. Indeed, almost all of those who were surveyed would not divulge anything more than the asking rent.

STUDIOS: The following tables describe the comparable units in the market area for projects that have studio units serving elderly households making 30%, 50% and 60% of AMI.

30% AMI AFFORDABLE RENTAL INVENTORY BY BEDROOM FOR OAHU

Bedrooms In Unit	Count of Projects With Units	Count of Built Units	Average Sq Ft Size	Count of Project's Units
Studio	1	6	420	4

50% AMI AFFORDABLE RENTAL INVENTORY BY BEDROOM FOR OAHU

Bedrooms In Unit	Count of Projects With Units	Count of Built Units	Average Sq Ft Size	Count of Project's Units
Studio	7	345	442	74

60% AMI AFFORDABLE RENTAL INVENTORY BY BEDROOM FOR OAHU

Bedrooms In Unit	Count of Projects With Units	Count of Built Units	Average Sq Ft Size	Count of Project's Units
Studio	8	532	413	4

These tables illustrate how the supply of the proposed subject development compares to the existing housing stock of comparable units, by bedrooms and the AMI of their target market. They describe specifically that – on the supply side - the numbers that will be provided by this proposed development are not large.

ONE BEDROOMS: The following tables describe the comparable units in the market area for projects that have one-bedroom units serving elderly households making 30%, 50% and 60% of AMI.

30% AMI AFFORDABLE RENTAL INVENTORY BY BEDROOM FOR OAHU

Bedrooms In Unit	Count of Projects With Units	Count of Built Units	Average Sq Ft Size	Count of Project's Units
Studio	13	279	464	2

50% AMI AFFORDABLE RENTAL INVENTORY BY BEDROOM FOR OAHU

Bedrooms In Unit	Count of Projects With Units	Count of Built Units	Average Sq Ft Size	Count of Project's Units
Studio	29	1383	481	20

60% AMI AFFORDABLE RENTAL INVENTORY BY BEDROOM FOR OAHU

Bedrooms In Unit	Count of Projects With Units	Count of Built Units	Average Sq Ft Size	Count of Project's Units
Studio	15	687	507	2

These tables illustrate how the supply of the proposed subject development compares to the existing housing stock of comparable units, by bedrooms and the AMI of their target market. They describe specifically that – on the supply side - the numbers that will be provided by this proposed development are not large.

XI. ANALYSIS OF COMPARABLE PROPERTIES IN THE MARKET AREA

The following section analyzes the comparable properties in the area of Honolulu, the ones again which responded to our inquiries as to their rents, vacancy rates, operating expenses and turnover rates. We note that the data comes from interviewing developers and searching on the Internet, and not all of our inquiries received an answer.

30% AMI, AFFORDABLE INVENTORY: Here, we describe and analyze the total inventory of affordable housing units in the comparable properties in the market area, as compared the prospective project supply.

30% AMI AFFORDABLE RENTAL INVENTORY, OAHU

Bedroom Count	Existing Projects	Existing Units	Ave. Months Waitlist, Short	Ave. Months Waitlist, Long	Ave Vacancy Rate	Ave Turnover Rate
Studio	1	6	24	60	0.0%	NA
1 Bed	13	279	27	42	1.9%	NA

As seen, there are low vacancy and turnover rates and long waiting list times, indicating the market is very tight for these units.

50% AMI, AFFORDABLE INVENTORY: In terms of affordable housing units on Oahu being rented to households making 50% of AMI, the following tables summarize this sub-market.

50% AMI AFFORDABLE RENTAL INVENTORY, OAHU

Bedroom Count	Existing Projects	Existing Units	Ave. Months Waitlist, Short	Ave. Months Waitlist, Long	Ave Vacancy Rate	Ave Turnover Rate
Studio	7	345	31	56	1.7%	0.2%
1 Bed	29	1,383	22	39	3.1%	2.0%

As described, there are low vacancy and turnover rates and long waiting list times, which indicates the market is very tight for these units.

60% AMI, AFFORDABLE INVENTORY: In terms of affordable housing units on Oahu being rented to households making 60% of AMI, the following tables summarize this sub-market.

60% AMI AFFORDABLE RENTAL INVENTORY, OAHU

Bedroom Count	Existing Projects	Existing Units	Ave. Months Waitlist, Short	Ave. Months Waitlist, Long	Ave Vacancy Rate	Ave Turnover Rate
Studio	8	532	7	18	3.1%	3.0%
1 Bed	15	687	16	30	0.9%	4.8%

GENERAL MARKET COMPARABLES: In addition, the following table is drawn from information from a large rental management company. It describes and summarizes the vacancy and waitlist information for 10 affordable rental projects.

VACANCY & WAITLISTS FOR SELECTED PROJECTS

	Units	Vacant	Waitlist	Vacancy
Project 1	52	3	25	6%
Project 2	91	4	28	4%
Project 3	80	6	315	8%
Project 4	53	2	222	4%
Project 5	54	1	413	2%
Project 6	62	2	250	3%
Project 7	47	0	54	0%
Project 8	106	10	94	9%
Project 9	62	3	30	5%
Project 10	83	9	9	11%
Project 11	132	19	4	14%
Summary	822	59	1,444	7%

An analysis shows the following trends:

- The lower the income of the households served, the lower the vacancy rate;
- The lower the income of the households served, the lower the turnover rate;

Given that, the market would be most served by having (producing) more units for the lower income households. It would also be beneficial to have more, larger sized units.

XII. ANALYSIS OF MARKET RATE PROPERTIES IN THE AREA

Again, there are no large operators to call and survey for their rents, vacancy rates, etc. Instead, the Internet was used to research websites that specialize in rental units. The rental averages below are drawn data downloaded from the websites advertising rental units, such as Craigslist, Apartments.com and the Honolulu Board of Realtors. They are for all rental units in the immediate area from Downtown to Hawaii Kai that are in building built after 1995. These are only long-term rental units and have been rented on Oahu in the years 2014-18.

STUDIO MARKET RENTALS, ANNUAL LISTINGS & AVERAGE RATES

	Listings	Average Rents
2014	3	$1,288
2015	5	$1,464
2016	10	$1,545
2017	11	$1,647
2018	33	$1,795

ONE BEDROOM MARKET RENTALS, ANNUAL LISTINGS & AVERAGE RATES

	Listings	Average Rents
2014	24	$2,046
2015	33	$2,228
2016	54	$2,199
2017	89	$2,297
2018	189	$2,189

As seen, the rates overall were rising 2014-2018. Listings showed a similar trend. The rise in listings over the last few years are due to the delivery of new units in large multifamily projects, such as 801 South Street and Keauhou Lane.

Next, we reviewed the data for rented units on the Internet over the last 3 years, specifically those advertised as long-term, and unfurnished. We set a rental ceiling on the data at the level of the rental limits for those households making 30%, 50% and then 60% of AMI and lower. We limited the data to units located just in urban Honolulu, from Salt Lake to Hawaii Kai.

XIII. ANALYSIS OF MARKET RATE PROPERTIES IN THE MARKET AREA

Given the project specifics:

PROJECT UNIT BREAKDOWN

AMI	Studios	One Beds	Studio Rent Guideline	One Bed Rent Guideline
30%	4	2	$612	$656
50%	72	20	$1,021	$1,093
60%	4	2	$1,225	$1,312

The following tables describe the comparable affordable units in the market area for projects that have one-bedroom units serving families making 30%, 50% and 60% of AMI. Here, we reviewed the data for rented units on the Internet over the last 3 years, specifically those advertised as long-term, and unfurnished.

We set a rental ceiling on the data at the level of the rental limits for those households making 30%, 50% and 60% of AMI and lower. We limited the data to units located just in the area outside of urban Honolulu, the area from Salt Lake to Hawaii Kai.

STUDIO MARKET LISTINGS, RENTS & AVERAGE YEAR BUILT FOR 30% AMI ($656 & BELOW)

	Listings	Average Rents
2016	0	0
2017	0	0
2018	0	0

STUDIO MARKET LISTINGS, RENTS & AVERAGE YEAR BUILT FOR 50% AMI ($1,200 & BELOW)

	Listings	Average Rents
2016	0	0
2017	0	0
2018	6	$1,033

STUDIO MARKET LISTINGS, RENTS & AVERAGE YEAR BUILT FOR 60% AMI ($1,350 & BELOW)

	Listings	Average Rents
2016	8	$1,181
2017	9	$1,189
2018	13	$1,251

ONE BEDROOM MARKET LISTINGS, RENTS & AVERAGE YEAR BUILT FOR 30% AMI ($656 & BELOW)

	Listings	Average Rents
2016	0	0
2017	0	0
2018	0	0

ONE BEDROOM MARKET LISTINGS, RENTS & AVERAGE YEAR BUILT FOR 50% AMI ($1,200 & BELOW)

	Listings	Average Rents
2016	0	0
2017	0	0
2018	4	$1,043

ONE BEDROOM MARKET LISTINGS, RENTS & AVERAGE YEAR BUILT FOR 60% AMI ($1,350 & BELOW)

	Listings	Average Rents
2016	2	$1,075
2017	0	
2018	9	$1,093

As seen, there is very little overlap between the proposed rents for the project and the existing rents in the market. Where there is overlap, these will be with units that are aged, and thus very likely to be inferior in terms of design, security, unit fixtures and project features.

XIV. PROPOSED PROJECTS IN THE MARKET AREAS

PROJECTED NEW INVENTORY: According to the governor's office, the following are projects that are in planning or under construction on the Oahu: Keahumoa Pl. 4 (81 units), Kulana Hale Mixed-Use (154 units), 630 Cooke Street (111), Alder Street (180), Hale Makana O Maili (51), Kapolei N/W Corner (168), Kukui Tower (378), and Village Of Kapolei Village 8 Cluster (50).

XV. CONCLUSIONS AND FORECAST

Many have observed the County's average rents charged are generally above what an average household would like to pay. This is compounded by a historically low wage rate, due to the low salaries given to service workers in the travel and hotel industries. For example, almost 35% of the County's population makes 60% of AMI and below - and 20% of the County's population are renters.

As such, the need for affordable housing is acutely felt throughout the market (which highlights the willingness of renters to relocate anywhere on the island for an affordable rental unit).

Looking ahead, the local real estate market is poised to see increased prices for all condominium units, significantly so by the end of this market cycle. Per usual, the market rents for rental housing will experience a similar trend, and reasonably priced units will become less available.

Currently, the demand for units similar to what the proposed development is producing is robust. As seen, the majority of the comparables are exhibiting stable occupancies and low vacancy rates. The current rental rate schedule for this project, relative to units available to the general public on the open market, is competitive.

Based on our demographic information and rental demand analysis, we believe that there is adequate demand in the primary market area for the Subject property as proposed – and this goes for whether it is done by phase, for the three remaining phases, or whether it is done by grouping two phases, or all three phases.

Therefore, we expect the proposed development will attain and maintain a 99 percent occupancy rate upon stabilization. And, in light of the paltry supply and growing demand for affordable housing, we do not foresee any negative impact on the existing rental housing stock. Further, it is reasonable to expect the project will be achieving 97%-100% occupancy in the first 6 to 9 months, post-completion.

Appendix H

*Cultural Impact Assessment - **FINAL***

For a Property Located in the Waikiki Ahupua'a, Honolulu District of Oahu
By Pacific Consulting Services, Inc.

FINAL REPORT

Cultural Impact Assessment in Support of the Hale Makana O Moʻiliʻili Affordable Rental Housing Project, Waikīkī Ahupuaʻa, Honolulu District, Island of Oʻahu, Hawaiʻi

TMKs: (1) 2-7-007:016 and 2-7-007:051

Prepared for:
Hoʻokahua Moiliili, LP
1188 Bishop Street, Suite 907
Honolulu, HI 96813

October 2020

PACIFIC CONSULTING SERVICES, INC.

720 Iwilei Road, Suite 424, Honolulu Hawaii 96817

REPORT

Cultural Impact Assessment in Support of the Hale Makana O Moʻiliʻili Affordable Rental Housing Project in Mōʻiliʻili, Waikīkī Ahupuaʻa, Honolulu District, Island of Oʻahu, Hawaiʻi

TMKs: (1) 2-7-007:016 and 2-7-007:051

By
Nicole I. Vernon, M.A.

Dennis Gosser, M.A.
Principal Investigator

Prepared For:
Hoʻokahua Moiliili, LP
1188 Bishop Street, Suite 907
Honolulu, Hawaii
96813

Prepared By:
Pacific Consulting Services, Inc.
720 Iwilei Road, Suite 424
Honolulu, HI 96817

October 2020

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MANAGEMENT SUMMARY

Document Title:	Cultural Impact Assessment in Support of the Hale Makana O Moʻiliʻili Affordable Rental Housing Project in Mōʻiliʻili, Waikīkī Ahupuaʻa, Honolulu District, Island of Oʻahu, Hawaiʻi
Date/Revised Date:	Preliminary Draft: July 2020
Archaeological Permit #:	SHPD Permit No. 20-29
Project Location:	2139 Algaroba Street and 918 Makahiki Way in Mōʻiliʻili, Waikīkī Ahupuaʻa, Honolulu District, Island of Oʻahu, Hawaiʻi
Project TMK:	(1) 2-7-007:016 and 2-7-007:051
Land Owner:	University Park Apartments LP
Project Proponents:	Hoʻokahua Development LLC
Project Tasks:	Archaeological Literature Review
Project Acreage:	.17 hectares (.42 acres)
Principal Investigator:	Dennis Gosser, M.A.
Regulatory Oversight:	Chapter 6E-7 and 6E-8, Hawaii Revised Statutes (HRS) and Hawaii Administrative Rules (HAR) Chapter 275; HRS Chapter 343
Project Background:	The project scope of work includes demolition of an existing single-family residence and a low-density apartment complex, and construction of a new apartment complex.
SIHP #:	No previously identified sites in the project area.
Findings:	Few archaeological investigations have been carried out near the project area. No human skeletal remains or human burials have been documented within a 500-meter radius. A single previously identified site, a historic trach deposit (SIHP 50-80-14-08210), is located 100 meters to the southeast. Traditional land use in the vicinity of the project area included wetland taro cultivation and habitation. The existing residences on the property were constructed in the 1920s and are potential historic properties.
Human Skeletal Remains:	None identified within the project area.
Recommendations:	It is recommended that no historic properties will be affected with the condition that archaeological monitoring be conducted with an SHPD-approved AMP and assessment and recordation is conducted for the existing structures over 50 years old.

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INTRODUCTION

Under contract to Hoʻokahua Moiliili, LP, Pacific Consulting Services, Inc. (PCSI) has prepared this Cultural Impact Assessment (CIA) in support of the Hale Makana O Moʻiliʻili Affordable Rental Housing Project located at 2139 Algaroba Street and 918 Makahiki Way in Mōʻiliʻili, Waikīkī Ahupuaʻa, Honolulu District, Island of Oʻahu, Hawaiʻi. The project proponent is Hoʻokahua Development LLC, which is a partnership between the Hawaiian Community Development Board and 3 Leaf Holdings. The current land owner is University Park Apartments HI, LP. Partial funding for the project is being provided by the Hawaii Housing Finance and Development Corporation. The extent of the proposed project is shown in Figure 1. The project scope of work includes the demolition of existing residences on the property and construction of a six-story (105-unit) affordable rental housing facility.

This CIA has been prepared in compliance with Title13 of the Hawaii Administrative Rules (HAR), Subtitle 13 (State Historic Preservation Division Rules), Chapter 275 (Rules Governing Procedures for Historic Preservation Review for Governmental Projects Covered Under Sections 6E-8, Hawaii Revised Statutes). The project requires compliance with the State of Hawaiʻi environmental review process (HRS Chapter 343), which includes consideration of a proposed Project's effect on cultural practices. PCSI has initiated the consultation process at the request of Hoʻokahua Moiliili, LP. Through document research and cultural consultation efforts this report provides information pertinent to the assessment of the proposed Project's impacts to cultural practices and resources (per the *Office of Environmental Quality Control's Guidelines for Assessing Cultural Impacts*). As part of the consultation process, PCSI has sought the input from the following:

- The Office of Hawaiian Affairs (OHA)
- The Archaeology Branch of the Department of Land and Natural Resources State Historic Preservation Division
- The History and Culture Branch of the Department of Land and Natural Resources State Historic Preservation Division
- The Honolulu Civic Club
- The McCully/Moiliili Neighborhood Board

PROJECT AREA LOCATION AND DESCRIPTION

The proposed project is located at 2139 Algaroba Street and 918 Makahiki Way on a residential block, immediately west of Old Stadium Park. The total project area measures .17 hectares (ha) (.42 acres [ac]). Tax Map Key (TMK) parcels for the project area are (1) 2-7-007:016 and 2-7-007:051, which are shown in Figure 2. Hoʻokahua Development, LLC is planning to construct a six-story (105-unit) affordable rental housing facility with covered parking stalls and an onsite Community Resource Center. The planned development will replace a two-story (26 unit) multi-family apartment complex and one single-family residence. A site plan map for the new construction is shown in Figure 3 and project design plans are provided in Appendix A.

The existing structures in the project area are in poor, dilapidated condition and the property has been heavily disturbed. Proposed work will involve demolition of an existing single-family residence at 918 Makahiki Way and the adjacent low-density apartment complex at 2139 Algaroba Street, followed by construction of a new apartment complex and excavations for associated structures and utilities. Excavations are anticipated to disturb previously undisturbed soils.

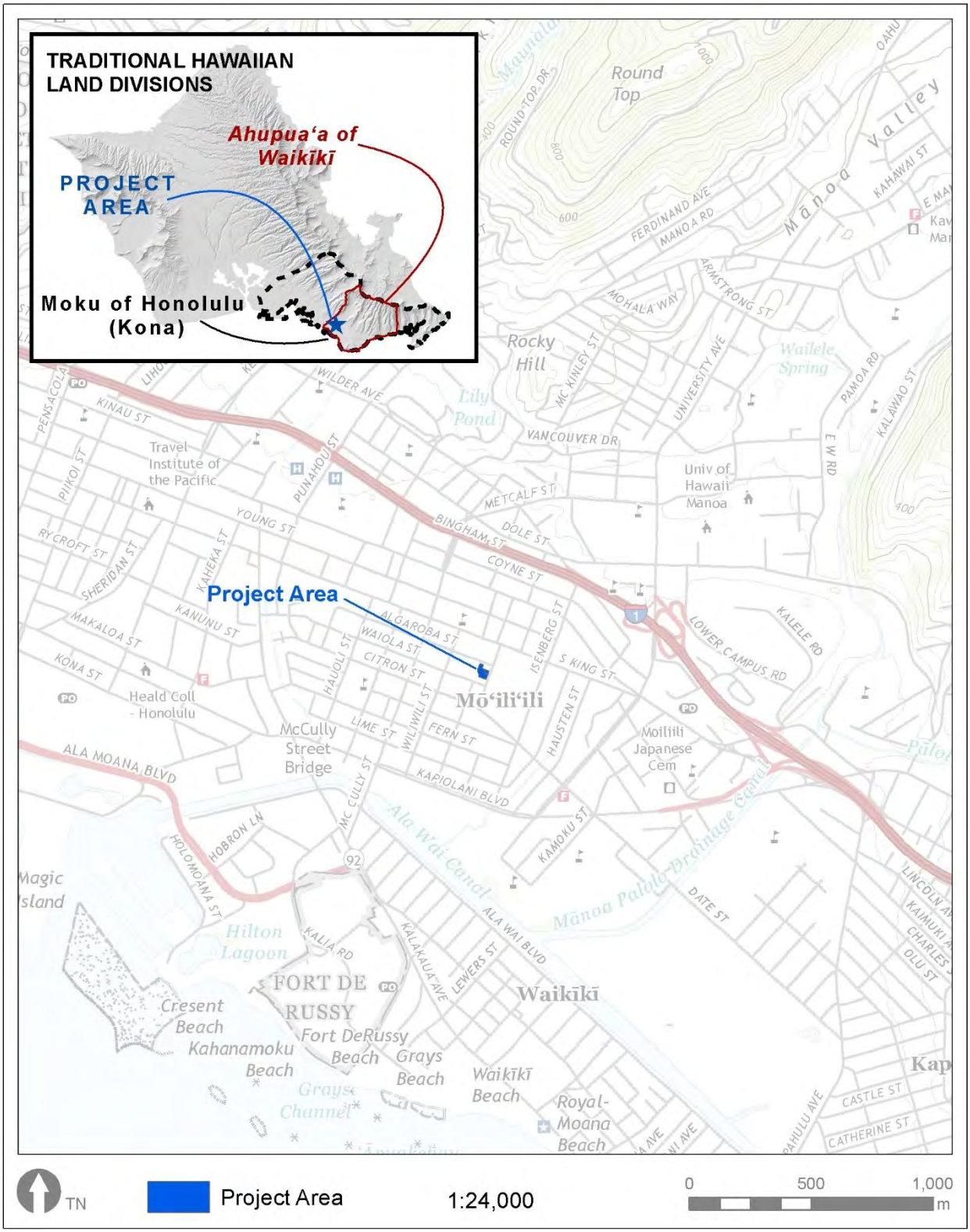


Figure 1. Project Area Shown on USGS 2017 Honolulu Topographical Quadrangle (USGS 2017).

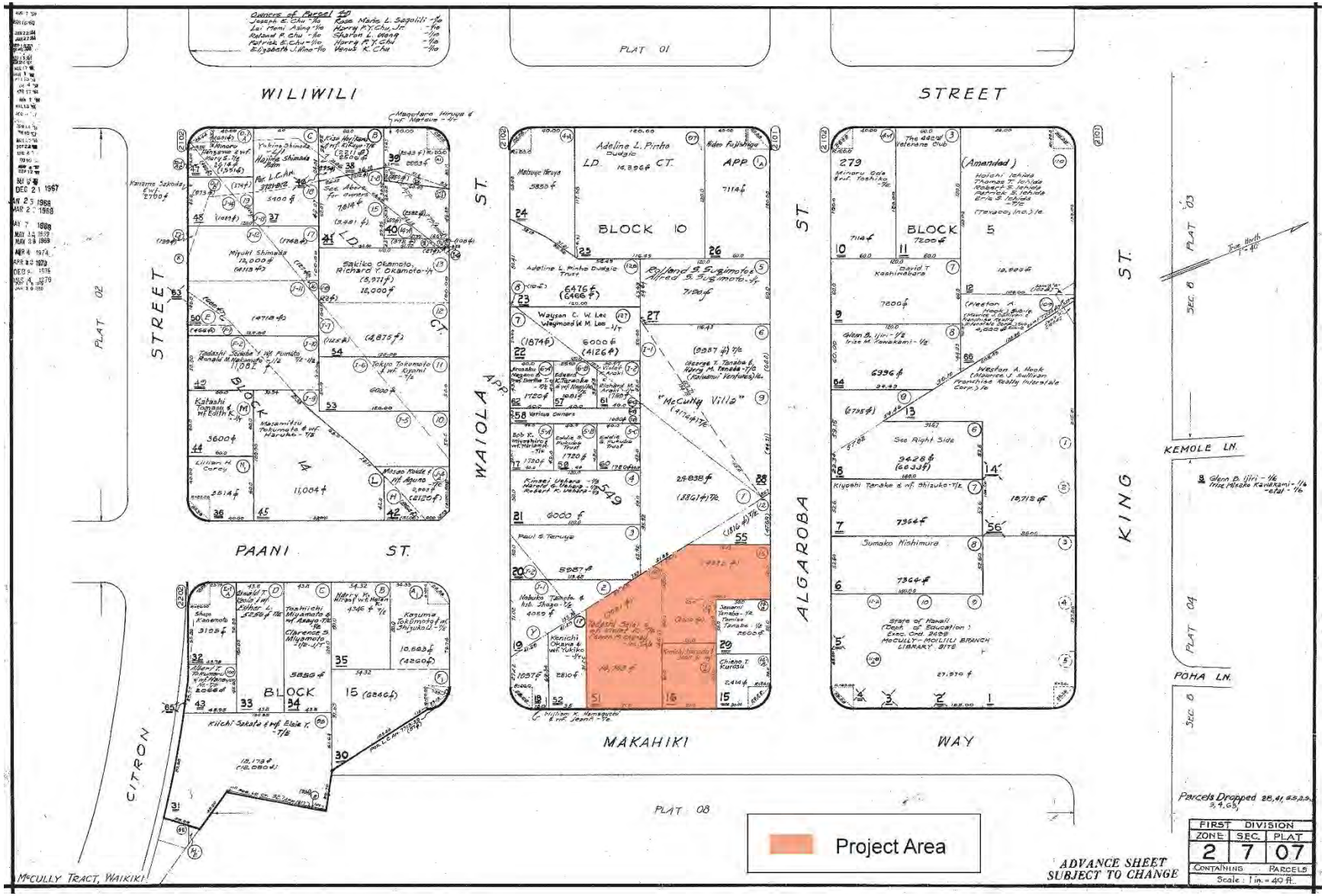


Figure 2. Plat Map Showing Project Area in TMK (1) 2-7-007:016 and 051 (Tax Maps Bureau 1932).

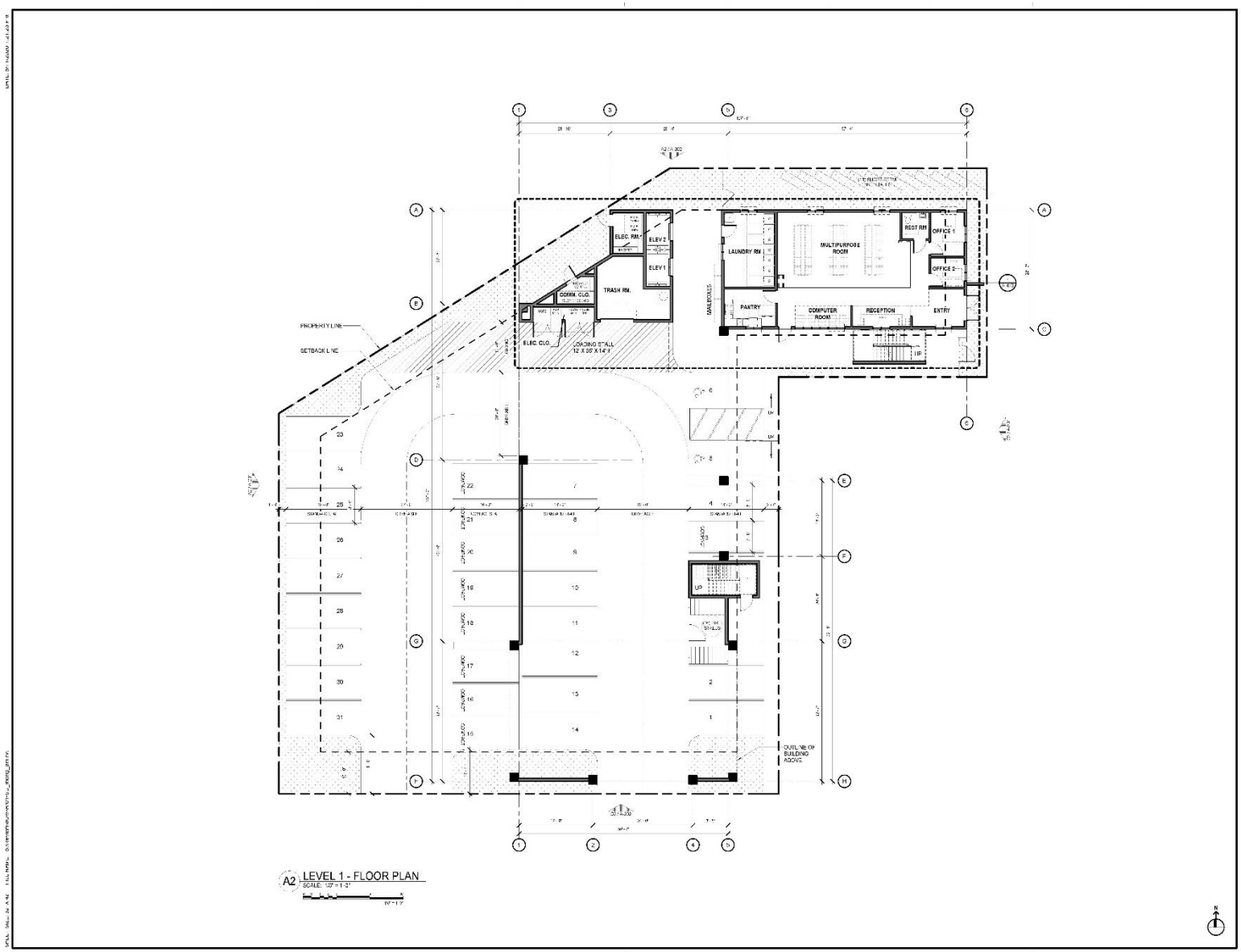


Figure 3. Site Plan for the Project Area.

ENVIRONMENTAL SETTING

Waikīkī Ahupuaʻa (a traditional Hawaiian land division) covers approximately 7,538 ha (18,627 acres [ac]) of the southeastern portion of Oʻahu Island. The land unit is bordered by Honolulu Ahupuaʻa on the west and Waimānalo Ahupuaʻa on the east, and extends south from the Koʻolau Mountain range to the coast. The project area is situated in the Mōʻiliʻili neighborhood, which is roughly bounded by the Ala Wai Canal, Dole Street, Mānoa Stream, and McCully Street; however, sometime the western boundary is placed at Isenberg Street, which places the project area in the McCully neighborhood. The project area is an urban area, with a mix of high-rise and low-rise buildings and single-family homes.

TOPOGRAPHY AND SOILS

The project area is on level land at 2.0 meters (m) above mean sea level (amsl). Soils underlying the project area, shown in Figure 4, consist of Ewa silty clay loam with zero to two percent slopes (EmA). The Ewa series is found on alluvial fans and terraces. Ewa soils developed in alluvium derived from basic igneous (Foote et al. 1972:29–30).

RAINFALL, HYDROLOGY, AND VEGETATION

Mean annual rainfall in this portion of Oʻahu measures 765.9 millimeters (mm) (30.15 in) with most of the rainfall occurring between November and March (Giambelluca et al. 2013). Several streams once extended through plain from the mountains to the coast; much of the plain was formerly wetland. Today, channelized streams flow into the Ala Wai Canal south of the project area (see Figure 4).

The project area is in a residential neighborhood and the parcels are densely built. The sparse vegetation consists of small trees and shrubs. Historically, the McCully-Mōʻiliʻili area was used for *loʻi* (irrigated taro field) and rice cultivation (Coulter and Chun 1937:12, 21). In the early 20th century, it was filled as part of the Waikīkī Reclamation District.

HISTORICAL BACKGROUND

Archival background research and literature review examined maps, historical and archival documents, and previous archaeological studies in the vicinity of the project area. Relevant historical maps were georeferenced to determine where traditional Hawaiian or historic features may fall within the project area. The information obtained from these sources was synthesized to present data findings and to evaluate the potential for archaeological and cultural resources in the project area.

MOʻŌLELO AND WAHI PANA

The Hawaiian cultural landscape can be described through significant Hawaiian place names, or *wahi pana*, and *moʻōlelo*. *Moʻōlelo* may be myths, legends, proverbs, and events surrounding well-known individuals in Hawaiian history (Pukui and Elbert 1986:254). The project area is in or near the three *ʻili* of Keauhou, Kapaʻakea, and Wahinalo. The place name Kapaʻakea (sometimes written as Paʻakea), refers to the white reef limestone visible on the ground surface (Pukui et al. 1974:86). The place name Mōʻiliʻili was formerly Kamōʻiliʻili, which can be translated as “the pebble lizard” (Pukui et al. 1974:153). According to legend, Pele’s sister Hiʻiaka was on her way to Hawaiʻi Island with her companion Wahineomaʻo and a handsome Kauaʻi chief named Lohiau. A *moʻo* (supernatural lizard) of Mānoa Valley attacked them and using forks of lightning from her skirt, Hiʻiaka slayed the *moʻo*, cutting it into many pieces, like pebbles (Chun 2003). These pebble-like pieces were then transformed into a low hill, which is where Kūhio Elementary is today.

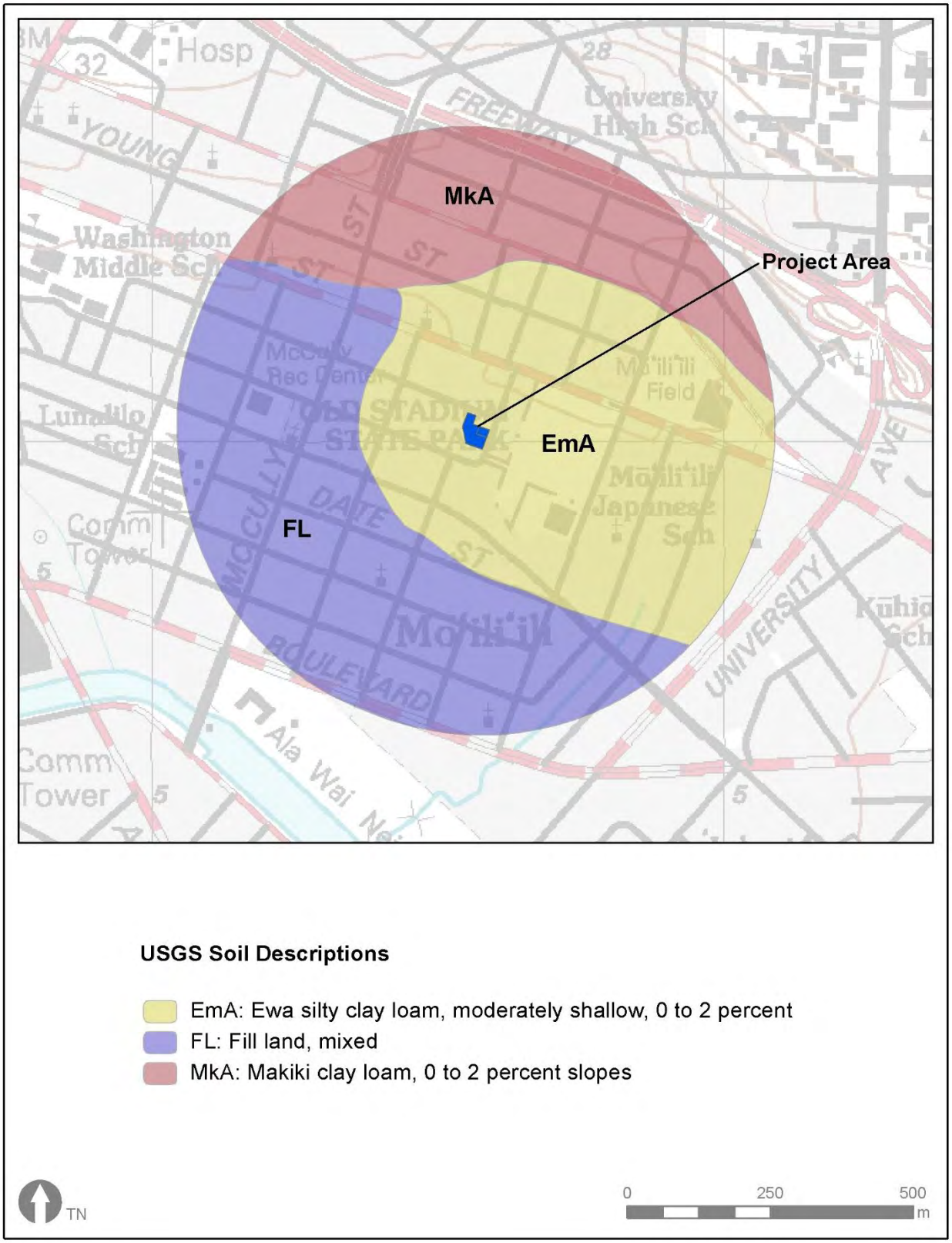


Figure 4. Soil Units in the Vicinity of the Project Area (Soil Survey Staff, NRCS, USDA 2020).

Northeast of the project area, a *heiau* (temple) and spring appear on a historical map dated 1883, which is shown in Figure 5. The *heiau* was likely Mauʻoki, which is suggested by the adjacent spring's name "Mauoke" and the land labeled Mauoki on Hawaiʻi Register Map 1234 (Bishop 1883). Kamakau wrote of the importance of Mauʻoki Heiau in its association with Chief Kiha-a-Piʻilani: "Kiha-a-Piʻilani was taken by the kahuna and raised at the heiau of Mauʻoki at Kamōʻiliʻili. He was raised there until he was grown and taught to be a warrior and an orator; he was skilled in those professions" (Kamakau 1991:50). Thomas G. Thrum described the *heiau* as follows: "It is said to have been of traditional Menehune construction with stones brought one by one from Kawiwi, Waianae. It was a heiau of good size, walled on three sides and open to the west that stood at the foot of the slope dividing the Manoa and Palolo valleys, Kamoiliili" (Thrum 1906b:56). Thrum also wrote that this was a "Heiau and luakini [sacrificial heiau]; erected according to tradition by Menehunes with stones from Kawiwi Waianae. Torn down about 1883 by the Minister of Interior for street work" (Thrum 1906a:44).

Regarding the *heiau* being razed in 1883, a newspaper article from 1882 appears to clarify this story. A reporter for the *Pacific Commercial* was told that stones from the *heiau* were being used to pave streets in the city and he set out to investigate around December of 1882. He happened upon the supervisor of road construction, a man by the name of Hart. Hart went with the reporter to the source of the road material, which was an "old wall," and not the *heiau* in question. This material was being dumped "on or over the excavation on the upper corner of Alapai and Beretania streets," and was being carried by rail that ran from "this point . . . out on one side of Beretania street to a point considerably beyond Punahou, and then curves to the left and runs to alongside of the long wall alluded to" (*Pacific Commercial Advertiser* 1882:8). Based on historical maps, it appears that the Moiliili Quarry (operated 1889–1949) may have existed in the same area as the *heiau*, which today is the site of University of Hawaii's lower campus and the H-1 Freeway. The following description of the *heiau* from the reporter, which matches a map from 1883 by Bishop (1883; see Figure 5), does suggest that its disappearance would not have gone unnoticed.

> This relic of an ancient people is, like all time-worn monuments, weather-worn and broken; but the outlines of the structure are still plainly visible, and, in fact, the walls are still standing. These walls are some twenty feet in thickness. At the base, rise to average height of ten feet, where they are some eight feet wide. Commencing at the west side on the bank of a pond of brackish water the wall runs easterly about 200 feet, and then right angles say 300 feet. Here a wing wall built parallel with the first one spoken of runs back to the fish pond, completing three sides of a square which is bounded on the fourth by the pond. Within this enclosure, there are several smaller walls that divide the interior into three or four parts. From where the south wall joins the easterly one, another has been built running east for a short distance to a gate way or entrance. Beyond this entrance the wall is carried on a short distance further in an easterly direction and then forms a right angle and runs southerly over a slight hollow of about five hundred feet. This last mentioned wall stands in the same relation to the heiau, as a "curtain" wall thrown across a valley from one fort to another does to the fortresses themselves. Under the lee, as it were, of this curtain wall is a spring that tradition says was used by the high chiefs alone; and from the position of the curtain spoken of we are inclined to believe that it was built as a sort of break-wind, for those who bathed in the pool. The heiau is not one of the oldest type. . . Mauoki belongs to this last named class of temples; and still it is very ancient, and should be permitted to stand as one of the mementoes of the old Hawaiians [Pacific Commercial Advertiser 1882:8].

As for the spring labeled Mauoke in Figure 5, Hammatt and Shideler (2014:33) suggest that this may be Kumulae Spring, which was a legendary pool associated with the karst caves of Mōʻiliʻili. This spring appears in a legend of Kamapuaʻa, the Hawaiian pig god, who made a spring

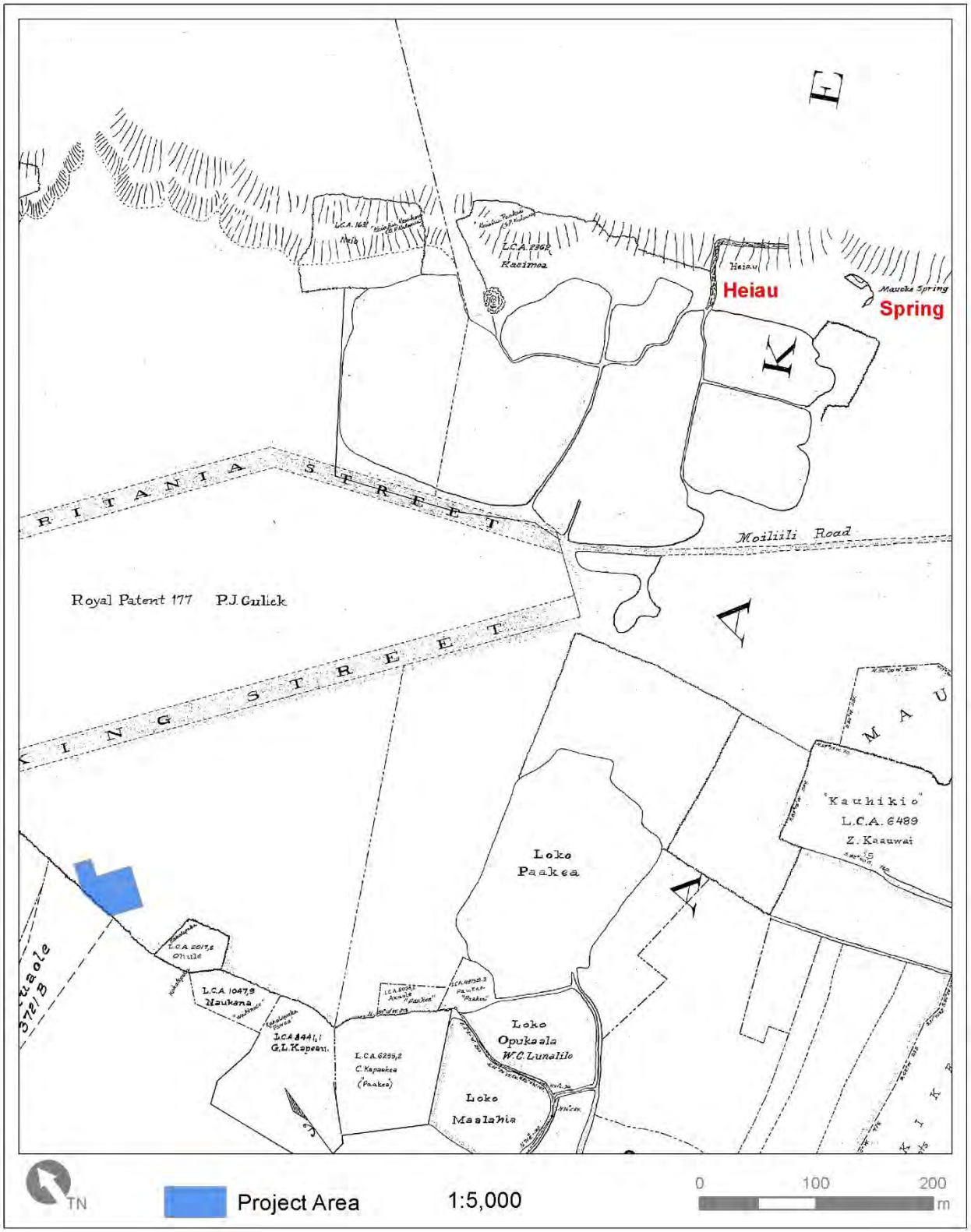


Figure 5. Historical Map of Kapaʻkea ʻIli Showing Heiau, a Spring, and Fishponds in Mōʻiliʻili (Bishop 1883).

at Kānewai and a spring called Paʻakea (also called Kumulae or Hausten Spring) in Kamōʻiliʻili. The following is an account from Westervelt of Kamapuaʻa at Mōʻili'ili:

> At Kamo'ili'ili he saw two beautiful women coming from the stream which flows from Manoa Valley. He called to them, but when they saw his tattooed body and rough clothing made from pigskins they recognized him and fled. He pursued them, but they were counted as goddesses, having come from divine foreign families as well as Kamapua'a. They possessed miraculous powers and vanished when he was ready to place his hands upon them. They sank down into the earth. Kamapua' a changed himself into the form of a great hog and began to root up the stones and soil and break his way through the thick layer of petrified coral through which they had disappeared. He first followed the descent of the woman who had been nearest to him. Down he went through soil and stone after her, but suddenly a great flood of water burst upward through the coral almost drowning him. The goddess had stopped his pursuit by turning an underground stream into the entrance which he had made [Near the former site of Kamoiliili church, today's Kūhio Elementary School].
>
> After this narrow escape Kamapuaʻa rushed toward Manoa Valley to the place where he had seen the other beautiful woman disappear. Here also he rooted deep through earth and coral, and here again a new spring of living water was uncovered. He could do nothing against the flood, which threatened his life. The goddesses escaped and the two wells have supplied the people of Kamoʻiliʻili for many generations, bearing the name, "The wells, or fountains, of Kamapuaʻa" [Westervelt 1915:259–260].

TRADITIONAL HISTORY AND LAND USE

Waikīkī became the seat of royal power in the 1400s when Māʻilikūkahi moved his court to the south side of the island. According to Kamakau, "Upon Mailikukahi becoming king, he was taken early by the chiefs to reside at Waikiki, and that perhaps was the origin of the residence of chiefs at Waikiki, because Waialua was the place formerly of the residence of chiefs, as also Ewa" (Kamakau N.D. in McAllister 1933:74).

Kamakau notes that the chief Kalamakua, who reigned around the sixteenth century (based on Stokes' [1933] 20 year-count; Kelly 1989), was the first to build an extensive irrigation system of *loko* (fishpond) and *loʻi* (irrigated taro field) in Waikīkī: "a good chief. He was noted for cultivating, and it was he who constructed the large pond fields Keʻokea, Kūalulua, Kalāmanamana, and other *loʻi* in Waikiki. He traveled about his chiefdom with his chiefs and household companions to cultivate the land and gave the produce to the commoners, the makaʻāinana" (Kamakau 1991:45).

In 1780, the army of Maui chief Kahekili landed at Waikīkī "carpeting the beaches from Kaʻalawai (near Diamond Head) to Kawehewehe (next to the Halekulani Hotel)" (Kanahele 1995:79). According to Thrum (1925:109), he dedicated Papaʻenaʻena Heiau, formerly located in the vicinity of Diamond Head, following his victory. In 1794, Kahekili died and was succeeded by Kalanikupule. The next year, Kamehameha invaded Oʻahu at Waikīkī, possibly with 10,000 warriors. The army made their base on the sandy beaches from Waiʻalae to Diamond Head to Kālia, which is southwest of the project area (Kanahele 1995:87). The final battle ended at Nuʻuanu when Oʻahu warriors became trapped between Kamehameha's warriors and the *pali* (cliff) and chose to leap to their deaths (Tomonari-Tuggle and Blankfein 1998:13).

Kamehameha made his capital at Waikīkī and the area became the chiefly center of the south coast where the ruling chief and subordinate *aliʻi* (chiefly class) resided (Cordy 1996; Nāpōkā 1986; Tomonari-Tuggle 1994). Hawaiian historian John Papa ʻĪʻī (1959) describes Kamehameha's residence in Waikīkī:

> Kamehameha's houses were at Puaaliili, makai of the old road, and extended as far as the west side of the sands of Apuakehau [vicinity of Moana Surfrider Hotel]. Within it was

> Helumoa [vicinity of Royal Hawaiian Hotel], where Kaahumanu went to while away the time. The king built a stone house there, enclosed by a fence; and Kamalo, Wawae, and their relatives were in charge of the royal residence. Kamalo and Wawae were the children of Luluka and Keaka, the childhood guardians of Kamehameha.
>
> This place has 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. Haalou, a makuahine of Kamehameha, lived there with her younger daughter Kekuapoi while en route from Hawaii to Kauai to consult Kapoukahi, a seer of Kauai, for means whereby Kamehameha would gain victory over Keoua Kuahuula ['Ī'ī 1959:17].

Kamakau also wrote of Waikīkī as a home to chiefs:

> Waikīkī sits proudly in the calm of the Ka'ao breeze… Waikīkī was a land beloved of the chiefs and there many of them lived from remote times to the time of board surfing could be indulged in there, and for this reason the chiefs liked the place very much. At Waikīkī are the surfs of Ka-lehua-wehe, 'Aiwohi, Maihiwa, and Kapuna [Kamakau 1991:44].

Waikīkī is described as a richly productive area in accounts by early European explorers. In 1792, Captain George Vancouver of the H.M.S. Discovery arrived at "Whyteete" and noted the field systems:

> On the shores, the villages appeared numerous, large, and in good repair; and the surrounding country pleasingly interspersed with deep, though not extensive valleys; which, with the plains near the sea-side, presented a high degree of cultivation and fertility [Vancouver 1798:162].
>
> This opened to our view 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 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 [Vancouver 1798:163–164].
>
> In this excursion we found the land 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, some of which our sportsmen shot, and they were very fine eating. 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 plains, however, if we may judge from the labour bestowed on their cultivation, seem to afford the principal proportion of the different vegetable productions on which the inhabitants depend for the subsistence [Vancouver 1798:164].

Also aboard the H.M.S. Discovery was surgeon and naturalist Archibald Menzies. He echoed Vancouver's description of a bountiful land:

> The verge of the shore was planted with a large grove of cocoanut palms, affording a delightful shade to the scattered habitations of the natives. Some of those near the beach were raised a few feet from the ground upon a kind of stage, so as to admit the surf to wash underneath them. We pursued a pleasing path back into the plantation, which was nearly level and very extensive, and laid out with great neatness into little fields planted with taro, yams, sweet potatoes and the cloth plant. These, in many cases, were divided by little banks on which grew the sugar cane and a species of Draecena without the aid of much cultivation, and the whole was watered in a most ingenious manner by dividing the general stream into little aqueducts leading in various directions so as to be able to supply

> the most distant fields at pleasure, and the soil seemed to repay the labor 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].

Several others followed Vancouver and Menzies in describing Waikīkī over the next few decades. Peter Corney wrote of Waikiki between 1813 and 1818:

> On rounding Diamond hill the village of Wyteetee (Waikiki) appears through large groves of cocoanut and bread-fruit trees; it has a most beautiful appearance, the land all round in the highest state of cultivation, and the hills covered with wood; a beautiful plain extending
>
> as far as the eye can reach. A reef of coral runs along the whole course of this shore, within a quarter of a mile of the beach, on which the sea breaks high; inside this reef there is a passage for canoes [Corney 1965:193].

Otto von Kotzebue commander of the Russian ship Rurick viewed Waikīkī from the sea in 1816. A map he produced of the southern coast of O‘ahu is shown in Figure 6. His description of the land follows:

> but you have scarcely sailed round the Yellow Diamond Hill, when you are surprised by the most beautiful landscape. Close to the shore you see verdant vallies adorned with palm and banana-trees, under which the habitations of the savages lie scattered; behind this, the land gradually rises, all the hills are covered with a smiling verdure, and bear the stamp of industry [von Kotzebue 1821:320].

Finally, the naturalist Andrew Bloxam was ashore from the H.M.S. Blonde in 1824–1825 when he noted the abundance of Waikīkī:

> I walked along shore towards the bay of Whyteete to see if I could procure any shells, but I found none worth picking up. The whole distance to the village of Whyteete is taken up with innumerable artificial fishponds extending a mile inland from the shore, in these the fish taken by nets in the sea are put, and though most of the ponds are fresh water, yet the fish seem to thrive and fatten. Most of these fish belong to the chiefs, and are caught as wanted. The ponds are several hundred in number and are the resort of wild ducks and other water fowl. I found it very difficult to get out of the labyrinth of paths which lead among them. Whyteete is about four miles east of Honoruru [Honolulu]. It is pleasantly situated and built along the shore among numerous groves of coconut and other trees, and in this respect far better than Honoruru, as scarcely any trees are to be found there [Bloxam 1925:35–36].

Traditional trails dating to the early 19th century were reported by Hawaiian Historian John Papa ‘Ī‘ī. In the Kona (Honolulu) District, a trail began from today’s downtown Honolulu and followed the alignment of King Street and Wai‘alae Avenue. ‘Ī‘ī (1959:93–94) described this trail around 1820 as follows:

> the mauka trail that came from Ululani’s place in Pawaa to Kapaakea, then up to Kamoiliili, and to Kapohakikeke, where it left the trail that went up to Palolo, and continued on to Mauumae, above Kaimuki where a pole later stood to serve as a mark for ships. From there it went down to, and along the upper side of, the taro paths of Waialae to join the other trails at the sand and go along Keahia and on to Maunalua, to the sea of Koko, to Makapuu, and so on [‘Ī‘ī 1959:93–94].

POST-CONTACT HISTORY AND LAND USE

The period of political importance ended for Waikīkī in 1809, when Kamehameha moved his capital to Honolulu, which was more accessible to Western visitors (Tomonari-Tuggle and Blankfein 1998:13). Following this move, traditional agriculture in Waikīkī waned. Population in

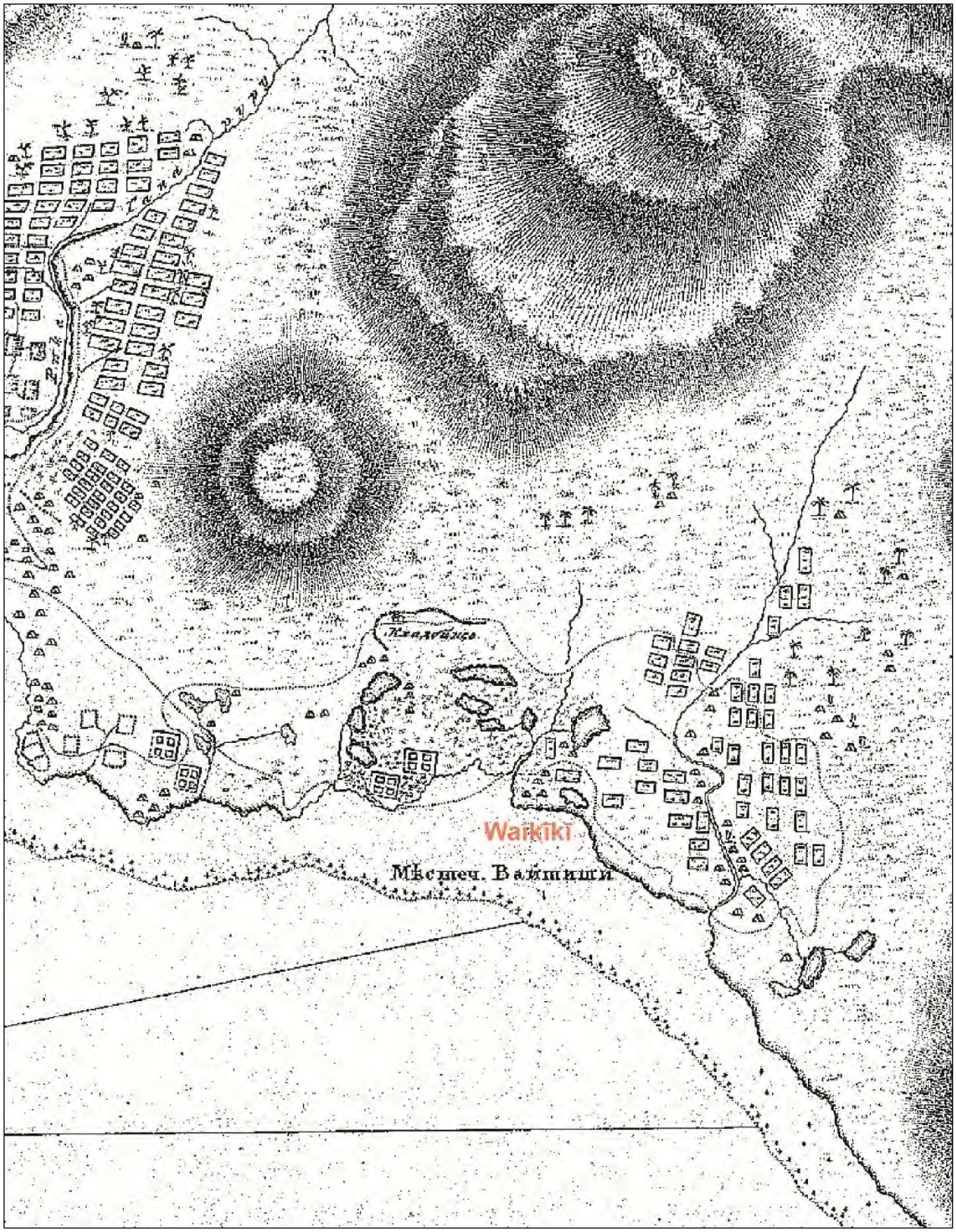


Figure 6. Portion of 1825 Map of Southern Coast of O‘ahu at Honolulu Showing Fishponds and *Lo‘i* at Waikīkī (von Kotzebue 1825).

the area had drastically decreased due to economic changes and the devastation caused by Western diseases. The missionary Levi Chamberlain noted these changes when writing in 1828:

> 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].

Traditional land divisions of the fifteenth and sixteenth centuries persisted until the 1848 Mahele, which introduced private property into Hawaiian society (Kamakau 1991:54). During the Mahele, the Land Commission required the Hawaiian chiefs and *konohiki* (land agent for the *ali‘i*) to present their claims to the Land Commission. In return they were granted Land Commission Awards (LCAs) for the land quit-claimed to them by Kamehameha III. Land was divided into Crown Lands, Government Lands, and Konohiki Lands. The remaining unclaimed land was then sold publicly, “subject to the rights of the native tenants” (Chinen 1958:29).

In the case of land claims made for Konohiki lands, approval by the Land Commissioners was required before the award was made. If approved, then the awardee obtained a Royal Patent (RP) from the Minister of the Interior, which indicated that the government’s interest in the land had been settled with a commutation fee. This fee was typically no more than one-third of the value of the unimproved land. This fee was paid either with cash, or, more commonly, the return of one-third of the awardee’s lands (or total value of the lands awarded) (Hammatt 2013:A-3).

The Kuleana Act of 1850 allowed *hoa‘āina* (common people of the land, native tenants) to make claims to the Land Commission. The new western system of ownership resulted in many losing their land. Often claims would be made for discontiguous cultivated plots with varying crops, but only one parcel would be awarded.

The Crown Lands became Government Lands when the Hawaiian Government was overthrown in 1895, making them public domain for sale by fee simple (Hammatt 2013:A-5). Patents were the certificates issued for the sale of such lands. Beginning in 1900, when Hawai‘i became a U.S. territory, the certificates were called Land Patents, or Land Patent Grants (Hammatt 2013:A-5).

Based on late 19th century maps, the project area was within the government land portions of Keauhou and Waihinalo ‘Ili, as shown in Figure 7; the boundaries of the two *‘ili* are not shown on maps. Boundary Commission testimony states that Keauhou, was claimed both by the Government and the Estate of Ruth Ke‘elikōlani. The *‘ili* of Kapa‘akea (or Pa‘akea), deeded to Victoria Kamamalu in 1861 as LCA 7713, ‘Āpana 39, was also in the vicinity. Boundary Commission testimony disputing the Kapa‘akea ‘Ili boundary suggests that Keauhou ‘Ili was *mauka*, or inland, or Waihinalo ‘Ili, but the descriptions varied. The following is testimony describing land containing the project area and some of the features are shown in Figures 7 and 8:

> Kamakania, sworn, states, I live at Kamoiiliili; I have lived there since 1847. I am nearly 60 years old. I know land of Paakea. I was a paneola [paniolo] on the Kula land in time of Kekuanaoa and Kamamalu. I came up to where land joined Punahou and down along Manoa road to Pawaa and drive animals toward Moiiliili, coming from Punahou. I went close to the Kuleana of Haumea [see Figure 7]; then down to stone wall makai of Judge McCully's house [McCully’s house was on the north side or King Street; see Figures 7 and 8].
>
> [Kekuanaoa] told me about this land at time that he had dispute with Haumea; he started to build a wall from Metcalf's gate and stopped at Kaleihiapu [near today’s Wilder Avenue

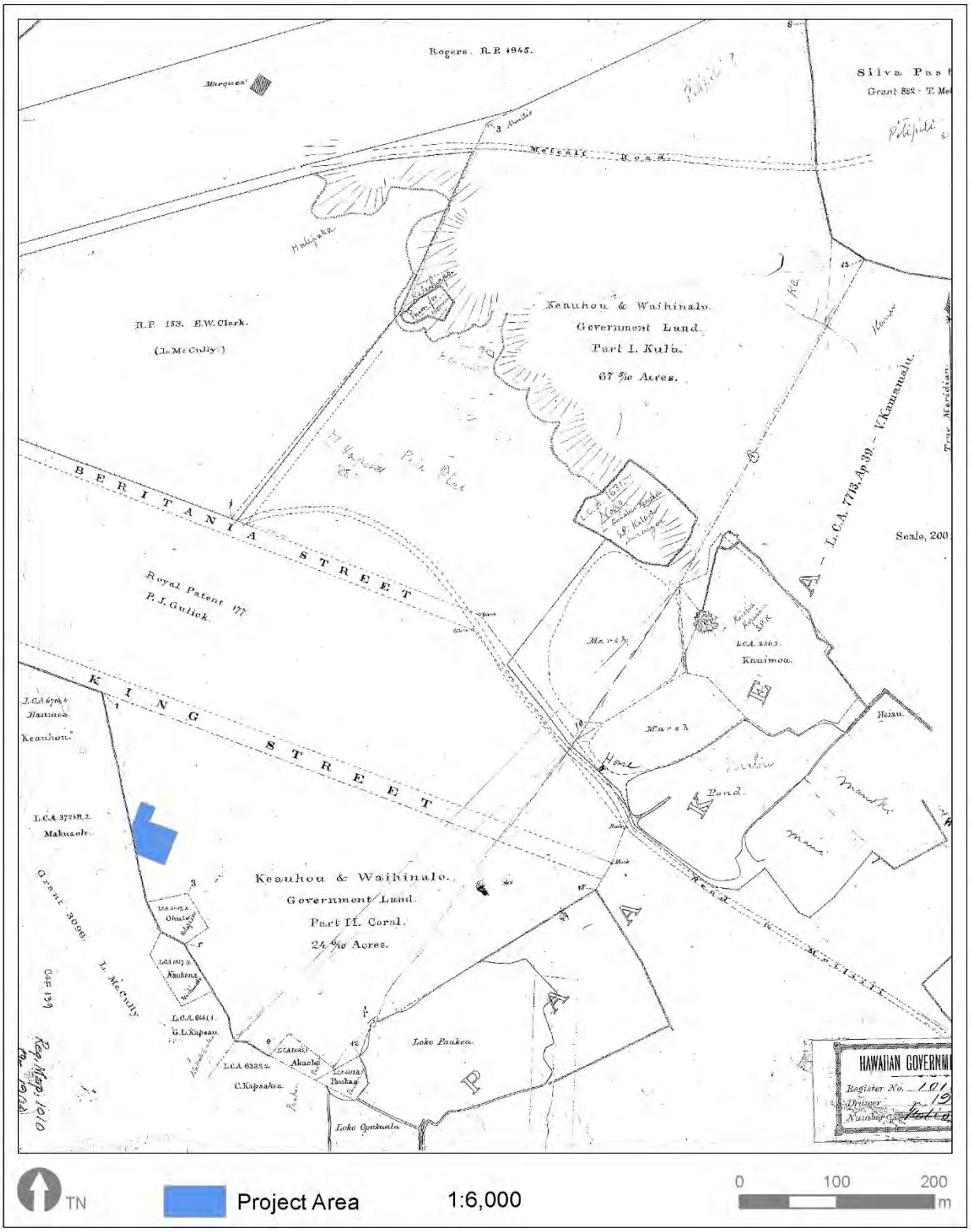


Figure 7. Portion of Historical Map of Waikīkī Showing LCAs Near the Project Area and Stone Wall on the West Border (Bishop 1881).

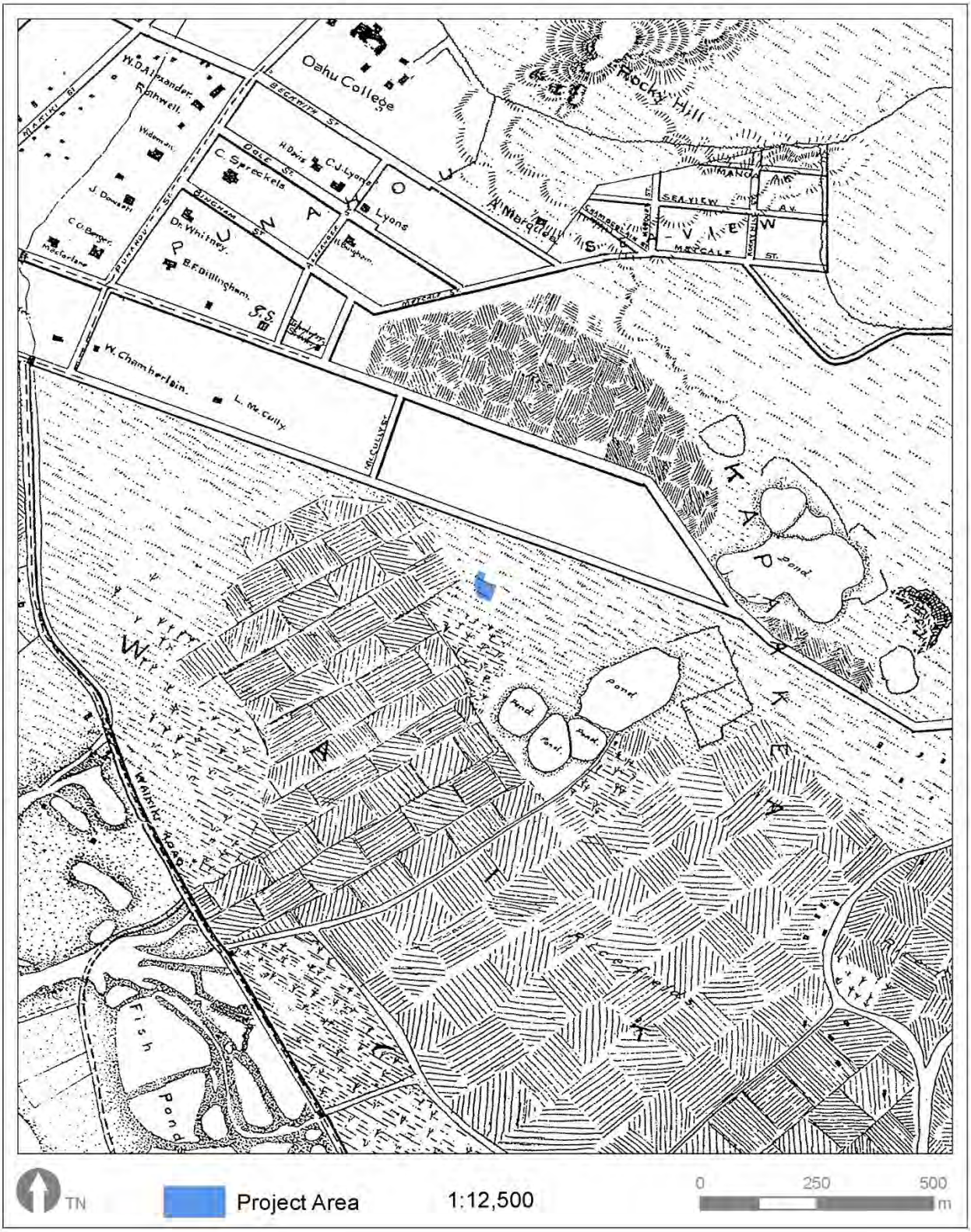


Figure 8. Portion of 1893 Map of Honolulu Showing the Project Area on the Edge of Rice Fields and Possibly Taro *Lo'i* (Wall 1893).

> and Dole Street]. Pahau was Konohiki; Keauhou was inside wall, where McCully's house is now. Haumea said Keauhou ran above. I don't know the boundaries of Waihinalu. I have heard of this land. Kekuanaoa was the only one that pointed out boundaries to me. . . . I heard Waihinalu was makai or outside of wall; the makai boundary went along stone wall to Opukaala Loko [see Figure 7], then along Loko Paakea on Waikiki side, runs on wall mauka near Loko, then runs up and over to Maulukikepa; then up to road; then mauka to Pohakuaumiumi, then to Kanewai; then along to Metcalf's gate; then to Punahou, but after Kekuanaoa had the dispute, he cut that part off and started from Metcalf's gate. I know ili of Halepaka; it is makai of wall excepting a kuleana inside the wall.
>
> Kuihonua, sworn, states . . . .Waihinalo was an Ili. Keauhou was a large land; Waihinalo only a small land. I don't know who owned Waihinalo or . . . was Konohiki. Haumea was Konohiki of Keauhou.
>
> Kahele, sworn, states, I am nearly 50 years of age, I think. I live at Kamoiiliili, have been there since 1853. I know Paakea also Keauhou. It belonged to Haumea. I know boundaries of Paakea; . . . . The land on this side is called Keauhou. Waihinalo is on both sides of old wall, most of it makai of wall [Boundary Commission 1896].

In the end judgement, it was decided that there was not enough evidence to determine the boundary between Keauhou and Waihinalo. Only the boundary of Kapaʻakea was resolved for the petition.

Two *moʻo ʻaina*, or portions of Keauhou ʻIli, were granted on the west side of the project area. LCA 6716, ʻApana 4, also referred to as LCA 4286B in Boundary Commission foreign testimony, was awarded to Haumea and contained two *puʻuone* (dune-banked ponds) called Kulekoloa. LCA 3721B, ʻApana 2, was awarded to Makuaole, which consisted of *kula* (dryland field) and *puʻuone*. To the south of the project area were two other LCAs. LCA 2017, ʻApana 2, was awarded to Ohule, which consisted of one *pahale* (house lot) in the *ʻili* of Halepaka (also cited as Kahalepaka and Kahalepaha), which was bordered on the north by the Alanui Aupuni (government road). LCA 10479 was awarded to Naukana, which consisted of a *pahale*, a *kalo* (taro) patch, or *loʻi*, and *kula* in the *ʻili* of Waihinalo.

To the east of the project area, Mōʻiliʻili was settled by Japanese families in the late 1800s. The Kihachi and Shika Kashiwabara family arrived in the 1893 and are said to have been the first. Their home was built on leased land, along with other rentals they erected to form a "camp." Over the following two decades, other families arrived and built "camps," and by the mid-1900s close to 90 percent of the population in Mōʻiliʻili was Japanese (Fung Associates, Inc. 2017:6). The Japanese Cemetery dates to as early as 1893 and is one of the largest Japanese Buddhist cemeteries in Hawaiʻi (Ruby 2005). Mōʻiliʻili was also known for a stone quarry that operated from the 1880s to the 1950s, which employed many in the area (Fung Associates, Inc. 2017:5).

During the 1880s, development intensified in Waikīkī and the area rapidly transformed. By the end of the 19th century many *loko* were filled and rice was planted in place of taro. A map from 1893 (see Figure 8) shows extensive rice fields and some taro planted. The productive wetlands came to be seen by some, particularly potential developers, as "deleterious to the public health in consequence of being low, and at times covered or partly covered by water, or of being situated between high and low water mark, or of being improperly drained, or incapable by reasonable expenditure of effectual drainage" (Pinkham 1906:3). This viewpoint would culminate in the dredging of the Ala Wai Canal and the filling of land that had a long history of productive wetland agriculture and aquaculture (Nakamura 1979).

The western border of the project area abutted Land Grant 3098, which comprised 118 acres granted by King Lunalilo to Hawaii Supreme Court Justice Lawrence McCully in 1873 (Fung Associates, Inc. 2017:7). McCully was leasing the land from the government before the grant. After McCully's death, the McCully Tract was planned, which extended roughly from Makahiki

Way and the west border of the project area to Algaroba Street, to Kalakaua Avenue, and to what would later become Ala Wai Canal. Several street layouts were proposed over the years, the earliest of which can be seen on a 1901 map in Figure 9, followed by a development plan in 1919 for the Waikīkī Reclamation District, as shown in Figure 10.

When the parcels were first offered for sale by the McCully Land Company, the buyers were not allowed a deed to their land until their lot was filled (Fung Associates, Inc. 2017:8). This led to slow sales and the company was consequently purchased by the Guardian Trust Company in 1912, which was owned by Walter Dillingham and W. O. Smith. Still, development did not take off until the construction of the Ala Wai Canal (1921–1928), along with the Manoa-Palolo Canal (1935–1936) and Alanaio Canal (1929). It was then that the wetlands and inland fishponds, Loko Kapaʻakea, Loko Maalahia, and Loko Opukaala in the McCully-Mōʻiliʻili area, were filled.

Though there was confusion in the late 19th century about the boundaries of Kapaʻakea ʻIli, Bishop Estate came to own the land that included the project area. Later maps indicate the project area was included in LCA 7713, ʻApana 39 to Victoria Kamamalu. After her death, the lands passed to her father; then to her half-sister Ruth Kaelekolani, followed by Bernice Pauahi Bishop in 1883. The land eventually became part of the Bishop Estate. Honolulu Rapid Transit and Land Company purchased the land from Bishop Estate in 1903, and in 1922, when the Honolulu Rapid Transit and Land Company separated its public utility and land, the property fell under the management of Kaauila Land Company (Fung Associates, Inc. 2017:7, 10). An early idea for the land, shown in Figure 11, was an amusement park. The architect Hart Wood drew up the plans in 1921 for a 90 acres amusement park, which he proposed at a Hawaii Territorial Senate committee hearing. Ultimately, the legislators chose not the fund the park (Hibbard et al. 2010:79).

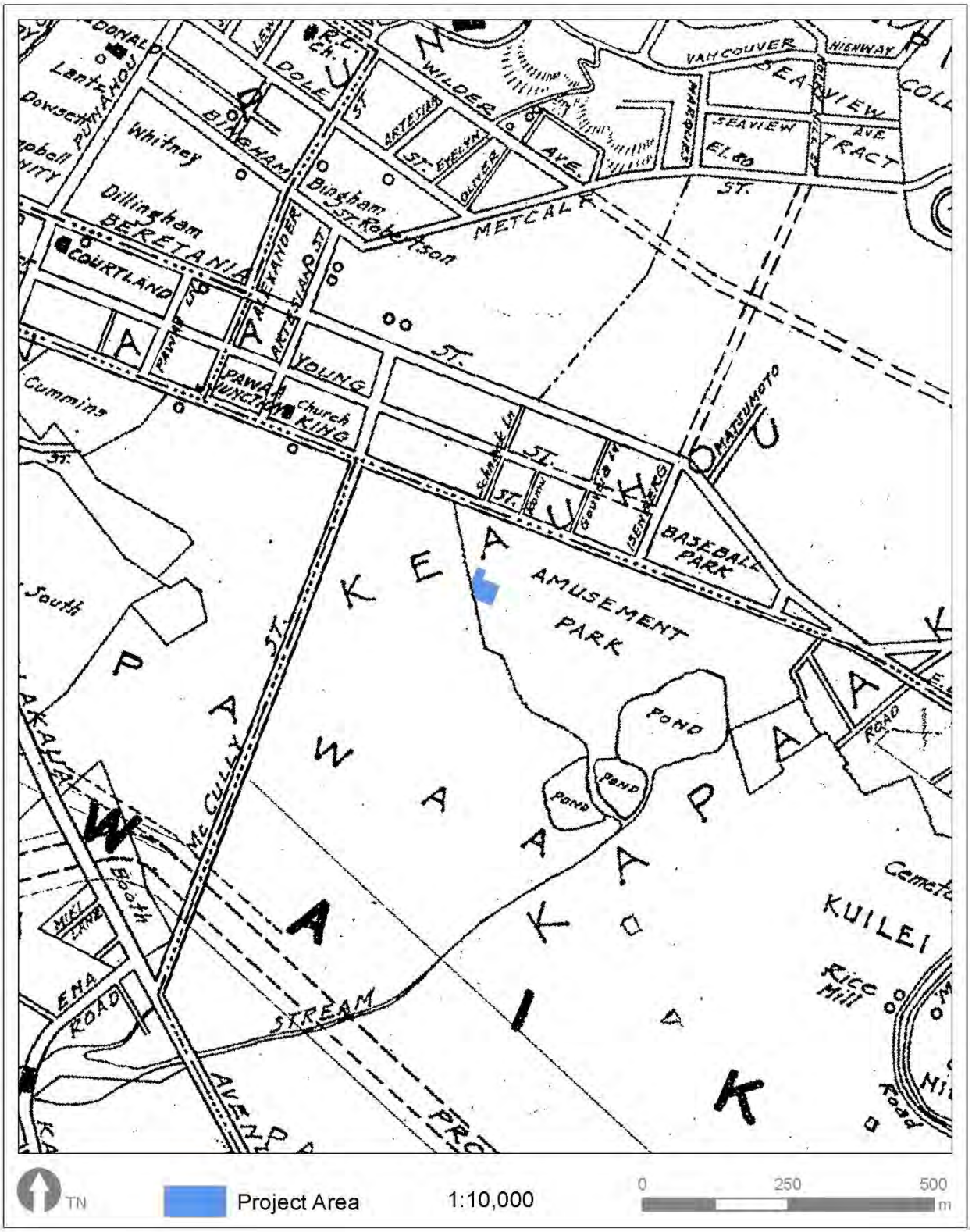
In 1925, land filling started in the McCully area using coral dredged during the construction of the Ala Wai Canal (Stephenson 2008:54). This major undertaking, called the Waikīkī Land Reclamation Project, began in 1921 and was completed in 1928 (Nakamura 1979; Stephenson 2008:28). The reclamation project was bounded by Sheridan, South Beretania, and South King streets, Kapahulu Avenue, and the ocean (Stephenson 2008:46), and resulted in the draining and filling-in of the ponds and irrigated fields throughout Waikīkī. Burned rubbish was also used as a fill material. The city used the wetlands as free dump sites for incinerated rubbish without compensating land owners and justified the practice by arguing that filling the land increased its value (Department of Environmental Services 2015). According to Nakamura (1979), state laws were passed that forced property owners to pay for the filling of their land, a matter in which they had no choice (Nakamura 1979).

As can be seen in Figure 12, the McCully Tract was prioritized for filling, which is indicated be the unfinish streets to the east and west. A streetcar ran down McCully Street from King Street, making it the main thoroughfare. This was due to Walter Dillingham owning the Hawaiian Dredging Company and having interest in the Guardian Trust Company, which owned the land (Stephenson 2008:54).

The current project area falls within the tract originally known as the Stadium Tract, shown in Figure 13. In 1925 John Ashman Beaven, an American who settled in Hawaiʻi in 1910, purchased a 14-acre parcel from the Kaauila Land Trust, which included the current project area, coral flats, and duck ponds (Fung Associates, Inc. 2017:10). Beaven had been leasing Mōʻiliʻili Field to host sporting events and carnivals, but the venue became too small for increasing demand. Beaven organized Honolulu Stadium Ltd and planned to develop a new stadium on the purchased land with a 23,000-seating capacity. After the purchase, Honolulu Stadium Ltd sold 4.93 acres of its lands on the west side of the property to the Union Trust Company, who in turn developed the Stadium Tract (see Figure 13). The company sold the lots in 1926 to the Hawaiian

Figure 9. Portion of Map Showing Proposed Street Layout for the McCully Tract and Adjoining Land (Monsarrat 1901).

Figure 10. Portion of Map of the Proposed Development of the Waikiki Reclamation District (Bigelow 1919).



TN Project Area 1:10,000 0 250 500 m

Figure 11. Portion of Map Showing Project Area in Proposed Amusement Park (Monsarrat 1920).

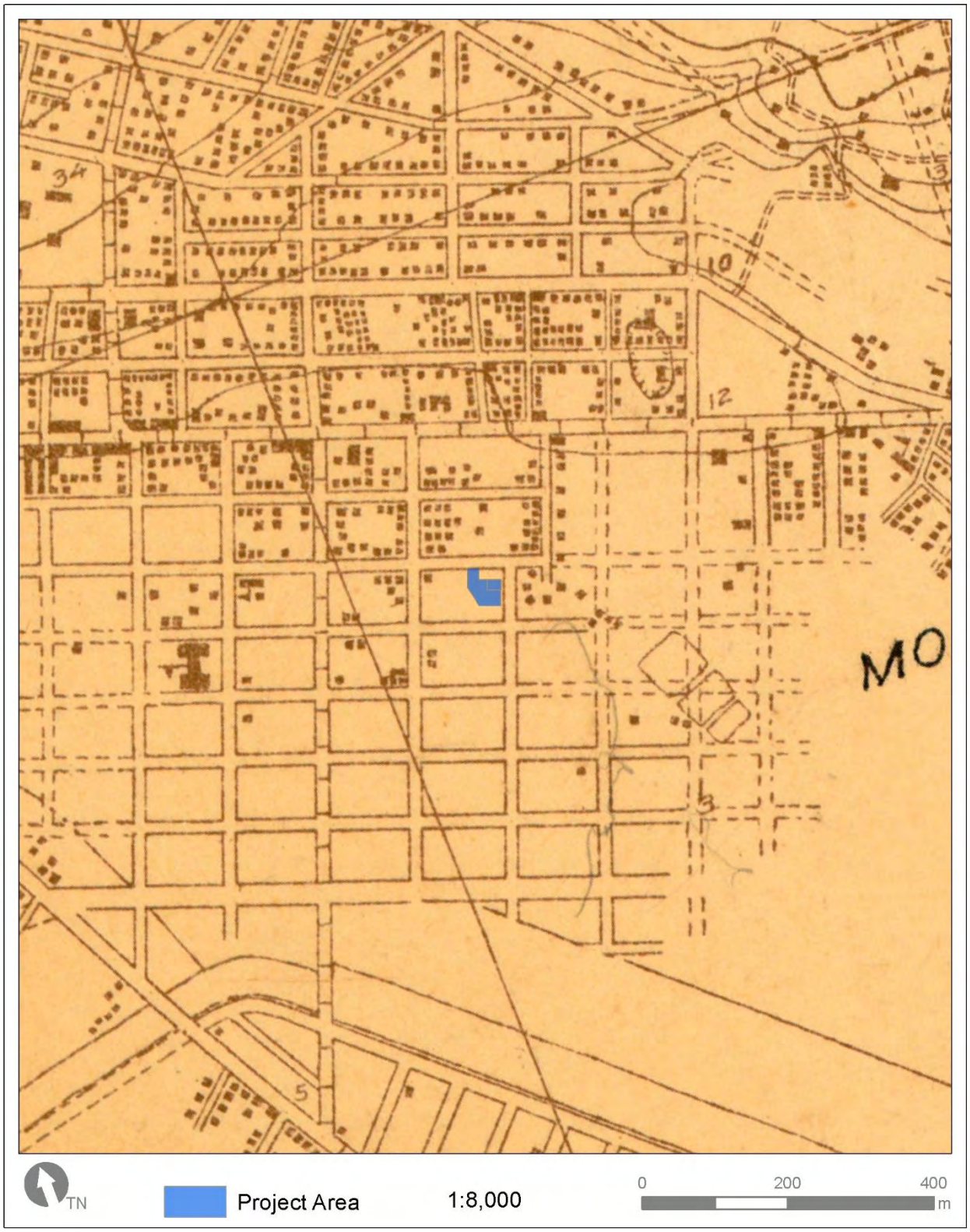


Figure 12. Portion of 1927 Map Showing Incomplete Street to the East and West of the Project Area (USGS 1927).

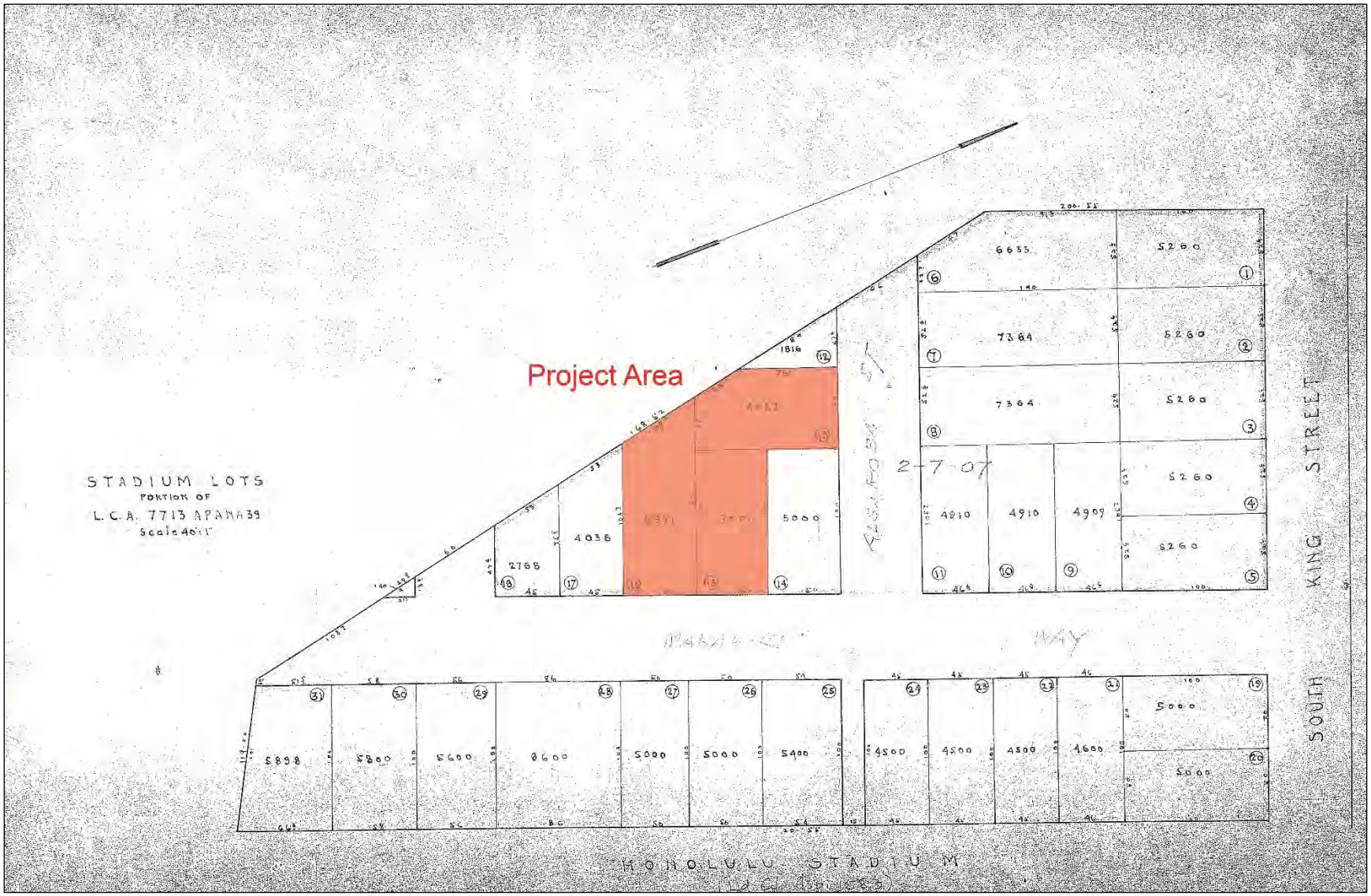


Figure 13. Map of Stadium Lots Showing the Current Project Area (Tax Maps Bureau ca 1927).

Industrial Company, which was owned by Ushisuke Taira and Seiji Miwa, who in turn sold lots to individual owners (Fung Associates, Inc. 2017:12). By 1927, single and multi-family wood dwellings were constructed in the current project area.

A topographical map from 1933, shown in Figure 14, indicates the growth in urban development, including houses in the project area, which were built in 1927, though land to west appears to had not yet been filled. The ridged grid system seen in Figure 10 had been proposed in 1906 by Lucius Pinkham, chair of Department of Health, for new development in Waikīkī (Stephenson 2008:83). This street plan was never followed, a decision which may have been influenced by the local architect Charles Dickey's proposal that the Waikīkī street system follow a "garden city" development plan rather than the traditional "gridiron" (Stephenson 2008:100).

By 1953, the neighborhood streets around the project area were completed and the Honolulu Stadium was built immediately to the east, as shown in Figure 15. The stadium was razed in 1976 and the lot became Old Stadium Park in 1978.

PREVIOUS ARCHAEOLOGY

There is no record of a previous archaeological investigation in the project area. Modern archaeological investigations conducted in the surrounding area, which are listed in Table 1 and discussed below, have identified a single archaeological site, while the previously discussed Mauʻoki Heiau was once situated northeast of the project area. No human burials have been previously recorded with 500 meters of the project area. Figure 16 shows the locations of the previous investigations and identified historic properties. In 1994, Scientific Consultant Surveys, Inc., conducted an archaeological assessment of four parcels on Hausten Street (Chaffee and Spear 1994). No historic properties were identified the project area.

In 2007, Cultural Surveys Hawaiʻi prepared a literature review and conducted a field inspection for Kamehameha School's University Parcels and Varsity Theater Parcel (O'Hare et al. 2007). Three fishponds were determined to have been within the property prior to land filling.

Cultural Surveys Hawaiʻi and Mason Architects prepared reports in support of the Ala Wai Canal project (also known as the Ala Wai Watershed project). These included a three volume cultural resources and ethnographic study report (O'Hare et al. 2010) and a historic structures report (Mason Architects 2010). The APE reached from the upper portions of Makiki, Mānoa, and Pālolo valleys to the mouth of the Ala Wai Canal. A total of 46 cultural resources were identified within 100 meters of the APE, which included historic buildings and structures, archaeological sites/features, and historic and traditional cultural practices and places. No historic properties were identified near the current project area.

In 2017, Pacific Legacy Inc. conducted an archaeological inventory survey at a 1.9-acre property located at 820 Isenberg Street in Mōʻiliʻili (McIntosh and Cleghorn 2018). A total of 24 test trenches were excavated, which identified a single historic property. The historic property, designated SIHP 50-80-14-08210, is a historic dump site comprising natural limestone depressions filled in with silt soil deposits containing glass, ceramic, and metal artifacts dating between 1896 and the 1960s.

ANTICIPATED FINDS

Based on background research concerning past land use, reviewed historical maps, and results of previous archaeological studies in the vicinity, it is anticipated that the following historic properties may be found in subsurface proveniences within the study area:

1. Coral fill deposits from the 1920s Waikiki Reclamation Project
2. Evidence of traditional Hawaiian habitation

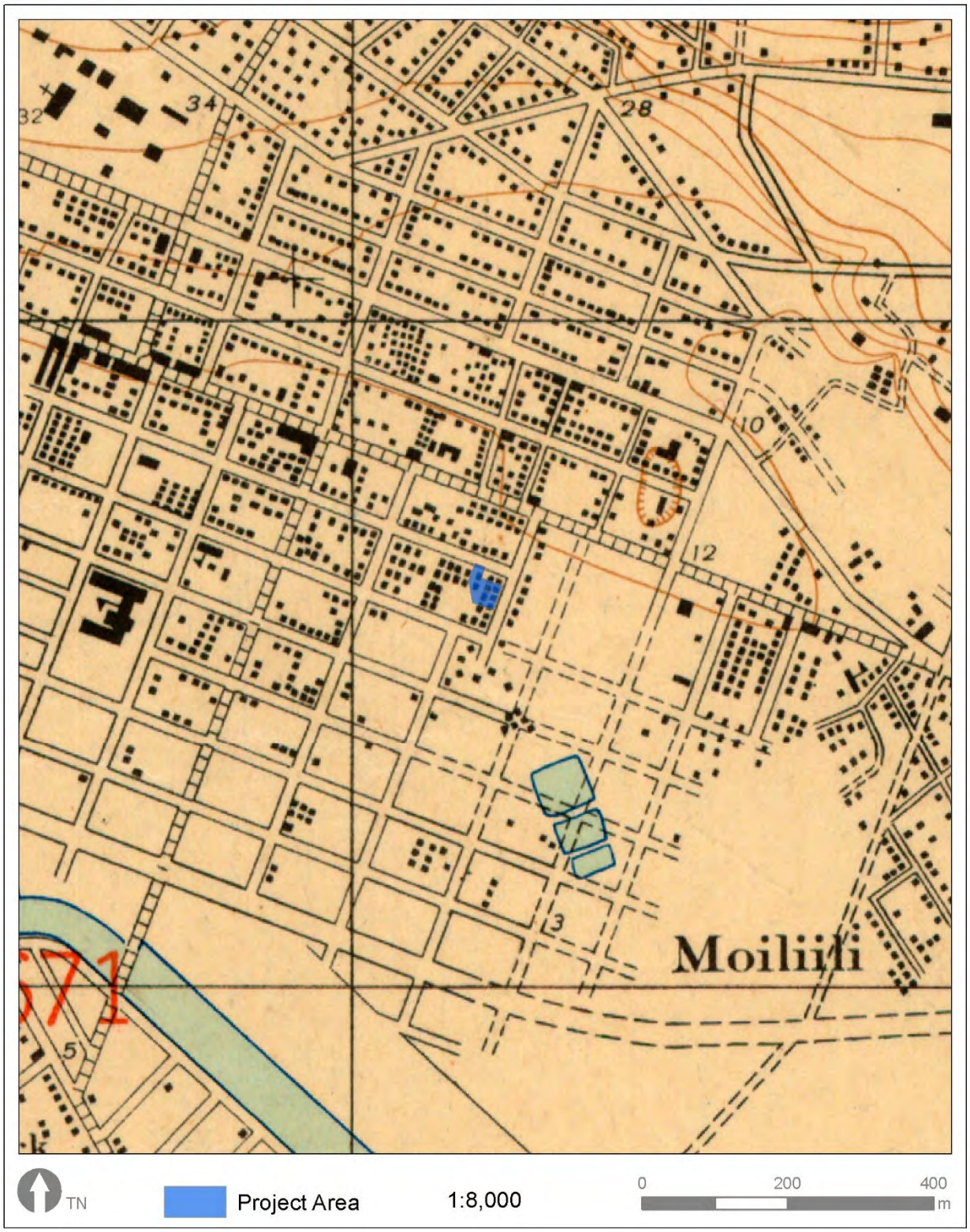


Figure 14. Portion of 1933 Map Showing Housing in the Project Area (USACOE 1933).

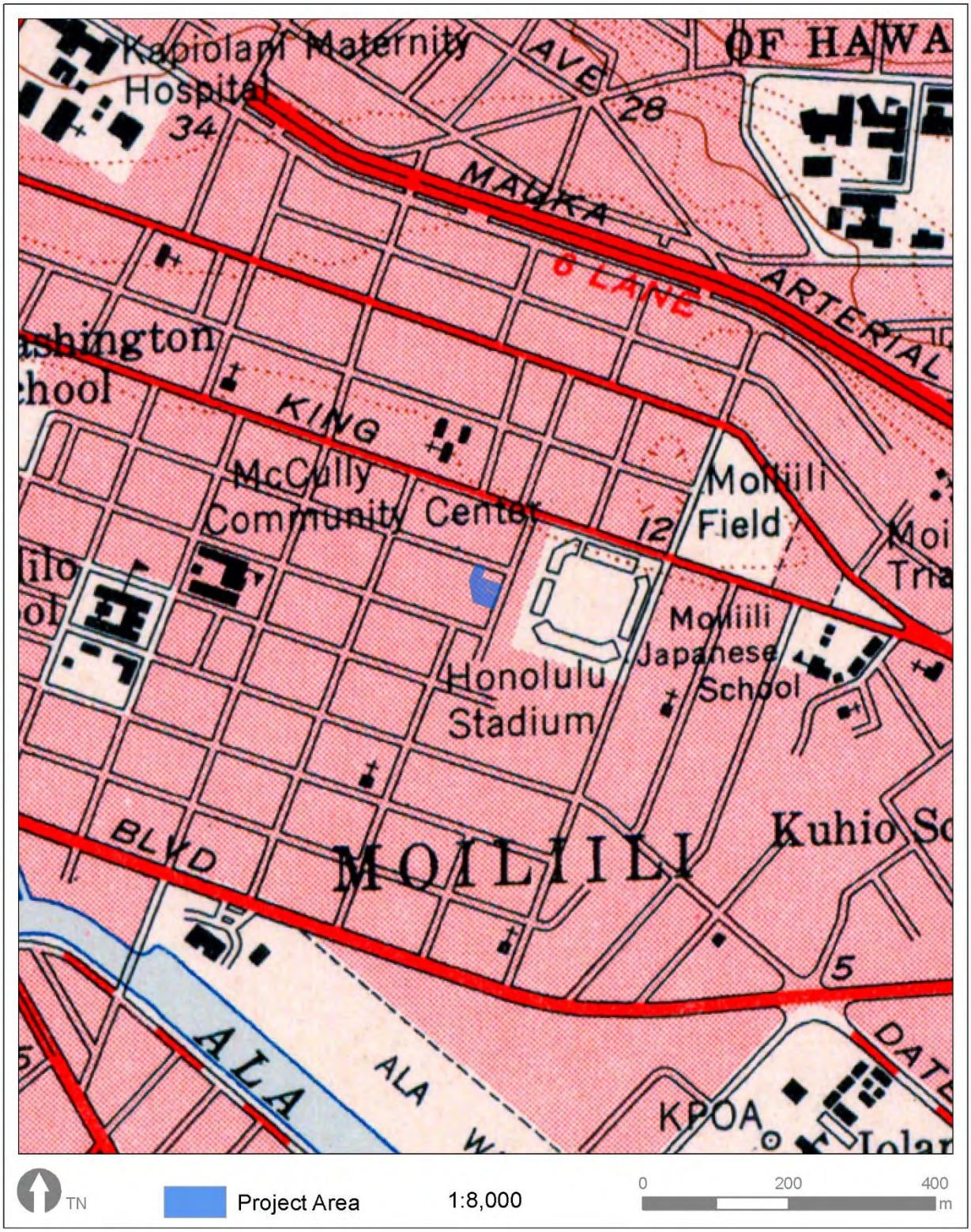


Figure 15. Portion of 1953 Map Showing Honolulu Stadium West of the Project Area (USGS 1953).

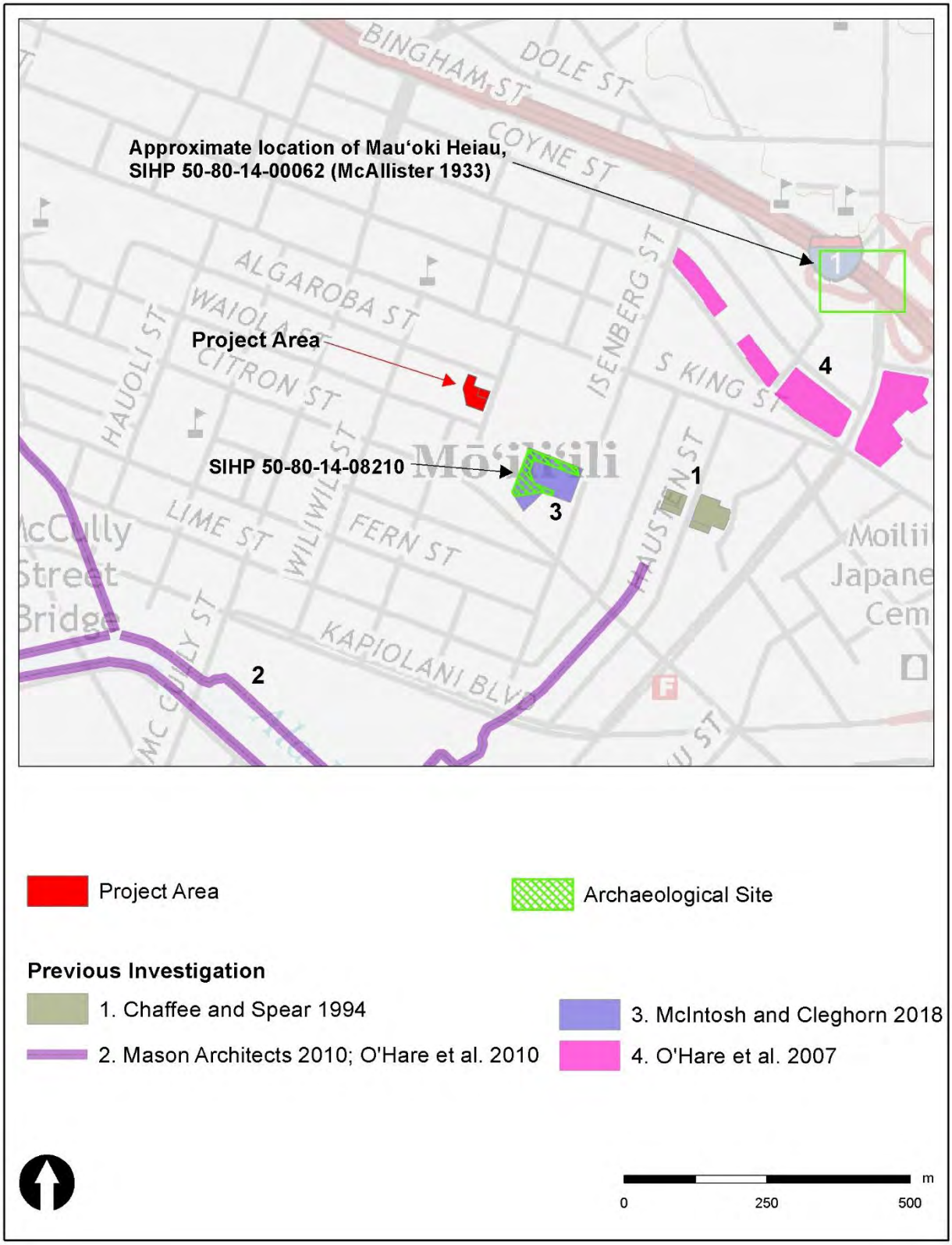


Figure 16. Previous Archaeological Investigations and Identified Historic Properties Near the Project Area.

3. Soils associated with taro and rice agriculture
4. Wetland soils, possibly with elevated coral sand berms, under coral fills
5. Historic trash deposits associated with historic residences on the property

Soil survey data (see Figure 3) shows that the project area falls just east of filled land; however, historical maps indicate the project area was within the Waikiki Reclamation District (see Figure 10). The coral fill deposits associated with the Waikiki Reclamation Project, if present, can be used as a time marker for deposits above and below these coral fills.

Table 1. List of Previous Archaeological Studies and Historic Properties Near the Project Area.

MAP NO.[1]	AUTHOR YEAR	TMK(S)	NATURE OF STUDY	SIHP[1] NO. 50-80-14-	RESULTS
-	McAllister 1933	Island-wide survey	Archaeological Survey	00062	Mauʻoki Heiau
1	Chaffee and Spear 1994	2-7-9:013, 014 2-7-010:008, 009/ Hausten Street	Archaeological Assessment	-	No significant cultural resources identified.
2	McIntosh and Cleghorn 2018	2-7-008:018 and 020/ 820 Isenberg Street	Archaeological Inventory Survey	08210	Historic dumpsite
3	O'Hare et al. 2007	2-8-006:001, 020, 023,025,032,036,038–43, 048, 052, 057, 058; 2-8-024:013,030–034; 2-8-025:047–054/ Kamehameha Schools University Parcels and Varsity Theater Parcel	Literature Review and Field Inspection	-	No significant cultural resources identified.
4	O'Hare et al. 2010	2-3, 2-4, 2-5, 2-6, 2-7, 2-8, 2-9, 3-1, 3-2, 3-3, and 3-4/ Ala Wai Watershed	Cultural Resources and Ethnographic Study	-	No historic properties identified near the current project area.

[1] SIHP (State Inventory of Historic Places)

Based on historical maps, taro *loʻi*, which were later used for rice agriculture, along with fishponds were located adjacent to the project area (see Figures 8). Additionally, LCAs indicate the presence of *puʻuone*, *loʻi*, *kula*, *pahale*, therefore, there is low to moderate potential for traditional Hawaiian habitations below fill deposits; however, LCAs and historical maps do not indicate any specific land use in the project area boundary.

[1] See Figure 15.

The residences at 2139 Algaroba Street and 918 Makahiki Way are over 50 years old, and therefore, are potential historic properties. 2139 Algaroba Street is a doglegged-shaped property containing low-density apartment complex built in 1928 (changes made in 1962). A street view of the property from Makahiki Way is shown in Figure 17 and from Algaroba Street in Figure 18. 918 Makahiki Way consists of a single-family, wooden, single wall construction built in 1927 (changes made in 1940). A street view of the property is shown in Figure 19. There is moderate to high potential for the presence of subsurface historic properties similar to SIHP 50-80-14-08210 (a historic period trach deposit), located 100 meters southeast of the project area. Historic period trash deposits associated with former occupation of the residences at 2139 Algaroba Street and 918 Makahiki Way may contain historic artifacts, such as glass, ceramic, and metal items.

RESULTS OF CONSULTATION

Consultation letters (see Appendix B for a sample) were sent on 7 July 2020 to the following individuals or groups seeking input concerning the proposed project:

- Dr. Alan Downer, Deputy State Historic Preservation Officer, SHPD
- Ms Anita Nāone, Pelekikena, Hawaiian Civic Club of Honolulu
- Dr. Susan Lebo, Archaeology Branch Chief, SHPD
- Mr. Tim Streitz, Chair, McCully/Moiliili Neighborhood Board
- Dr. Sylvia Hussey, Chief Executive Officer, Office of Hawaiian Affairs
- Mr. Vincent Hinano Rodrigues, History and Culture Branch Chief, SHPD

As of 14 October 2020, no responses were returned.

ASSESSMENT OF CULTURAL IMPACTS

The proposed Hale Makana O Moʻiliʻili Affordable Rental Housing Project is located at 2139 Algaroba Street and 918 Makahiki Way in Mōʻiliʻili, Waikīkī Ahupuaʻa, Honolulu District, Island of Oʻahu, Hawaiʻi (TMKs: [1] 2-7-007:016 and 2-7-007:051) (see Figure 1). The project proponent is Hoʻokahua Development LLC and the land owner is University Park Apartments Hi, Lp. Funding for the project is being provided by Hawaii Housing Finance and Development Corporation. The project scope of work includes the demolition of existing residences on the property and construction of a six-story (105-unit) affordable rental housing facility. Historical, cultural, and archaeological background research was conducted in order to evaluate any potential effect on historic properties, traditional cultural places, or traditional cultural practices in the project area, and to recommend mitigation of any adverse effect, if warranted. This work was carried out in accordance with Hawaii Revised Statutes (HRS) Chapter 6E, and Title 13 of the Hawaii Administrative Rules (HAR), Subtitle 13 (State Historic Preservation Division Rules), Chapter 275 (Rules Governing Procedures for Historic Preservation Review for Governmental Projects Covered Under Sections 6E-7 and 6E-8, HRS). To date, no traditional cultural places or practices or archaeological sites have been identified in the project area.

Background research indicates that the project area is within the former Waikiki Reclamation District and may have been a wetland. Historical land use in the area, which is known from 18th and 19th century maps and LCA descriptions, included taro *loʻi* and rice agriculture, *puʻuone*, *kula*, and *pahale*. Historic period construction began on the property in the 1920s when single and multi-family residences were built. The properties at 2139 Algaroba Street and 918 Makahiki Way are not listed on the Hawaiʻi or National Registers of Historic Places, nor have they been nominated

It is currently unknown to what extent previous residential construction in the project area has disturbed subsurface soils, including to what depth fill deposits extend. Archaeological inventory survey has not previously been conducted on the property and the demolition work will

Figure 17. Street View of 2139 Algaroba Street, TMK 2-7-007:051 (Google 2020a).

Figure 18. Street View of 2139 Algaroba Street from Makahiki Way, TMK 2-7-007:051 (Google 2020b).

Figure 19. Street View of 918 Makahiki Way, TMK 2-7-007:016 (Google 2020c).

extend beyond the existing dwellings' footprints. The recommended SHPD determination is no historic properties affected with a commitment for archaeological monitoring (under the guidance of an SHPD-approved Archaeological Monitoring Plan) to ascertain the subsurface conditions in the project area and an architectural assessment and recordation for the existing structures on the properties that are over 50 years old.

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APPENDIX A

Design Plans

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EAST ELEVATION

2139 ALGARROBA STREET

ALTERNATE DESIGN STUDY
MAY 2020

ahl.

SOUTH ELEVATION

2139 ALGARROBA STREET

ALTERNATE DESIGN STUDY
MAY 2020

ahl.

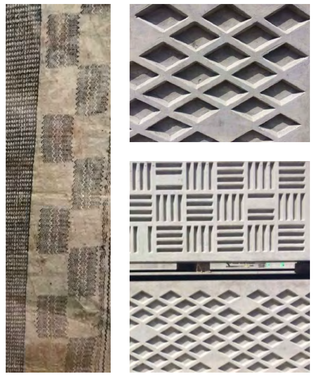
NORTH ELEVATION

2139 ALGARROBA STREET

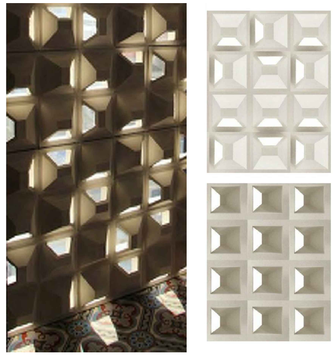
ALTERNATE DESIGN STUDY
MAY 2020

ahl.

ON PRECAST CONCRETE PANELS
MMISSIONED BY A LOCAL ARTIST
PRACTITIONER



DECORATIVE BLOCKS PARTITIONS PROVIDE
PRIVACY BUT TRANSMIT LIGHT AND AIR



ROOF TOP
RESIDENTIAL
LOUNGE

EXIT STAIR

DECORATIVE
PATTERNS ON
CONRETE

ART MURAL BY
LOCAL ARTIST

FRONT YARD
LANDSCAPING

MAIN ENTRY
(TO ADMIN OFFICE &
RESOURCE CENTER)

RESIDENTIAL MAIL &
ELEVATOR LOBBY

STREET VIEW

2139 ALGARROBA STREET

ALTERNATE DESIGN STUDY
MAY 2020

ahl.

VIEW FROM MAKAHIKI

2139 ALGARROBA STREET

ALTERNATE DESIGN STUDY
MAY 2020

ahl.

VIEW FROM ALGARO□A

2139 ALGARROBA STREET

ALTERNATE DESIGN STUDY
MAY 2020

ahl.

STREET VIEW

2139 ALGARROBA STREET

ALTERNATE DESIGN STUDY
MAY 2020

ahl.

VIEW OF MAIN ENTRY

2139 ALGARROBA STREET

ALTERNATE DESIGN STUDY
MAY 2020

ahl.

VIEW OF PARKING □ ELEVATOR LO□□Y

2139 ALGARROBA STREET

ALTERNATE DESIGN STUDY
MAY 2020

ahl.

VIEW OF TYPICAL FLOOR CORRIDOR

2139 ALGARROBA STREET

ALTERNATE DESIGN STUDY
MAY 2020

ahl.

VIEW OF TYPICAL LIVING ROOM

2139 ALGARROBA STREET

ALTERNATE DESIGN STUDY
MAY 2020

ahl.

APPENDIX B

Sample Consultation Letter

PACIFIC CONSULTING SERVICES, INCORPORATED

27 July 2020

SUBJECT: Consultation for a Cultural Impact Assessment in Support of the Hale Makana O Moʻiliʻili Affordable Rental Housing Project located at 2139 Algaroba Street and 918 Makahiki Way in Mōʻiliʻili, Waikīkī Ahupuaʻa, Honolulu District, Island of Oʻahu, Hawaiʻi (TMK [1] 2-7-007:016 and 2-7-007:051)

Dear:

At the request of Hoʻokahua Moiliili, LP, Pacific Consulting Services, Inc. (PCSI), is initiating consultation for a Cultural Impact Assessment (CIA) being prepared in support of the Hale Makana O Moʻiliʻili Affordable Rental Housing Project. The project proponent is Hoʻokahua Development LLC, which is a partnership between the Hawaiian Community Development Board and 3 Leaf Holdings. The current land owner is University Park Apartments Hi, LP. Funding for the project is being provided by Hawaii Housing Finance and Development Corporation. The project scope of work includes the demolition of existing residences on the property and construction of a six-story (105-unit) affordable rental housing facility. We are seeking your views on this project, especially any effects it might have on traditional cultural practices and on any historic or cultural sites that you may know about in the area.

A historical, cultural, and archaeological background study was conducted in order to evaluate any potential effect on historic properties and to recommend mitigation of any adverse effect, if warranted. This work was carried out in accordance with Hawaii Revised Statutes (HRS) Chapter 6E, and Title 13 of the Hawaii Administrative Rules (HAR), Subtitle 13 (State Historic Preservation Division Rules), Chapter 275 (Rules Governing Procedures for Historic Preservation Review for Governmental Projects Covered Under Sections 6E-7 and 6E-8, HRS). In the event that adverse impacts are possible because of this project, mitigation work will be recommended.

PROJECT LOCATION AND DESCRIPTION

The proposed project is located at 2139 Algaroba Street and 918 Makahiki Way on a residential block, immediately west of Old Stadium Park. The total project area measures .17 hectares (ha) (.42 acres [ac]). Hoʻokahua Development, LLC is planning to construct a six-story (105-unit) affordable rental housing facility with covered parking stalls and an onsite Community Resource Center. The planned development will replace a two-story (26 unit) multi-family apartment complex and one single-family residence.

The existing structures in the project area are in poor, dilapidated condition and the property has been heavily disturbed. Proposed work will involve demolition of an existing single-family residence at 918 Makahiki Way and the adjacent low-density apartment complex at 2139 Algaroba Street, followed by construction of a new apartment complex and excavations for associated structures and utilities. Excavations are anticipated to disturb previously undisturbed soils.

ENVIRONMENTAL BACKGROUND

Waikīkī Ahupuaʻa (a traditional Hawaiian land division) covers approximately 7,538 ha (18,627 acres [ac]) of the southeastern portion of Oʻahu Island. The land unit is bordered by Honolulu Ahupuaʻa on

720 IWILEI ROAD, HONOLULU, HAWAIʻI 96817
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808.546.5557

the west and Waimānalo Ahupuaʻa on the east, and extends south from the Koʻolau Mountain range to the coast. The project area is situated in the Mōʻiliʻili neighborhood, which is roughly bounded by the Ala Wai Canal, Dole Street, Mānoa Stream, and McCully Street; however, sometime the western boundary is placed at Isenberg Street, which places the project area in the McCully neighborhood. The project area is an urban area, with a mix of high-rise and low-rise buildings and single-family homes.

HISTORICAL BACKGROUND

Archival background research and literature review examined maps, historical and archival documents, and previous archaeological studies in the vicinity of the project area. The information obtained from these sources is synthesized below.

MOʻŌLELO AND WAHI PANA

The Hawaiian cultural landscape can be described through significant Hawaiian place names, or *wahi pana*, and *moʻōlelo*. *Moʻōlelo* may be myths, legends, proverbs, and events surrounding well-known individuals in Hawaiian history (Pukui and Elbert 1986:254). The project area is in or near the three *ʻili* of Keauhou, Kapaʻakea, and Wahinalo. The place name Kapaʻakea (sometimes written as Paʻakea), refers to the white reef limestone visible on the ground surface (Pukui et al. 1974:86). The place name Mōʻiliʻili was formerly Kamōʻiliʻili, which can be translated as "the pebble lizard" (Pukui et al. 1974:153). According to legend, Pele's sister Hiʻiaka was on her way to Hawaiʻi Island with her companion Wahineomaʻo and a handsome Kauaʻi chief named Lohiau. A *moʻo* (supernatural lizard) of Mānoa Valley attacked them and using forks of lightning from her skirt, Hiʻiaka slayed the *moʻo*, cutting it into many pieces, like pebbles (Chun 2003). These pebble-like pieces were then transformed into a low hill, which is where Kūhio Elementary is today.

Northeast of the project area, a *heiau* (temple) and spring appear on a historical map dated 1883. The *heiau* was likely Mauʻoki, which is suggested by the adjacent spring's name "Mauoke" and the land labeled Mauoki on Hawaiʻi Register Map 1234 (Bishop 1883). Kamakau wrote of the importance of Mauʻoki Heiau in its association with Chief Kiha-a-Piʻilani: "Kiha-a-Piʻilani was taken by the kahuna and raised at the heiau of Mauʻoki at Kamōʻiliʻili. He was raised there until he was grown and taught to be a warrior and an orator; he was skilled in those professions" (Kamakau 1991:50). Thomas G. Thrum described the *heiau* as follows: "It is said to have been of traditional Menehune construction with stones brought one by one from Kawiwi, Waianae. It was a heiau of good size, walled on three sides and open to the west that stood at the foot of the slope dividing the Manoa and Palolo valleys, Kamoiliili" (Thrum 1906b:56). Thrum also wrote that this was a "Heiau and luakini [sacrificial heiau]; erected according to tradition by Menehunes with stones from Kawiwi Waianae. Torn down about 1883 by the Minister of Interior for street work" (Thrum 1906a:44).

As for the spring labeled Mauoke, Hammatt and Shideler (2014:33) suggest that this may be Kumulae Spring, which was a legendary pool associated with the karst caves of Mōʻiliʻili. This spring appears in a legend of Kamapuaʻa, the Hawaiian pig god, who made a spring at Kānewai and a spring called Paʻakea (also called Kumulae or Hausten Spring) in Kamōʻiliʻili.

TRADITIONAL HISTORY AND LAND USE

Waikīkī became the seat of royal power in the 1400s when Māʻilikūkahi moved his court to the south side of the island. According to Kamakau, "Upon Mailikukahi becoming king, he was taken early by the chiefs to reside at Waikiki, and that perhaps was the origin of the residence of chiefs at Waikiki, because Waialua was the place formerly of the residence of chiefs, as also Ewa" (Kamakau N.D. in McAllister 1933:74).

Kamakau notes that the chief Kalamakua, who reigned around the sixteenth century (based on Stokes' [1933] 20 year-count; Kelly 1989), was the first to build an extensive irrigation system of *loko* (fishpond) and *loʻi* (irrigated taro field) in Waikīkī: "a good chief. He was noted for cultivating, and it was he who constructed the large pond fields Keʻokea, Kūalulua, Kalāmanamana, and other *loʻi* in Waikiki. He traveled about his chiefdom with his chiefs and household companions to cultivate the land and gave the produce to the commoners, the makaʻāinana" (Kamakau 1991:45).

In 1780, the army of Maui chief Kahekili landed at Waikīkī "carpeting the beaches from Kaʻalawai (near Diamond Head) to Kawehewehe (next to the Halekulani Hotel)" (Kanahele 1995:79). According to Thrum (1925:109), he dedicated Papaʻenaʻena Heiau, formerly located in the vicinity of Diamond Head, following his victory. In 1794, Kahekili died and was succeeded by Kalanikupule. The next year, Kamehameha invaded Oʻahu at Waikīkī, possibly with 10,000 warriors. The army made their base on the sandy beaches from Waiʻalae to Diamond Head to Kālia, which is southwest of the project area (Kanahele 1995:87). The final battle ended at Nuʻuanu when Oʻahu warriors became trapped between Kamehameha's warriors and the *pali* (cliff) and chose to leap to their deaths (Tomonari-Tuggle and Blankfein 1998:13).

Kamehameha made his capital at Waikīkī and the area became the chiefly center of the south coast where the ruling chief and subordinate *aliʻi* (chiefly class) resided (Cordy 1996; Nāpōkā 1986; Tomonari-Tuggle 1994). Traditional trails dating to the early nineteenth century were reported by Hawaiian Historian John Papa ʻĪʻī. In the Kona (Honolulu) District, a trail began from today's downtown Honolulu and followed the alignment of King Street and Waiʻalae Avenue.

POST-CONTACT HISTORY AND LAND USE

The period of political importance ended for Waikīkī in 1809, when Kamehameha moved his capital to Honolulu, which was more accessible to Western visitors (Tomonari-Tuggle and Blankfein 1998:13). Following this move, traditional agriculture in Waikīkī waned. Population in the area had drastically decreased due to economic changes and the devastation caused by Western diseases.

Traditional land divisions of the fifteenth and sixteenth centuries persisted until the 1848 Mahele, which introduced private property into Hawaiian society (Kamakau 1991:54). During the Mahele, the Land Commission required the Hawaiian chiefs and *konohiki* (land agent for the *aliʻi*) to present their claims to the Land Commission. In return they were granted Land Commission Awards (LCAs) for the land quit-claimed to them by Kamehameha III. Land was divided into Crown Lands, Government Lands, and Konohiki Lands. The remaining unclaimed land was then sold publicly, "subject to the rights of the native tenants" (Chinen 1958:29).

Based on late nineteenth century maps, the project area was within the government land portions of Keauhou and Waihinalo ʻIli; the boundaries of the two *ʻili* are not shown on maps. Boundary Commission testimony states that Keauhou, was claimed both by the Government and the Estate of Ruth Keʻelikōlani. The ʻ*ili* of Kapaʻakea (or Paʻakea), deeded to Victoria Kamamalu in 1861 as LCA 7713, ʻĀpana 39, was also in the vicinity. Boundary Commission testimony disputing the Kapaʻakea ʻIli boundary suggests that Keauhou ʻIli was *mauka*, or inland, or Waihinalo ʻIli, but the descriptions varied.

Two *moʻo ʻaina*, or portions of Keauhou ʻIli, were granted on the west side of the project area. LCA 6716, ʻApana 4, also referred to as LCA 4286B in Boundary Commission foreign testimony, was awarded to Haumea and contained two *puʻuone* (dune-banked ponds) called Kulekoloa. LCA 3721B, ʻApana 2, was awarded to Makuaole, which consisted of *kula* (dryland field) and *puʻuone*. To the south of the project area were two other LCAs. LCA 2017, ʻApana 2, was awarded to Ohule, which consisted of one *pahale* (house lot) in the *ʻili* of Halepaka (also cited as Kahalepaka and Kahalepaha), which was bordered on the north by the Alanui Aupuni (government road). LCA 10479 was awarded to Naukana, which consisted of a *pahale*, a *kalo* (taro) patch, or *loʻi*, and *kula* in the *ʻili* of Waihinalo.

To the east of the project area, Mōʻiliʻili was settled by Japanese families in the late 1800s. The Kihachi and Shika Kashiwabara family arrived in the 1893 and are said to have been the first. Their home was built on leased land, along with other rentals they erected to form a "camp." Over the following two decades, other families arrived and built "camps," and by the mid-1900s close to 90 percent of the population in Mōʻiliʻili was Japanese (Fung Associates, Inc. 2017:6). The Japanese Cemetery dates to as early as 1893 and is one of the largest Japanese Buddhist cemeteries in Hawaiʻi (Ruby 2005). Mōʻiliʻili was also known for a stone quarry that operated from the 1880s to the 1950s, which employed many in the area (Fung Associates, Inc. 2017:5).

During the 1880s, development intensified in Waikīkī and the area rapidly transformed. By the end of the 19th century many *loko* were filled and rice was planted in place of taro. A map from 1893 shows extensive rice fields and some taro planted. The productive wetlands came to be seen by some, particularly potential developers, as "deleterious to the public health in consequence of being low, and at times covered

or partly covered by water, or of being situated between high and low water mark, or of being improperly drained, or incapable by reasonable expenditure of effectual drainage" (Pinkham 1906:3). This viewpoint would culminate in the dredging of the Ala Wai Canal and the filling of land that had a long history of productive wetland agriculture and aquaculture (Nakamura 1979).

The western border of the project area abutted Land Grant 3098, which comprised 118 acres granted by King Lunalilo to Hawaii Supreme Court Justice Lawrence McCully in 1873 (Fung Associates, Inc. 2017:7). McCully was leasing the land from the government before the grant. After McCully's death, the McCully Tract was planned, which extended roughly from Makahiki Way and the west border of the project area to Algaroba Street, to Kalakaua Avenue, and to what would later become Ala Wai Canal. Several street layouts were proposed over the years, the earliest of which can be seen on a 1901, followed by a development plan in 1919 for the Waikīkī Reclamation District.

When the parcels were first offered for sale by the McCully Land Company, the buyers were not allowed a deed to their land until their lot was filled (Fung Associates, Inc. 2017:8). This led to slow sales and the company was consequently purchased by the Guardian Trust Company in 1912, which was owned by Walter Dillingham and W. O. Smith. Still, development did not take off until the construction of the Ala Wai Canal (1921–1928), along with the Manoa-Palolo Canal (1935–1936) and Alanaio Canal (1929). It was then that the wetlands and inland fishponds, Loko Kapaʻakea, Loko Maalahia, and Loko Opukaala in the McCully-Mōʻiliʻili area, were filled.

Though there was confusion in the late nineteenth century about the boundaries of Kapaʻakea ʻIli, Bishop Estate came to own the land that included the project area. Later maps indicate the project area was included in LCA 7713, ʻApana 39 to Victoria Kamamalu. After her death, the lands passed to her father; then to her half-sister Ruth Kaelekolani, followed by Bernice Pauahi Bishop in 1883. The land eventually became part of the Bishop Estate. Honolulu Rapid Transit and Land Company purchased the land from Bishop Estate in 1903, and in 1922, when the Honolulu Rapid Transit and Land Company separated its public utility and land, the property fell under the management of Kaauila Land Company (Fung Associates, Inc. 2017:7, 10). An early idea for the land was an amusement park. The architect Hart Wood drew up the plans in 1921 for a 90 acres amusement park, which he proposed at a Hawaii Territorial Senate committee hearing. Ultimately, the legislators chose not the fund the park (Hibbard et al. 2010:79).

In 1925, land filling started in the McCully area using coral dredged during the construction of the Ala Wai Canal (Stephenson 2008:54). This major undertaking, called the Waikīkī Land Reclamation Project, began in 1921 and was completed in 1928 (Nakamura 1979; Stephenson 2008:28). The reclamation project was bounded by Sheridan, South Beretania, and South King streets, Kapahulu Avenue, and the ocean (Stephenson 2008:46), and resulted in the draining and filling-in of the ponds and irrigated fields throughout Waikīkī. Burned rubbish was also used as a fill material. The city used the wetlands as free dump sites for incinerated rubbish without compensating land owners and justified the practice by arguing that filling the land increased its value (Department of Environmental Services 2015). According to Nakamura (1979), state laws were passed that forced property owners to pay for the filling of their land, a matter in which they had no choice (Nakamura 1979).

The current project area falls within the tract originally known as the Stadium Tract. In 1925 John Ashman Beaven, an American who settled in Hawaiʻi in 1910, purchased a 14-acre parcel from the Kaauila Land Trust, which included the current project area, coral flats, and duck ponds (Fung Associates, Inc. 2017:10). Beaven had been leasing Mōʻiliʻili Field to host sporting events and carnivals, but the venue became too small for increasing demand. Beaven organized Honolulu Stadium Ltd and planned to develop a new stadium on the purchased land with a 23,000-seating capacity. After the purchase, Honolulu Stadium Ltd sold 4.93 acres of its lands on the west side of the property to the Union Trust Company, who in turn developed the Stadium Tract. The company sold the lots in 1926 to the Hawaiian Industrial Company, which was owned by Ushisuke Taira and Seiji Miwa, who in turn sold lots to individual owners (Fung Associates, Inc. 2017:12). By 1927, single and multi-family wood dwellings were constructed in the current project area. A topographical map from 1933 indicates the growth in urban development, including houses in the project area, which were built in 1927, though land to west appears to have not yet been filled. By 1953, the neighborhood streets around the project area were completed and the Honolulu Stadium was built immediately to the east. The stadium was razed in 1976 and the lot became Old Stadium Park in 1978.

PREVIOUS ARCHAEOLOGICAL STUDIES IN AND NEAR THE PROJECT AREA

There is no record of a previous archaeological investigation in the project area. Modern archaeological investigations conducted in the surrounding area have identified a single archaeological site, while Mauʻoki Heiau was once situated northeast of the project area. No human burials have been previously recorded with 500 meters of the project area.

In 1994, Scientific Consultant Surveys, Inc., conducted an archaeological assessment of four parcels on Hausten Street (Chaffee and Spear 1994). No historic properties were identified the project area. In 2007, Cultural Surveys Hawaiʻi prepared a literature review and conducted a field inspection for Kamehameha School's University Parcels and Varsity Theater Parcel (O'Hare et al. 2007). Three fishponds were determined to have been within the property prior to land filling.

Cultural Surveys Hawaiʻi and Mason Architects prepared reports in support of the Ala Wai Canal project (also known as the Ala Wai Watershed project). These included a three volume cultural resources and ethnographic study report (O'Hare et al. 2010) and a historic structures report (Mason Architects 2010). The APE reached from the upper portions of Makiki, Mānoa, and Pālolo valleys to the mouth of the Ala Wai Canal. A total of 46 cultural resources were identified within 100 meters of the APE, which included historic buildings and structures, archaeological sites/features, and historic and traditional cultural practices and places. No historic properties were identified near the current project area.

In 2017, Pacific Legacy Inc. conducted an archaeological inventory survey at a 1.9-acre property located at 820 Isenberg Street in Mōʻiliʻili (McIntosh and Cleghorn 2018). A total of 24 test trenches were excavated, which identified a single historic property. The historic property, designated SIHP 50-80-14-08210, is a historic dump site comprising natural limestone depressions filled in with silt soil deposits containing glass, ceramic, and metal artifacts dating between 1896 and the 1960s.

REQUEST FOR INFORMATION ON CULTURAL SITES, CULTURAL PRACTICES, AND TRADITIONAL HISTORY PERTAINING TO THE HALE MAKANA O MOʻILIʻILI AFFORDABLE RENTAL HOUSING PROJECT

As part of the preparation of the Cultural Impact Assessment for this project, we would like to seek your views and comments about this project. We are especially interested in any information you may be willing to share about the presence of historic sites that are located on or near the project area parcel. We would also like to learn about any specific cultural traditions, legends, and traditional cultural places and practices that pertain to this area that you may know about. I have attached several figures to help provide context for the above discussion and citations are available upon request. If you would like a PDF copy of the Draft Archaeological Literature Review, please feel free to email me at the address below.

If you would like to share information with us, you can contact us in several ways:

Email: dennis@pcsihawaii.com
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USPS mail:
Dennis Gosser
Pacific Consulting Services, Inc.
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Honolulu, HI 96817

If you can get back to us by ****** we would appreciate it. Thank you very much in advance for your time, and we look forward to hearing from you.

Sincerely,

Dennis Gosser
Cultural Resources Manager
Pacific Consulting Services, Inc

Appendix I

Phase I Environmental Site Assessment

By Environmental Risk Analysis, LLC

IN LIEU OF PRINTING THIS DOCUMENT AND IN CONSIDERATION OF THE ENVIRONMENT THIS STUDY CAN BE FOUND AT https://www.dropbox.com/s/zmd0irl5ag19hjx/Appendix%20I%20-%20Phase%20I%20ESA.pdf?dl=0

PHASE I
ENVIRONMENTAL SITE ASSESSMENT

2139 Algaroba Street
Honolulu, Oahu, Hawaii
TMK (1) 2-7-007-051 & (1) 2-7-007-016

Prepared for:
Hawaiian Community Development Board
1188 Bishop Street #907
Honolulu, HI 96813

Prepared by:
Environmental Risk Analysis LLC
905A Makahiki Way
Honolulu, HI 96826

February 2019

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APPENDICES

Appendix A: Environmental Professional Qualifications
Appendix B: Aerial Photographs
Appendix C: EDR Report, Sanborn Fire Insurance Maps, Historical Topographic Maps, Historical Aerial Photographs and City Directory
Appendix D: Bureau of Conveyance Documentation
Appendix E: Interview Documentation
Appendix F: Site Reconnaissance Photographs

ACRONYMS

ACBM	Asbestos Containing Building Material
ASTM	American Society for Testing and Materials
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System
CERC-NFRAP	CERCLIS No Further Remedial Action Planned
Cl^-	chloride
CORRACTS	Treatment, storage and disposal facility subject to Corrective Action under RCRA
C-REC	Controlled Recognized Environmental Condition
DOD	Department of Defense
EAL	Environmental Action Level
EDR	Environmental Data Resources, Inc.
EHE	Environmental Hazard Evaluation
EHMP	Environmental Hazard Management Plan
ERA	Environmental Risk Analysis, LLC
ESA	Environmental Site Assessment
FEMA	Federal Emergency Management Agency
FINDS	Facility Index System/Facility Identification Initiative Program Summary Report
FIRM	Flood Insurance Rate Map
HDOH	Hawai‘i Department of Health
HECO	Hawaiian Electric Company
HEER	HDOH Hazard Evaluation and Emergency Response
H-RECs	Historical Recognized Environmental Condition
INST CONTROL	institutional controls
LCP	Lead Containing Paint
LLC	Limited Liability Company
LUST	Leaking Underground Storage Tank
Mg/kg	milligrams/kilogram
mg/l	milligrams/liter

MINES	Mines Master Index File
msl	mean sea level
NFA	no further action
NPL	National Priorities List
PAH	polycyclic aromatic hydrocarbons
PCB	polychlorinated biphenyl
RCRA	Resource Conservation and Recovery Act
RCRA-LQG	Resource Conservation and Recovery Act – large quantity generators
RCRA-SQG	Resource Conservation and Recovery Act – small quantity generators
RCRA-CESQG	Resource Conservation and Recovery Act – conditionally exempt small quantity generators
REC	Recognized Environmental Condition
SARA	Superfund Amendments and Reauthorization Act
SHWS	State Hazardous Waste Sites List
TMK	Tax Map Key
TPH	Total Petroleum Hydrocarbons
UIC	Underground Injection Control
US	United States
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UST	Underground Storage Tank
VCP	Voluntary Response Program Sites

QUALIFICATIONS AND SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

The undersigned environmental professional was responsible for conducting and preparing the Phase I Environmental Site Assessment for the properties designated by Tax Map Key (TMK) (1) 2-7-007-051 and (1) 2-7-007-016 located at 2139 Algaroba Street in Honolulu, Hawaii.

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in §312.10 of 40CFR312.

I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40CFRPart312.

Environmental professional qualifications are provided in Appendix A.

Environmental Risk Analysis LLC

Prepared By:

Name: Vincent Yanagita

Title: Senior Project Manager

Reviewed By:

Name: Russell Okoji

Title: Principal Scientist

EXECUTIVE SUMMARY

At the request of Hawaiian Community Development Board, Environmental Risk Analysis LLC (ERA) has performed a Phase I Environmental Site Assessment (ESA) for a two parcels located at 2139 Algaroba Street in Honolulu, Hawaii (hereafter referred to as the Site). The Site is designated on City and County of Honolulu Tax Maps as Tax Map Keys (TMKs) (1) 2-7-007-051 and (1) 2-7-007-016.

The purpose of this ESA was to identify, to the extent feasible, Recognized Environmental Conditions (RECs) associated with the Site. The investigation included a physical inspection of the property; review of current regulatory environmental database information; interviews of persons knowledgeable about the property, review of historical records; and preparation of this Phase I ESA Report. This ESA report conforms to the format outlined in the *American Society for Testing and Materials (ASTM) Document E1527-13* and the United States Environmental Protection Agency's (USEPA) All Appropriate Inquiries Rule. The site reconnaissance visit was conducted by Mr. Max Ulloa and Ms. Carolann Toyama of ERA on February 6 and 8, 2019.

Findings

Site Reconnaissance

The Site, TMKs (1) 2-7-007-016 and (1) 2-7-007-051, are comprised of a total of 17,743 square feet of land. TMK (1) 2-7-007-016 consists of a 3,000 square feet parcel of land and contains one (1) single-family two-story dwelling with an open carport and porch with a railing. The living space of the home on TMK (1) 2-7-007-016 is 868 square feet. This parcel is designated by the street address 918 Makahiki Way.

TMK (1) 2-7-007-051 consists of a 14,743 square foot parcel of land and contains seven (7) 2-family two-story dwellings. At the time of the inspection, the interior of the residential structures were observed to be partially occupied with some furnishings. Fluorescent light bulbs were observed in the dwellings, along with vinyl flooring and drywall. A water heater is located on the exterior of one of the structures. Located in the under-home storage area was a single container of pesticide along with two (2) containers containing fuel/gasoline. No releases from the pesticide bag were observed and the quantity was considered *de minimis*. The yard was observed to be vegetated. No dead or stressed vegetation was observed.

ERA visually assessed areas adjacent to the Site from public thoroughfares. The surrounding area was a mix of residential and commercial properties. Adjacent to west side of the Site is McCully Villa, a condominium complex, which appears to be residential in nature. Across Algaroba Street to the North is the Korea Adventist Church and McCully-Moili'ili Public Library. These residential and commercial sites are not anticipated to affect the environmental condition of the subject Site. McCully Service station is located upgradient, approximately 1/8-mile from the Site.

Historic Photos

Aerial photographs from 1968 through 2013, indicate that TMKs (1) 2-7-007-016 and (1) 2-7-007-051 were developed prior to 1968. City and County of Honolulu property tax records indicate that the structures were constructed in 1927 and 1928. No RECs were identified in the review of the historic aerial photographs.

Sanborn Maps from 1927 to 1993 were reviewed. In 1927, the Site was developed with 6 structures. Additional structures were added by 1949. Based on the Sanborn maps one structure was demolished and a new structure was constructed on the southwest portion of TMK (1) 2-7-007-051, and additional development of the Site was conducted between 1955 and 1973.

It was reported in the Site history that at one time, there was a fire at TMK (1) 2-7-007-05 impacting one structure. Based on the building permit data, there was repair work conducted to the 2nd floor of a structure, indicating the fire may have been limited to the 2nd floor of the structure. The exact date and location of the fire could not be determined. Building fires may impact surface soil with fire suppressants, polycyclic aromatic hydrocarbons (PAHs), dioxins, and heavy metals from the combustion of various building materials.

Regulatory Database Review

A search of the Hawaii Department of Health (HDOH) Underground Storage Tank (UST) Section database records indicated that nineteen (19) sites have had UST releases within a ½-mile radius of the Site. According to the HDOH Leaking Underground Storage Tank (LUST) database, cleanup activities have been completed (no further action [NFA], or NFA with Environmental Hazard Evaluation/Environmental Hazard Management Plan [EHE/EHMP]) at 18 of the 19 sites. The one remaining site was further investigated by review of HDOH records. HDOH records of the McCully Service Station located at 1901 South King Street were reviewed. The HDOH records indicate that a Phase I ESA was performed in 2012, which identified no UST closure records for

the former service station. In 2017, a Phase II ESA was conducted to assess for potential releases from the former USTs. Analytical results of soil and groundwater samples from two borings down-gradient of the former fuel station indicated the presence of chemicals of potential concern above HDOH Tier 1 Environmental Action Levels (EALs). Total Petroleum Hydrocarbons (TPH)-oil, ethylbenzene, m,p-xylenes, o-xylenes, anthracene, indeno(123-cd)pyrene, and benzo(ghi)perylene were detected above HDOH EALs in groundwater. TPH-diesel, TPH-oil, lead, 1-methylnaphthalene, and naphthalene were detected above HDOH EALs in soil. In June 2018, an EHE/EHMP was prepared to manage the remaining contamination. The Phase II ESA and EHE/EHMP stated that the downgradient delineation of the contamination was not further evaluated due to the presence of the building at the Site. Based on the concentrations in groundwater, subsurface contamination may extend further than approximated in the EHE/EHMP. The contamination at this site has not been fully delineated, and is located within ¼-mile to the subject Site. The potential that contamination extends to the subject Site is low, however the undelineated release at this site is considered a REC.

Forty-four (44) State Hazardous Waste Sites (SHWS) are located ¼-mile of the Site. Of the forty-four (44) sites, thirty-seven (37) sites are listed as either NFA or No Hazard, and do not pose an environmental risk to the Site. The seven (7) remaining sites were further investigated by review of HDOH records. None of the open investigation SHWS sites were determined to pose a potential environmental threat to the subject Site.

The McCully Union Service site, located at 2105 S King Street, is listed as an SHWS site with found petroleum and benzo(a)pyrene in soil. This site is also listed in the LUST database with a release and site cleanup completed with EHMP. This site received an NFA for both registered releases but listed as hazards managed with controls. This site has three (3) USTs currently in use, a 15,000-gallon gasohol tank, a 10,000-gallon gasoline tank, and a 5,000-gallon gasohol tank. The presence of currently in use USTs in close proximity and at a higher elevation than the subject Site is a potential environmental concern.

ERA observed two (2) pole mounted transformers in the vicinity of the property on Algaroba Street. No releases were observed associated with this equipment. Electrical transformers may contain polychlorinated biphenyls (PCBs). All untested mineral oil transformers purchased prior to July 1, 1979, must be considered PCB-contaminated. ERA sent an inquiry to Hawaiian Electric Company (HECO) to obtain the PCB status of the transformers observed however no response was received.

One (1) pole mounted transformer was located on the street adjacent to the Site on Algoroba Street. One (1) pole mounted transformer was located across Algaroba Street to the north on a commercial property. Releases from either of these transformers is unlikely to impact the subject Site.

Table ES-1 Phase I ESA Summary	
Assessment Component	**TMK** (1) 2-7-007-051 (1) 2-7-007-016
Historic Land Use (Section 2)	
Historical Aerial Photos/Maps	E[1]
Land Lease/Ownership	-
Interviews	-
Regulatory Records Review	-
Vapor Intrusion	-
Site Reconnaissance (Section 4)	
Operations	-
Hazardous Materials Storage	-
Underground Storage Tanks	-
Aboveground Storage Tanks	-
Solid Waste	-
Wells	-
Asbestos	E[2]
Lead Based Paint	E[2]
PCBs	-
Regulatory Database Review (Section 5)	
Target Property	-
Surrounding Sites	R[1], E[3]

Notes:
"-" = no ASTM RECs identified, no further investigation is required
R = ASTM defined REC observed
H = ASTM defined Historic REC observed
C = ASTM defined Controlled REC observed
E = indicates *de minimus* or non ASTM REC

Reference numbers (i.e., R[1]) are further discussed in the Executive Summary

SUMMARY AND RECOMMENDATIONS

RECs - Site

- **R[1]:** McCully Service Station located at 1901 South King Street was investigated in a Phase II ESA in 2017. Analytical results of soil and groundwater samples from the two borings down-gradient of the former fuel station indicated the presence of chemicals of potential concern above HDOH Tier 1 EALs. TPH-oil, ethylbenzene, m,p-xylenes, o-xylenes, anthracene, indeno(123-cd)pyrene, and benzo(ghi)perylene were detected above HDOH EALs in groundwater. TPH-diesel, TPH-oil, lead, 1-methylnaphthalene, and naphthalene were detected above HDOH EALs in soil. In June 2018, an EHE/EHMP was prepared to manage the remaining contamination. The Phase II ESA and EHE/EHMP stated that the downgradient delineation of the contamination was not further evaluated due to the presence of the building at the Site. Based on the concentrations in groundwater, subsurface contamination may extend further than approximated in the EHE/EHMP. The contamination at this site has not been fully delineated, and is located within ¼-mile to the subject Site. The potential that contamination extends to the subject Site is low, however this undelineated release to the environment is considered a REC.

List of Additional Environmental Issues

- **E[1]:** It was reported in the Site history that at one time, a fire occurred at TMK (1) 2-7-007-051 impacting one of the structure. Based on the building permit data, there was repair work conducted to the 2nd floor of a structure, indicating the fire may have been limited to the 2nd floor of the structure. The exact date and location of the fire could not be determined. Building fires may impact surface soil with fire suppressants, PAHs, dioxins, and heavy metals from the combustion of building materials.

- **E[2]:** The structures at the Site were constructed between 1927 and 1973. Based on the date of construction, there is the potential for lead, asbestos, and arsenic containing materials to be present at the Site. ERA visually assessed the interior of existing structures for potential lead containing paint, asbestos containing building materials, and arsenic containing materials. Potential asbestos containing materials included pipe insulation, vinyl floor tiles, vinyl baseboards, and ceiling tiles. Other materials typical in residential spaces such as caulking, mastics may also have been present. Interior walls were painted and some of the paints used may contain lead. Ceiling materials may have been canec materials which may contain arsenic. Interviews conducted for this Phase I ESA indicate that a hazardous material survey has not been performed. Although the presence of asbestos and lead containing paints are not considered RECs by ASTM, a hazardous materials survey should be performed prior to renovation or demolition activities at the Site.

- **E[3]:** The McCully Union Service site, located at 2105 S King Street, is listed as an SHWS site with found petroleum and benzo(a)pyrene in soil. This site is also listed in the LUST database with a release and site cleanup completed with EHMP. This site received an NFA for both registered releases but listed as hazards managed with

controls. Due to the NFA status with EHMP the UST release from this site, the release documented as controlled and the potential for groundwater constituent present at the subject Site exceeding HDOH EALs is low. This site has three (3) USTs currently in use and due to the location and proximity of this site to the subject Site, future releases from these USTs may impact the subject Site.

SECTION 1: INTRODUCTION

This Phase I Environmental Site Assessment (ESA) report was prepared by Environmental Risk Analysis LLC (ERA) for Hawaiian Community Development Board. The subject of this Phase I ESA consists of two parcels designated by Tax Map Keys (TMKs) (1) 2-7-007-016 and (1) 2-7-007-051, with a street address of 2139 Algaroba Street, in Honolulu, Hawaii.

1.1 PURPOSE

This Phase I ESA was requested by the Hawaiian Community Development Board, to determine the current environmental status of the Site to satisfy due diligence requirements mandated by the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). The purpose of this investigation was to identify and evaluate evidence that may indicate any Recognized Environmental Conditions (REC) at the Site due to past or current management of chemicals or other materials that, if released or not properly controlled, could present a risk to human health or the environment.

Under CERCLA, owners and operators of real estate with hazardous substance contamination may be held strictly liable for the costs of cleaning up contamination found on their property. No evidence linking the owner/operator with the placement of the hazardous substances on the property is required.

Congress, in response to pressure from business and academic groups, established the "innocent landowner defense" in the 1986 amendments to CERCLA known as the Superfund Amendments and Reauthorization Act (SARA). To establish innocent landowner status, the landowner "must have undertaken, at the time of acquisition, all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial and customary practice in an effort to minimize liability."

In an effort to clarify what constitutes "all appropriate inquiry," the American Society for Testing and Materials (ASTM) has developed a standard that provides specific definition of the steps one should take when conducting a "due diligence" Phase I ESA for commercial real estate. The site assessment documented herein complies with the current ASTM E1527-13 Standard Practice for Environmental Site Assessments.

ASTM E-1527-13 defines three categories of RECs which may impact the project site.

- A REC is defined as the presence of any hazardous substance or petroleum product in, on, or at the property: 1) due to any release to the environment, 2) under conditions indicative of a release to the environment, or 3) under conditions that pose a material threat of a future release to the environment
- Historical RECs (H-RECs) are defined as a past release of any hazardous substance or petroleum product that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authorities or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls
- Controlled RECs (C-RECs) are defined as a REC resulting from a past release that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place, subject to the implementation of required controls, such as property use restrictions, activity and use limitations, institutional controls, or engineering controls

Additionally, the United States Environmental Protection Agency (USEPA) has also published its final rule setting federal standards for the conduct of all appropriate inquiries. This rule establishes specific regulatory requirements for conducting all appropriate inquiries into previous ownership, uses, and environmental conditions of a property. As of November 1, 2006, parties must comply with either the requirements of the All Appropriate Inquiries Final Rule or the standards set forth in the ASTM E1527-13 Phase I Environmental Site Assessment Process. All appropriate inquiries must be conducted in compliance with either of these standards in order to obtain protection from potential liability under CERCLA as an innocent landowner, a contiguous property owner, or a bona fide prospective purchaser. This site assessment complies with both the current ASTM E1527-13 Standard Practice for Environmental Site Assessments and the USEPA All Appropriate Inquiries Rule.

1.2 SCOPE

The scope of services for this Phase I ESA consisted of the following tasks:

- Reviewing historical aerial photographs, information of past ownership, and conducting discussions with knowledgeable persons to evaluate historical land use.
- Assessing general conditions at the Site including a general geology and hydrogeology evaluation.
- A reconnaissance visit to the Site to evaluate visual evidence of past or current practices that may have impacted the Site.

- Reviewing local, state, and federal agency lists and available files of reported hazardous waste sites and hazardous substance/petroleum sources and releases. ERA queried the Environmental Data Resources, Inc. (EDR) database which provides comprehensive federal and state environmental release listings. The EDR database provides results in proximity to the Site following ASTM search distance guidelines.

- Providing a summary of findings and recommendations for the Site.

- Providing a summary of the limitations of this assessment.

1.3 SITE LOCATION

The Site is comprised two parcels totaling 17,743 square feet and designated on City and County of Honolulu Tax maps as TMKs (1) 2-7-007-016 and (1) 2-7-007-051. The Site is in the City of Honolulu, Hawaii. A map displaying the location of the Site is included as Figure 1. Figure 2 depicts the TMK boundaries.

1.4 CURRENT USE OF THE SUBJECT PROPERTY

The Site contains eight (8) separate multifamily two-story houses. TMKs (1) 2-7-007-016 contains a single structure, and (1) 2-7-007-051 contains seven (7) separate structures. The structures are constructed primarily of wood with a post and pier foundation. At the time of the site reconnaissance the structures were partially vacant.

1.5 CURRENT USE OF ADJACENT PROPERTIES

Adjoining properties were observed from public access areas for signs of RECs and evaluated for their potential to pose an environmental risk to the subject property. The uses and features of adjoining properties are provided below:

North:	Algaroba Street, other residential structures, Honolulu Korean Adventist Church
South:	Other residential structures
East:	Other residential structures
West:	Other residential structures

Environmental Risk Analysis	PROJECT NAME: Phase I Environmental Site Assessment 2139 Algaroba St Honolulu, Hawaii 96826 TMK (1) 2-7-007-016 TMK (1) 2-7-007-051	FIGURE TITLE: Site Location Map FIGURE NUMBER: 1

Environmental Risk Analysis	PROJECT NAME: Phase I Environmental Site Assessment 2139 Algaroba St Honolulu, Hawaii 96826 TMK (1) 2-7-007-016 TMK (1) 2-7-007-051	FIGURE TITLE: TMK Map FIGURE NUMBER: 2

SECTION 2: HISTORICAL LAND USE

Research regarding historical land use was conducted to determine, to the extent practicable, if past or current practices involving the use, storage, treatment, generation, and/or disposal of hazardous substances or petroleum products may have taken place at the Site or if releases on properties in the surrounding area may have impacted the Site. Research on historical land use was accomplished by examining the following sources: historical information sources, historical aerial photographs, land lease and land ownership records, and reports from previous investigations that may have been conducted at the Site. In addition, first hand interviews were conducted with persons who are knowledgeable about the Site.

2.1 HISTORICAL INFORMATION SOURCES

ERA queried the EDR database to obtain information about federal and state environmental release listings. The EDR database provides results in proximity to the Site following ASTM search distance guidelines (indicated in Section 5) and is continually updated. EDR provided the Sanborn Fire Insurance maps, historical city records, and historical topographic maps reviewed in this Section. Results of the EDR database search are provided in Section 5 of this report. Other historical information sources queried include aerial photographs and environmental records reviewed through the State of Hawai‘i, Department of Health (HDOH).

2.2 HISTORICAL AERIAL PHOTOGRAPHS

Historical aerial photographs were reviewed to help determine the past use of the Site, as well as adjacent properties. Aerial photographs for the years 1968, 1975, 1978, 1985, 1992, and 2006 were obtained from EDR historical aerial maps (EDR, 2018a). A 2013 aerial view was obtained from the Google Maps website.

Based on a review of TMKs (1) 2-7-007-016 and (1) 2-7-007-051, historical aerial photographs spanning 1968 to 2013 show the Site was partially developed prior to 1968. No ASTM defined RECs were noted from review of the historical aerial photographs.

Copies of the aerial photographs are available in Appendix B. Brief descriptions of these photographs are presented below:

1968

Site: The 1968 aerial photograph shows TMKs (1) 2-7-007-051 and (1) 2-7-007-016 in an area which appears to be developed with residential structures. Due to the poor resolution of the photograph, the number of structures located on the Site cannot be determined.

Adjacent Properties: The vicinity of the Site appears to be developed with other residential structures. This road is developed with residential structures.

1975

Site: The 1975 aerial photograph shows TMKs (1) 2-7-007-051 and (1) 2-7-007-016 in an area which appears to be developed with residential structures. Due to the poor resolution of the photograph, the number of structures located on the Site cannot be determined.

Adjacent Properties: The vicinity of the Site appears to be developed with some residential structures.

1978

Site: The 1978 aerial photograph shows TMKs (1) 2-7-007-051 and (1) 2-7-007-016 in an area which appears to be developed with residential structures. Due to the poor resolution of the photograph, the number of structures located on the Site cannot be determined.

Adjacent Properties: The vicinity of the Site appears to be developed with some residential structures.

1985

Site: The 1985 aerial photograph shows TMKs (1) 2-7-007-051 and (1) 2-7-007-016 in an area which appears to be developed with residential structures. Due to the poor resolution of the photograph, the number of structures located on the Site cannot be determined.

Adjacent Properties: The vicinity of the Site appears to be developed with some residential structures.

1992

Site: The 1992 aerial photograph shows TMKs (1) 2-7-007-051 and (1) 2-7-007-016 in an area which appears to be developed with residential structures. Due to the poor resolution of the photograph, the number of structures located on the Site cannot be determined.

Adjacent Properties: The vicinity of the Site is developed with structures which appear to be residential in nature.

2006

Site: The 2006 aerial photograph shows TMKs (1) 2-7-007-051 and (1) 2-7-007-016 in an area which appears to be developed with residential structures. Although the resolution is poor, the structures seen appear to be the similar to what exists today.

Adjacent Properties: The vicinity of the Site is developed with structures which appear to be residential in nature similar to what exists today.

2013

Site: The Site in the 2013 aerial photograph appears as it exists today.

Adjacent Properties: Adjacent properties in the vicinity of the Site are developed, similar to what exists today.

2.3 EDR SUPPLEMENTAL SEARCH OF SANBORN FIRE INSURANCE MAPS

The EDR database was queried for Sanborn Fire Insurance Maps which document historical property use. The EDR database located Sanborn maps for the years 1927, 1949, 1951, 1955, 1973, 1975, 1980, 1985, 1991 and 1993 (EDR, 2018b). Following are descriptions of the maps.

1927

Site: The 1927 Sanborn map depicts the Site as partially developed with six (6) separate structures present.

Adjacent Properties: Adjacent properties appear developed and residential in nature.

1949

Site: The 1949 Sanborn map depicts the Site as developed with eight (8) separate residential structures.

Adjacent Properties: Sites directly adjacent to the Site have been developed and appear to be residential in nature.

1951

Site: The 1951 Sanborn map depicts the Site as developed with eight (8) separate residential structures.

Adjacent Properties: Adjacent properties appear developed and residential in nature.

1955

Site: The 1955 Sanborn map depicts the Site as developed with eight (8) separate residential structures.

Adjacent Properties: Adjacent properties appear developed and residential in nature.

1973

Site: The 1973 Sanborn map depicts the Site as developed with eight (8) separate residential structures. The layout of one structure appears to have been redeveloped from what was shown in the 1955 Sanborn Map. Modification to two (2) additional structure is observed from the 1955 Sanborn Map. The remaining structures appear similar to that which currently exists at the Site.

Adjacent Properties: Sites directly adjacent to the Site have been developed. Area adjacent to the West of the Site appears to have been redeveloped into a large residential structure and parking lot. Area further North on the corner of Algaroba Street and Makahiki Way appears to have been redeveloped into McCully – Mo'ili'ili Library. Area further to the East, Honolulu Stadium, appears to have been removed and now labeled as Former Honolulu Stadium.

1975

Site: The Site presents similarly as in the 1973 Sanborn map.

Adjacent Properties: Adjacent properties remain similar to what was depicted in the 1973 Sanborn maps.

1980

Site: The Site appears as in the 1975 Sanborn map.

Adjacent Properties: Adjacent properties appeared similar to the 1975 Sanborn map.

1985

Site: The Site presents similarly as in the 1980 Sanborn map.

Adjacent Properties: Adjacent properties appear similar to the 1980 Sanborn map.

1991

Site: The Site presents similarly as in the 1985 Sanborn map.

Adjacent Properties: Adjacent properties appear similar to the 1985 Sanborn map.

1993

Site: The Site presents similarly as in the 1991 Sanborn map.

Adjacent Properties: Adjacent properties appear similar to the 1991 Sanborn map.

2.4 EDR CITY DIRECTORY ABSTRACT

EDR City Directory Abstracts identify historic usage of subject and adjoining properties. The City Directory Abstract is presented in Appendix C. Listings for the address 2139 Algaroba Street were found for the years 1977, 1982, 1987, 1992, 1995, 2000, 2005, 2010, and 2014 (EDR, 2018c).

The 2014 City Directory identifies primarily residential listing Algaroba Street and Makahiki Way in the vicinity of the Site. 2139 Algaroba Street is listed as occupied by Crowley, Mark and Optimized Ltd Liability Co. Businesses listed in the vicinity of the Site include: United Korean Association of Hawaii, WDM Inc, Young & Mary Foods Corporation, LGCY LLC, Charisma Industries Inc, Danny Yim Capital LLC, Hana Hou Bistro LLC, Noir Pictures LLC, Prestige Valet

Svc, Sadino Creations, Hawaii Conf of 7th Day Adventist, and Honolulu Korean Church on 2026 through 2142 Algaroba Street.

The 2010 City Directory identifies primarily residential listings on Algaroba Street and Makahiki Way in the vicinity of the subject Site. 2139 Algaroba Street is listed as occupied by Marriot, John W and Mathow, Apollonia. Businesses listed in the vicinity of the Site include: HI5 Recycling Services LLC, Young & Mary Foods Corporation, LGCY LLC, Twinstars Hawaii LLC, Keala Canoe Foundation, Adventures into Hawaii LLC, Broadcast Ventures Inc, Charisma Industries Inc, Hal Lum Photography, Hana Hou Bistro LLC, Mahaloha Group LLC, Noir Pictures LLC, Prestige Valet Svc, Sadino Creations, SRI Chinmoy Centre, Hawaii Conf of 7th Day Adventist, and Honolulu Korean Church on 2026 through 2142 Algaroba Street.

The 2005 City Directory identifies primarily residential listings on Algaroba Street and Makahiki Way in the vicinity of the subject Site. 2139 Algaroba Street is listed as occupied by; Kawabata, Janet, McGonagle, Sean T, Okura, Kiyoko, and Rivera, Jose. Kama'aina Prosthetic Dental Lab which is located at 2118 Algaroba Street, is listed as a business in the vicinity of the Site.

The 2000 City Directory identifies primarily residential listings on Algaroba Street and Makahiki Way in the vicinity of the subject Site. 2139 Algaroba Street is listed as occupied by Kawabata, Janet and McGonagle, Sean. Businesses listed in the vicinity of the Site include: Kama'aina Prosthetic Dental Lab, Broadcast Ventures Inc, MS Electrolysis, and Naris Cosmetics of Hawaii Inc on 2118 to 2142 Algaroba Street.

The 1995 City Directory identifies primarily residential listings on Algaroba Street and Makahiki Way in the vicinity of the subject Site. 2139 Algaroba Street is listed as occupied by Kawabata, Janet, Matsumoto, Akira, and Okura, Motoji. Businesses listed in the vicinity include: Bezier Group Inc, *Instant Terminalling*, Naris Cosmetics of Hawaii Inc, and Tanabe Plumbing Inc on 2121 to 2145 Algaroba Street.

The 1992 City Directory identifies primarily residential listings on Algaroba Street and Makahiki Way in the vicinity of the subject Site. 2139 Algaroba Street is listed as occupied by Matsumoto, Akira, Okura, Motoji, and Tsujuchi, F G on the 1992 City Directory. Businesses listed in the vicinity include: S & M Drapes, *Instant Terminalling*, Naris Cosmetics of Hawaii Inc, and Tanabe Plumbing Inc on 2022 to 2145 Algaroba Street.

The 1987 City Directory identifies primarily residential listings on Algaroba Street and Makahiki Way in the vicinity of the subject Site. According to the 1987 City Directory 2139 Algaroba Street does not have any listed occupants. Businesses listed in the vicinity include: Ho Ronald N S & Associates Inc, Naris Cosmetics of Hawaii Inc, and Tanabe Plumbing Inc on 2138 to 2145 Algaroba Street.

The 1982 City Directory identifies primarily residential listings on Algaroba Street and Makahiki Way in the vicinity of the subject Site. According to the 1982 City Directory 2139 Algaroba Street does not have any listed occupants. Businesses listed in the vicinity include: Chemi-Pure Products Ltd, and Tanabe Plumbing Inc on 2142 to 2145 Algaroba Street.

The 1977 City Directory identifies primarily residential listings on Algaroba Street and Makahiki Way in the vicinity of the subject Site. According to the 1977 City Directory 2139 Algaroba Street does not have any listed occupants. Tanabe Plumbing Inc which is located at 2145 Algaroba Street, is listed as a business in the vicinity of the Site.

No ASTM defined RECs were noted from the review of the City Directory.

2.5 EDR HISTORICAL TOPOGRAPHIC MAPS

EDR Historical Topographic Maps track changing land use and development patterns of subject and adjoining properties. Historical Topographic Maps are presented in Appendix C (EDR, 2018d). Following are the observations made of listings provided for the years 1928, 1953, 1954, 1959, 1969, 1970, 1983, 1998/1999, and 2013 (most current year available). No ASTM defined RECs were noted from the review of the historic topographic maps.

1928 (7.5 Minute): According to the 1928 Topographic Map, there are developments which appear to be residential in nature on and within the vicinity of the Site. Businesses and institutions located within a one mile radius of the Site include: University of Hawaii located approximately 1 mile to the North East, Punahou School located ¾ of a mile to the North.

1953 (7.5 Minute): Similar to the 1928 Topographic Map, there are developments which appear to be residential in nature on and within the vicinity of the Site. The University of Hawaii is still listed to the North East. Punahou School is

still listed to the North. Businesses and institutions located within a one mile radius of the Site include: Honolulu Stadium listed less than ¼ mile to the East, Moili'ili Field less than ¼ mile to the North East, Moili'ili Quarry located approximately half a mile to the East, Kaimuki Pumping Station located approximately one mile to the East, Kapiolani Hospital located approximately ¾ of a mile to the North West, Shriners Hospital located approximately ¾ of a mile to the North West, YMCA located approximately ¾ of a mile to the South West, KGMB radio tower located approximately one mile to the West, Drive in theater located approximately one mile to the West, KHON radio tower located approximately ¾ of a mile to the South West, KPOA radio tower located approximately half a mile to the South East, Fort DeRussy Military Reservation located approximately one mile to the South, Ala Wai Golf Course located approximately ¾ of a mile to the South East, Kaimuki Pumping Station located approximately one mile to the East,

1954 (7.5 Minute): Similar to the 1953 Topographic Map, there are developments which appear to be residential in nature on and within the vicinity of the Site. The University of Hawaii is still listed to the North East, Punahou School is still listed to the North, the Honolulu Stadium is still listed to the East, Moili'ili Field is still listed to the North East, Moili'ili Quarry is still listed to the East, Kapiolani Hospital is still listed to the North West now named Kapiolani Maternity Hospital, Shriners Hospital is still listed to the North West, the YMCA is still listed to the South West, the KGMB Radio Tower is still listed to the West, the Drive in Theater is still listed to the West, the KHON Radio Tower is still listed to the South West, the KPOA Radio tower is still listed to the South East, Fort DeRussy Reservation is still listed to the South, and the Ala Wai Golf Course is still listed to the South East. The Pumping Station is no longer listed. The topography of the Site remains unchanged.

1959 (7.5 Minute): Similar to the 1954 Topographic Map, there are developments which appear to be residential in nature on and within the vicinity of the Site. The University of Hawaii is still listed to the North East, Punahou School is

still listed to the North, the Honolulu Stadium is still listed to the East, Moili'ili Field is still listed to the North East, Moili'ili Quarry is still listed to the East and there has been partial development, Kapiolani Hospital is still listed to the North West, Shriners Hospital is still listed to the North West, the YMCA is still listed to the South West, the KGMB Radio Tower is still listed to the West, the Drive in Theater is still listed to the West, the KHON Radio Tower is still listed to the South West, the KPOA Radio tower is still listed to the South East, Fort DeRussy Reservation is still listed to the South, and the Ala Wai Golf Course is still listed to the South East. There is a gas station listed approximately half a mile to the East. A structure large in nature is listed approximately ¾ of a mile to the West (located West of the YMCA). The topography of the Site remains unchanged.

1969 (7.5 Minute): Similar to the 1959 Topographic Map, there are developments which appear to be residential in nature on and within the vicinity of the Site. The University of Hawaii is still listed to the North East, Punahou School is still listed to the North, the Honolulu Stadium is still listed to the East, Moili'ili Field is still listed to the North East, Moili'ili Quarry is still listed to the East and there appears to be further development, Kapiolani Hospital is still listed to the North West, Shriners Hospital is still listed to the North West, the YMCA is still listed to the South West, the KGMB Radio Tower is still listed to the West, the KHON Radio Tower is still listed to the South West, the KPOA Radio tower is still listed to the South East, Fort DeRussy Reservation is still listed to the South, and the Ala Wai Golf Course is still listed to the South East, the structure located ¾ of a mile to the West of the Site is still listed as Shopping Center. The gas station to the East is no longer listed, the Drive in Theater to the West is no longer listed. The topography of the Site remains unchanged.

1970 (15 Minute): The subject property appears similar to the 1969 map. The topography of the Site remains unchanged from the 1969 map.

1983 (7.5 Minute): Similar to the 1970 Topographic Map, there are developments which appear to be residential in nature on and within the vicinity of the Site. The University of Hawaii is still listed to the North East, Punahou School is still listed to the North, the Honolulu Stadium is still listed to the East now listed as Honolulu Stadium State Park, Moili'ili Field is still listed to the North East, Moili'ili Quarry is still listed to the East and there appears to be further development, Kapiolani Hospital is still listed to the North West, Shriners Hospital is still listed to the North West, the YMCA is still listed to the South West, the KGMB Radio Tower is still listed to the West, the KHON Radio Tower is still listed to the South West, the KPOA Radio tower is still listed to the South East, Fort DeRussy Reservation is still listed to the South, and the Ala Wai Golf Course is still listed to the South East, the Shopping Center is still listed to the West. The topography of the Site remains unchanged.

1998 (7.5 Minute): Similar to the 1983 Topographic Map, there are developments which appear to be residential in nature on and within the vicinity of the Site. The University of Hawaii is still listed to the North East, Punahou School is still listed to the North, the Honolulu Stadium State Park is still listed to the East now listed as Old Stadium State Park, Moili'ili Field is still listed to the North East, Moili'ili Quarry is still listed to the East and there appears to be further development towards an athletic compound, Kapiolani Hospital is still listed to the North West, Shriners Hospital is still listed to the North West, the YMCA is still listed to the South West, Fort DeRussy Reservation is still listed to the South, and the Ala Wai Golf Course is still listed to the South East, the Shopping Center is still listed to the West. The KHON, KPOA, and KGMB Radio Towers are not listed in the 1998 Topography Maps. A cemetery is listed approximately ¾ of a mile East of the Site. A development which appears to be commercial in nature is listed approximately ¾ of a mile to the South West. The topography of the Site remains unchanged.

2013 (7.5 Minute): The subject property appears similar to the 1998 map. It is difficult to determine the nature of business in the area due to a lack of information

from the 2013 Topography Map. Fort DeRussy Reservation is still listed to the South, and the Ala Wai Golf Course is still listed to the South East. The topography of the Site remains unchanged from the 1998 map.

2.6 TIER ONE VAPOR ENCROACHMENT SCREENING (VES)

Based on the EDR, Prestige Valet Service is listed as containing dry cleaning agents in 2006. TCE and PCE are harmful solvents found in dry cleaning agents have been outlawed since 1977 therefore no longer posing a threat to the surrounding environment. Upon further review ERA found the listing to be located on the 15th floor of a residential condominium with extremely limited possibility of impacting soil and ground water.

2.7 LAND LEASES AND OWNERSHIP

The City and County of Honolulu indicates the Fee Owner of the Site parcels as University Park Apartments HI LP. This information is also listed on the City and County of Honolulu's Real Property Assessment and Tax Billing Information website. According to the City and County of Honolulu records TMKs 2-7-007-016 and 2-7-007-051 comprises approximately 17,743 square feet. The site is in an area zoned Residential. The Site is not located in a Special District or a Special Management Area. Past ownership of the Site was determined through Department of Land and Natural Resources (DLNR) Bureau of Conveyances records. The DLNR, Bureau of Conveyance record for the years 1937 to 1986 was found (Appendix D).

In 1937 the deed for TMK 2-7-007-016 was transferred from Toyo Harada to Kinichi Harada and wife Atsuko Harada. In 1984 there was a transfer of the parcel to Kinichi Harada and wife Atsuko Harada as well as Paul Harada. In 1986 Kinichi Harada transferred the parcel to Paul Harada. The current owner listed is University Park Apartments HI LP.

In 1954 the deed for TMK 2-7-007-051 was transferred from Tadashi Seiki and Sadao Seiki to Tadashi Seiki and wife, Violet Kikuno, Sadao Seiki and wife, and Umeyo. In 1963 the document shows a deed transfer from Tadashi Seiki and wife to Violet Kikuno. In 1977 the document shows a transfer to Aaron M. Chaney Inc. In 1985 the property was transferred to Jean K Yokoyama Trustee. The current owner listed in University Park Apartments LP.

2.8 PREVIOUS INVESTIGATIONS

According to Mr. Mark D Bratton, current owner of the Site, there was one previous investigation conducted for the Site. This investigation comprised of an environmental questionnaire for the Central Pacific Bank. A copy of this questionnaire was not provided for review.

2.9 INTERVIEWS

ERA conducted interviews with persons who are knowledgeable about the Site. The objective of these interviews was to ascertain any information that may be indicative of potential RECs in connection with the Site. According to ASTM Standard E1527-13 Section 3.2.43, questions should be addressed to *past and present* owners, operators, and occupants of the Site, as well as local government officials.

Summary of Interviews

The following individuals were contacted to complete this Phase I ESA. A summary of each interview (including business and contact name) is presented below. Interview documentation is provided in Appendix E.

- Mr. Mark D. Bratton, owner of the Site. Via questionnaire dated January 25, 2019.
- Ms. Lehua Nakamaejo and Mr. Raymond Enriquez, Realtor and Property Manager for the Site. In person interview on February 8, 2019.

<u>Mr. Mark D. Bratton current owner of the Site</u>

Mr. Bratton, the current owner of the property, completed a Phase I ESA questionnaire dated January 25, 2019. He has no knowledge of any environmental liens filed against the property, nor were aware of any activity use limitations for the property.

According to Mr. Bratton, there was one environmental investigation conducted for the site, this was an environmental questionnaire for Central Pacific Bank.

Mr. Bratton was not aware of any environmental spills or releases that took place within the subject property or the neighboring parcels. To his knowledge, no environmental cleanups have taken place at the adjacent properties.

Lehua Nakamaejo and Raymond Enriquez, Realtor and Property Manager for the Site

According to Mr. Enriquez and Ms. Nakamaejo they are not aware of any previous Environmental Site Investigations conducted at the Site. Mr. Enriquez stated that he knew the current owner has only held this property for approximately one year, Miss Nakamaejo confirmed this statement. This interview was conducted after an on-site reconnaissance on February 8, 2019 at the Site.

2.10 RECORDS REVIEW

Hawai‘i Department of Health, Hazard Evaluation and Emergency Response (HEER) Office

The HDOH HEER office was contacted to obtain further information on State Hazardous Waste Sites (SHWS) records determined to be of potential environmental concern to the Site. HDOH records received were reviewed on February 5, 2019 and are discussed below.

Wally's Garden Center

Wally's Garden Center, located at 1935 S Beretania St., is listed as a medium priority site with hazards present. A Phase I ESA was conducted for the property. In the Phase I ESA, the 1955 fire insurance map indicated that the site was formerly occupied by a dry cleaning facility. Former activities associated with this business may have impacted the subsurface with dry cleaning chemicals. A Phase II ESA was conducted for the property which found detected TPH-diesel and TPH-oil in subsurface soil from a single boring at the site. HDOH reviewed the Phase II Environmental Site Assessment for this site and determined that delineation of environmental hazards are incomplete for the site. Furthermore, the former use of this site as a dry cleaning business could have perpetuated pockets of contamination overlooked by limited soil borings. Due to nature of contamination at this site and the distance from the subject Site, this site is unlikely to pose a significant environmental threat.

1800 Vancouver Drive

The 1800 Vancouver Drive site is located approximately 0.6 mi upgradient from the Site. The bottom floor of the residence located at 1800 Vancouver Drive is classified as a suspected clandestine drug laboratory (CDL). The exposure of residual contamination from CDLs is considered a risk to human health. Environmental site characterization should be performed prior to occupancy. This site was not determined to pose an environmental threat to the subject Site.

Punahou School Winne Units C and D

Punahou School Winne Units C and D, located at 1601 Punahou St., is listed as a medium priority site with hazards managed with controls. In 2015, during construction of a new Arts & music Building and Learning Center, soil sampling was conducted to determine disposal options for the concrete slab and determine controls, if any, should be implemented to protect construction workers. Based on the results of the sampling organochlorine pesticides including chlordane, DDE, and heptachlor were detected in surface soil around Units C and D. The impacted soil was relocated to a subsurface fill area and covered with three feet of clean fill. Permeable high visibility plastic sheeting was installed between the impacted soil and clean fill. Approximately 680 cubic yards of impacted soil were relocated. Relocation of the soil to an unimpacted area generated the requirement to notify this contamination as a release with HDOH. An Environmental Hazard Management Plan (EHMP) was prepared to manage the soil which was relocated and buried. HDOH provided comments on the EHMP prepared. No responses to the HDOH comments were provided in the HDOH records. Due to nature of contamination at this site and the distance from the subject Site, this site is unlikely to pose a significant environmental threat to the subject Site.

Punahou School Grades 2-5 Project

Punahou School Grades 2-5, located at 1601 Punahou St., is listed as a medium priority site with hazards present. HDOH records provided included two letters indicating a Removal Action Work plan was prepared in response to pesticide-impacted soil at the Punahou School Grades 2-5 Project. The Removal Action Work Plan was approved by HDOH. The Removal Action Work Plan was not provided in HDOH records, and no additional reporting following a removal action conducted at the Site were provided. Due to nature of contamination (pesticide-impacted soil) and the distance from the subject Site, this site is unlikely to pose a significant environmental threat to the subject Site.

UH Manoa Henke Hall

UH Manoa Henke Hall, located at 1800 East-West Road, is listed with hazards present and response ongoing. HDOH records provided included a letter from HDOH to the Environmental Health & Safety Office and the University of Hawaii at Manoa, indicating in May 2018, a Revised Removal Action Work Plan was prepared for the University of Hawaii Life Sciences Building and approved by HDOH. The Removal Action Work Plan was not provided in HDOH records, and no additional

reporting following a removal action conducted at the Site were provided. Due to the planned removal action to address contamination at this site and the distance from the subject Site, this site is unlikely to pose a significant environmental threat to the subject Site.

Ritz Carlton Waikiki Residence & Resort

Ritz Carlton Waikiki Residence & Resort, located at 2139 Kuhio Ave., is listed as a medium priority site with hazards present. In 2015, a Site Characterization report was prepared. Based on previous investigations, heptachlor, heptachlor epoxide, and technical chlordane were identified as chemicals of potential concern. During the 2015 Site Characterization, heptachlor and heptachlor epoxide were detected above commercial/industrial EALs in a single decision unit evaluated. In December 2016, a Construction EHMP was prepared to establish procedures to properly handle contaminated media during construction. Due to nature of contamination at this site and the distance from the subject Site, this site is unlikely to pose a significant environmental threat to the subject Site.

Hale Pua Nui UST Removal

Hale Pua Nui UST Removal, located at 228 Beach Walk, is listed as a low priority site with hazards present. In 2006, a 575-gallon steel UST was closed at the site. A closure report was prepared which stated that there was no piping connected to the tank and the tank was likely previously used for diesel storage to power a hot water heater. The tank was cleaned and removed from the ground. A diesel fuel odor and staining were observed in the soil along the northwest end of the tank at approximately 2 feet below ground surface. Free product was observed on the water at the bottom of the tank pit excavation. Free product was absorbed using oil absorbent pads. The northwest side wall of the UST excavation was over-excavated until there was little or no evidence of contamination. Confirmation sampling conducted after the over-excavation did not detect any petroleum related constituents. Four monitoring wells were installed with soil collected at the capillary fringe and groundwater samples collected approximately 20 feet from the UST excavation. Soil and groundwater sample results from these borings did not have any detection exceeding the HDOH EALs. After the over-excavation and extraction of free product no remaining contamination was observed at this site. This site is unlikely to pose a significant environmental threat to the subject Site.

Hawai‘i Department of Health, Solid and Hazardous Waste Branch (SHWB)

The HDOH SHWB office was contacted to obtain further information on Leaking Underground Storage Tank Sites (LUST) records determined to be of potential environmental concern to the Site. HDOH records received were reviewed on February 12, 2019 and are discussed below.

McCully Service Station

HDOH records of the McCully Service Station located at 1901 South King Street were reviewed. The EDR records indicate that there is a confirmed release as of February 9, 2018. The HDOH records indicate that a Phase I ESA was performed in 2012, which identified no UST closure records for the former service station. In 2017, a Phase II ESA was conducted to assess for potential releases from the former USTs. Four boring were conducted to collect soil and groundwater samples. Analytical results of soil and groundwater samples from the two borings down-gradient of the former fuel station indicated the presence of chemicals of potential concern above HDOH Tier 1 EALs TPH-oil, ethylbenzene, m,p-xylenes, o-xylenes, anthracene, indeno(123-cd)pyrene, and benzo(ghi)perylene were detected above HDOH EALs in groundwater. TPH-diesel, TPH-oil, lead, 1-methylnaphthalene, and naphthalene were detected above HDOH EALs in soil. In June 2018, an Environmental Hazard Evaluation/Environmental Hazard Management Plan (EHE/EHMP) was prepared to manage the remaining contamination. The Phase II ESA and EHE/EHMP stated that the downgradient delineation of the contamination was not further evaluated due to the presence of the building at the Site. Based on the concentrations in groundwater, subsurface contamination may extend further than approximated in the EHE/EHMP. The contamination at this site has not been fully delineated, and is located within ¼-mile to the subject Site. The potential that contamination extends to the subject Site is low, however this site is considered a REC.

2.11 ENVIRONMENTAL LIENS OR ACTIVITY AND USE LIMITATIONS

An interview with the current owner indicated that there are no environmental liens or activity associated with the property.

2.12 VALUATION REDUCTION FOR ENVIRONMENTAL ISSUES

Information regarding valuation of the subject Site was not provided. The City and County of Honolulu, Real Property Assessment and Tax Billing Information website lists the assessed value of TMKs.

TMK 2-7-007-016 has a total assessed value of $627,100 including land and building value. TMK 2-7-007-051 has a total assessed value of $2,949,200 including land and building value. The total assessed value for both parcels is $3,576,300. Fair market value and purchase price information was not available.

SECTION 3: SITE CONDITIONS

The subject property is situated in Honolulu on the island of Oahu. The following section describes the Site with regards to soil classifications, groundwater hydrology, topography and land cover and local zoning.

3.1 SOIL CLASSIFICATIONS

The United States Department of Agriculture (USDA) Soil Conservation Service classifies the soil within the Site as Ewa silty clay loam (EmA) with slopes ranging from 0 to 2 percent. Ewa silty loam is described as well drained, prime for farmland if irrigated. Ewa silty clay loam is described as well drained with low run off. Ewa silty loam belongs to hydrologic soil group C. The typical soil profile is silty clay loam between 0 and 29 inches below ground, from 29 to 39 inches it becomes bedrock with a depth to water table greater than 80 inches. (USDA, 2019)

3.2 GROUNDWATER HYDROLOGY

The Site overlies the Palolo aquifer system of the Honolulu aquifer sector. The upper aquifer is a basal (fresh water in contact with sea water), unconfined (where water table is upper surface of saturated aquifer), sedimentary (nonvolcanic lithology) aquifer. It is classified as a potentially used, replaceable, and highly vulnerable to contamination, with moderate salinity (1,000 – 5,000 milligrams per liter [mg/l] chloride [Cl^-]). It is considered neither a drinking water source or ecologically important. (Mink and Lau, 1990).

The lower aquifer is a basal (fresh water in contact with sea water), confined (aquifer bounded by impermeable or poorly permeable formations and top of saturated aquifer is below groundwater surface), flank (horizontally extensive lavas) aquifer. It is classified as a currently used, drinking water source, irreplaceable, low vulnerable to contamination, with fresh water salinity (<250 milligrams per liter [mg/l] chloride [Cl^-]) (Mink and Lau, 1990).

According to the EDR report, there are seventy-one (71) United States Geological Survey (USGS) wells within a 1-mile radius of the Site. All seventy-one (71) water wells were identified in the State Database Well Information located within a 1-mile radius of the subject property (EDR, 2018e). The Site is up-gradient of the Underground Injection Control (UIC) line (Figure 3) as such;

the underlying aquifer is considered a drinking water source and permit limitations governing the use of these waters may be imposed.

3.3 TOPOGRAPHY AND LAND COVER

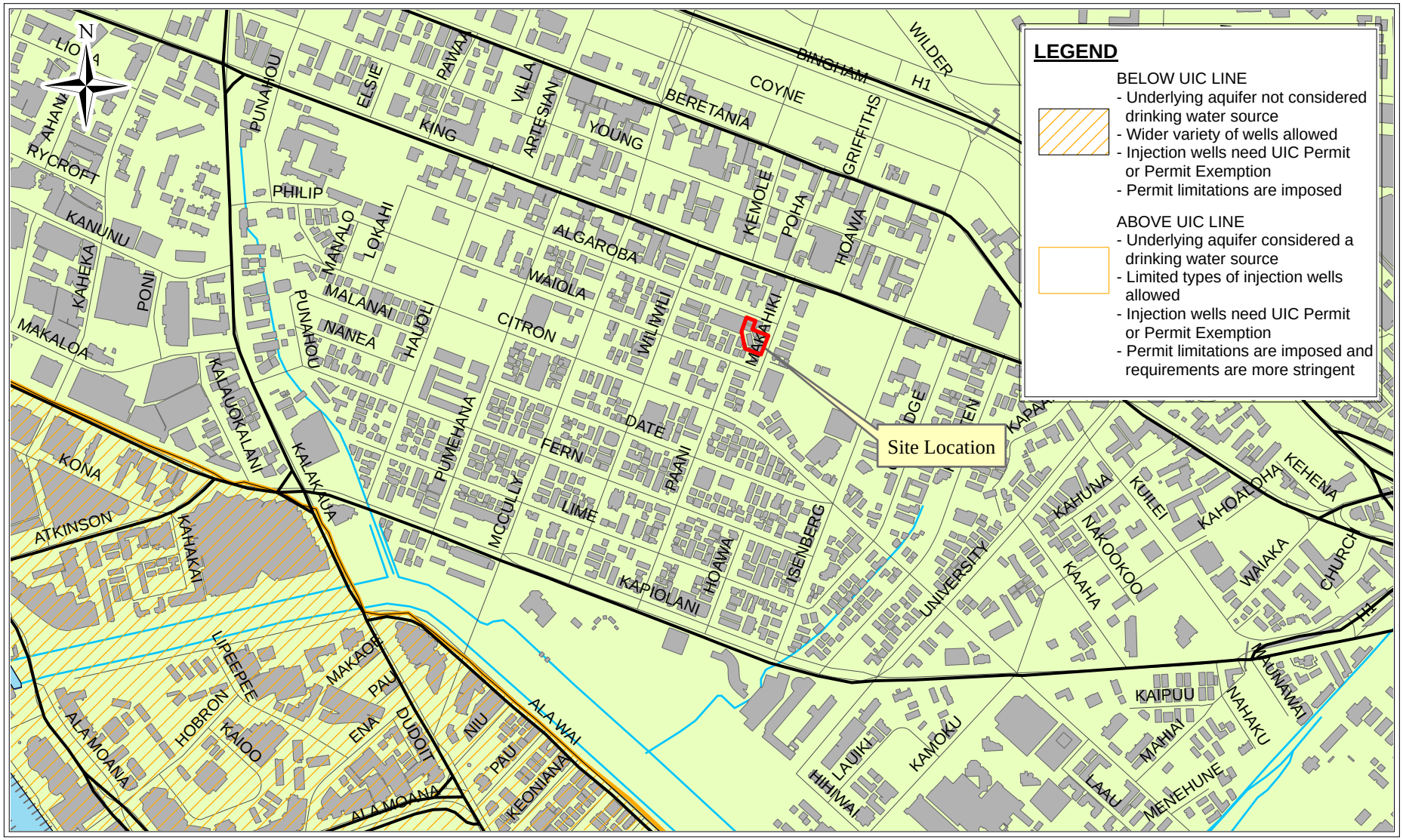
According to the USGS, Honolulu, Hawaii, 7.5-minute topographic quadrangle map, the subject property elevation is approximately 9-feet above mean sea level (msl). The Site is developed with residential structures and mostly paved.

3.4 LOCAL ZONING

The City and County of Honolulu, Department of Permitting and Planning, Land Use Ordinance Zoning Designation for the Site is Residential (A-2). The A-2 designation is described as a medium density apartment zone. The Site is not located in a Special District or Special Management Area.

3.5 FLOOD ZONE DETERMINATION

The Federal Emergency Management Agency (FEMA) flood insurance rate map (FIRM Map No. 15003C0366G, revised 01/19/2011) was reviewed. The subject properties are within Flood Zone X, beyond the 500-year flood plain.



0 0.05 0.1 0.2 0.3 0.4 0.5 Miles

Environmental Risk Analysis	PROJECT NAME: Phase I Environmental Site Assessment 2139 Algaroba St Honolulu, Hawaii 96826 TMK (1) 2-7-007-016 TMK (1) 2-7-007-051	FIGURE TITLE: Underground Injection Control Map FIGURE NUMBER: 3

SECTION 4: SITE RECONNAISSANCE

The purpose of the site reconnaissance was to visually assess for evidence of the use, storage, generation and disposal of potentially hazardous substances and petroleum products, and/or indicators of possible releases of hazardous substances and/or petroleum products at the Site. Evidence of possible releases of hazardous substances or petroleum products include discolored soil, flooring, or paving; visible leaks; odors; and apparent stressed vegetation. A visual survey of adjacent properties from public thoroughfares was also conducted. Mr. Max Ulloa and Ms. Carolann Toyama of ERA conducted the site reconnaissance on February 6 and 8, 2019. The following sections present general observations of the Site and the surrounding area, a description of PCB-containing equipment, asbestos-containing building materials (ACBM) and lead containing paint (LCP) and arsenic findings at the Site.

4.1 GENERAL OBSERVATIONS OF THE SITE

No visual evidence of large-scale oil spills, hazardous substance storage or release was noted during the site reconnaissance. Photos of the Site as it appeared on February 6 and 8, 2019 are provided in Appendix F.

General

The Site, TMKs (1) 2-7-007-016 and (1) 2-7-007-051, are comprised of a total of 17,743 square foot of land. TMK (1) 2-7-007-016 consists of a 3,000 square feet parcel of land and contains one (1) single-family two-story dwelling with an open carport and porch with a railing. The living space of the home on TMK (1) 2-7-007-016 is 868 square feet. This parcel is designated by the street address 918 Makahiki Way.

TMK (1) 2-7-007-051 consists of a 14,743 square foot parcel of land and contains seven (7) 2-family two-story dwellings. The living space of the homes are 968, 484, 1,232, and 977 square feet. At the time of the inspection, the interior of the residential structures were observed to be partially occupied with some furnishings. Fluorescent light bulbs were observed in the dwellings, along with vinyl flooring and drywall. A water heater is located on the exterior of one of the structures. Located in the under-home storage area was a single container of pesticide along with two (2) containers containing fuel/gasoline. No releases from the pesticide bag were observed and the quantity was considered *de minimis*. The yard was observed to be vegetated. The front and

backyard of the property was vegetated and well-maintained. No dead or stressed vegetation was observed.

4.2 GENERAL OBSERVATIONS OF THE SURROUNDING AREA

ERA visually assessed areas adjacent to the Site from public thoroughfares. The surrounding area was a mix of residential and commercial properties. Adjacent to west side of the Site is McCully Villa, a condominium complex, which appears to be residential in nature. Across Algaroba Street to the North is the Korea Adventist Church and McCully-Moili'ili Public Library. These residential and commercial sites are not anticipated to affect the environmental condition of the subject Site. McCully Service station is located upgradient 1/8-mile from the Site. This site was further investigated in a review of environmental databases in Section 5.

4.3 PCB-CONTAINING EQUIPMENT

Electrical transformers may contain PCBs. All untested mineral oil transformers purchased prior to July 1, 1979, must be considered PCB-contaminated. ERA observed two (2) pole mounted transformers in the vicinity of the property on Algaroba Street. No releases were observed associated with this equipment. ERA sent an inquiry to HECO to obtain the PCB status of the transformers observed however no response was received. One (1) pole mounted transformer was located on the street adjacent to the Site on Algoroba Street. One (1) pole mounted transformer was located across Algaroba Street to the north on a commercial property. Releases from either of these transformers is unlikely to impact the subject Site..

Fluorescent lighting was observed in the buildings. Fluorescent lighting ballasts can be PCB-containing. In addition, fluorescent light bulbs may also contain small amounts of mercury. Lighting fixtures should be checked prior to removal and disposal as they may require special handling.

4.4 ASBESTOS-CONTAINING MATERIAL AND LEAD PAINT

ACBM and LCP are not considered to be RECs as defined by ASTM but can pose potential health hazards. According the aerial photographs and city and county records, the structures at the Site were built between 1927 and 1928. Based on the age of the structures, it is possible that ACBM and LCP are present at the Site. Interior and exterior paints appeared in good condition but may

contain lead. Materials such as vinyl floor tiles, vinyl baseboards, drywall joint compound, pipe insulation, may contain asbestos.

While not ASTM-defined RECs, given the age of the structure, it is prudent that a hazardous materials survey be conducted to determine the presence or absence of ACBM and LCP prior to any renovation or demolition work.

4.5 ARSENIC

Possible arsenic containing building materials (e.g., canec ceiling tiles) were observed at the Site during the reconnaissance. If found during future renovation or demolition, these materials should be tested for the presence of arsenic.

SECTION 5: REVIEW OF FEDERAL, STATE, AND LOCAL LISTS AND AVAILABLE FILES OF REPORTED HAZARDOUS SUBSTANCE/PETROLEUM PRODUCT SOURCES AND RELEASES

This section includes results of a review of federal, state, and local lists and available files of reported hazardous waste sites and hazardous substance/petroleum product sources and releases. The EDR database provided the federal and state environmental release listings (EDR, 2018e). This information is provided in Appendix C and is summarized below.

5.1 DATABASES AND REGULATORY FILES REVIEWED

A list of the Federal Sources and Hawai‘i State Regional databases reviewed is provided below. These databases were reviewed to document the location of federal and state listed sites, or other known hazardous waste sites, following ASTM search distance guidelines. The ASTM search distance guidelines are provided in parenthesis.

Standard Environmental Record Sources

- Federal RCRA – large quantity generators (RCRA-LQG) (property and adjoining properties)
- Federal RCRA – small quantity generators (RCRA-SQG) (¼-mile)
- Federal RCRA – conditionally exempt small quantity generators (RCRA-CESQG) (property and adjoining properties) (¼-mile)
- State Hazardous Waste Sites List (SHWS) (1-mile)
- HDOH LUST Database (½-mile)
- HDOH Registered UST Database (property and adjoining properties) (¼-mile)
- State Sites with Institutional Controls (INST CONTROL) (property only) (½-mile)
- State Institution/Engineering Control (½-mile)

The following standard environmental record sources were reviewed by EDR, however there were no findings within the ASTM specified search distances. The following databases are provided for reference, but not further discussed in this report:

- Federal CERCLIS No Further Remedial Action Planned (CERC-NFRAP) (½-mile)

- Federal Corrective Action Report (CORRACTS) (1-mile)
- Federal Resource Conservation and Recovery Act (RCRA) non-CORRACTS – treatment, storage, and disposal facilities (RCRA-TSDF) (½-mile)
- Federal Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) (½-mile)
- Federal National Priorities List (NPL) (1-mile)
- Federal Delisted NPL List (½-mile)
- Federal Engineering Controls Sites (property only)
- Federal Sites with Institutional Controls (property only)
- Federal Emergency Response Notification System (property only)
- State Voluntary Response Program Sites (½-mile)
- State facilities permitted as solid waste landfills, incinerators, or transfer stations (½-mile)
- Voluntary Remediation Program and Brownfields Sites with Institutional Controls (½-mile)
- Permitted Landfills in the State of Hawai‘i (½-mile)
- Leaking Underground Storage on Indian Land (½-mile)
- Underground Storage on Indian Land (½-mile)

Additional Environmental Record Sources

The following additional environmental record sources were reviewed by EDR and findings from the search are detailed in Section 5.2.

- RCRA Non-Generator List
- US Historical Auto Sites (¼-mile)
- US Historical Cleaners (¼-mile)

The following additional environmental records sources were reviewed by EDR, however there were no findings within the ASTM specified search distances. The following databases are provided for reference, but not further discussed in this report:

- Department of Defense Sites (DOD)
- EPA Listing of Brownfields Properties
- Facility Index System/Facility Identification Initiative Program Summary Report (FINDS)

- Biennial Reporting System
- Formerly Used Defense Sites
- Superfund CERCLA Consent Decrees
- CERCLA Lien Information
- Records of Decision
- Uranium Mill Tailing Sites
- Hazardous Materials Information Reporting System
- Material Licensing Tracking System
- PCB Activity Database System
- Storm Water General Permits
- RCRA Administrative Action Tracking System
- Toxic Chemical Release Inventory System
- Toxic Substances Control Act
- Federal Insecticide, Fungicide, and Rodenticide Act /Toxic Substances Control Act
- Section 7 Tracking Systems
- Open Dump Inventory
- Clandestine Drug Labs
- Incident and Accident Data
- Radiation Information Database
- Federal Insecticide, Fungicide, and Rodenticide Act/ Toxic Substances Control Act Tracking System Administrative Case Listing
- Land Use Control Information System
- Integrated Compliance Information System State List of Permitted Facilities Permitted Drycleaner Facility Listing
- Indian Reservations
- Mines Master Index File
- State Brownfields Sites (½-mile)
- EDR Proprietary Manufactured Gas Plants
- Unmapped Sites (¼-mile)

5.2 RESULTS OF DATABASE REVIEW AND REGULATORY AGENCY CONTACTS

This section provides a summary of results for all database searches conducted during this assessment. ERA does not consider any of the EDR results discussed below as RECs for the Site.

Section 5.2.1 provides results specifically for the Site and Section 5.2.2 provides results found for properties within the vicinity of the Site.

5.2.1 RESULTS FOR SUBJECT SITE

The target property address submitted to EDR was not listed in any reviewed databases searched by EDR.

5.2.2 RESULTS FOR PROPERTIES WITHIN THE VICINITY OF THE SUBJECT SITE

ASTM proximity search guidelines were used to designate properties for evaluation and review. Properties were listed in the vicinity of the Site in the following databases and reviewed for potential impacts which could contribute to a REC at the Site:

Standard Environmental Record Sources

- Federal RCRA LQG
- Federal RCRA SQG
- Federal RCRA CESQG
- SHWS
- HDOH LUST Database
- HDOH Registered UST Database

Additional Environmental Record Sources

- RCRA Non-Generator List
- Unmapped Sites

Potential environmental conditions at adjacent properties located within the vicinity of the Site are summarized below.

Standard Environmental Record Sources

Federal RCRA LQG Generators List

One (1) RCRA large quantity generator facility is listed within a ¼-mile radius of the Site. The Longs Drug Store #9954 site located at 2470 S King Street has no record of violation.

Federal RCRA SQG Generators List

One (1) RCRA-SQG small quantity generator facilities are listed within less than a ¼-mile radius of the Site. The Texaco Service Station site, located at 2105 S King Street and Wiliwili, has no record of violation.

Federal RCRA CESQG Generators List

Five (5) RCRA conditionally exempt small quantity generator facilities are listed within less than a ¼-mile radius of the Site. Cycle Plaza located at 903 Isenberg Street has no record of violation. Unocal 76 SS L 4462 located at 2114 S Beretania Street has no record of violation. Continental Auto Service, located on 1918 Algaroba Street, has no record of violation. GM Automotive Center, located at 1918 B Algaroba Street, has no record of violation. McCully Shell, located at 1115 McCully Street, has no record of violation.

Solid and Hazardous Waste Site (SHWS) Database

There are forty-four (44) SHWS facilities located within a 1-mile radius of the Site. Of the forty-four (44) sites, thirty-seven (37) sites are listed as either NFA or No Hazard, and do not pose an environmental risk to the Site. The seven (7) remaining sites were further investigated by review of HDOH records.

- Wally's Garden Center, located at 1935 S Beretania St., is listed as a medium priority site with hazards present. A Phase I ESA was conducted for the property. In the Phase I ESA, the 1955 fire insurance map indicated that the site was formerly occupied by a dry cleaning facility. Former activities associated with this business may have impacted the subsurface with dry cleaning chemicals. A Phase II ESA was conducted for the property which found detected TPH-diesel and TPH-oil in subsurface soil from a single boring at the site. HDOH reviewed the Phase II Environmental Site Assessment for this site and determined that

delineation of environmental hazards are incomplete for the site. Furthermore, the former use of this site as a dry cleaning business could have perpetuated pockets of contamination overlooked by limited soil borings. Due to nature of contamination at this site and the distance from the subject Site, this site is unlikely to pose a significant environmental threat.

- 1800 Vancouver Drive site is located approximately 0.6 mi upgradient from the Site. The bottom floor of the residence located at 1800 Vancouver Drive is classified as a suspected clandestine drug laboratory (CDL). The exposure of residual contamination from CDLs is considered a risk to human health. Environmental site characterization should be performed prior to occupancy. This site was not determined to pose an environmental threat to the subject Site.

- Punahou School Winne Units C and D, located at 1601 Punahou St., is listed as a medium priority site with hazards managed with controls. In 2015, during construction of a new Arts & music Building and Learning Center, soil sampling was conducted to determine disposal options for the concrete slab and determine controls, if any, should be implemented to protect construction workers. Based on the results of the sampling organochlorine pesticides including chlordane, DDE, and heptachlor were detected in surface soil around Units C and D. The impacted soil was relocated to a subsurface fill area and covered with three feet of clean fill. Permeable high visibility plastic sheeting was installed between the impacted soil and clean fill. Approximately 680 cubic yards of impacted soil were relocated. Relocation of the soil to an unimpacted area generated the requirement to notify this contamination as a release with HDOH. An Environmental Hazard Management Plan (EHMP) was prepared to manage the soil which was relocated and buried. HDOH provided comments on the EHMP prepared. No responses to the HDOH comments were provided in the HDOH records. Due to nature of contamination at this site and the distance from the subject Site, this site is unlikely to pose a significant environmental threat to the subject Site.

- Punahou School Grades 2-5, located at 1601 Punahou St., is listed as a medium priority site with hazards present. HDOH records provided included two letters indicating a Removal Action Work plan was prepared in response to pesticide-impacted soil at the Punahou School Grades 2-5 Project. The Removal Action Work Plan was approved by

HDOH. The Removal Action Work Plan was not provided in HDOH records, and no additional reporting following a removal action conducted at the Site were provided. Due to nature of contamination (pesticide-impacted soil) and the distance from the subject Site, this site is unlikely to pose a significant environmental threat to the subject Site.

- UH Manoa Henke Hall, located at 1800 East-West Road, is listed with hazards present and response ongoing. HDOH records provided included a letter from HDOH to the Environmental Health & Safety Office and the University of Hawaii at Manoa, indicating in May 2018, a Revised Removal Action Work Plan was prepared for the University of Hawaii Life Sciences Building and approved by HDOH. The Removal Action Work Plan was not provided in HDOH records, and no additional reporting following a removal action conducted at the Site were provided. Due to the planned removal action to address contamination at this site and the distance from the subject Site, this site is unlikely to pose a significant environmental threat to the subject Site.

- Ritz Carlton Waikiki Residence & Resort, located at 2139 Kuhio Ave., is listed as a medium priority site with hazards present. In 2015, a Site Characterization report was prepared. Based on previous investigations, heptachlor, heptachlor epoxide, and technical chlordane were identified as chemicals of potential concern. During the 2015 Site Characterization, heptachlor and heptachlor epoxide were detected above commercial/industrial EALs in a single decision unit evaluated. In December 2016, a Construction EHMP was prepared to establish procedures to properly handle contaminated media during construction. Due to nature of contamination at this site and the distance from the subject Site, this site is unlikely to pose a significant environmental threat to the subject Site.

- Hale Pua Nui UST Removal, located at 228 Beach Walk, is listed as a low priority site with hazards present. In 2006, a 575-gallon steel UST was closed at the site. A closure report was prepared which stated that there was no piping connected to the tank and the tank was likely previously used for diesel storage to power a hot water heater. The tank was cleaned and removed from the ground. A diesel fuel odor and staining were observed in the soil along the northwest end of the tank at approximately 2 feet below ground surface. Free product was observed on the water at the bottom of the tank pit excavation. Free product was absorbed using oil absorbent pads. The northwest side wall of the UST excavation

was over-excavated until there was little or no evidence of contamination. Confirmation sampling conducted after the over-excavation did not detect any petroleum related constituents. Four monitoring wells were installed with soil collected at the capillary fringe and groundwater samples collected approximately 20 feet from the UST excavation. Soil and groundwater sample results from these borings did not have any detection exceeding the HDOH EALs. After the over-excavation and extraction of free product no remaining contamination was observed at this site. This site is unlikely to pose a significant environmental threat to the subject Site.

None of the open investigation SHWS sites were determined to pose a potential environmental threat to the subject Site.

HDOH Leaking UST (LUST) Database

A search of the HDOH UST Branch database records (dated 8/31/2018) indicated that nineteen (19) sites have had UST releases within a ½-mile radius of the Site. According to the HDOH LUST database, cleanup activities have been completed (NFA, or NFA with EHE/EHMP) at 18 of the 19 sites. The one remaining site was further investigated by review of HDOH records.

- HDOH records of the McCully Service Station located at 1901 South King Street were reviewed. The EDR records indicate that there is a confirmed release as of February 9, 2018. The HDOH records indicate that a Phase I ESA was performed in 2012, which identified no UST closure records for the former service station. In 2017, a Phase II ESA was conducted to assess for potential releases from the former USTs. Four borings were conducted to collect soil and groundwater samples. Analytical results of soil and groundwater samples from the two borings down-gradient of the former fuel station indicated the presence of chemicals of potential concern above HDOH Tier 1 EALs. TPH-oil, ethylbenzene, m,p-xylenes, o-xylenes, anthracene, indeno(123-cd)pyrene, and benzo(ghi)perylene were detected above HDOH EALs in groundwater. TPH-diesel, TPH-oil, lead, 1-methylnaphthalene, and naphthalene were detected above HDOH EALs in soil. In June 2018, an Environmental Hazard Evaluation/Environmental Hazard Management Plan (EHE/EHMP) was prepared to manage the remaining contamination. The Phase II ESA and EHE/EHMP stated that the downgradient delineation of the contamination was not further evaluated due to the presence of the building at the Site. Based on the concentrations in groundwater, subsurface contamination may extend further than

approximated in the EHE/EHMP. The contamination at this site has not been fully delineated, and is located within ¼-mile to the subject Site. The potential that contamination extends to the subject Site is low, however this site is considered a REC.

HDOH UST Database

Based on EDR's registered UST database search (dated 8/31/2018), there are eleven (11) registered UST sites within a ¼-mile radius of the Site. Of these eleven registered UST sites, eight (8) are permanently out of use, three (3) are currently in use. The closest site with currently in use USTs is McCully Union Service #136 located at 2105 S King Street, approximately 300 feet from the subject Site. This site has three (3) USTs currently in use, a 15,000-gallon gasohol tank, a 10,000-gallon gasoline tank, and a 5,000-gallon gasohol tank.

The presence of currently in use USTs in close proximity and at a higher elevation than the subject Site is a potential environmental concern.

State and Tribal Institutional Control/Engineering Control Registries

Based on the EDR's database search of the engineering control list (dated 9/27/2018), there is one (1) engineering control site within a ½-mile radius of the target property. Details for the sites are presented below:

- The McCully Union Service site, located at 2105 S King Street, is listed as an SHWS site with found petroleum and benzo(a)pyrene in soil. This site is also listed in the LUST database with a release and site cleanup completed with EHMP. This site received an NFA for both registered releases but listed as hazards managed with controls.

This site listed in the State and Tribal Institutional Control/Engineering Control database was determined to not pose a significant environmental threat to the subject Site.

Voluntary Response Program Sites

Based on the EDR's database search of the Voluntary Response Program list (dated 9/27/2018), there is one (1) institutional control sites within a ½-mile radius of the target property.

- The McCully Union Service site, located at 2105 S King Street, is listed as an SHWS site with found petroleum and benzo(a)pyrene in soil. This site is also listed in the LUST database with a release and site cleanup completed with EHMP. This site received an NFA for both registered releases but listed as hazards managed with controls.

This site listed in the Voluntary Remediation Program and Brownfield Institutional Control database was determined to not pose a significant environmental threat to the subject Site.

Additional Environmental Record Sources

Federal RCRA Non-Generators List

Based on the EDR's registered UST database search (dated 03/01/2018) six (6) RCRA non-generator facility is listed within less than a ¼-mile radius of the Site. None of the sites listed on the Federal RCRA Non-Generators list were determined to pose a significant environmental threat to the subject Site.

Historical Auto Sites

Two (2) EDR Historical Auto facilities are listed within less than a ¼-mile radius of the Site. McCully Super Service was located at 2105 S King Street. Ishii Enterprises Inc. was located at 2114 S King Street. The McCully Super Service is the McCully Union Service site listed in the SHWS and LUST database. Based on the NFA status for both the registered releases, this site was determined to not pose a significant environmental threat to the subject Site. Based on the distance to the subject Site, overland flow from stormwater is also unlikely to impact the subject Site. Ishii Enterprises Inc. is listed as Tom Ishii's Union Service in both the SHWS and LUST databases. Based on the NFA status for both the registered releases, this site was determined to not pose a significant environmental threat to the subject Site.

Historical Cleaners

Two (2) EDR Historical Cleaners are listed within less than a ¼-mile radius of the Site. Prestige Valet Svc is listed at 2121 Algaroba Street Apt 1502 in 2006. This site was listed in the VEC assessment in Section 2 and determined to be on the 15th floor of a residential condominium, unlikely to impact the environmental condition of the Site. Kim Mary Anne is listed at 2104

Algaroba Street Apt D in 2009 through 2012. This site is also located on the 2nd floor of a residential apartment building and not directly adjacent to the subject Site. The facilities in the EDR Historical Cleaners list was determined not to pose a significant environmental threat to the Site.

Unmapped Sites due to Poor or Inadequate Address Information

EDR listed seven (7) sites as having poor or inadequate address information and was unable to map the sites in relation to the subject property. Further investigation indicated that all of the sites were not in close proximity to the subject Site and are therefore not a significant environmental threat.

SECTION 6: FINDINGS & RECOMMENDATIONS

At the request of the Hawaiian Community Development Board, ERA has performed a Phase I ESA for the property located at 2139 Algaroba Street in Honolulu, Hawaii. The Site is designated on City and County of Honolulu Tax Maps as TMKs (1) 2-7-007-016 and (1) 2-7-007-051. The purpose of this ESA was to identify, to the extent feasible, RECs associated with the Site. The investigation included a physical inspection of the property; review of current regulatory environmental database information; interviews of persons knowledgeable about the property, review of historical records; and preparation of this Phase I ESA Report. This ESA report conforms to the format outlined in the *ASTM Document E1527-13* and the USEPA's All Appropriate Inquiries Rule. The site reconnaissance visit was conducted by Mr. Max Ulloa and Ms. Carolann Toyama of ERA on February 6 and 8, 2019.

FINDINGS

Site Reconnaissance

The Site, TMKs (1) 2-7-007-016 and (1) 2-7-007-051, are comprised of a total of 17,743 square feet of land. TMK (1) 2-7-007-016 consists of a 3,000 square feet parcel of land and contains one (1) single-family two-story dwelling with an open carport and porch with a railing. The living space of the home on TMK (1) 2-7-007-016 is 868 square feet. This parcel is designated by the street address 918 Makahiki Way.

TMK (1) 2-7-007-051 consists of a 14,743 square foot parcel of land and contains seven (7) 2-family two-story dwellings. At the time of the inspection, the interior of the residential structures were observed to be partially occupied with some furnishings. Fluorescent light bulbs were observed in the dwellings, along with vinyl flooring and drywall. A water heater is located on the exterior of one of the structures. Located in the under-home storage area was a single container of pesticide along with two (2) containers containing fuel/gasoline. No releases from the pesticide bag were observed and the quantity was considered *de minimis*. The yard was observed to be vegetated. No dead or stressed vegetation was observed.

ERA visually assessed areas adjacent to the Site from public thoroughfares. The surrounding area was a mix of residential and commercial properties. Adjacent to west side of the Site is McCully Villa, a condominium complex, which appears to be residential in nature. Across Algaroba Street

to the North is the Korea Adventist Church and McCully-Moili'ili Public Library. These residential and commercial sites are not anticipated to affect the environmental condition of the subject Site. McCully Service station is located upgradient, approximately 1/8-mile from the Site.

Historic Photos

Aerial photographs from 1968 through 2013, indicate that TMKs (1) 2-7-007-016 and (1) 2-7-007-051 were developed prior to 1968. City and County of Honolulu property tax records indicate that the structures were constructed in 1927 and 1928. No RECs were identified in the review of the historic aerial photographs.

Sanborn Maps from 1927 to 1993 were reviewed. In 1927, the Site was developed with 6 structures. Additional structures were added by 1949. Based on the Sanborn maps one structure was demolished and a new structure was constructed on the southwest portion of TMK (1) 2-7-007-051, and additional development of the Site was conducted between 1955 and 1973.

It was reported in the Site history that at one time, there was a fire at TMK (1) 2-7-007-05 impacting one structure. Based on the building permit data, there was repair work conducted to the 2nd floor of a structure, indicating the fire may have been limited to the 2nd floor of the structure. The exact date and location of the fire could not be determined. Building fires may impact surface soil with fire suppressants, polycyclic aromatic hydrocarbons (PAHs), dioxins, and heavy metals from the combustion of various building materials.

Regulatory Database Review

A search of the HDOH UST Section database records indicated that nineteen (19) sites have had UST releases within a ½-mile radius of the Site. According to the HDOH LUST database, cleanup activities have been completed (NFA, or NFA with EHE/EHMP) at 18 of the 19 sites. The one remaining site was further investigated by review of HDOH records. HDOH records of the McCully Service Station located at 1901 South King Street were reviewed. The HDOH records indicate that a Phase I ESA was performed in 2012, which identified no UST closure records for the former service station. In 2017, a Phase II ESA was conducted to assess for potential releases from the former USTs. Analytical results of soil and groundwater samples from two borings down-gradient of the former fuel station indicated the presence of chemicals of potential concern above HDOH Tier 1 EALs. TPH-oil, ethylbenzene, m,p-xylenes, o-xylenes, anthracene, indeno(123-cd)pyrene, and benzo(ghi)perylene were detected above HDOH EALs in groundwater. TPH-

diesel, TPH-oil, lead, 1-methylnaphthalene, and naphthalene were detected above HDOH EALs in soil. In June 2018, an EHE/EHMP was prepared to manage the remaining contamination. The Phase II ESA and EHE/EHMP stated that the downgradient delineation of the contamination was not further evaluated due to the presence of the building at the Site. Based on the concentrations in groundwater, subsurface contamination may extend further than approximated in the EHE/EHMP. The contamination at this site has not been fully delineated, and is located within ¼-mile to the subject Site. The potential that contamination extends to the subject Site is low, however the undelineated release at this site is considered a REC.

Forty-four (44) SHWS are located ¼-mile of the Site. Of the forty-four (44) sites, thirty-seven (37) sites are listed as either NFA or No Hazard, and do not pose an environmental risk to the Site. The seven (7) remaining sites were further investigated by review of HDOH records. None of the open investigation SHWS sites were determined to pose a potential environmental threat to the subject Site.

The McCully Union Service site, located at 2105 S King Street, is listed as an SHWS site with found petroleum and benzo(a)pyrene in soil. This site is also listed in the LUST database with a release and site cleanup completed with EHMP. This site received an NFA for both registered releases but listed as hazards managed with controls. This site has three (3) USTs currently in use, a 15,000-gallon gasohol tank, a 10,000-gallon gasoline tank, and a 5,000-gallon gasohol tank. The presence of currently in use USTs in close proximity and at a higher elevation than the subject Site is a potential environmental concern.

ERA observed two (2) pole mounted transformers in the vicinity of the property on Algaroba Street. No releases were observed associated with this equipment. Electrical transformers may contain polychlorinated biphenyls (PCBs). All untested mineral oil transformers purchased prior to July 1, 1979, must be considered PCB-contaminated. ERA sent an inquiry to HECO to obtain the PCB status of the transformers observed however no response was received. One (1) pole mounted transformer was located on the street adjacent to the Site on Algoroba Street. One (1) pole mounted transformer was located across Algaroba Street to the north on a commercial property. Releases from either of these transformers is unlikely to impact the subject Site.

SUMMARY AND RECOMMENDATIONS

RECs - Site

- **R[1]:** McCully Service Station located at 1901 South King Street was investigated in a Phase II ESA in 2017. Analytical results of soil and groundwater samples from the two borings down-gradient of the former fuel station indicated the presence of chemicals of potential concern above HDOH Tier 1 EALs. TPH-oil, ethylbenzene, m,p-xylenes, o-xylenes, anthracene, indeno(123-cd)pyrene, and benzo(ghi)perylene were detected above HDOH EALs in groundwater. TPH-diesel, TPH-oil, lead, 1-methylnaphthalene, and naphthalene were detected above HDOH EALs in soil. In June 2018, an EHE/EHMP was prepared to manage the remaining contamination. The Phase II ESA and EHE/EHMP stated that the downgradient delineation of the contamination was not further evaluated due to the presence of the building at the Site. Based on the concentrations in groundwater, subsurface contamination may extend further than approximated in the EHE/EHMP. The contamination at this site has not been fully delineated, and is located within ¼-mile to the subject Site. The potential that contamination extends to the subject Site is low, however this undelineated release to the environment is considered a REC.

List of Additional Environmental Issues

- **E[1]:** It was reported in the Site history that at one time, a fire occurred at TMK (1) 2-7-007-051 impacting one of the structure. Based on the building permit data, there was repair work conducted to the 2nd floor of a structure, indicating the fire may have been limited to the 2nd floor of the structure. The exact date and location of the fire could not be determined. Building fires may impact surface soil with fire suppressants, PAHs, dioxins, and heavy metals from the combustion of building materials.

- **E[2]:** The structures at the Site were constructed between 1927 and 1973. Based on the date of construction, there is the potential for lead, asbestos, and arsenic containing materials to be present at the Site. ERA visually assessed the interior of existing structures for potential lead containing paint, asbestos containing building materials, and arsenic containing materials. Potential asbestos containing materials included pipe insulation, vinyl floor tiles, vinyl baseboards, and ceiling tiles. Other materials typical in residential spaces such as caulking, mastics may also have been present. Interior walls were painted and some of the paints used may contain lead. Ceiling materials may have been canec materials which may contain arsenic. Interviews conducted for this Phase I ESA indicate that a hazardous material survey has not been performed. Although the presence of asbestos and lead containing paints are not considered RECs by ASTM, a hazardous materials survey should be performed prior to renovation or demolition activities at the Site.

- **E[3]:** The McCully Union Service site, located at 2105 S King Street, is listed as an SHWS site with found petroleum and benzo(a)pyrene in soil. This site is also listed in the LUST database with a release and site cleanup completed with EHMP. This site received an NFA for both registered releases but listed as hazards managed with

controls. Due to the NFA status with EHMP the UST release from this site, the release documented as controlled and the potential for groundwater constituent present at the subject Site exceeding HDOH EALs is low. This site has three (3) USTs currently in use and due to the location and proximity of this site to the subject Site, future releases from these USTs may impact the subject Site.

SECTION 7: DEVIATIONS AND DATA GAPS

The following are data gaps encountered during the assessment:

- No inquiries were made of past owners of the Site as the previous owners were not available for interview.
- A valuation assessment comparing fair market value of the property was not performed as information regarding the fair market value and property purchase price was not available.

These data gaps are not considered significant.

SECTION 8: REPORT LIMITATIONS; SPECIAL TERMS AND CONDITIONS

The findings, observations, conclusions, and recommendations of this report are limited by the technical requirements specified in the contract between the Hawaiian Community Development Board and ERA. The findings, observations, conclusions, and recommendations presented herein solely identify and evaluate evidence that may indicate that environmental hazards exist at the Site due to past or current management of chemicals or other materials that, if released or not properly controlled, could present a risk to human health or the environment.

The Phase I ESA provides a "snap shot" of Site conditions at the time of the investigation. The assessment does not cover site changes that ERA could not reasonable ascertain. Additionally, it must be noted that no investigation can completely rule out the existence of any regulated or hazardous materials at a given Site.

In preparing this report, ERA relied on information derived from visual reconnaissance, governmental agencies, computer databases, and personal interviews. Except as set forth in this report, ERA made no independent investigations as to the accuracy and completeness of the information derived from the listed sources. ERA assumed that all information obtained during the course of the investigation is accurate and complete.

Although ERA did evaluate (to the extent reasonable) the historical use of adjacent properties (e.g., City Directory Search), ERA cannot guarantee that neighboring industries have not impacted the subject Site. ERA did not perform a complete environmental assessment of adjacent properties and it is possible that groundwater migration, overland flow or transport of contaminated particles via wind may have contaminated the Site.

All findings, observations, conclusions, and recommendations stated in this report are based on facts; circumstances; applicable federal, state and local laws, rules, and regulations; and generally accepted national standards for such services in existence at the time that the report was prepared. Topics not explicitly discussed within this report should not be assumed to have been investigated or tested.

ERA has prepared this document for the use and benefit of the Hawaiian Community Development Board. Any use of this document or information herein by persons or entities other than those

named above without the express written consent of ERA will be at the sole risk and liability of said person or entity, and ERA will not be liable to such persons or entities for any damages resulting therefrom.

SECTION 9: REFERENCES

American Society for Testing and Materials (ASTM), 2013, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, E1527-13.

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EDR, 2018c. City Directory Image Report, 2139 Algaroba Street, 2139 Algaroba Street, Honolulu, HI 96826, Inquiry Number 5544094.5, January 25, 2019.

EDR, 2018d. Historical Topographic Map Report, 2139 Algaroba Street, 2139 Algaroba Street, Honolulu, HI 96826, Inquiry Number 5544094.4, January 25, 2019.

EDR, 2018e. Radius Map with GeoCheck®, 2139 Algaroba Street, 2139 Algaroba Street, Honolulu, HI 96826, Inquiry Number 5544094.2s, January 25, 2019.

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Mink, J. F. and S. L. Lau, 1990, Aquifer Identification and Classification for the Island of Oahu: Groundwater Protection Strategy for Hawai‘i. Water Resources Research Center, University of Hawai‘i at Manoa, Technical Report No. 179.

United States Department of Agriculture (USDA), Natural Resources Conservation Service. Accessed January 2019. www.websoilsurvey.nrcs.usda.gov.

Appendix **A**

ENVIRONMENTAL PROFESSIONAL QUALIFICATIONS

Russell S. Okoji, Ph.D.

Principal

Professional Summary:

Dr. Russell S. Okoji is Principal and Senior Technical Advisor for Environmental Risk Analysis. Dr. Okoji received his BS in Applied Ecology from the University of California, Irvine, and his doctorate in Environmental Toxicology from the University of California, Los Angeles. Previously, he was the Environmental Division Manager for AMEC Earth and Environmental's Pacific Region and oversaw a team of 10 environmental scientists, engineers, geologists and biologists. He has been associated with ERA since its inception in 2006 and has more than 17 years of environmental professional consulting experience. Dr. Okoji's current responsibilities at ERA include Program and Project Management for a variety of project types including environmental impact statements, toxicological assessments, human health and ecological risk assessments, industrial hygiene projects, air studies, both small and large scale Phase 1, 2 and 3 Assessments, and public relations support. Dr. Okoji has extensive knowledge in both federal and state environmental regulations. Between 2006 and 2010, Dr. Okoji was the Program Manager for an environmental IDIQ contract through Kamehameha Schools Commercial Assets Division, the largest private landowner in Hawaii. Between 2004 and 2008, Dr. Okoji served as Program Manager for the Hawaii Department of Health Environmental Services IDIQ Contract. Dr. Okoji is currently Program Manager for ERA Federal Programs which includes contracts with the USNavy, USArmy and USACE. He has received commendation from the State of Hawaii, City and County of Honolulu, the U.S. Navy and ATSDR.

Past Employment History **Position:** **Dates of Employment**:	AMEC Earth and Environmental Inc. Environmental Division Manager, Pacific Region 2000 to 2010
Other Firms: **Position:** **Dates of Employment:**	University of California, Los Angeles Laboratory Manager and Researcher 1994 to 2000
Education:	2000, Ph.D., Environmental Toxicology, University of California, Los Angeles 1994, B.S., Applied Ecology, University of California, Irvine
Professional Qualifications:	OSHA 40-Hour Hazardous Material Operations and Emergency Response Training (29 CFR 1910.120), initial certification 2000, annual refreshers Asbestos Building Inspector, initial certification 2005 Asbestos Management Planner, initial certification 2005
Professional Registration:	None Available

Detailed Core Skills by Project

Environmental Due Diligence (Phase 1, 2 and 3 Assessments)

Island Recycling Inc, Campbell Industrial Park, 2015-2106 – Contract Value $100,000. Principal in Charge: Provide expert witness support regarding potential site and navigable waters contamination at the CIP site. Performed a comprehensive soil and groundwater investigation to support litigation and DOH Notice of Violation (NOV) for the drainage canal on the north and east side of the property. Authored work plans, negotiated scopes of work with the DOH and completed the Final Investigation Report.

Kamehameha Schools, Confidential Site, 2008-2009 – Contract Value $500,000. Program Manager: This confidential Site was used for over a hundred years as a truck fleet repair and maintenance facility, for warehousing and other heavy industrial activities. Previous investigations at the Site identified TPH contamination in soil/rock, groundwater, and in free product form. Studies also identified the presence of elevated lead levels in Site surface soils. Dr. Okoji assembled and managed a highly qualified team of environmental professionals to identify existing data gaps, provide services to fully characterize and delineate the Site and provide detailed recommendations for further investigation and site cleanup. Specifically, Dr. Okoji's team was tasked with the following:

- Provide expert witness support and opinion
- Delineate the lateral and vertical extent of free product contamination in groundwater.
- Provide fingerprinting analyses for free product source identification.
- Provide a free product recovery pilot test to evaluate the implementability, cost, and effectiveness of traditional remedial technologies.
- Determine true groundwater gradient at the Site (correcting for tidal influences) to provide information regarding free product and contaminant fate and transport conditions.
- Provide baseline chemical conditions for future determination of the status of the free product plume (stable, shrinking, migrating).
- Delineate lateral and vertical extent of hydrocarbon-related contaminants in soil/rock and groundwater at concentrations exceeding regulatory levels of concern.
- Determine if shallow soil vapor in plume areas contain site contaminants at levels that would pose a human health risk.
- Determine the nature and extent of possible chlorinated solvent contamination several areas on Site.
- Determine the nature of possible chlorinated pesticides and herbicide contamination in surface soil and groundwater near Building 8's refrigerator truck wash area.
- Perform a geophysical investigation to identify the presence and relative locations of physical features (i.e., lava tubes, bedrock fractures, utilities) and potentially the extent of the free product plume.

Kamehameha Schools, Confidential Site, 2009 – Contract Value $150,000. Program Manager: Performed an evaluation of surface soil, surface water and groundwater at a confidential Quarry Site assumed to be the location of illegal dumping of C&D debris, metal, asphalt and unknown solvents. Dr. Okoji and his team planned and initiated an environmental investigation which included a geophysical survey to identify location and magnitude of debris as well as nature and extent of soil and groundwater contamination. The results of Dr. Okoji's study was used by the client to recover costs associated with the investigation and to facilitate further investigative activities.

Kamehameha Schools, Confidential Site, 2008-2009 – Contract Value $20,000. Program Manager: Dr. Okoji provided a third party review of various Remedial Alternatives Analysis & Response Action reports for ongoing litigation related to environmental investigations at a confidential agricultural Site that included a Herbicide Mixing area and Heavy machinery Storage area. Dr. Okoji determined that there were significant deficiencies and bias in the site characterization, evaluation and recommendations for the Site. Dr. Okoji provided detailed recommendations to address the deficiencies. As part of his scope, Dr. Okoji also performed a comprehensive Administrative Records Review.

Sun Edison Inc: Phase II Environmental Site Assessment, 87-2018 Farrington Highway and 87-2019 Farrington Highway, Waianae, HI, 2012 – Contract Value $20,000. Principal in Charge: Performed a limited Phase II Environmental Site Assessment for 2 sites previously used for farming, salvage and a former firing range. The Site was assessed as 4 independent decision units and sampled accordingly based on suspected historical chemical usage. Multi-incremental sampling methodology utilized per HDOH guidelines.

Hawai‘i State Department of Health, Kea‘au, HI, 2005-2006 – Contract Value $150,000. Program Manager: Performed the initial Phase 2 site characterization of arsenic in former sugar cane land over a several hundred acre area in Kea‘au. To accomplish this task, the investigation focused sampling on areas with known or potential human exposure. The sampled areas included school playgrounds, community gardens and areas adjacent to residential areas. A main concern for the DOH was how to limit the uncertainty associated with conventional environmental sampling techniques. To limit the heterogeneity inherent to the method, the investigation implemented (for the first time in Hawaii) a multi increment composite sampling (MICS) methodology. MICSs can drive a skewed distribution (commonly found in environmental sampling) towards normality. For the Kea‘au investigation a total of 40 increments (i.e. mini composite sample) was taken for each decision unit or area to be evaluated. The totality of the increments was composited and a larger 10-gram subsample sent for arsenic analysis. The laboratory arsenic results were deemed to better represent average site concentrations than concentrations achieved by simple traditional compositing methods or by averaging discreet sample points across a site. Additional subsamples for the physical and chemical properties of the soil were also obtained using multi increment compositing methods. Provided community relations support for the DOH. The MICS approach has been adopted by the State of Hawai‘i Department of Health and is currently undergoing review for adoption by the USEPA.

Architects Hawaii Ltd, Lahaina, HI, 2012 – Contract Value $20,000. Principal in Charge: Performed a limited Phase II Environmental Site Assessment at the Lahaina Fire Department located at 1860 Honoapiilani Highway, Lahaina, HI. The Limited Phase II ESA was conducted to determine the presence or absence of total petroleum hydrocarbon-diesel (TPH-D) in Site surface soils in the immediate vicinity of a currently used diesel Aboveground Storage Tank (AST) proposed for removal. The assessment was also conducted to determine if an onsite shed proposed for demolition requires special disposal considerations based on leachable lead concentrations.

Agribusiness Development Corporation, Ewa, HI, 2009 – Contract Value $5,000. Principal in Charge: Performed a Phase I Environmental Site Assessment (ESA) for an agricultural easement encumbering a parcel situated at Honouliuli, District of Ewa, City and County of Honolulu, State of Hawai‘i. The subject site covered an area of 108.221 acres. AMEC provided the following services in accordance with ASTM E1527-05: conducted an historic aerial photograph review; conducted a database search for property and adjacent properties; conducted an historic property use review of property; executed a site walk; and prepared a Phase I Report. Based on the Phase I Investigation, it was determined the environmental concerns for the Site are minimal. As the land is intended to remain under agricultural use in perpetuity, further investigation was not warranted.

State of Hawaii, Department of Education, HI, 2010 – Contract Value $10,000. Project Manager: Phase I Environmental Site Assessment, Phase II Sampling and Analysis Plan and Title Documents for Kalaheo Elementary School Land Acquisition, Kalaheo, Hawaii.

Hawai‘i State Department of Health, Kakaako Brownfield Unit 8 Site, HI, 2008 – Contract Value $25,000. Project Manager: Performed a preliminary site-specific Phase 2 assessment and screening level risk assessment of a former incinerator site slated for redevelopment. Contaminants of concern included heavy metals, dioxins and polyaromatic hydrocarbons. Recommendations were made to conduct a site-specific baseline risk assessment that considers site-specific exposure assumptions, partitioning of data based on future land use and partitioning of data based on lateral and vertical dispersion of contaminants.

County of Maui, Waiale Landfill, HI, 2008-2009 – Contract Value $175,000. Project Manager: Contracted by the County of Maui to perform a Phase II Site Investigation to evaluate existing site conditions at the Waiale Landfill. Previous environmental site assessments and investigations conducted for the adjacent roadway indicated that landfill waste was found in several locations along the roadway alignment during excavation activities for road construction. The Phase II delineated the limits of waste placement and property boundaries, by performing analysis of surface and trenched soils. Determined the thickness of the surface soil layer above the top waste layer within the landfill. Currently providing the County of Maui with an Engineering Evaluation and Cost Analysis (EECA) detailing closure options of the landfill.

Native Hawaiian Veterans, USACE HED, Munitions Response Site Prioritization Protocol (MRSPP) for Defense Environmental Restoration Program, Formerly Used Defense Site (FUDS) of Opana Point Bombing Range, Opana Point, Island of Maui, Site No.H09HI027200 and Papohaku Target Range, Kaluakoi, Island of Molokai, Site No. H09HI0032, 2014- 2017 – Contract Value $500,000. Principal in Charge: Executed MRSPP to determine the relative risks posed at each of the sites; assistance with data gathering from state and local repositories; collecting appropriate information necessary to eliminate from further consideration those releases that pose no significant threat to public health or the environment; determining potential need for removal action and collecting or developing additional data to complete the MRSPP. Prepared project documents (UFP-QAPP, SAP) for a remedial investigation. COCs included metals, explosives and semivolatile organic compounds. Risk to human health and ecological receptors are evaluated.

Long-Term Maintenance & Monitoring/ Remedial Action Operations for IRP Sites CF023, CG110, LF01, LF14, SS01, SS06, SS11, SS15 and Consolidation Unit at Joint Base Pearl Harbor – Hickam, HI, 2012-2017 – Contract Value $500,000. Principal in Charge: Performed annual inspections/maintain, and optimized long-term maintenance and monitoring (LTM) / Remedial Action Operations (RAO) (groundwater sampling) at eight Installation Restoration Program sites. The project consisted of inspecting, maintaining, and providing recommendations to optimize the existing remedies based on evaluation of all existing reports and recommendations for each site. Prepared all project documents including results of groundwater, soil vapor, landfill gas and apparent product thickness measurements.

Institutional Controls for Safety Awareness, Defense Environmental Restoration Program, Formerly Used Defense Sites at Various Windward Oahu Projects, Island of Oahu, HI, 2014-2017 – Contract Value $500,000. Principal in Charge: Provided planning and producing institutional controls educational material for ensuring public safety from potential unexploded ordnance (UXO) at these sites. The institutional controls consist of materials oriented towards educating the public about the potential hazards from UXO found at these sites. Provided presentations to schools of affected areas and general public events.

Coca Cola Bottling Enterprises, Oahu, HI, 2000-2010 – Contract Value $750,000. Project Manager: Conducted a Phase 2 and Phase 3 site investigation of soils and groundwater and site-specific risk assessment for the Coca Cola Bottling Facility. The site had undergone substantial remediation including removal of impacted soil, application of Oxygen Reaction Compounds (ORC) to groundwater and implementation of a Soil Vapor Extraction (SVE) System. Environmental Hazard Evaluation (Risk assessment) performed to determine the suitability of the property for future residential use. Chemicals of concern and pathways of concern include BTEX and fuel related compounds. Pathways of concern include direct contact with site media as well as vapor intrusion into buildings and ambient air.

Sun Edison Inc., Mililani, HI, 2010-2011 – Contract Value $15,000. Principal in Charge: Multiple Phase 1 Environmental Site Investigations:

- Phase I Environmental Site Assessment for three (3) parcels of land located at 87-2018 Farrington Highway, 87-2019 Farrington Highway, and 87-1233 Hakimo Road, in Waianae, Hawaii (hereafter referred to as the Site). The Site was designated on Tax Maps as Tax Map Key (TMK) (1) 8-7-009-002, (1) 8-7-010-006, and (1) 8-7-010-010. TMK (1) 8-7-009-002 consisted of 236 acres of land, tmk (1) 8-7-010-006 consisted of 21.138 acres of land and tmk (1) 8-7-010-010 consisted of 2.755 acres of land. Additional soil investigation was recommended for 4 areas of the Site including soil near a large AST, a former salvage lot area, former pesticide mixing area and former firing range.
- Phase I Environmental Site Investigation for 91-399 Kauahi Street, Kapolei, Hawaii. The Site was designated on Tax Maps as TMK (1) 9-1-032-001. The 51-acre site was bordered by industrial property to the north, automobile storage to the west, Kalaeloa Airport to the East, and the continuation of the parcel to the south.
- Phase I Environmental Site Assessment for a 34.76-acre portion of lot within parcel TMK (1) 9-4-005:048 in Mililani, Hawaii. The Site was bordered by other agricultural lots in all directions.

Kamehameha Schools, HI, 2008-2010 – Contract Value $25,000. Principal in Charge: Multiple Phase I Environmental Site Investigations:

- Phase I Environmental Site Assessment at the Jackson Volvo location, situated at 704 Ala Moana Boulevard in Honolulu, Hawaiʻi. The property evaluated was identified by Tax Map Keys (1) 2-1-055:002 (lot consisting of 0.8699 acres) and (1) 2-1-055:018 (lot consisting of 0.2789 acres).
- Phase I Environmental Site Assessment at multiple addresses located on Cooke Street, Auahi Street, and Pohukaina Street, Honolulu, Hawaiʻi. The property evaluated was identified by current Tax Map Key (1) 2-1-053:032 (lot consisting of 4.187 acres).
- Phase I Environmental Site Assessment at multiple addresses located on Ala Moana Boulevard, Coral Street, Keawe Street, and Auahi Street, Honolulu, Hawaiʻi. The property evaluated was identified by Tax Map Keys (1) 2-1-055:003 (lot consisting of 0.5306 acres), (1) 2-1-055:021 (lot consisting of 0.9256 acres), (1) 2-1-055:006 (lot consisting of 0.4904 acres), (1) 2-1-055:026 (lot consisting of 0.1148 acres), and (1) 2-1-055:038 (lot consisting of 0.8135 acres).
- Phase I Environmental Site Assessment at multiple addresses located on Kekuanaoa Street, Iolani Street, and Mililani Street in Hilo, Hawaiʻi. The property evaluated was identified by Tax Map Keys (3) 2-2-030:004 (lot consisting of 0.4171 acres), (3) 2-2-030:006 (lot consisting of 0.8245 acres), (3) 2-2-030:008 (lot consisting of 0.2686 acres), (3) 2-2-030:009 (lot consisting of 0.5165 acres), (3) 2-2-030:0010 (lot consisting of 0.2479 acres), (3) 2-2-030:0011 (lot consisting of 0.2365 acres), (3) 2-2-030:0012 (lot consisting of 0.8617 acres), and (3) 2-2-030:014 (lot consisting of 0.4018 acres).

Hawaii Commercial Real Estate, 233 Merchant Street, Honolulu, HI, 2012-2014 – Contract Value $15,000. Principal in Charge: Performed a Phase 1 ESA in support of property transfer of a 5 story building located in downtown Honolulu. Results of the Phase 1 indicated potential subsurface soil contamination from TPH and PCB hydraulic fluids related to a decommissioned elevator and its associated equipment. ERA performed a Phase 2 Site assessment to determine extent of impacts.

Crocodile Partners, 537 Ala Moana Blvd Phase 1 Environmental Site Assessment and Hazardous Materials Assessment, HI, 2013 – Contract Value $10,000. Principal in Charge: At the request of Crocodile Partners LLC, ERA performed a Phase I Environmental Site Assessment (ESA) for a single parcel of land located at 537 Ala Moana Blvd in Honolulu, Hawaii (hereafter referred to as the Site). The purpose of the ESA was to identify, to the extent feasible, Recognized Environmental Conditions (REC) associated with the Site. The investigation included a physical inspection of the property; review of current regulatory environmental database information; interviews of persons knowledgeable about the property, review of historical records; and preparation of a Phase I ESA Report. The ESA report conformed to the format outlined in the American Society for Testing and Materials (ASTM) Document E1527-05 and the USEPA All Appropriate Inquiries Rule. ERA was subsequently requested to perform a comprehensive hazardous materials assessment for the onsite structures. The survey consisted of lead and asbestos sampling and the production of a hazardous materials assessment report.

Autopark USA, 771 Amana Street, Honolulu, HI, 2013 – Contract Value $4,000. Principal in Charge: Performed a Phase I Environmental Site Assessment (ESA) for the single parcel of land located at 771 Amana Street in Honolulu, Hawaii. The Phase 1 was used to establish innocent landowner status for the purchaser of the property prior to sale. The Site is designated on Tax Maps as TMK (1) 2-3-021-023 and consisted of 16,149 square feet of land. One (1) structure occupied the Site at the time of the assessment.

USBank, HI, 2012-2013 – Contract Value $25,000. Principal in Charge: Multiple Phase I Site Assessments (various locations): At the request of USBank Dr. Okoji performed 6 Phase I Environmental Site Assessments (ESA) for multiple parcels of land in Honolulu, Hawaii. The purpose of the ESA was to identify, to the extent feasible, Recognized Environmental Conditions (REC) associated with the Site. The investigation included a physical inspection of the property; review of current regulatory environmental database information; interviews of persons knowledgeable about the property, review of historical records; and preparation of a Phase I ESA Report. The ESA report conformed to the format outlined in the American Society for Testing and Materials (ASTM) Document E1527-05 and the USEPA All Appropriate Inquiries Rule.

USBank, HI, 2013 – Contract Value $5,000. Principal in Charge: Phase I ESA: Hawaiian Cement Warehouse located at 91-055 Kaomi Loop in Kapolei, Hawai‘i. The property evaluated is identified by Tax Map Key (1) 9-1-026-06, lot consisting of 7.433 acres and three (3) buildings totaling 23,301 square feet.

Maui Land and Pineapple, HI, 2008-2009 – Contract Value $5,000. Project Manager: Phase I ESA for the Maui Pineapple Company (MPC) Kahului Seed Site, located off Haleakala Highway, in Kahului, Maui. The subject site was a 2-acre portion of TMK (2) 3-8-79:13 (formerly TMK (2) 3-8-01:16).

Marcus and Associates Inc. Kobe Steak House Phase I Environmental Site Assessment, HI, 2011 – Contract Value $4,000. Principal in Charge: At the request of Yamada Pacific Inc. and Marcus and Associates Inc., Environmental Risk Analysis LLC (ERA) performed a Phase I Environmental Site Assessment (ESA) for a single parcel of land located at 1841 Ala Moana Blvd in Honolulu, Hawaii. The Site is designated on Tax Maps as TMK (1) 2-6-009-006. The purpose of the ESA was to identify, to the extent feasible, Recognized Environmental Conditions (REC) associated with the Site. The investigation included a physical inspection of the property; review of current regulatory environmental database information; interviews of persons knowledgeable about the property, review of historical records; and preparation of a Phase I ESA Report. The ESA report conformed to the format outlined in the American Society for Testing and Materials (ASTM) Document E1527-05 and the USEPA All Appropriate Inquiries Rule.

Environmental Planning and Permitting

Bellavita, Inc., Napule Restaurant, Honolulu, HI, 2014-2015 – Contract Value $20,000. Principal Scientist: Prepared an Environmental Assessment for a proposed restaurant at the current charter boat building located between Kewalo Basin Harbor and Ala Moana Blvd. The existing structure was slated to be renovated and/or redeveloped to accommodate the needs of the proposed restaurant's operations, including the installation of a wood fired oven. Planned renovations also included site work for the construction of the outdoor seating patio. The proposed project was planned to encompass approximately 6,000 square feet within Kewalo Basin and will be occupied by an Italian Restaurant, Napule.

Kewalo Waterfront Partners, Inc., Multi-use Facility, Honolulu, HI, 2014-2015 – Contract Value $20,000. Principal Scientist: Prepared an Environmental Assessment for a proposed multi-use facility encompassing approximately 2.1 acres within Kewalo Basin and located between Kewalo Basin Harbor and Ala Moana Beach Park in what is now a surface parking lot. The facility consists of four, two-level buildings with the majority on the second level equipped with an open deck and viewing spaces. Combined, the four buildings include almost 50,000 square feet of waterfront retail stores; small restaurants, cafes and bars; commercial office space; a live entertainment venue; and a large observation deck and signature multipurpose venue on the second floor. Additionally, the proposed project includes a 250-stall, multi-level parking structure.

Confidential Client, Waimea Hawaii, 2016 – Contract Value $30,000. Principal Scientist: Performed a comprehensive biological survey of a 4.6 acre parcel in Waikaloa, North Kona District, Island of Hawai'i. The survey focused on plants and wildlife listed under the Endangered Species Act (50 CFR 17.11 and 50 CFR 17.12), the Migratory Bird Treaty Act (50 CFR 10.13), and the state list of threatened or endangered wildlife (Exhibit 2 and 3 HAR 13-124). The biological survey consisted of a pedestrian survey for flora and terrestrial faunal resources and a point count survey for avian resources. A data inquiry for records of listed threatened or endangered species for the parcel was conducted at the University of Hawaii Mānoa Center for Conservation Research and Training prior to the field survey.

Covanta Energy, EIS for 3rd Boiler, City and County of Honolulu H-Power Facility, HI, 2008-2009 – Contract Value $1,000,000. EIS and Permitting Task Manager: Performed an Environmental Impact Statement to address the impact of a third combustion unit at the City and County of Honolulu H-Power waste to energy facility. Potential impacts addressed include noise, traffic, historical resources, soil, groundwater and surface water. Air impacts addressed in a PSD permit that included extensive modeling of emissions using screening models and AERMOD. Additional permitting support required for operation and construction of the facility included the solid waste management permit, NPDES operation, Conditional Use Permit, Wastewater Discharge, Stormwater, water use permit, Air Navigation and Clearance for Work in Airport Hazard Area, grading and drainage, NPDES Construction, well construction and pump installation and a permit to operate a sewage treatment facility. Dr. Okoji was also tasked with performance of a comprehensive multimedia risk assessment according to USEPA Human Health Risk Assessment Guidance for Combustor Facilities to address the human and ecological health impacts of the proposed combustion unit on neighboring communities. Also produced a Material Separation Plan and collected data for use in a Lifecycle Analysis pertaining to the recycling waste stream for the City and County of Honolulu.

Covanta Energy, Stormwater Monitoring Plans, H-Power Facility, HI, 2011-2012 – Contract Value $30,000. Principal in Charge: Produced stormwater management plans for the H-Power facility. Plans included the facility Stormwater Management Plan (SWMP), Stormwater Pollution Control Plan (SWPCP) and Spill Prevention, Control, and Countermeasure Plan (Oil And Petroleum Products). Represented Covanta Energy in meetings with the State Department of Health during site inspections.

Department of Public Works, Sydney, Nova Scotia, **2002-2003,** Task Manager: Assisted in performance of an Environmental Impact Analysis for air emissions associated with the environmental remediation of the Tar Ponds and Coke Ovens sites, which comprise over 100 hectares of industrial property containing 560,000 tonnes of soil contaminated with petroleum hydrocarbons, PAHs, and metals, 1,300 tonnes of PAH-contaminated sediments, 25,000 tonnes of coal-tar contaminated soil, 700,000 tonnes of sediments contaminated with PAHs and metals, and 35,000 tonnes of PCBs in excess of 50 ppm. Airborne constituents of concern included SOx, NOx, CO, and particulate matter from construction vehicles, particulate matter from excavation and grading activities, and site-related VOCs from excavation and stabilization activities. Evaluated air monitoring program and health-based air criteria. Estimated emissions from a proposed PCB combustor, which included PCBs, dioxins/furans, PAHs, and selected metals as Constituents of Potential Concern. Performed a worker and off-site resident risk assessment of the remediation of pond sediments containing PCBs, PAHs, other organic constituents and metals as well as similar risk assessments for the remediation

East West Center, University of Hawaii, Manoa Campus, Honolulu, HI, 2013-2014 – Contract Value $20,000. Principal in Charge: Completed the NPDES permit application (Appendix L) for the East West Center decorative Koi pond. Performed initial discharge sampling for inclusion in the application. Negotiated chemical of concern list with the HDOH Clean Water Branch and enforcement division.

FOPCO, Fort Shafter Building 145, Honolulu, HI, 2015-2016 – Contract Value $25,000. Principal in Charge: Prepared the Spill Prevention, Control, and Countermeasure Plan (SPCCP) for the removal, decontamination and disposal of one 12,000 gallon UST at Fort Shafter Building 145. Petroleum releases from these tanks which may be discovered during construction are subject to regulation and Hawaii Department of Health oversight under Hawaii Revised Statutes Chapter 128D, Hawaii Environmental Response Law (HERL) and Hawaii Administrative Rules Title 11, Chapter 451, State Contingency Plan. Provided environmental professional (EP) services during tank removal. Authored closure report.

FOPCO, Schofield Barracks, Wahiawa, HI, 2015-2016 – Contract Value $25,000. Currently preparing the Spill Prevention, Control, and Countermeasure Plan (SPCCP) for the removal, decontamination and disposal of one 3,000 gallon UST at Schofield Barracks Building 2072. Petroleum releases from these tanks which may be discovered during construction are subject to regulation and Hawaii Department of Health oversight under Hawaii Revised Statutes Chapter 128D, Hawaii Environmental Response Law (HERL) and Hawaii Administrative Rules Title 11, Chapter 451, State Contingency Plan. Provided environmental professional (EP) services during tank removal. Authored closure report.

Cloudbreak Hawaii LLC, Kapolei, O'ahu HI, 2013-2014 – Contract Value $35,000. Principal Planner: Prepared a HEPA and NEPA compliant EA for Cloudbreak Hawaii, LLC. The EA discussed the addition of affordable housing units to Hale Uhiwai Nalu, an 80-unit veterans housing and services building at Barbers Point. The project consisted of constructing additional structures on an adjacent parcel of land, approximately 6,000 square feet. The Proposed Action would add up to 72 affordable housing units for very low to moderate income households and make support services such as outreach, substance abuse treatment, employment training and placement, and housing transition easily accessible. The project was partially funded through the State Rental Housing Trust Fund (RHTF) and was conducted in collaboration with the Hawaii Housing Finance and Development Corporation and U.S. Department of Veteran Affairs. Public and various federal, state and city agencies were consulted during the EA process. Evaluations conducted as part of the planning initiative concentrated on the following potentially affected environments: Soils, Topography, and Geology, Ground and Surface Water, Air Quality and Climate, Biological Resources, Historic/Archaeological Resources, Land Use, Hazardous/Toxic Wastes, Utilities and Noise. No significant impacts were determined for the proposed project. Specific supplemental studies included an archeological inventory survey and site-specific biological resources survey.

American Piping and Boiler, Campbell Industrial Park, Kapolei, HI, 2012-2013 – Contract Value $50,000. Principal in Charge: Prepared a Grading and Drainage Permit Application to convert a vacant lot to a construction laydown parcel for use in the H-Power expansion project. Project site is located in the City and County of Honolulu, Special Management Area and Coastal Zone Management Area. Completed and submitted the SMA permit application which required that an environmental assessment be conducted for the project. ERA was successful in negotiations with the City and County Department of Environmental Services and the Land Use Approvals division to exempt the project from the Chapter 343 requirement. The exemption required consultation with multiple agencies including the State of Hawaii Historic Preservation Division, USFW, Land Use Approvals, DBEDT, DoA, OHA, etc. The exemption allowed the project to move forward without unnecessary delays due to the EA process. ERA also provided services for completion of a building permit for the construction of 2 driveways and an NPDES permit application for the Department of Health Clean Water Branch. NPDES permit application required completion of a Storm Water Pollution Prevention Plan.

City and County of Honolulu, Department of Environmental Services, H-Power, HI, 2015-2016 – Contract Value $25,000. Principal in Charge: Prepared an Emergency Action Plan for the City and County facility for the H-Power facility located in Campbell Industrial Park. The plan was composed of a Level 1 plan and Level 2 conditions and requirements. The H-POWER Emergency Action Plan delineates the authorities, responsibilities and procedures to be followed by employees in effectively responding to a disaster within the facility. The primary function of the H-POWER Emergency Action Plan is to prepare the facility to respond effectively and quickly to emergencies that occur within the facility or within the community. The plan governs the facility and its employees in the event of an emergency or disaster.

City and County of Honolulu, Waimanalo Gulch Sanitary Landfill, HI, 2008-2009 – Contract Value $75,000. Project Manager: Provided an operational and design review of the City and County operated Waimanalo Gulch Municipal Solid Waste Landfill. Tasks included the review of waste acceptance and screening procedures, as assessment of the geotechnical stability of the landfill including assessment of the use of waste to energy ash as structural fill, compliance with regulatory agencies, spill prevention and response and emergency operations. Report was presented to the City Council and appropriate State agencies to facilitate discussion regarding waste management options for the island of Oahu. Project add-ons included evaluating the cause of elevated landfill temperatures within the landfill and providing a third party review of a Waste Management request for additional funds to operate the landfill.

85-443 Waianae Valley Road Grading, Waianae, HI, 2012-2013 – Contract Value $14,000. Principal in Charge: Prepared a NPDES general permit coverage application for the State of Hawaii, Department of Health Clean Water Branch. NPDES permit coverage was required to manage stormwater runoff during construction activities to remove existing manmade ponds from a former dairy farm. Completed and submitted the NPDES Notice of Intent and Site-Specific Construction Best Management Practices Plan. ERA provided quantity of stormwater discharge calculations and designed BMPs which would meet both client and regulatory requirements.

Environmental Science Corporation, Environmental Report (ER) for 3 Projects, U.S. Army Engineer District, Japan District, Okinawa, Japan, 2015-2016 – Contract Value $40,000. Principal Environmental Planner: Conducted an Environmental Review for three separately planned projects co-located on Kadena Air Base (KAB). Typically, each of the projects would be individually evaluated in separate documents. However, because they were all scheduled to begin construction in 2012 and because they were all co-located on KAB, it was appropriate to streamline the environmental evaluation process and consequently the documentation format, which resulted in a three-project environmental review. The 3 projects were:

- ***Replace Bullet Road Bridge*** – The U.S. Air Force proposed to repair and reconstruct the Bullet Road Bridge to meet current and future load capacity requirements of the munitions squadron. The existing Bullet Road Bridge is located along an alternate munitions transportation route that connects the airport runway at KAB with the Munitions Storage Annex. Natural weathering and normal operational wear of the Bullet Road Bridge has resulted in the bridge's current degraded state, which has deteriorated to a load capacity approximately 50% of its original design.
- ***Department of Defense Education Activity (DODEA) MILCON School Replacements*** – The DODEA proposed to conduct a series of replacement construction school projects at multiple sites over a period of 2-5 years with planned designed start dates scheduled for November 2012. Phase I of the DODEA project involves demolition of 49 existing family housing units to provide space for new construction and consolidated co-location of the Amelia Earhart Intermediate School (AEIS) and Bob Hope Primary School (BHPS). Phase II of the DODEA project involves construction of the new Stearley Heights Elementary School (SHES) and demolition of the old SHES. Phase III is to construct a new Kadena Elementary School (KES) in green space northeast of the old SHES site. Phase IV is the construction of the new Kadena High School (KHS) at the former KES site. This four-phase program will create adequate academic facilities that meet Department of Defense Dependents Schools DoDDS initiatives to increase classroom space for various plans and programs, such as the Reduced Pupil-Teacher Ratio (RPTR) initiative and the Department of Defense Education Activity DoDEA Technology Plan, which calls for increased computer laboratories in schools.
- ***Special Action Committee on Okinawa (SACO) Agreement of 1996 Navy Relocation*** – The Department of Defense (DOD) proposed to construct a single parking lot to serve all Navy facilities being relocated under the SACO program. The project, when completed, provides convenient access to support activities in the vicinity of the northeastern end of Runway F. The project also reconstructs parking areas that will be demolished or taken out of service in order to provide a site for the relocated Navy aircraft operations facilities. The project will include construction of sidewalks, a traffic light or pedestrian bridge, and new utilities such as storm drains and security lighting. The proposed action is consistent with the planned Navy Relocation activities related to the SACO Agreement.

Hawai'i State Army National Guard, Keaukaha Military Reservation Consolidation, HI, 2008-2009 – Contract Value $90,000. Project Manager: Performed an NEPA and HEPA compliant Environmental Assessment for the consolidation of several Hawai'i National Guard facilities and construction and redevelopment of an existing military facility. Evaluated cumulative environmental impacts from the proposed project. Specific project issues include addressing potentially significant impacts on archaeological resources, historical buildings, determination and mitigation of potential impacts on historically significant trails and addressing the substantial public inquiry and comment regarding the project.

U.S. Air Force Center for Environmental Excellence, Environmental Assessment (EA) for Beddown of the 604th Air Support Operations Center (ASOC), Oahu, HI, 2009-2010 – Contract Value $100,000. Principal Environmental Planner: Performed a NEPA and Chapter 343 State of Hawaii HEPA compliant environmental assessment to facilitate the beddown of the 604th ASOC on O'ahu, Hawai'i. Two principal technical services were provided: an Environmental Baseline Survey (EBS) and a NEPA and HEPA compliant EA. The EBS tasks were intended to provide thorough research, investigation, evaluation, documentation, and decision findings of the environmental conditions of the subject real property under consideration for the proposed beddown. The EA was necessary to determine if a Finding of No Significant Impact (FONSI) or the preparation of an Environmental Impact Statement (EIS) was required for the beddown. The EA addressed potential environmental impacts related to implementation of the proposed action and its alternatives; principal impact assessment is anticipated to focus on cultural resources management, hazardous and regulated materials and wastes, safety, infrastructure, and land use compatibility. A FONSI was determined for the proposed beddown project.

Environmental Impact Statement (EIS), EIS Technical Support for Pohakuloa Training Area, State of Hawai'i Department of Transportation, HI, 2008-2009 – Contract Value $40,000. Principal Environmental Planner: Subcontracted by Okahara and Associates to provide EIS technical support for the State of Hawai'i Department of Transportation expansion of Saddle Road on the Big Island of Hawai'i. Specifically tasked with

determining the impacts from potential depleted uranium originating from PTA during military training activities to receptors that may traverse the proposed roadway. Project involves depleted uranium surface soil sampling and air modeling to receptor locations.

City and County of Honolulu, Environmental Assessment for Expansion of Waianae Regional Park, Oahu, HI, 2008-2009 – Contract Value $30,000. Project Manager: Performed an Environmental Assessment for development and expansion of a regional park. Provided technical support regarding the unique geological fixtures that might pose developmental difficulties. Specific issues included, ancient Hawaiian archaeological burial grounds, the existence of multiple limestone sinkholes on site and unique endangered species.

Environmental Science Corporation, Environmental Review (ER) for Proposed Kadena Industrial Park, U.S. Army Engineer District, Japan District, Okinawa, Japan, 2013-2014 – Contract Value $40,000. Principal Environmental Planner: Prepared an Environmental Review (ER) for a new industrial park at Kadena Air Base (KAB). Camp Kinser, located south of KAB, was proposed for closure as a result of mandates from the Special Action Committee on Okinawa (SACO) Agreement of 1996 and the Security Consultative Committee (SCC) Agreement of 2005. The mandates required the relocation of a number of industrial facilities. Two sites, Kadena Ammunition Storage Area (KASA) 1 and Chibana were identified as viable alternatives for construction of the new industrial park. The ER was in accordance with the following:

- Executive Order (EO) 12114, Environmental Effects Abroad of Major Federal Actions, dated January 4, 1979.
- DoDD 6050.7, Environmental Effects Abroad of Major Defense Actions, dated March 31, 1979.
- Japan Environmental Governing Standards (JEGS) September 2008
- Air Force Policy Directive 32-7006, Environmental Program in Foreign Countries, 29 April 1994
- Air Force Instruction 32-7061, The Environmental Impact Analysis Process, 12 March 2003
- National Historic Preservation Act of 1966, Section 402.

Environmental Science Corporation, Environmental Review (ER) for Proposed Missile Storage Facility and Access Road, U.S. Army Engineer District, Japan District, Okinawa, Japan, 2013-2014 – Contract Value $35,000. Principal Environmental Planner: Currently preparing an ER for a proposed Missile Storage Facility in the Munitions Storage Area of KAB. The ER is being prepared for Kadena Air Base (KAB) through the US Army Corps of Engineers (USACE), Japan Engineer District (JED) to evaluate the potential environmental impacts that may occur as a result of the proposed actions at KAB. The Proposed Action is defined as the demolition of three (3) existing above ground magazines (AGM), construction and operation of two (2) consolidated MSF structures, and construction and maintenance of a new access road to accommodate munitions transport vehicles. The Proposed Action would be implemented under the authority of the FY14 Military Construction (MILCON), Army Patriot Missile Storage Facilities for the 1-1 Air Defense Artillery (ADA) Battalion.

Environmental Science Corporation, USACE Japan District, Iwakuni, Japan, 2013-2014 – Contract Value $40,000. Principal Environmental Planner: Provided an Environmental Review (ER) to identify, document, and address potential environmental impacts associated with the construction and subsequent operation of a Type III Hydrant Fueling System and Supporting Structures. The action was proposed to improve safety, security, and logistics infrastructure at MCAS Iwakuni by providing a dependable, high volume and environmentally sound hydrant refueling system.

Effects of the Proposed Actions were analyzed as required by, and in accordance with:

- Executive Order (EO) 12114, Environmental Effects Abroad of Major Federal Actions, January 1979;
- Department of Defense (DoD) Directive 6050.7, Environmental Effects Abroad of Major Department of Defense Actions, March 1979; and
- Marine Corps Order (MCO) P5090.2A w/ch 2, Environmental Compliance and Protection Manual, May 2009.

Evaluations conducted as part of the planning initiative concentrated on the following potentially affected environments: Soils, Topography, and Geology; Ground and Surface Water; Air Quality and Climate; Biological Resources; Historic/Archaeological Resources; Hazardous/Toxic Wastes; Land Use; Utilities; and Noise.

Environmental Science Corporation, USACE Japan District, Marine Corps Base Camp Butler, 2012-2013 – Contract Value $40,000. Principal Environmental Planner: Provided an Environmental Review (ER) to identify, document, and address potential environmental impacts associated with the construction a new elementary school. The proposed action included the demolition of an existing school and residential neighborhood. The ER was performed in accordance with:

- Executive Order (EO) 12114, Environmental Effects Abroad of Major Federal Actions, January 1979;

- Department of Defense (DoD) Directive 6050.7, Environmental Effects Abroad of Major Department of Defense Actions, March 1979; and
- Marine Corps Order (MCO) P5090.2A w/ch 2, Environmental Compliance and Protection Manual, May 2009.

Enviroquest Inc, Environmental Assessment (EA) Iwakuni Marine Corp Air Station Golf Course, U.S. Army Corp Engineers (USACE), Iwakuni, Japan, 2008-2009 – Contract Value $30,000. Principal Environmental Planner: Subcontracted by EnviroQuest Inc. to perform an Environmental Report on behalf of the U.S. Army Corp of Engineers (USACE) Japan Environmental District and U.S. Marine Corp Air Station, Iwakuni. The Environmental Report was prepared to identify, document, and address potential environmental impacts associated with the construction and subsequent operation of a golf course and supporting structures on a former unregulated landfill. Specialty impact assessments required for the EA included geotechnical and human health risk assessments. Also required was an impacts assessment for biological resources, specifically the proposed action's impacts on the endangered white snake. Additional evaluations conducted as part of the planning initiative concentrated on the following potentially affected environments: Soils, Topography, and Geology, Ground and Surface Water, Air Quality and Climate, Biological Resources, Historic/Archaeological Resources, Land Use, Hazardous/Toxic Wastes, Utilities and Noise.

Engineering/Remediation Resources Group Inc (ERRG), U.S. Army Corps of Engineers, Hawaii District, Haleiwa Landing Field, Oahu, HI, 2001 – Contract Value $6,000. Principal Scientist: Performed principal level review of a biological resources assessment for a formerly used defense site in Kawailoa, Oahu, Hawaii. The scope of the assessment included a biological resources reconnaissance survey and consultation with appropriate federal and state agencies including the State of Hawaii Department of Land and Natural Resources Land Division, Hawaii State Office of Conservation and Coastal Lands, Hawaii National Heritage Program and the United States Fish and Wildlife. The assessment report provide a detailed analysis of potential biological impacts due to planned construction activities within the boundaries of the site and mitigation measures required to prevent significant adverse impact.

Micon Real Estate, Environmental Assessment for Hale Ohana Affordable Housing Project, **Koloa, Kauai and Maui, HI, 2008-2009 – Contract Value $30,000.** Principal Environmental Planner: Assisted a real estate developer, Micon Real Estate, with the environmental review process of their proposed Hale Ohana affordable housing project, located in Koloa, Kauai and proposed Honokawai Villa Apartments affordable housing project, located in Lahaina, Maui. The existing 48-unit Hale Ohana Apartment complex and 56-unit Honokawai Villa Apartments is proposed to undergo a significant renovation in order to meet current health and safety codes, and to provide a higher quality of housing for those in need. After evaluation of the project description and applicable environmental and social factors, these projects were determined to be of minimal impact to the environment and would be of great benefit to the community. Dr. Okoji and his team were able to seek exemptions from the environmental review process for these projects and secure Letters of Negative Determination. This saved the client valuable time and funds.

Project Manager, Aston Waikiki Beachside Hotel Renovation, Environmental Assessment (EA), Royal Kai Lani, O'ahu, HI, 2008-2009 – Contract Value $35,000. Conducted an Environmental Assessment EA for a $7 million dollar renovation project in Honolulu, Hawai'i. The proposed project would renovate the Aston Waikiki Beachside Hotel into a luxury condominium, the Royal Kai Lani. A complete interior renovation would transform the structure from its existing 8-unit per floor hotel into a single unit per floor luxury suite. Public and various federal, state and city agencies were consulted during the EA process. The Final Environmental Assessment was accepted by the Department of Planning and Permitting and a Finding of No Significant Impact was designated. Dr. Okoji and his staff were also successful in obtaining the necessary Special Management Area Use Permit, Major (SMA) for the project.

Belt Collins, Island of Hawai'i. Kawaihae-Mamalahoa Connector Road EIS Technical Support, HI, 2008-2009 – Contract Value $40,000. Project Manager: Provided EIS technical support for the construction and operation of a bypass road in the Mamalahoa, Waimea area of the Island of Hawai'i. Specifically subcontracted by Belt Collins to determine the environmental impacts of the proposed roadway on adjacent organic and conventional farm lands. Impacts assessed included the change in surface water potential and productivity of the land. Conversely, the assessment also evaluated the impact of farming practices on potential future users of the proposed road.

Risk Assessment and Toxicology

Engineering Remediation Resources Group (ERRG), Military Munitions Response Program, Remedial Investigation at Bellows Air Force Base, Waimanalo, HI, 2012-2014 – Contract Value $60,000. Principal in Charge: Assisted in preparing project documents (UFP-QAPP, APP, SHSP, WP, IDW Management Plan, Explosives Safety Plan) for a remedial investigation. The subjects of the RI are three MRA (MRA39, MRA40 and MRA43). The MRAs were recommended for further investigation under a Comprehensive Site Evaluation (CSE) Phase II. The objective of the RI was to further characterize the nature and extent of munitions constituents (MC)-related contamination in soil and determine if MEC is still present. The suspected MC consisted primarily of lead and small amounts antimony, arsenic, cadmium, copper, and zinc. As part of the RI, human health and ecological risk assessments were performed to characterize the risk from site metals to humans and wildlife.

Environet Inc. Military Munitions Response Program, USACE Omaha District, RI/FS at Bellows Air Force Base, Waimanalo, HI, 2014-2017 – Contract Value $100,000. Principal in Charge: Provided work plan and feasibility study support from RI/FS through Decision Document in conjunction with the technical team and federal regulatory bodies. Currently preparing a supplmental ERA for the Feasibility Study. The Feasibility Study is a follow on study to the Remedial Investigation performed in 2012 and addressed datagaps identified in the RI and potential future use of the mangroves area as constituted wetland.

Environet Inc. for U.S. Department of the Interior, National Park Service, Screening Level Human Health Risk Assessment, Asan Beach Unit, War in the Pacific National Park, Asan, Guam, 2013-2014 – Contract Value $15,000. Principal in Charge: Prepared a screening level human health risk assessment for munitions related chemicals. Risk assessment evaluated potential for health effects from the consumption metals and other COPCs in seafood.

Engineering Remediation Resources Group (ERRG), Military Munitions Response Program, Remedial Investigation at Wake Island Airfield, Wake Island Atoll, 2012-2014 – Contract Value $60,000. Principal in Charge: Assisted in preparing project documents (UFP-QAPP, APP, SHSP, WP, IDW Management Plan) for a remedial investigation. The subject of the RI is a single MRA (MRA101, MRS SR001 – Small Arms Range). The MRA was recommended for further investigation under a Comprehensive Site Evaluation (CSE) Phase II. The objective of the RI was to further characterize the nature and extent of munitions constituents (MC)-related contamination in soil at MRA101. The suspected MC consists primarily of lead and small amounts antimony, arsenic, cadmium, copper, and zinc. As part of the RI, human health and ecological risk assessments are currently being performed to characterize the risk from site metals to humans and wildlife.

US Army Garrison, Hawaii, Hawaii Makua Military Reservation, HI, 2014-2015 – Contract Value $45,000. Principal Risk Assessor. Produced a baseline HHRA in support of the Makua Military Reservation Live-Fire Training Area Supplemental Marine Resources Study of nearshore waters of Makua Beach, Kaena Point and Mokuleia Beach. The United States Army performed the Marine Resources Study to supplement an earlier 2009 Study. Biota samples for the analyses of constituents of concern were collected for two consecutive seasons at three locations from within the nearshore waters off Makua Beach, Ka'ena Point, and Mokule'ia Beach. The two analytical datasets were evaluated for human health risk from consumption of the seafood biota. Supported client at a public meeting by providing a presentation of risk results.

Engineering Remediation Resources Group (ERRG), Military Munitions Response Program, Remedial Investigation at Hickam Air Force Base, Joint Base Pearl Harbor Hickam, HI, 2013-2014 – Contract Value $45,000. Assisted in preparing project documents (UFP-QAPP, APP, SHSP, WP, IDW Management Plan, Explosives Safety Plan) for a remedial investigation. Performed baseline human health and ecological risk assessments for munitions constituents (MC)-related contamination in soil, groundwater and sediment.

Army National Guard, Fort Ruger, HI, 2006-2007 – Contract Value $3,000,000. Project Toxicologist: Conducted a site-specific lead risk assessment for a former rifle and pistol range. Receptors included children and adult visitors to the monument and onsite workers. Evaluated lead from several particle size fractions. Provided extensive technical support in developing field sampling plan and data objectives. Extensively involved in determining options for site cleanup and remediation. Risk assessment compared results from USEPA IEUBK and the California Department of Toxic Substance Control lead models.

Environet Inc., Hawaii Undersea Military Munitions Assessment, HI, 2009-2010 – Contract Value $40,000. Principal Scientist: Dr. Okoji performed a human health risk assessment to support the U.S. Department of Defense's efforts to assess the potential risk to human health and the environment of an historic munitions disposal site located about 5 miles south of Pearl Harbor. Risk assessment was performed assuming recreational divers, adult and child subsistence fishermen, adult and child recreational fishermen and adult and child residents may be exposed to seafood contaminated with munitions-related compounds.

Environet Inc. Waikane Valley HHRA, Waianae, HI, 2008-2009 – Contract Value $45,000. Principal Toxicologist: Hawaii has a number of active and transferred military training areas that have been contaminated by unexploded ordnance (UXO). The government has continued the complex task of remediating these lands of the explosives hazards, but the process is slow and expensive. There are public concerns about the status of the water and soils on and near these lands, and questions about how they are affected by both the chemicals present inside the remaining UXO as well as large pieces of explosives (energetics) which can remain in or around an area following low order detonations. Very little emphasis has been given to the assessment of area groundwater, soil contamination, and the resulting risk to humans and the environment from these munitions constituents (MC), especially in sub-tropical volcanic soils. Provided a Tier IA and Tier II HHRA for this UXO site. The site was approximately 20 acres and partitioned into 5 independent DUs. Risk assessment was performed assuming receptors would be exposed to average surface soil concentrations as determined by MI sampling techniques. A supplemental assessment was also conducted which included biased discreet sampling data collected from the immediate area around identified lead bullets as well as the MI data. Biased samples were area-weighted to ensure those locations did not disproportionally represent the concentrations on site.

PVT Land Company, PVT Landfill, Nanakuli, HI, 2010-2012 – Contract Value $50,000. Principal in Charge: Produced a work plan and baseline human health risk assessment to evaluate recycling of construction and demolition (C&D) materials for use as fuel in a liquid gas manufacturing plant. The investigation was prepared to address Hawaii Department of Health (HDOH) concerns regarding the environmental and human health safety of recycling, including the use of a crushing/processing plant at the PVT Landfill Site. The proposed plant is part of a larger recycling initiative that when implemented will significantly reduce the volume of material going to landfill, provide the State with an additional renewable source of natural gas and align PVT operations with the State's Clean Energy Initiative and Integrated Solid Waste Management Plan. Specifically, the HDOH is concerned with the following potential impacts associated with the proposed recycling program: air/dust impacts during delivery of bulk material, air/dust impacts during mining of closed portions of the landfill for feedstock (bulk material), air/dust impacts during crushing and shredding of bulk material, air/dust impacts from onsite storage of processed material, leaching potential of stored feedstock or processed material.

Insight Environmental, Former Lowry AFB, Aurora, CO, 2013-2014 – Contract Value $40,000. Principal Toxicologist. Produced a human health risk assessment for the Former Lowry Titan I, Missile Site 1, Complex 1C site located on the Former Lowry Bombing Range, in Arapahoe County, Colorado. The HHRA evaluated potential chemical releases identified in two (2) distinct areas or Decision Units (DUs). The first DU was defined as the former Incinerator Area. The second DU was defined as the former Chemical Waste Clarifier Area. The goal of the HHRA was to determine if concentrations of chemical constituents at each DU presented an unacceptable risk to human health. The relevant data sets for the Incinerator and Waste Clarifier Areas were reviewed to ensure that all applicable data were included in the HHRA. The following previous investigations have been conducted at Titan 1C: 1998 Site Inspection (SI), 2000 Remedial Investigation (RI), and a 2014 Data Gaps Investigation (DGI) and Pilot Study Activities Report. The chemical boundaries for this HHRA were limited to polycyclic aromatic hydrocarbons (PAHs) at the former Incinerator Area and polychlorinated biphenyls (PCBs) at the former Chemical Waste Clarifier Area. Other chemicals such as metals, volatile organic compounds (VOCs), and total petroleum hydrocarbons (TPH) were characterized in previous investigations and determined to not be of concern at the Site.

Insynergy, USACE, JED, Sasebo, Japan, 2013-2014 – Contract Value $40,000. Principal Scientist. Conducted an air modeling study to evaluate ambient air quality concerns associated with an existing diesel boiler located adjacent to the proposed new E.J. King High School and Sasebo Elementary School at U.S. Fleet Activities Sasebo located in Sasebo, Nagasaki, Japan. This air modeling study was conducted to assess if the existing boiler plant poses a human health risk above regulatory levels of concern to students, teachers and workers at the proposed new high school and elementary school or if mitigation measures are required. In order to assess the air concentrations from the boiler, air dispersion modeling was conducted utilizing the United States Environmental Protection Agency regulatory model AERMOD Version 14134 (EPA, 2014a). Modeling input parameters, which consisted of nearby building dimensions, emission source parameters, meteorological data, and property boundary locations, were configured to run with the AERMOD dispersion model to estimate air pollution concentrations at various locations surrounding the existing boiler. In addition to the existing diesel fueled boiler, an assessment was conducted assuming the conversion from diesel fuel to natural gas. Projected natural gas consumption was calculated assuming the natural gas boiler would require the same heat input as the existing diesel fuel boiler.

Insight Environmental, Vandenberg Air Force Base, CA, 2013-2015 – Contract Value $75,000. Produced a Human Health Risk Assessment (HHRA) as part of the revised Feasibility Study (FS) for Vandenberg Air Force Base (VAFB) Installation Restoration Program (IRP) Site ST042 (Component Decontamination Facility). The purpose of the HHRA was to assess risk to human health from soil and soil gas and to identify whether further evaluation is warranted if these media present unacceptable risks to current and potential future receptors. Site ST042 consists of a square, 10,000 square foot (ft2), single-story, cement-block structure (Building 7501),

surrounded by a 157,500 ft2 asphalt-paved yard. The Site ST042 facility was used for testing Titan II rocket engines. Missile parts and missile service equipment contaminated with hypergolic fuels were also cleaned inside Building 7501 using trichloroethene (TCE), detergents, and water. After use, the spent solvent and water were directed to two USTs located beneath the paved area southeast of Building 7501. The two USTs were investigated and removed in 1992. Building 7501 is currently used to maintain tanker trucks that store and transport Jet Propellant No. 8 (JP-8). Site soil and soil gas were evaluated in the HHRA. Environmental data collected from 2007 to 2010 were deemed representative of current site conditions and were included in the data set. Maximum site soil concentrations were compared to residential U.S. Environmental Protection Agency (EPA) Regional Screening Levels (RSLs) (EPA, 2015a). Indoor air screening levels were sourced from the EPA RSL Table (EPA, 2014a) and DTSC Note 3 revised RSLs (DTSC, 2014a) and used to calculate subslab soil gas and contaminant source soil gas screening levels by applying the default attenuation factors of 0.05 for existing residential subslab soil gas and 0.001 for future residential contaminant source soil gas (DTSC, 2011). Developed Risk-Based Cleanup Goals for the Site.

SDV Engineering and Construction, NAVFAC Southwest, Marine Corps Air Station, Yuma, AZ, 2015 – Contract Value $20,000. Produced a Tier IA screening level human health risk assessment (HHRA) for the KMEP Fuel Site, located at MCAS, Yuma, Arizona. This Tier IA HHRA was prepared as part of this investigation to determine the potential for risk to hypothetical future residents using the groundwater for drinking water purposes, or associated with vapor intrusion from groundwater to indoor air.

Environmental Science Corporation, Camp Zama Fuel Spill Characterization and Risk Assessment, Camp Zama, Japan, 2009-2010 – Contract Value $45,000. Principal Scientist: Prepared a site-specific human health and ecological risk assessment for the Camp Zama underground FJ-1 fuel pipeline leak. The leak was associated with a 52,000 gallon capacity FJ-1 fuel tank (1024-n) which supplies fuel to an incinerator day tank (106 gallons) and boiler tank. The amount leaked was estimated at 2,000 gallons. Immediately following the identification of the leak, emergency remedial activities were undertaken to clean up visible oil at the leak site, the surface of the Camp Zama retention pond and downstream creeks and outfalls. The purpose of the human health risk evaluation was to estimate potential risks to human and ecological health, if any, that may be posed by residual FJ-1 fuel following emergency remedial activities. The site-specific human health risk assessment also included a qualitative uncertainty analysis. AMEC provided significant input into the sampling and analysis plan. Two deliverables were produced including a comprehensive baseline human health and ecological risk assessment and a "concise" public version. The site-specific risk assessment has undergone regulatory review and has been accepted.

Environmental Science International, US Navy, US Naval Base Yokosuka, Japan, 2011-2012 – Contract Value $40,000. Principal Toxicologist: Produced a Tier I, (Risked Based Screening) and Tier II (Baseline Human Health Risk Assessment) for A Tier IA Risk-Based Screening and Tier II Site-specific Baseline Human Health Risk Assessment (BHHRA) were prepared for two separate sites proposed for the new Kinnick High School at Naval Base Yokosuka, Japan. The assessment was conducted using all available data collected during Site investigations by ESI in 2010 and from relevant previous investigations. Receptors evaluated in this HHRA included current and future industrial Site workers, future construction workers, future high school students and hypothetical residents. Exposure pathways considered in the Tier I screening level assessment included: ingestion of soil, dermal contact and absorption of chemicals in soils, leaching potential, inhalation of chemicals via fugitive dust and inhalation of volatiles emanating from soil. Media evaluated included surface and subsurface soil only. Data was provided for multiincrement samples. Chemicals evaluated in the risk assessment included heavy metals, PCBs, dioxins, SVOCs, VOCs, chlorinated pesticides and organophoshate herbicides. Childhood risks calculated using Age-Dependent Adjustment Factors for mutagenic compounds.

Element Environmental, US Navy, Sand Blast Grit Disposal Sites, Joint Base Pearl Harbor-Hickam, HI, 2012-2012 – Contract Value $40,000. Principal Toxicologist: Performed a Tier IA and Tier II human health risk assessment (HHRA) as part of the remedial investigation (RI) at the Sandblast Grit Disposal Sites located on the Waipio Peninsula, Joint Base Pearl Harbor-Hickam (JBPHH), Hawaii. The HHRA evaluated potential cancer risks and noncancer hazards to hypothetical future onsite residents (to provide baseline risk information only), current and future industrial site workers, future construction workers, and current and future trespassers/visitors. Based on the historical chemical data available for the Site, Site details and current and anticipated future Site use, the exposure routes evaluated included incidental ingestion, dermal contact with soil, and inhalation of fugitive dust from soil. The HHRA assumed that future soil removal or construction activities at the Site could bring subsurface soil to the surface. Each soil horizon was evaluated separately and assumed present at the surface available for exposure to all identified receptors.

Enviroquest Inc., USACE Japan Environmental District, Iwakuni Japan, 2010 – Contract Value $30,000. Principal Scientist: Provided a human health risk assessment for an existing Solid Waste Landfill site located at U.S. Marine Corps Air Station (MCAS), Iwakuni, Japan. The landfill was defined by four (4) distinct zones, three (3) of which are similar in size and one (1) that was slightly larger than the others. A total of fifteen (15) soil vapor

samples were collected from the landfill. Three (3) soil vapor samples were collected from a medial transect of each of the (3) smaller zones, resulting in a total of nine (9) samples from the smaller zones, and six (6) were collected in the larger zone. In addition, nine (9) surface water samples were collected along various locations on the perimeter of the landfill.

The specific scenarios evaluated included hypothetical construction workers, golf course attendants and future users of the golf course. The human health risk assessment included a Tier IA: Risk Based Screening and Tier II: Baseline Human Health Risk Assessment and was performed in accordance with standard principles and approaches identified in the U.S. Navy Human Health Risk Assessment Guidance (Pioneer Technologies Corporation 2008) and the Department of Defense Vapor Intrusion Handbook (Tri-Service Environmental Risk Assessment Workgroup 2009), as well as the United States Environmental Protection Agency's (USEPA) Risk Assessment Guidance for Superfund (RAGS): Human Health Evaluation Manual, Part A (USEPA 1989) and other USEPA guidance documents. Risk assessment guidelines established by other federal agencies and state agencies were also considered when appropriate.

US Navy, Marine Corp Base Hawaii (MCBH), Kaneohe, HI, 2008-2009 – Contract Value $25,000. Project Toxicologist: Performed a Tier IB site-specific human health risk assessment for property located in the vicinity of Mokapu Mall, between MacLachlan Street and McLennon Drive, at Marine Corps Base Hawai'i (MCBH) in Kane'ohe, Hawai'i. Specifically, the assessment evaluated health risks to human receptors that may work at or frequent a future Child Development Center proposed to be located at the Site.

US Navy, NAF Atsugi, Japan, 2004-2005 – Contract Value $30,000. Project Toxicologist: Conducted a preliminary risk evaluation and site-specific assessment of surface and subsurface soils at a U.S. Naval facility in Atsugi, Japan. Contaminants of concern include PCBs, dioxin, arsenic, chlordane and DDD. Obtained regulatory site closure on a Naval base located outside the U.S. Risk assessment used to obtain No Further Action status.

US Navy, Pearl Harbor HI, 2004-2006 – Contract Value $50,000. Project Manager: Provided extensive review and consulting on a previously conducted screening human health risk assessment for the site. Recalculated quantitative risk estimates using current and accepted EPA protocols and methodology. Provided technical support on the Site-specific Baseline Human Health Risk Assessment. Toxicological and risk assessment issues addressed include validity of modeling chemical concentrations in fish tissue from sediment concentrations, scientifically justifiable methodologies for estimating exposure point concentrations and the relevance of the TEF approach for estimating PCB risk. Risk assessment was used to make risk management decisions regarding the recreational use of the site.

RMA Insight JV for USAF, Malmstrom Air Force Base, Mt, 2013-2014 – Contract Value $25,000. Principal in Charge: Produced a screening level ecological risk assessment (SLERA) as part of the Resource Conservation and Recovery Act (RCRA) facility investigation (RFI) for storm drainage ditch site SD010 located on Malmstrom Air Force Base (MAFB), Great Falls, Montana. Previous ecological risk assessments (ERAs) conducted for this Site have indicated that the potential for risk to benthic macroinvertebrates may exist due to residual contaminants (i.e., chlorinated pesticides and polychlorinated biphenyls [PCBs]) in the sediment of the Site. The SLERA provided an update to the previous ERAs and assessed the current potential for risk to ecological receptors at the Site as well as the potential for future risk due to the transport of contaminants by water erosion into the ditch from the adjacent upland soils.

PCR Environmental, Former Naval Station Agana, Guam, 2006-2007 – Contract Value $30,000. Principal in Charge: A site-specific Tier II (Baseline Human Health Risk Assessment) was prepared for the POI-3 and POI-18 sites located at the Former Naval Air Station Agana, Tiyan, Guam. Human health risks were estimated for future construction workers if construction work were conducted at the Site. Although exposure pathways were considered incomplete for future industrial/commercial workers and hypothetical residents, risk were estimated for these receptors assuming impacted soils are brought to the surface. The risk assessment provided further characterization of human health risks from Site soils resulting from past activities associated with the operation and maintenance of the facilities. Risk assessment has lifted all land use restrictions from both Sites.

Okahara and Associates, Pohakuloa Training Area, HI, 2009-2010 – Contract Value $60,000. Project Manager: Contracted by Okahara and Associates to provide EIS technical support for the State of Hawai'i Department of Transportation expansion of Saddle Road on the Big Island of Hawai'i. Dr. Okoji was specifically tasked with determining the human health risk from potential depleted uranium originating from PTA during military training activities to receptors that may traverse the proposed roadway. Project involved depleted uranium surface soil sampling and air modeling to receptor locations. Project deliverables included a Sampling and Analysis Plan, the results of the surface soil sampling event, a source determination and background evaluation and Human Health Risk Assessment (HHRA) for uranium (U) isotopes. The assessment addressed the public's concern that depleted uranium originating from military operations at PTA may impact the health of those that may be involved in the construction of the proposed alignment as well as those that may use the road in the future. The risk assessment

considered both chemical and radiological toxicity from uranium. Assisted Okahara in responding to community comments in the EIS at 2 public meetings.

US Navy, Orote Landfill, Guam, 2002-2006 – Contract Value >5,000,000. Senior Toxicologist: Performed a preliminary human health risk evaluation and baseline human health risk evaluation for seafood sourced from the Marine DU of the Orote Landfill Site. Chemicals of concern included PCBs, dioxins/furans, metals, chlorinated pesticides, PAHs and Ordnance compounds. Provided extensive technical support on PCB and Dioxin risk assessment on behalf of Navy clients in numerous face-to-face conferences with the EPA, Guam EPA, ATSDR and the public. Successful in negotiations with EPA Region 9 to make risk management decisions based on more realistic data supported by site-specific conditions rather than overly conservative default assumptions. Provided the Navy with technical arguments on the complexities of interpreting information from biomarker data as well as extensive toxicological support regarding the carcinogenic evaluation of PCBs. Significant participation in developing and evaluating data from a seafood consumption survey in the Agat Bay area on the island of Guam. Extensive involvement in development and implementation of a more comprehensive study to evaluate human health risks associated with the Orote Landfill site. Developed site conceptual models and exposure routes. Represented Navy client in numerous interactions with the people of Guam. Received commendations from the Navy and ATSDR for public support efforts. Risk assessments have released the Navy from potential liability along approximately three miles of coastline on the Orote Peninsula.

Environet Inc., Ordnance Reef, HI, 2008-2010 – Contract Value $150,000. Principal Scientist: Provided human health and ecological risk assessment support for an underwater munitions site off the Waianae Coast of Oahu, HI. Dr. Okoji was specifically tasked with reviewing and providing input on the project Sampling and Analysis Plan, development of the Conceptual Site Model and providing a human health and ecological risk assessment. The human health risk assessment addressed carcinogenic and noncarcinogenic risks to recreational divers, adult and child subsistence fishermen and adult and child recreational fishermen. Media evaluated included: sediment, water, fish and invertebrate tissues. Dr. Okoji and his staff designed and implemented a program to assess seafood consumption habits of the Waianae community. This data was accepted by regulatory agencies and used in the HHRA. Dr. Okoji also attended and present results of the risk assessment at various regulator and public meetings on behalf of Environet and the USACE.

AMEC Earth and Environmental Inc, US Navy, Pearl City Fuel Annex, 2010-2011 – Contract Value $48,000. Principal Toxicologist: Conducted a limited Tier II site-specific human health risk assessment for the Pearl City Fuel Annex site (PCFA), located in the Pearl Harbor Naval Complex (PHNC), Hawaii. Human health risks were estimated for a potential trespasser and maintenance worker scenario exposed to surficial soils. This risk assessment provided further characterization of human health risks from surface soil impacts resulting from past site activities associated with the operation and maintenance of the facility. Potential sources of contamination include: product releases, the sandblasting and painting of above-ground storage tanks (ASTs) and associated pipelines, and past tank sludge and condensate disposal practices. Currently conducting a Tier I, (Risked Based Screening) and Tier II (Baseline Human Health Risk Assessment) for the PCFA Site. Exposure pathways evaluated included dermal contact and oral ingestion of contaminated soils and inhalation of ambient air. 649 surface and subsurface soil samples from 9 total investigations are included in the analysis. Receptors include current and future industrial workers, construction workers, offsite residents and trespassers.

Environmental Science International, US Navy, Pearl Harbor Naval Complex, Building 35, HI, 2011-2012 – Contract Value $40,000. Principal Toxicologist: Performed a Tier I, (Risked Based Screening) and Tier II (Baseline Human Health Risk Assessment) for an area north of Paint Shop Building 35 located in the Public Works Center (PWC) Geographic Study Area (GSA) within the Pearl Harbor Naval Complex (PHNC) on the island of Oahu, Hawaii. The risk assessment provided further characterization of human health risks from surface and subsurface soil impacts resulting from past site activities associated with the operation and maintenance of the Site. The assessment was conducted using all available data collected during Site investigations by ESI in December of 2009 and from relevant previous investigations. Receptors evaluated in this HHRA included current and future industrial Site workers, future construction workers and hypothetical residents. Exposure pathways considered in the Tier I screening level assessment included: ingestion of soil, dermal contact and absorption of chemicals in soils, leaching potential, inhalation of chemicals via fugitive dust and inhalation of volatiles emanating from soil. Media evaluated included surface and subsurface soil only. The Site was treated as a single Decision Unit (i.e., receptors were assumed to be exposed to all areas of the Site and not just specific areas). Chemicals evaluated in the risk assessment included heavy metals, PCBs, acetone, ethylbenzene and toluene.

Environmental Science International, US Navy, Abandoned Small Arms Firing Range, Lualualei, HI, 2011-2012 – Contract Value $40,000. Principal Toxicologist: Provided human health and ecological risk assessment support for a former abandoned small arms firing range. Risk assessment included a Tier IA and Tier II HHRA and

ERA. Chemicals of potential concern included lead only. Child lead exposures were evaluated with USEPA's IEUBK Child Lead Model. Adult lead exposures were evaluated with USEPAs Adult Lead Model.

US Navy, Red Hill, HI, 2004-2006 – Contract Value $50,000. Task Manager: Performed a comprehensive Exposure Assessment and Multimedia Preliminary Human Health Risk Evaluation for past and potential releases of petroleum compounds, including PAHs from the Navy's Red Hill Storage Tanks in the mountainside adjacent to and above Pearl Harbor. Tasks included the evaluation of risk from historical or accidental releases of hazardous substances and its impact to human and ecological health. Both site-specific concentrations as well as possible catastrophic release scenarios were evaluated. Modeling of potential releases required multidisciplinary input from toxicologists, geologist, GIS specialists, groundwater modelers, and remedial engineers. Pivotal in developing site conceptual models and exposure routes.

Rocketdyne Propulsion and Power, Santa Susana Field Laboratory (SSFL), CA, 2004-2006 – Contract Value $150,000. Project Manager: Provided site-specific human health risk assessments for The Boeing Company, Rocketdyne Propulsion and Power, NASA and the DOE as part of the RCRA Corrective Action Program at the SSFL. The risk assessments were conducted in response to requirements specified in three Hazardous Waste Permits issued to Rocketdyne by DTSC. Chemicals of concern include Total Petroleum Hydrocarbons, PCBs, PAHs, benzene, toluene, ethylbenzene, xylene, naphthalene, volatile organic compounds, semivolatile organic compounds and metals.

U.S. Army Corp of Engineers, Fort Irwin, CA, 2008-2009 – Contract Value $45,000. Project Toxicologist: Performed site-specific human health risk assessments at 14 Hazardous Waste Management Units at the U.S. Army National Training Center at Fort Irwin, California. Responsibilities include risk assessment approach negotiations with the Department of Toxic Substances Control Human and Ecological Risk Division and performance, standardization of methodology and performance of the risk assessments.

AMTRAK: Redondo Junction Site-Wide and Location Specific HHRA, Los Angeles, CA, 2006-2009 – Contract Value $125,000. Principal Toxicologist. Assisted in the development of work plans and field sampling plans. Prepared site-specific human health risk assessments for the Amtrak Redondo Junction located in Los Angeles, California. Risk assessments were prepared to determine if chlorinated solvents and other volatile chemicals were posing an unacceptable indoor air human health risk to Amtrak workers at the facility as a whole as well as specifically in Building 18. Workers within various structures at the Site were evaluated for exposures to volatile chemicals resulting from subsurface vapor intrusion. Data assessed in the quantitative analysis included soil vapor data collected in a February 15, 2010 soil vapor investigation. In total, 9 soil vapor samples (8 primary samples and 1 duplicate) were collected at the perimeter of Building 18 and analyzed for the EPA TO-15 Super suite of compounds and Gasoline Range Total Petroleum Hydrocarbons (TPH). 80 other SV samples were collected from other areas of the Site. 19 constituents were detected in soil vapor at the Site. These chemicals include, TPH-Gasoline, BTEX, 1,1,1-Trichloroethane, PCE, and TCE.

Hawai'i Department of Health, Lead in Drinking Water Study at all DHS Licensed Child Care Centers, State of HI, 2007-2009 – Contract Value $1,000,000. Program Manager: Provided technical and public relations support to the State of Hawai'i Department of Health's Safe Drinking Water Branch regarding a State-wide testing program of all drinking water sources at registered child care facilities. The federally-funded program was intended to help safeguard young children who are considered to be more vulnerable to lead exposure. With over 1,000 registered facilities this project is one of the largest drinking water sampling tasks of its kind in the State of Hawai'i. Produced a state of the art information technology resources database to manage everything from scheduling and routing, to correspondence management and results analysis and reporting. In coordination with the laboratory undertaking the analysis, Dr. Okoji implemented a highly automated system to manage the receipt and analysis of results. All results were automatically imported into an electronic database system and analyzed. If lead was found at levels above the acceptable limit, Dr. Okoji implemented a range of notification procedures to prevent further potential exposure of children to the lead and also provided in-depth lead abatement strategies to the facility owners and/or managers. As part of this process, a series of informational packets were prepared to update the multiple government entities, including the Safe Drinking Water Branch and the Department of Human Services. During this process, Dr. Okoji also served as the HDOH and DHS public media representative in a KHON news story.

Hawai'i State Department of Health, Keaukaha, HI, 2004-2005 – Contract Value $30,000. Project Manager: Conducted an ambient air characterization study and baseline human health risk assessment of a light industrial district and airport. Industries present and areas of concern include airline industries, harbor facilities, diesel fueling station and truck yard, auto paint shops, wood treatment plants, fiberglass shops, compressed gas industries, petroleum storage tanks, naphthalene storage tanks, propane storage tanks and an old sewage treatment facility. Ambient air monitoring utilized passive GoreSorber sampling devices as well as active Hi-vol samplers. GoreSorbers allowed evaluation of air impacts over a 7-day period. Traditional active samplers capture significantly

shorter periods of time. Receptors evaluated include residents living in the nearby Hawaiian Homelands residential district. Assisted the Department of Health in communicating potential risks to residents at several public meetings.

W.H. Shipman Ltd, Kea'au, HI, 2002-2004 – Contract Value $50,000. Project Manager: Perforemed a Phase 2 soil characterization and Phase 3 risk assessment of former sugar cane lands contaminated with arsenic, lead, pesticides and herbicides. Supporting client's efforts to develop land under a future residential use scenario. Using bioaccessibility data gathered for the site in arguments to the HDOH. Providing extensive community relations and regulatory agency support.

CSV Hospitality LLC, Kea'au, HI, 2004-2005 – Contract Value $40,000. Project Manager: Performed site investigation and a site-specific risk assessment for a 5-acre site in Kea'au, HI. Site was formally used for agriculture and was heavily contaminated with high levels of arsenic. Provided extensive community relations and regulatory agency support over a 2 year period. Held public meetings in collaboration with the HDOH. Produced engineering cost analysis, mitigation and implementation plans. Successful in obtaining regulatory support for construction of a hotel and commercial facility at the site without soil removal.

Matsubara, Lee and Kotake, HI, 2004-2005 – Contract Value $90,000. Project Manager: Provided litigation support regarding a property that was the site of an automobile dealership, a warehouse and a former wood treatment site. Chemicals of concern include pesticides used in wood preservation: arsenic, chromium, dioxins/furans, and pentachlorophenol as well as other heavy metals. Evaluated soil and groundwater data and attended meetings with plaintiffs' consultants. Risk assessment used to define the cleanup level goals and areas of remediation.

Hawai'i State Department of Health, PVT Landfill, HI, 2008-2009 – Contract Value $60,000. Project Manager: Performed an air monitoring and human health risk assessment of a municipal solid waste and construction and demolition landfill. Chemicals evaluated include landfill gases and heavy metals. Receptors evaluated include nearby residents. Assisted Department of Health in communicating potential risks to the community.

City and County of Honolulu, Waimanalo Landfill, HI, 2008-2009 – Contract Value $150,000. Project Manager: Prepared human health risk assessment of the beneficial use of municipal solid waste incinerator ash from the City and County of Honolulu's H-Power facility. The project considered the proposed use of the ash *in lieu* of clay as part of the final cover in the closure of a city-owned landfill. The risk assessment considered risks from lead, other heavy metals, and dioxin and furan congeners. Risks during and after the closure were evaluated under several potential scenarios. Receptors included workers, on-site trespassing children, and off-site children. Affected media included the ash, ash leachate, ash-derived dust, surface water and sediment in Pearl Harbor, and fish. Dust generation and dispersion modeling was performed as well as modeling of surface runoff of ash into nearby surface water and sediment. Ash-specific absorption adjustment factors were derived. On-going projects include risk evaluation of other beneficial uses of the ash, including use as daily cover at an operating municipal landfill and use as aggregate in the road materials.

City and County of Honolulu, Waipahu Incinerator, HI, 2004-2010 – Contract Value $55,000. Project Manager: Performed a human health risk assessment of soil, municipal waste combustion ash, and debris present at the site of the former Waipahu Incinerator Complex and the adjacent Waipahu Ash Landfill. Receptors included City workers from who currently occupy the old incinerator building, nearby residents, and children who frequent the nearby Waipio Peninsula Soccer Complex. Designed and executed real-time monitoring of ambient airborne respirable dust levels indoor and outdoors. Prepared technical memorandums regarding penalties assessed by the State Department of Health. Developed supplemental environmental programs for the city for use in penalty negotiations. Completed work plans required for the closure of the Waipahu Incinerator Complex.

Costco Wholesale Corporation, HI, 2002-2003 – Contract Value $40,000. Project Manager: Performed a site-specific human health risk assessment for a commercial property undergoing a site evaluation for property transfer. The former MGP site had a history of petroleum product releases. Contaminants of concern included Total Petroleum Hydrocarbons, PCBs, PAHs, benzene, toluene, ethylbenzene, xylene, naphthalene and heavy metals. Evaluated the potential carcinogenic and noncarcinogenic risks from contact with site soil and groundwater via ingestion and dermal absorption via TPH Working Group and State of Massachusetts methodologies. Assessed the health hazards of inhaling soil vapor in both ambient surroundings and within the warehouse store using laboratory-specific data as well as data obtained from mathematical modeling from free product, groundwater and soil concentrations. Derived chemical specific absorption factors for site chemicals including arsenic and several PAHs. Evaluated soil, soil vapor and groundwater data and advised Brewer Environmental consultants, Costco attorneys and parties involved in the land transfer on appropriate cleanup goals. Risk assessment successfully used by Costco to obtain letter of completion within the Hawai'i State Department of Health's Voluntary Response Program.

Honolulu Resource Recovery Venture, HI, 2004-2005 – Contract Value $150,000. Evaluated the potential use of municipal solid waste incinerator ash as an aggregate in roadway materials. Performed data collection, summary and analysis of total and respirable particulates in air due to road demolition activities of ash-amended asphalt. Ambient air monitoring data and air-modeling techniques were used to estimate COPC concentrations in soil and

air. Particulate deposition data was used to model COPC uptake into plants that could potentially be consumed by humans. Health risks were evaluated for potential receptors using estimated heavy metal content of site-specific media.

Sprint Lot Risk Assessment, HI, 2003-2004 – Contract Value $40,000. Project Manager: Performed a site-specific human health risk assessment for a commercial property and office building. The former MGP site had a history of petroleum product releases, an onsite fuel pipeline and free product releases under the office building. Contaminants of concern included Total Petroleum Hydrocarbons, PAHs, benzene, toluene, ethylbenzene, xylene, naphthalene etc. Evaluated the potential carcinogenic and noncarcinogenic risks from contact with site soil, groundwater, soil vapor and weathered kerosene-like free product. Assessed the health hazards of inhaling soil vapor in both ambient surroundings and within the Sprint Office Building using laboratory-specific data as well as data obtained from mathematical modeling from free product, groundwater and soil concentrations. Derived chemical specific absorption factors for site chemicals including arsenic and several PAHs. Advised Brewer Environmental consultants and the owners of the property of potential health risks and remedial alternatives.

Native Hawaiian Veterans, USACE HED, Munitions Response Site Prioritization Protocol (MRSPP) for Defense Environmental Restoration Program, Formerly Used Defense Site (FUDS) of Opana Point Bombing Range, Opana Point, Island of Maui, Site No.H09HI027200 and Papohaku Target Range, Kaluakoi, Island of Molokai, Site No. H09HI0032, 2014- 2017 – Contract Value $500,000. Principal in Charge: Executed MRSPP to determine the relative risks posed at each of the sites; assistance with data gathering from state and local repositories; collecting appropriate information necessary to eliminate from further consideration those releases that pose no significant threat to public health or the environment; determining potential need for removal action and collecting or developing additional data to complete the MRSPP. Prepared project documents (UFP-QAPP, SAP) for a remedial investigation. COCs included metals, explosives and semivolatile organic compounds. Risk to human health and ecological receptors are evaluated.

Long-Term Maintenance & Monitoring/ Remedial Action Operations for IRP Sites CF023, CG110, LF01, LF14, SS01, SS06, SS11, SS15 and Consolidation Unit at Joint Base Pearl Harbor – Hickam, HI, 2012-2017 – Contract Value $500,000. Principal in Charge: Performed annual inspections/maintain, and optimized long-term maintenance and monitoring (LTM) / Remedial Action Operations (RAO) (groundwater sampling) at eight Installation Restoration Program sites. The project consisted of inspecting, maintaining, and providing recommendations to optimize the existing remedies based on evaluation of all existing reports and recommendations for each site. Prepared all project documents including results of groundwater, soil vapor, landfill gas and apparent product thickness measurements.

Institutional Controls for Safety Awareness, Defense Environmental Restoration Program, Formerly Used Defense Sites at Various Windward Oahu Projects, Island of Oahu, HI, 2014-2017 – Contract Value $500,000. Principal in Charge: Provided planning and producing institutional controls educational material for ensuring public safety from potential unexploded ordnance (UXO) at these sites. The institutional controls consist of materials oriented towards educating the public about the potential hazards from UXO found at these sites. Provided presentations to schools of affected areas and general public events.

Coca Cola Bottling Enterprises, Oahu, HI, 2000-2010 – Contract Value $750,000. Project Manager: Conducted a Phase 2 and Phase 3 site investigation of soils and groundwater and site-specific risk assessment for the Coca Cola Bottling Facility. The site had undergone substantial remediation including removal of impacted soil, application of Oxygen Reaction Compounds (ORC) to groundwater and implementation of a Soil Vapor Extraction (SVE) System. Environmental Hazard Evaluation (Risk assessment) performed to determine the suitability of the property for future residential use. Chemicals of concern and pathways of concern include BTEX and fuel related compounds. Pathways of concern include direct contact with site media as well as vapor intrusion into buildings and ambient air.

- Phase I Environmental Site Assessment at multiple addresses located on Cooke Street, Auahi Street, and Pohukaina Street, Honolulu, Hawai‘i. The property evaluated was identified by current Tax Map Key (1) 2-1-053:032 (lot consisting of 4.187 acres).
- Phase I Environmental Site Assessment at multiple addresses located on Ala Moana Boulevard, Coral Street, Keawe Street, and Auahi Street, Honolulu, Hawai‘i. The property evaluated was identified by Tax Map Keys (1) 2-1-055:003 (lot consisting of 0.5306 acres), (1) 2-1-055:021 (lot consisting of 0.9256 acres), (1) 2-1-055:006 (lot consisting of 0.4904 acres), (1) 2-1-055:026 (lot consisting of 0.1148 acres), and (1) 2-1-055:038 (lot consisting of 0.8135 acres).
- Phase I Environmental Site Assessment at multiple addresses located on Kekuanaoa Street, Iolani Street, and Mililani Street in Hilo, Hawai‘i. The property evaluated was identified by Tax Map Keys (3) 2-2-030:004 (lot consisting of 0.4171 acres), (3) 2-2-030:006 (lot consisting of 0.8245 acres), (3) 2-2-030:008 (lot consisting of 0.2686 acres), (3) 2-2-030:009 (lot consisting of 0.5165 acres), (3) 2-2-030:0010 (lot

consisting of 0.2479 acres), (3) 2-2-030:0011 (lot consisting of 0.2365 acres), (3) 2-2-030:0012 (lot consisting of 0.8617 acres), and (3) 2-2-030:014 (lot consisting of 0.4018 acres).

Covanta Energy, EIS for 3rd Boiler, City and County of Honolulu H-Power Facility, HI, 2008-2009 – Contract Value $1,000,000. EIS and Permitting Task Manager: Performed an Environmental Impact Statement to address the impact of a third combustion unit at the City and County of Honolulu H-Power waste to energy facility. Potential impacts addressed include noise, traffic, historical resources, soil, groundwater and surface water. Air impacts also addressed in a PSD permit. Additional permitting support required for operation and construction of the facility included the solid waste management permit, NPDES operation, Conditional Use Permit, Wastewater Discharge, Stormwater, water use permit, Air Navigation and Clearance for Work in Airport Hazard Area, grading and drainage, NPDES Construction, well construction and pump installation and a permit to operate a sewage treatment facility. Dr. Okoji was also tasked with performance of a comprehensive multimedia risk assessment according to USEPA Human Health Risk Assessment Guidance for Combustor Facilities to address the human and ecological health impacts of the proposed combustion unit on neighboring communities. Also produced a Material Separation Plan and collected data for use in a Lifecycle Analysis pertaining to the recycling waste stream for the City and County of Honolulu.

Covanta Energy, Stormwater Monitoring Plans, H-Power Facility, HI, 2011-2012 – Contract Value $30,000. Principal in Charge: Produced stormwater management plans for the H-Power facility. Plans included the facility Stormwater Management Plan (SWMP), Stormwater Pollution Control Plan (SWPCP) and Spill Prevention, Control, and Countermeasure Plan (Oil And Petroleum Products). Represented Covanta Energy in meetings with the State Department of Health during site inspections.

East West Center, University of Hawaii, Manoa Campus, Honolulu, HI, 2013-2014 – Contract Value $20,000. Principal in Charge: Completed the NPDES permit application (Appendix L) for the East West Center decorative Koi pond. Performed initial discharge sampling for inclusion in the application. Negotiated chemical of concern list with the HDOH Clean Water Branch and enforcement division.

FOPCO, Fort Shafter Building 145, Honolulu, HI, 2015-2016 – Contract Value $25,000. Principal in Charge: Prepared the Spill Prevention, Control, and Countermeasure Plan (SPCCP) for the removal, decontamination and disposal of one 12,000 gallon UST at Fort Shafter Building 145. Petroleum releases from these tanks which may be discovered during construction are subject to regulation and Hawaii Department of Health oversight under Hawaii Revised Statutes Chapter 128D, Hawaii Environmental Response Law (HERL) and Hawaii Administrative Rules Title 11, Chapter 451, State Contingency Plan. Provided environmental professional (EP) services during tank removal. Authored closure report.

FOPCO, Schofield Barracks, Wahiawa, HI, 2015-2016 – Contract Value $25,000. Currently preparing the Spill Prevention, Control, and Countermeasure Plan (SPCCP) for the removal, decontamination and disposal of one 3,000 gallon UST at Schofield Barracks Building 2072. Petroleum releases from these tanks which may be discovered during construction are subject to regulation and Hawaii Department of Health oversight under Hawaii Revised Statutes Chapter 128D, Hawaii Environmental Response Law (HERL) and Hawaii Administrative Rules Title 11, Chapter 451, State Contingency Plan. Provided environmental professional (EP) services during tank removal. Authored closure report.

Cloudbreak Hawaii LLC, Kapolei, O‘ahu HI, 2013-2014 – Contract Value $35,000. Principal Planner: Prepared a HEPA and NEPA compliant EA for Cloudbreak Hawaii, LLC. The EA discussed the addition of affordable housing units to Hale Uhiwai Nalu, an 80-unit veterans housing and services building at Barbers Point. The project consisted of constructing additional structures on an adjacent parcel of land, approximately 6,000 square feet. The Proposed Action would add up to 72 affordable housing units for very low to moderate income households and make support services such as outreach, substance abuse treatment, employment training and placement, and housing transition easily accessible. The project was partially funded through the State Rental Housing Trust Fund (RHTF) and was conducted in collaboration with the Hawaii Housing Finance and Development Corporation and U.S. Department of Veteran Affairs. Public and various federal, state and city agencies were consulted during the EA process. Evaluations conducted as part of the planning initiative concentrated on the following potentially affected environments: Soils, Topography, and Geology, Ground and Surface Water, Air Quality and Climate, Biological Resources, Historic/Archaeological Resources, Land Use, Hazardous/Toxic Wastes, Utilities and Noise. No significant impacts were determined for the proposed project. Specific supplemental studies included an archeological inventory survey and site-specific biological resources survey.

American Piping and Boiler, Campbell Industrial Park, Kapolei, HI, 2012-2013 – Contract Value $50,000. Principal in Charge: Prepared a Grading and Drainage Permit Application to convert a vacant lot to a construction laydown parcel for use in the H-Power expansion project. Project site is located in the City and County of

Honolulu, Special Management Area and Coastal Zone Management Area. Completed and submitted the SMA permit application which required that an environmental assessment be conducted for the project. ERA was successful in negotiations with the City and County Department of Environmental Services and the Land Use Approvals division to exempt the project from the Chapter 343 requirement. The exemption required consultation with multiple agencies including the State of Hawaii Historic Preservation Division, USFW, Land Use Approvals, DBEDT, DoA, OHA, etc. The exemption allowed the project to move forward without unnecessary delays due to the EA process. ERA also provided services for completion of a building permit for the construction of 2 driveways and an NPDES permit application for the Department of Health Clean Water Branch. NPDES permit application required completion of a Storm Water Pollution Prevention Plan.

City and County of Honolulu, Department of Environmental Services, H-Power, HI, 2015-2016 – Contract Value $25,000. Principal in Charge: Prepared an Emergency Action Plan for the City and County facility for the H-Power facility located in Campbell Industrial Park. The plan was composed of a Level 1 plan and Level 2 conditions and requirements. The H-POWER Emergency Action Plan delineates the authorities, responsibilities and procedures to be followed by employees in effectively responding to a disaster within the facility. The primary function of the H-POWER Emergency Action Plan is to prepare the facility to respond effectively and quickly to emergencies that occur within the facility or within the community. The plan governs the facility and its employees in the event of an emergency or disaster.

Belt Collins, Island of Hawai'i. Kawaihae-Mamalahoa Connector Road EIS Technical Support, HI, 2008-2009 – Contract Value $40,000. Project Manager: Provided EIS technical support for the construction and operation of a bypass road in the Mamalahoa, Waimea area of the Island of Hawai'i. Specifically subcontracted by Belt Collins to determine the environmental impacts of the proposed roadway on adjacent organic and conventional farm lands. Impacts assessed included the change in surface water potential and productivity of the land. Conversely, the assessment also evaluated the impact of farming practices on potential future users of the proposed road.

Kerr Mill, MA, 2000-2001 – Contract Value $100,000. Task Manager: Performed data summary and risk assessment calculations on a historical petroleum product spill site. Contaminants of concern included volatile and semivolatile petroleum hydrocarbons including naphthalene, 2-methylnaphthalene, benzo(a)pyrene and anthracene. Risk assessment used to help define the cleanup level goals and areas of remediation.

Jan Chatten-Brown and Associates, CA, 2000-2001 – Contract Value $10,000. Project Manager: Provided litigation support regarding a class action lawsuit claiming adverse health effects from exposure to organophosphate pesticides. Comprehensively evaluated and summarized toxicological data involving neurotoxicity, hepatotoxicity, renal toxicity and carcinogenesis.

Alston, Hunt, Floyd & Ing, HI, 2001-2002 – Contract Value $25,000. Project Manager: Provided litigation support for a residential property that was contaminated with arsenic. Advised attorneys on the toxicity of arsenic compounds, reliable biomarkers of exposure, sampling methods and potential exposure to other toxic compounds or biological agents.

Confidential Client, GA, 2002-2003 – Contract Value $20,000. Project Manager: Prepared toxicological summaries on creosote and related mixtures in support of litigation.

Confidential Client, AZ, 2002-2003 – Contract Value $80,000. Project Manager: Performed a comprehensive review of a Monte-Carlo Based Risk assessment on a former MGP site in Arizona. Chemicals identified in samples from the Site include the semi-volatile organic chemicals called polynuclear aromatic hydrocarbons (PAHs) found in lampblack and volatile organic chemicals: benzene, toluene, ethylbenzene, and xylenes (BTEX) found in fuels.

California EPA, CA, 2002-2003 – Contract Value $100,000. Project Manager: Performed comprehensive literature review and analysis on the toxic properties of ethyl chloride. Conclusions used for the quantitative estimation of risk for regulatory purposes.

Graduate Student Researcher for Dr. John Froines, Professor of Environmental Toxicology and Director of the Center for Occupational and Environmental Health, UCLA: Project Manager: Examined the toxicokinetic and molecular events involved in arsenic induced carcinogenesis. Collaborated with the National Institute of Environmental Health Sciences (NIEHS) and the National Toxicology Program (NTP) in designing and conducting subchronic and chronic NTP animal bioassays, pharmacokinetic analysis, pre-clinical, GLP pharmacology, toxicology and safety studies in animals with the goal of regulating arsenic in drinking water.

Undergraduate Researcher for Dr. Jonathon E. Ericson, Professor of Environmental Analysis & Design, University of California, Irvine: Project Manager: Performed comprehensive literature review and analysis on the toxic effects of lead. Identified potential health implications and possible initiatives for soil remediation.

Graduate Student Researcher for Dr. Michael Collins, Professor of Environmental Toxicology, UCLA: Project Manager: Researched the impact of nutritional deficiencies (i.e. folate, methionine, choline and vitamin B12)

on the occurrence of neural tube defects in rats and mice. Participated in the development of an animal model for abnormal neural tube closure using a combination of in vivo and in vitro cell culture techniques. Performed gross necropsies, folate measurements via the bacterial growth assay, choline measurements via GC-Mass Spectroscopy and homocysteine measurements via HPLC in serum and other bodily tissues.

Clinical Research Assistant for Dr. Marian Swendseid, Professor of Nutrition, UCLA: Project Manager: Provided scientific and laboratory support for a clinical nutrition study conducted by the Western Human Nutrition Research Center and UCLA on choline status dependence on folate nutriture.

Researcher: Dr. Ricardo De Leon, Professor of Environmental Analysis and Design, University of California, Irvine: Project Manager: Assisted in developing a PCR based assay for analyzing environmental water and soil samples containing infectious microorganisms. Compared the newly developed PCR method with the standard plaque assay.

Research: Dr. Roger Fujioka, Professor of Microbiology & Head of the Water Resources Research Center, University of Hawai'i at Manoa: Project Manager: Quantified E. Coli levels in soil samples. Quantified nitrogen, phosphorous, coliform and E.coli levels in environmental water samples.

Industrial Hygiene

MMI Realty Services Inc (Kahala Mall Flood), Honolulu, HI, Project Manager: Provided 24- hour/day on call support to MMI Realty Inc. following a significant flooding event in which the entire indoor mall was flooded to approximately 1-2 feet of storm water. Provided remedial workplans and specifications for immediate water removal and drying of the interior space. Instructed and oversaw mall representatives and their contractors during remedial efforts. Due to Dr. Okoji's disaster management efforts, the mall was reopened 4 days after the water intrusion event. Following emergency actions, MMI Realty retained Dr. Okoji's team to manage all non-emergency remediation at the mall. Non-emergency work included drying of internal wall spaces in mall common areas and later removal of significantly flood impacted building materials. Flood and mold assessments were conducted for all mall responsible areas as well as separately for tenant responsible areas. Work plans were provided to MMI Realty Inc, Kahala Mall tenants and their contractors detailing the specific protocols and precautions necessary during removal actions. Dr. Okoji created a database of every wall or building material affected by the flood. Data presented in tabular and graphic formats. Photodocumentation was also provided for all affected demising walls. Provided remedial oversight and post-remedial verification assessments during work activities. Ensured all contractors performed work to protocol and the appropriate standard of care. Periodically sampled building materials and air for mold to protect client from future claims. Provided hourly work logs and daily summaries to client ensuring they received maximum insurance reimbursement. Provided experts witness testimony during litigation proceedings including during appraisal hearings. Client received approximately 90% of their insurance claim in large part due to Dr, Okoji's testimonies. Project was one of the largest flood remediation jobs in the State of Hawaii.

AIG Insurance Company, Grand Wailea, Maui, HI, Principal Scientist:: Provided on call principal level consulting services for a large insurance carrier addressing a mold remediation claim. Verified the necessity for mold remediation and corroborated claim against actual remediation. Provided detailed reports including HVAC system design recommendations to prevent recurrence. Services were provided over a 1-year period.

Confidential Client and Location, Honolulu, HI, Principal Scientist: Provided litigation support for a property transfer. Evaluated for the presence of residual methamphetamine and chemicals related to its manufacturing. Collected wipe samples of left in place building material and belongings in the structure. Collected air samples for volatile constituents. Provided expert witness reports to validate the requirement for additional remediation.

Goodsill Anderson Quinn & Stifel, Confidential Site, Wailea, HI, Principal Scientist: At the request of counsel, Environmental Risk Analysis LLC (ERA) performed a comprehensive review of the available mold assessments and relevant home-inspector documents relating to the plaintiff's claims that the defendant intentionally or negligently misrepresented the water or mold condition of the property prior to sale. The plaintiffs alleged that undisclosed leaks in the shower areas of the condo caused mold/moisture issues which required remediation. ERA's review focuses on the validity of claims associated with water intrusion and mold noted in the various reports and the potential effect on health. ERA identified falsehoods or misleading claims of plaintiff experts reports and assessments.

Bays Lung Rose & Holma, Attorneys at Law, Confidential Site, Honolulu, HI, Principal Scientist: At the request of counsel, Dr. Okoji performed a comprehensive review of relevant medical documents related to the defendant's claim of significant health effects from a neighbors willful and illegal application of fipronil and bifenthrin. Reviewed relevant scientific literature and provided an expert witness report.

Monkeypod Kitchen, Ko Olina Station, Kapolei, HI, Principal Scientist: ERA was engaged to provide a water intrusion assessment and remediation work plan for the Monkeypod Kitchen located at 92-1048 Olani Street, Suite 4-107, Kapolei, HI 96707. According to Monkeypod Kitchen there have been multiple water intrusion events over the last year that are related to faulty construction. ERA used an Infrared camera, a Delmhorst pin-type moisture meter and visual assessment to evaluate the extent of water intrusion at the Site. Evidence of significant water intrusion was observed throughout the space. While water did not originate from a sewer line backup, the water intrusion event as observed and described was determined to be Category 3. Category 3 waters are defined by the Institute of Inspection, Cleaning and Restoration Certification (IICRC) as grossly contaminated and may contain pathogenic, toxigenic or other harmful agents. Wood flooring throughout the lower level of the restaurant was observed to be severely water impacted and was noted with elevated moisture, water staining and buckling. Significantly damaged wood flooring was removed and replaced with plywood in a several areas. These impacts are assumed to be the results of water infiltration from the center island bar area that houses multiple sources of water including sinks, dishwashers and ice makers. Water is believed to exit the island bar area via infiltration through or over the cove base of the perimeter tiles. Additional areas of water impacts were noted in the kitchen area and upstairs bar and wine cellar. The wine cellar interstitial wall spaces were determined to be severely mold-impacted and due to inadequate insulation. ERA recommended immediate remedial actions at the Site. Following remedial actions, a through post-remedial verification assessment was conducted of each impacted space that included a moisture assessment of left-in place building materials, bacterial swab sampling and air testing for mold.

The Beall Corporation, Waikiki Pavillion, 1925 Kalakaua Ave, Honolulu, HI, Principal Scientist: On May 2, 2014 Environmental Risk Analysis LLC (ERA) was contacted to provide a water intrusion assessment and remediation work plan for the Waikiki Pavilion retai1 stores located at 1925 Kalakaua Ave, in Waikiki, Honolulu, Hawaii. Dr. Russell Okoji was onsite at approximately 9:15pm approximately 45 minutes following notification. According to the Beall Corporation, the origin of the water intrusion was a sewer line backup. Waialua Plumbing was observed in the loading area attempting to unclog the waste line. Four tenants occupied the retail area of the Waikiki Pavilion (ABC Store, Vitamin and Supplement, Subway and Vapor. According to tenant accounts, wastewater entered into the retail areas via plumbing lines connected to the main waste line shared with the Waikiki Pavilions Condominium. ERA used an Infrared camera, a Delmhorst pin-type moisture meter and visual assessment to evaluate the extent of water intrusion at the Site. Evidence of significant water intrusion in each of the four spaces were noted. The water intrusion event as observed and described was determined to be Category 3. Category 3 waters are defined by the Institute of Inspection, Cleaning and Restoration Certification (IICRC) as grossly contaminated and may contain pathogenic, toxigenic or other harmful agents. ERA recommended immediate implementation of remedial actions at the Site and provided detailed work plans for each space. Provided on-call remedial oversight and a post-remedial Category 3 water intrusion assessment

William Scottsman, Pearl City, HI, Principal Scientist: Performed a comprehensive moisture and mold assessment for 2 double wide modular trailers used by HECO at their modular trailer lot in Pearl City, Hawaii. HECO mold consultants were called to determine source of water and mold with no success. No overt sources of water intrusion were noted. ERA evaluated the space and determined that mold growth was a result of inappropriate temperature and humidity control. ERA provided work plans and specifications for remediation, remedial oversight and post-remedial verification. Dr. Okoji attended meetings on behalf of William Scottsman with HECO facility maintenance personnel. Provided recommendations to prevent recurrence including materials for build back and HVAC system controls.

John Bansemer Construction, Asbestos Survey, Kealakekua, HI, Principal in Charge: Environmental Risk Analysis, LLC (ERA) was retained by John Bansemer Construction Inc. to conduct an asbestos assessment of the space occupied by the University of Hawaii, West-Hawaii campus located at 81-964 Haleki'i Street in Kealakekua, Hawai'i. This survey was performed in accordance with federal, state, and local regulatory requirements.

Limberg Trust, Asbestos Survey, Kealakekua, HI, Principal in Charge: Environmental Risk Analysis, LLC (ERA) was retained by the Limberg Trust to conduct an asbestos assessment of the space occupied by the University of Hawaii, West-Hawaii campus located at 81-970 Haleki'i Street in Kealakekua, Hawai'i. This survey was performed in accordance with federal, state, and local regulatory requirements.

Occidental Insurance, Hazardous Materials Survey and Remediation, Honolulu, HI, Principal in Charge: Performed a comprehensive hazardous materials survey and asbestos remediation at a 10,000 square foot facility located at the current Occidental Insurance building. Provided air monitoring for the duration of the remediation process to verify that the remedial containment and High Efficiency Particulate Air (HEPA) exhaust filter were working efficiently. Asbestos results were within acceptable limits (less than or equal to 0.01 fibers per cubic centimeter of air sampled via Phase Contrast Microscopy (PCM)) for all air monitoring locations. Air monitoring locations were located at the containment entrance and at the exhaust output. Additional air samples collected from an adjacent office space (per tenant request) did indicate an elevated number of particulate fibers as analyzed using

PCM. PCM does not differentiate between fiber types (asbestos, dust, cotton, fiber glass, etc.). Confirmation Transmission Electron Microscopy (TEM) analysis of these samples resulted in <0.0006 asbestos fibers per cubic centimeter of air, which is within acceptable limits. Clearance air samples collected at completion of the abatement activities were within acceptable limits (less than or equal to 0.01 fibers per cubic centimeter of air sampled). The abated space was cleared for reoccupancy. Post-remedial visual verification also confirmed that asbestos containing materials (as identified in the ERA March 2010, Asbestos Survey) were properly abated.

Hawai'i State Department of Accounting and General Services (DAGS), Kaneohe, HI, Project Manager: Interpreted lead and asbestos data collected at King Intermediate School classrooms and buildings. Worked closely with the DOH Asbestos Division to determine potential health risks and to determine a consistent health message for the public. Performed toxicological and environmental consulting in meetings with DAGS, the Department of Education (DOE) and King Intermediate staff. Presented a discussion of the health effects of lead and asbestos at a public meeting. Provide information fact sheets on the health effects of lead and asbestos. Provided justification letters required for reoccupation of King Intermediate. Also instrumental in quelling fears of neighboring residents who may also have been exposed to low levels of asbestos and lead.

Department of Agriculture Lead-based Paint Survey, HI, Principal in Charge: Performed a lead paint survey at nine (9) Department of Agriculture facilities located on five (5) islands. The survey included field investigation and sampling, testing and analysis, report of findings, recommendations and a cost estimate of corrective measures. The lead paint assessment consisted of the use of an x-ray fluorescence (XRF) analyzer and confirmation lead paint chip samples. The XRF analyzer was used as a screening device on all internal and external painted surfaces of the facilities. Lead paint chip samples will be collected randomly to corroborate XRF results.

Whole Foods, Kahala Mall, Honolulu, HI, Project Manager: Conducted a comprehensive hazard materials assessment that included assessment for mold, asbestos, lead, PCBs and arsenic. Provided specification documents for remediation as well as request for proposal offerings on behalf of the client. Performed site walk with prospective remedial contractors. Performed oversight and ambient and personal air monitoring during remediation activities.

American Savings Bank, Kahului Branch, Principal Scientist, Performed a facility wide hazardous materials survey for lead and asbestos containing materials. Provided remedial specifications for identified LBP and ACM. Procured remediation contractors and oversaw remedial efforts. Post-remedial verification report also provided.

Loveland Academy, Honolulu, HI: Principal in Charge**:** Environmental Risk Analysis LLC (ERA) was retained by Loveland Academy to conduct a Three-Year Asbestos Hazard Emergency Response Act (AHERA) asbestos re-inspection of the Loveland Academy campus buildings. The re-inspections were performed to comply with applicable Federal and State guidelines requiring that secondary schools (K-12) be re-inspected every three years for any changes in the condition of assumed and confirmed asbestos-containing building materials (ACBMs). ERA re-inspected accessible areas within each building and noted ACBM conditions using the seven AHERA assessment categories. ERA was then re-contracted by Loveland to perform third-party oversight of remedial activities.

O'Connor Playdon & Guben LLP, Kailua Kona, HI, Principal Toxicologist: ERA was hired to provide expert witness and consulting services in support of litigation. ERA was requested to review defendant expert witness reports and provide rebuttal. ERA provided multiple declarations to support plaintiff argument. Also provided sampling and analysis services for mold and sewage related organisms. Designed studies to determine source of water intrusion and was a resource to plaintiff medical experts regarding use of medical tests to help support the case. Project is Ongoing.

American Savings Bank, Kahului Branch, Principal Scientist: Performed a facility wide mold and water intrusion assessment at the American Savings Bank, Kahului Branch. Assessment included over 30 distinct spaces within the structure including a separate loan office and former doctor's office space. Indoor air samples were collected from approximately 10 spaces presumed mold impacted. The assessment revealed significant and excess mold spores in a single area historically impacted by water intrusion. Provided mold remediation protocols and facilitated remedial efforts.

American Savings Bank, Lahaina, HI, Principal Scientist: Performed a facility-wide mold assessment of the American Savings Bank, Lahaina Branch. Provided an assessment report and mold remediation protocols. Provided third party oversight of remedial activities.

American Savings Bank, Kailua, HI, Principal Scientist: Performed a comprehensive moisture and mold assessment which included the HVAC system. Utilized bore scope cameras, infrared thermal imaging cameras, and direct handheld moisture meters to identify moisture impacted areas. Performed air sampling to identify potential health risks. Conducted Post-remedial verification assessments.

American Savings Bank, Kealakekua Branch, Principal Scientist: Performed a facility wide mold and water intrusion assessment. Indoor air samples were collected from 8 areas presumed mold impacted. The assessment

revealed significant and excess mold spores in multiple areas. Provided mold remediation protocols and facilitated remedial efforts.

Li & Tsukazaki, Attorneys at Law, LLC, Principal Scientist**:** Environmental Risk Analysis, LLC (ERA) was retained by Mr. William McCohnell through Philip Li, Esq to conduct a limited moisture and mold assessment of the condominium unit designated by Unit # 1302 at 19 Pohina Street, Wailuku, Maui, Hawaii. ERA provided a third party independent post-remedial verification assessment of the unit, visually assessed for the presence or absence of suspect visible mold growth (SVMG) collected tape lift samples for laboratory confirmation. Data was collected for potential litigation.

Kincaids (Restaurants Unlimited Inc.), Honolulu, HI, Project Manager: Provided initial sewage intrusion assessment and remediation protocol following a significant sewage backflow event of Kincaid's neighboring tenants at the Ward Warehouse Center. Protocol included standard of care procedures to remediate the area, protect public health and limit client's liability. Provided on-call 24-hr support during the critical first days of the sewage backup.

Hawai'i State Department of Accounting and General Services (DAGS), Records Warehouse, Honolulu, HI, Project Manager: Provided emergency on-call consulting services for the DAGs records warehouse in Mapunapuna, HI. Provided mold investigation and air sampling protocols, mold survey and remedial plan. Discussed potential risks with warehouse staff.

Hawai'i State Public Library System, HI, Project Manager: Currently providing the Hawai'i State Library System with open ended support for HVAC system evaluations, indoor air quality and mold assessments. Performed HVAC system evaluations and indoor air quality assessments. Provided detailed recommendations regarding HVAC system efficiency and upgrades, remediation protocols, and remediation oversight.

Hawai'i State Public Library System, HI, Project Manager: Performed a water intrusion and mold assessment at the Ewa Beach Public Library. Provided mold remediation work plans for books and building materials impacted by mold. Provided third party oversight during remedial activities and post-remedial verification following clean up.

Honolulu Sports Medical Center: Project Manager: Provided on-call 24-hour support to hospital staff after a "black" water flooding event at the facility. Provide a comprehensive moisture assessment to determine extent of impacts using handheld moisture meters and infrared cameras. Provided work plans for remediation and reviewed plans provided by the building manager's consultants. Oversaw remedial efforts and conducted air sampling. Ensured that remediation was performed according to the standard of care at the time the assessment was conducted

A&B Properties Inc., Stangenwald Building, 119 Merchant Street, HI, Principal Scientist: Provided a Category 3 Water Intrusion Initial Assessment, Remediation Work Plan and Post-remedial Assessment. ERA used an Infrared camera, a Delmhorst pin-type moisture meter and visual assessment to evaluate the extent of water intrusion at the Site. The Site consisted of the entire basement of the building as well as a large portion of the 1st floor ground level.

Aloha Petroleum, Kaneohe HI, Project Manager: First responder to a "black" water backflow event at an Aloha Petroleum MiniMart. Provided an impact assessment report and workplans for remediation. Provided remedial oversight and fecal coliform indicator post-remedial verification testing in air and on surfaces. Ensured cleanup and remediation were performed according to the proper stand of care in an effort to obtain maximum insurance reimbursement and to limit future liabilities. Provided expert witness deposition in case against the party responsible for the flood.

Confidential Client, Koloa, HI, Project Manager: Provided litigation support for a potential carbon monoxide exposure event. Provided and implemented workplans to simulate and/or mathematically model exposures to a gasoline powered concrete cutter.

Kona Sea Villas, Kailua-Kona, Hawai'i and Fairway Villas, Waikoloa, Hawai'I, Project Manager: Provided mold-sampling services to determine limited speciation of fungi found on site and recommended remedial actions. Confirmation sampling and consultation services continued through completion of construction activities. Provided detailed remediation plans, oversight and post-remedial verification.

Hospice of Kona, Kailua-Kona, Hawai'i: Project Manager: Performed mold-sampling services to determine limited speciation of fungi found on site. Provided informational training to employees and recommended remedial actions. Conducted HVAC system evaluation and provided specifications to prevent mold growth and recommendations to increase HVAC efficiency.

Kohala Coast Mold Assessment: Project Manager: Provided mold-sampling services for multiple structures to determine limited speciation of fungi found on site and recommended remedial actions. Provided detailed remediation plans and scopes of work. Evaluated HVAC system and quality of indoor air via spore trap analyses.

Lerma and Goya: Project Manager: Provided mold sampling and consulting services for a law office in Hilo, Hawai‘i. Findings and Recommendations successfully used in claim against insurance company for damages related to a leaky toilet and substantial mold infestation in subfloors and adjoining walls.

Presentations/Publications

Okoji, R.S. & Froines, J.R. Sodium arsenite administration via drinking water increases genome-wide and Ha-ras DNA methylation in methyl deficient C57Bl/6J mice. *Carcinogenesis,* **23,** 777-785.

Okoji, R.S., Hernandez, A., Leininger, J.R., Maronpot, R.R. & Froines, J.R. Subchronic animal bioassay of sodium arsenite in methyl-deficient male C57Bl/6J mice. Submitted to Environmental Research.

Okoji, R.S., Maronpot, R. & Froines, J.R. Chronic animal bioassay for sodium arsenite in methyl deficient C57Bl/6 mice. Submitted to *Environmental Health Perspectives*.

Okoji, R.S., Leininger, J. & Froines, J.R. Subchronic Toxicity Study of Sodium Arsenite in Methyl-Deficient Male C57BL/6 Mice. In: Arsenic Exposure and Health Effects. 1999. (eds. Chappel, W.R., Abernathy, C.O. & Calderon, R.L.) Elsevier Science Ltd, Oxford, UK, pp. 225-232.

Froines, J., Collins, M., Fanning, E., McConnell, R., Robbins, W., Silver, K., Kun, H., Mutialu, R., **Okoji, R.,** Taber, R., Tareen, N. & Zandonella, C. 1998. Health and Environmental Assessment of MTBE. Report to the Governor and Legislature of the State of California as sponsored by SB 521. 1999: Volume II: Human Health Effects. An evaluation of the Scientific Peer-Reviewed Research and Literature on the Human Health Effects of MTBE, its Metabolites, Combustion Products and Substitute Compounds. University of California: available at http://tsrtp.ucdavis.edu/

Okoji, R.S., Hernandez, A., Cebrian, M. & Froines, J.R. Toxicokinetic profile of arsenic metabolites in C57Bl/6 mice maintained on methyl-deficient diets. In Progress.

Makua Military Reservation Community Meetings: Supported the USARMY Garrison in multiple public meeting venues specifically providing human health risk information to the public. (2014-2015).

Keaukaha Community Meeting: Air sampling in a residential neighborhood (2005).

Lead In Drinking Water KHON 2 News Story: Hawai‘i Department of Health (2008).

King Intermediate School, Hawai‘i State Department of Accounting and General Services/ Department of Education. Health effects of Lead and Asbestos (December 2004).

Orote Community Meeting, Guam: Health risks associated with the ingestion of seafood from Agat Bay (2003).

Ordnance Reef Community Meetings: Health risks from ingestion of seafood sourced from Ordnance Reef. (2010-2012).

University of Hawai‘i: Guest Lecturer: Metal Toxicology (2000).

Lorman Education Services: Solving Water Intrusion and Mold problems in Hawai‘i. Water Intrusion: The Standard Of Care, Health effects of Molds (2006).

Lorman Education Services, Solving Water Intrusion and Mold problems in Hawai‘i. Health effects of Molds. 2005.

USEPA, San Francisco, CA: Health risks associated with recreational activities in Agat bay and the ingestion of seafood from Agat Bay, Guam.

Fourth International Conference on the Health Effects of Arsenic: Sodium arsenite administered in drinking water reduces DNA methylation in methyl-deficient C57BL/6 mice, 2000.

Toxic Substances Research and Teaching Program (TSR&TP): 12th Annual Research Symposium. Presentation: Arsenic Induced Carcinogenesis: Perturbations in p53 and Ha-ras methylation patterns.

Toxic Substances Research and Teaching Program (TSR&TP): 11th Annual Research Symposium. Presentation: Arsenic Induced Carcinogenesis: A murine model for the induction of cancer in methyl-deficient C57Bl/6J mice.

Third International Conference on the Health Effects of Arsenic: Arsenic Induced Carcinogenesis: A murine model for the induction of cancer in methyl-deficient C57Bl/6J mice, 1999.

Commendations

5/06 Commendation Letter from the Operations Director at Kahala Mall for services performed during a severe flooding event.

12/04	Commendation letter from the Department of Accounting and General Services for risk communication support regarding asbestos and lead at King Intermediate School, Kaneohe, Hawai‘i.
8/00 – 9/04	Multiple commendations from U.S. Navy and ATSDR for technical support in human health toxicological consulting and community relations
5/99	Recipient of the UCLA School of Public Health Raymond Goodman Scholarship for academic excellence
6/95	Recipient of the Gladys Emerson Award (UCLA) for research in toxicology and nutrition

References

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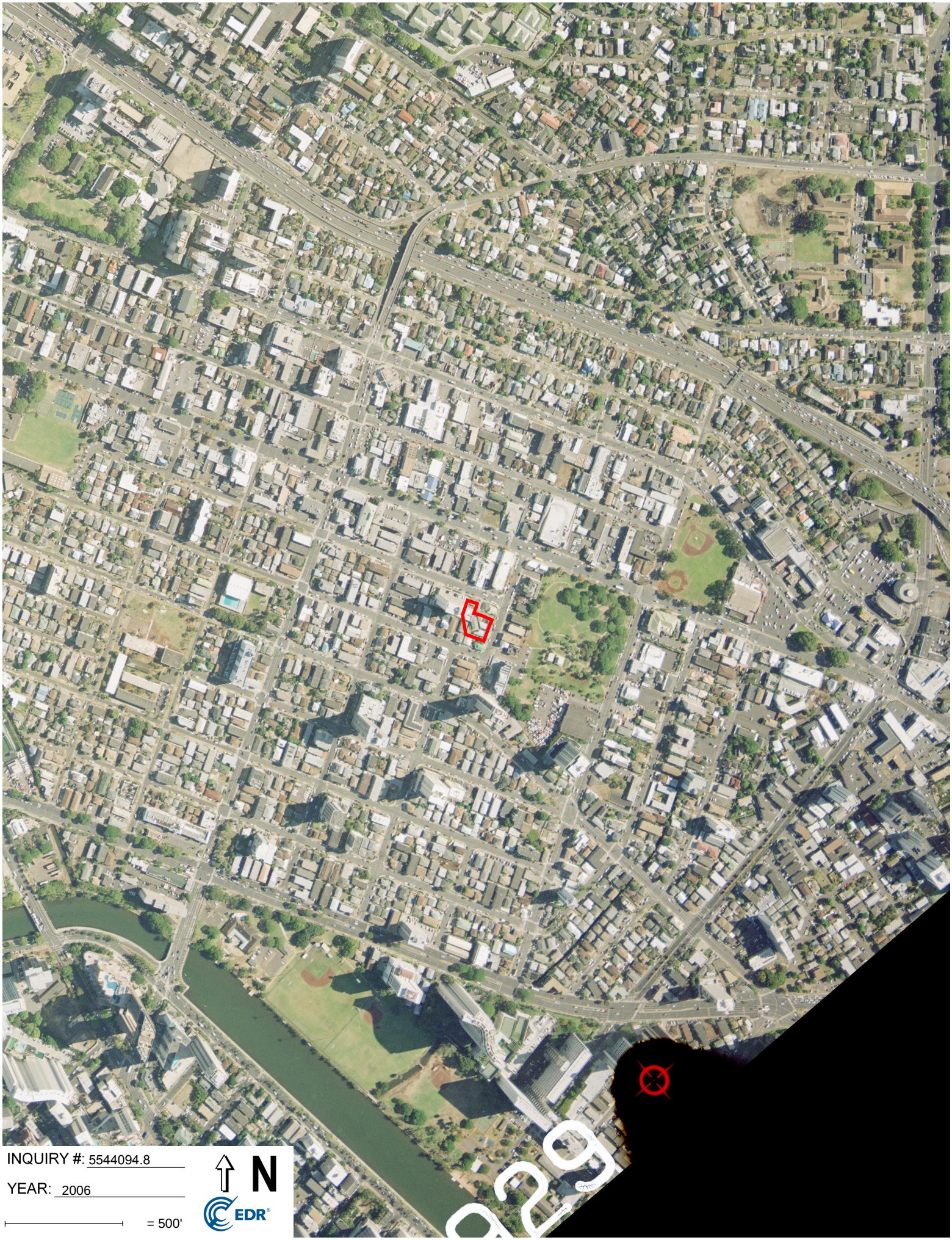
JBPHH, Hawai‘i 96860-3134
Phone: (808) 472-1461
E-mail:brian.whitehouse@navy.mil

Appendix B

AERIAL PHOTOGRAPHS

Environmental Risk Analysis	PROJECT NAME: Phase I Environmental Site Assessment 2139 Algaroba St Honolulu, Hawaii 96826 TMK (1) 2-7-007-016 TMK (1) 2-7-007-051	FIGURE TITLE: Aerial Photograph, 2013 FIGURE NUMBER: Appendix B



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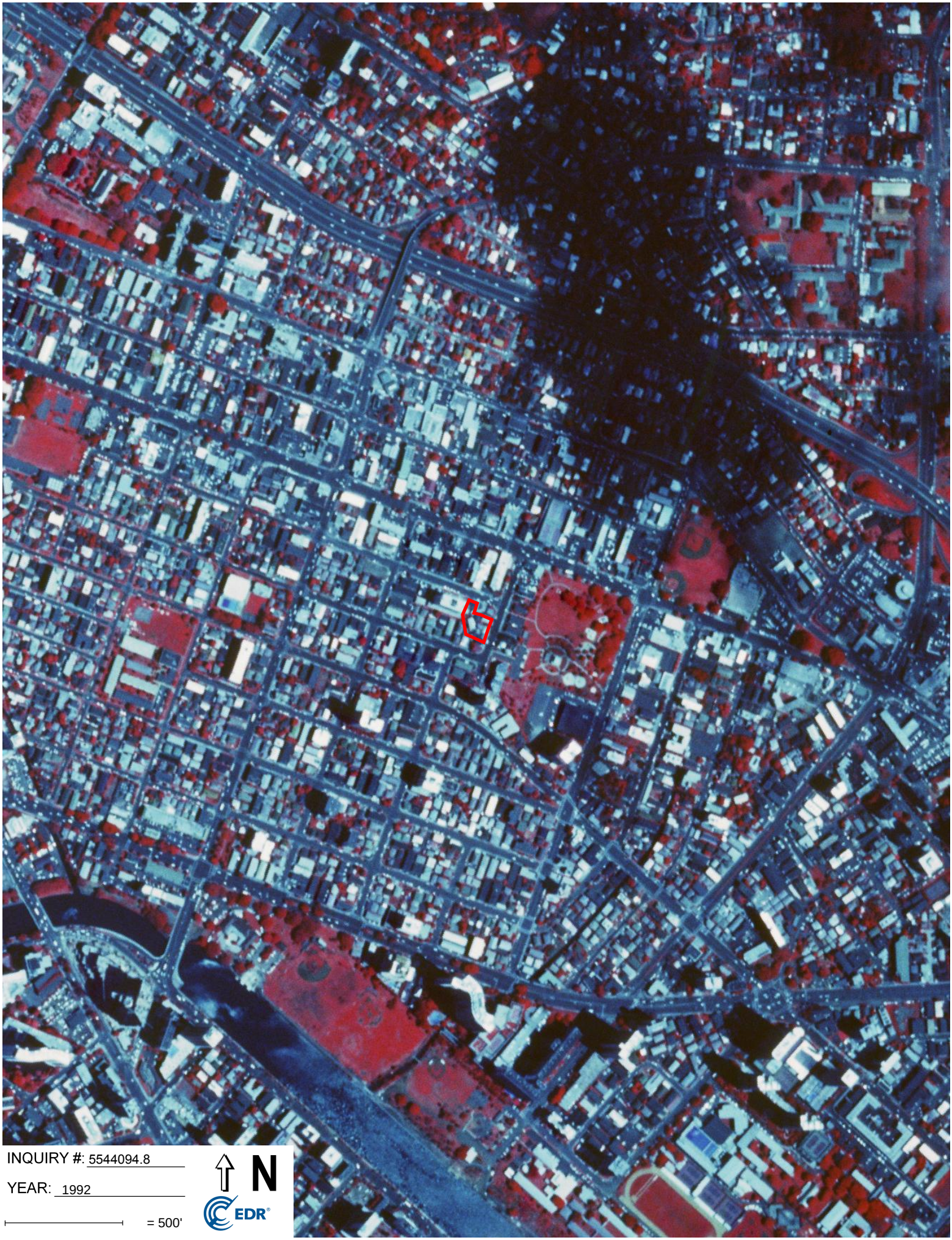
EDR



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EDR

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EDR

INQUIRY #: 5544094.8

YEAR: 1978

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EDR

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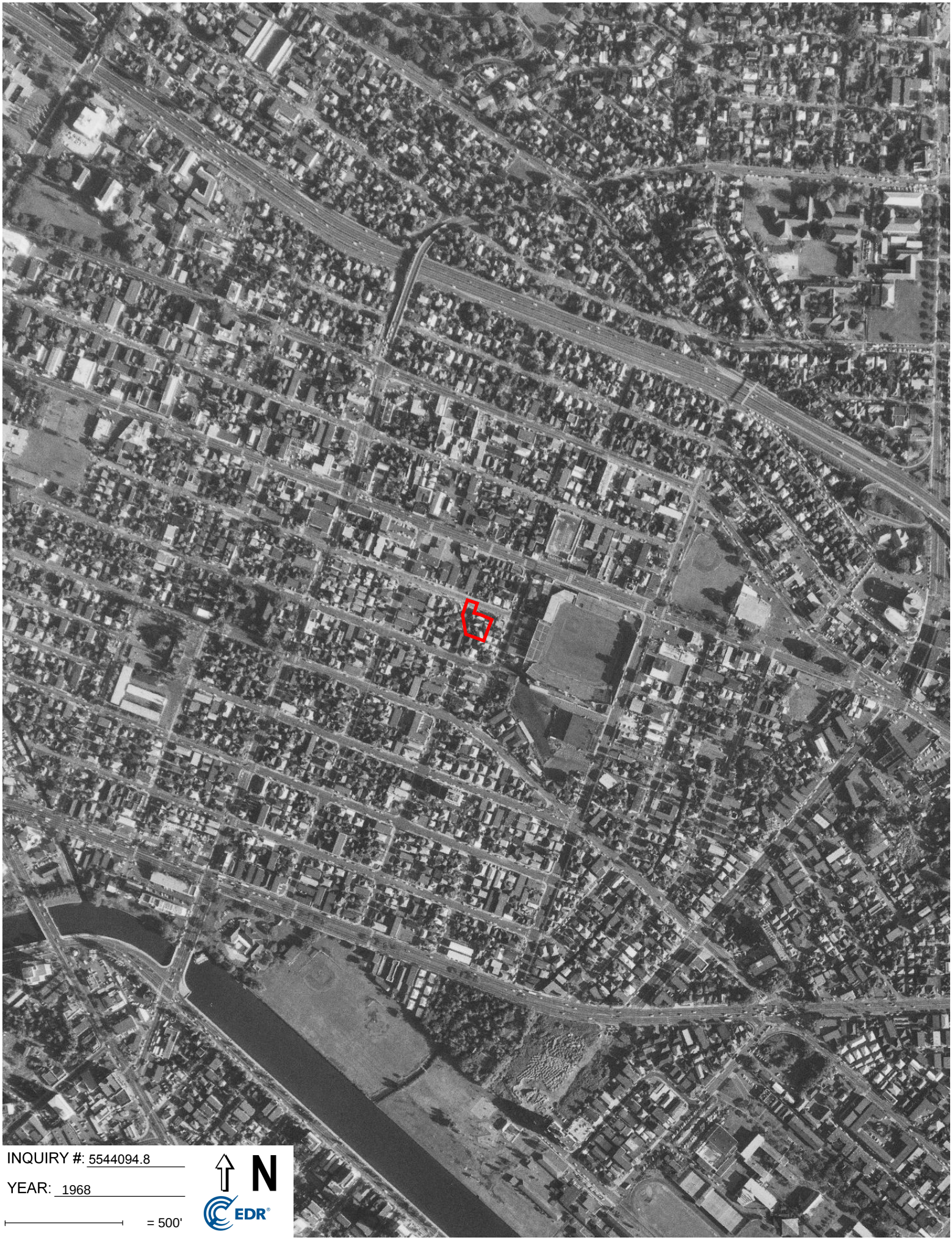
EDR



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YEAR: 1968

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EDR

Appendix **C**

EDR REPORT, SANBORN FIRE INSURANCE MAPS, HISTORICAL TOPOGRAPHIC MAPS, HISTORICAL AERIAL PHOTOGRAPHS AND CITY DIRECTORY

2139 Algaroba Street
2139 ALGAROBA ST
HONOLULU, HI 96826

Inquiry Number: 5544094.2s
January 25, 2019

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

2139 ALGAROBA ST
HONOLULU, HI 96826

COORDINATES

Latitude (North):	21.2928750 - 21˚ 17' 34.35''
Longitude (West):	157.8281210 - 157˚ 49' 41.23''
Universal Tranverse Mercator:	Zone 4
UTM X (Meters):	621561.0
UTM Y (Meters):	2354874.2
Elevation:	7 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5941635 HONOLULU, HI
Version Date:	2013

MAPPED SITES SUMMARY

Target Property Address:
2139 ALGAROBA ST
HONOLULU, HI 96826

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	PRESTIGE VALET SVC	2121 ALGAROBA ST APT	EDR Hist Cleaner	Higher	101, 0.019, NW
A2	KIM MARY ANN	2104 ALGAROBA ST APT	EDR Hist Cleaner	Higher	343, 0.065, NW
A3	MC CULLY SUPER SERVI	2105 S KING STREET	EDR Hist Auto	Higher	372, 0.070, NNW
A4	MCCULLY UNION SERVIC	2105 S KING ST	SHWS, LUST, UST, ENG CONTROLS, INST CONTROL,...	Higher	372, 0.070, NNW
A5	TEXACO SERVICE STATI	2105 S KING AND WILI	RCRA-SQG	Higher	372, 0.070, NNW
B6	TOM ISHII'S UNION SE	2114 S KING ST	SHWS	Higher	401, 0.076, North
B7	ISHII ENTERPRISES IN	2114 S KING	EDR Hist Auto	Higher	401, 0.076, North
B8	TOM ISHII'S UNION L-	2114 S KING ST	LUST, UST	Higher	401, 0.076, North
B9	PRECISION DENTAL LAB	2104 S KING ST	RCRA NonGen / NLR, FINDS, ECHO	Higher	422, 0.080, North
B10	LONGS DRUG STORE NO	2220 S KING ST	RCRA NonGen / NLR	Higher	543, 0.103, NE
B11	FRANCIS LEANDRO	2209 YOUNG ST	UST	Higher	613, 0.116, NNE
C12	UNIVERSITY OF HAWAII	2019 S KING ST	LUST, UST	Higher	706, 0.134, NW
D13	CYCLE PLAZA	903 ISENBERG ST	RCRA-CESQG, FINDS, ECHO	Higher	755, 0.143, ESE
14	MCCULLY & MOILIILI S	MCCULLY ST X MOILIIL	UST	Lower	810, 0.153, West
D15	GREEN MILL FOOD MANU	914 COOLIDGE ST	LUST, UST	Higher	884, 0.167, ESE
C16	930 MCCULLY BLDG	930 MCCULLY ST	RCRA NonGen / NLR	Higher	896, 0.170, WNW
E17	HIRONAKA SERVICE STA	2105 S BERETANIA ST	LUST, UST	Higher	897, 0.170, North
F18	PUNAHOU CENTRAL OFFI	2054 YOUNG ST	LUST, UST, Financial Assurance	Higher	908, 0.172, NNW
E19	UNOCAL 76 SS L 4462	2114 S BERETANIA ST	RCRA-CESQG, FINDS, ECHO	Higher	1054, 0.200, NNE
G20	CONTINENTAL AUTO SER	1918 ALGAROBA ST	SHWS, SPILLS	Higher	1079, 0.204, WNW
G21	CONTINENTAL AUTO SER	1918 ALGAROBA ST	RCRA-CESQG, FINDS, ECHO	Higher	1079, 0.204, WNW
G22	GM AUTOMOTIVE CENTER	1918 B ALGAROBA ST	RCRA-CESQG, FINDS, ECHO	Higher	1160, 0.220, WNW
F23	MCCULLY SHELL	1115 MCCULLY ST	LUST, UST, Financial Assurance	Higher	1167, 0.221, NNW
F24	MCCULLY SHELL	1115 MCCULLY ST	RCRA-CESQG	Higher	1167, 0.221, NNW
G25	MCCULLY SERVICE STAT	1901 S KING ST	LUST, UST	Higher	1215, 0.230, NW
H26	ACCU PATH LABORATORY	2469 S KING ST	RCRA NonGen / NLR, FINDS, ECHO	Higher	1249, 0.237, East
I27	HAWAII BIOTECH, INC.	1946 YOUNG ST SUITE	RCRA NonGen / NLR, FINDS, ECHO	Higher	1283, 0.243, NNW
I28	KAPIOLANI MED CTR GE	1946 YOUNG ST STE 40	RCRA NonGen / NLR	Higher	1283, 0.243, NNW
29	LINDSEY'S CHEVRON SE	2404 S BERETANIA ST	LUST, UST	Higher	1310, 0.248, ENE
H30	LONGS DRUG STORE #99	2470 S KING ST	RCRA-LQG	Higher	1319, 0.250, East
31	HONOLULU LIMITED	911 HAUSTEN ST	LUST, UST	Lower	1376, 0.261, ESE
J32	JAPANESE CULTURAL CE	2454 S BERETANIA ST	LUST, UST	Higher	1476, 0.280, ENE
I33	WALLYS GARDEN CENTER	1935 S BERETANIA ST	SHWS, SPILLS	Higher	1478, 0.280, NNW
J34	VARSITY MOTORS, LTD.	2482 S BERETANIA ST	LUST, UST	Higher	1497, 0.284, East
35	KYLE'S SERVICE STA.	2550 S BERETANIA ST	LUST, UST	Lower	1823, 0.345, East
36	C&CH MCCULLY FIRE ST	2425 DATE ST	LUST, UST, Financial Assurance	Lower	1846, 0.350, SE
37	ALEXANDER TOWER	1226 ALEXANDER ST	LUST, UST	Higher	2252, 0.427, NW
38	TEXACO STATION 61100	1119 UNIVERSITY AVE	LUST, UST, RCRA NonGen / NLR	Higher	2278, 0.431, East
39	WILDER AVENUE 7-11 &	2028 WILDER AVE.	LUST, UST, Financial Assurance	Higher	2285, 0.433, NNE

MAPPED SITES SUMMARY

Target Property Address:
2139 ALGAROBA ST
HONOLULU, HI 96826

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
K40	UNIVERSITY 76 / 7-11	2646 S KING ST	LUST, UST, Financial Assurance	Lower	2456, 0.465, East
41	ALA WAI COVE CONDOMI	509 UNIVERSITY AVE	SHWS, SPILLS	Lower	2458, 0.466, South
L42	FUNAI'S UNION SERVIC	1810 KAPIOLANI BLVD	LUST, UST, Financial Assurance	Lower	2548, 0.483, WSW
L43	HAWAII CONVENTION CE	1801 KALAKAUA AVE	SHWS, SPILLS	Lower	2662, 0.504, WSW
K44	2700 SOUTH KING STRE	2700 S KING ST	SHWS, ENG CONTROLS, INST CONTROL, SPILLS	Higher	2670, 0.506, ESE
M45	IOLANI SCHOOL PETROL	563 KAMOKU ST	SHWS, SPILLS	Lower	2713, 0.514, SSE
M46	IOLANI SCHOOL CAMPUS	563 KAMOKU ST	SHWS	Lower	2713, 0.514, SSE
47	ALOHA MOTORS 1777 KA	1777 KAPIOLANI BLVD	SHWS, SPILLS	Lower	2880, 0.545, WSW
N48	FORMER KALAKAUA TRAN	1665 KALAKAUA AVE	SHWS, ENG CONTROLS, INST CONTROL	Lower	2936, 0.556, West
N49	ROGER'S REPAIR INC	1687 KALAKAUA AVE	SHWS	Lower	2938, 0.556, West
50	THE PAVILLION	1925 KALAKAUA AVE	SHWS, SPILLS	Lower	2954, 0.559, SW
51	ROYAL GARDENS HOTEL	440 OLOHANA ST	SHWS, SPILLS	Lower	3041, 0.576, SSW
52	1800 VANCOUVER DRIVE	1800 VANCOUVER DRIVE	SHWS, INST CONTROL, CDL	Higher	3166, 0.600, NNE
53	CHEVRON U.S.A., INC.	2002 KALAKAUA AVE	SHWS, LUST	Lower	3173, 0.601, SSW
54	KAPIOLANI WOMEN'S &	1319 PUNAHOU ST	SHWS, UST, AIRS, Financial Assurance	Higher	3302, 0.625, NW
O55	7-11 KALAKAUA	1323 KALAKAUA AVE	SHWS, UST, Financial Assurance	Higher	3390, 0.642, NW
O56	ALOHA/KING SELF STOR	1414 KALAKAUA AVE	SHWS, ENG CONTROLS, INST CONTROL, VCP	Higher	3438, 0.651, WNW
57	WAIKIKI GATEWAY PARK	2044 KALAKAUA AVE	SHWS	Lower	3464, 0.656, SSW
58	1003 AND 1013 KAHEKA	1003 KAHEKA ST	SHWS	Higher	3664, 0.694, WNW
59	HAWAII HALL	2500 CAMPUS RD	SHWS, SPILLS	Higher	3664, 0.694, NE
60	KING KALAKAUA PLAZA	2080 KALAKAUA AVE	SHWS, LUST, UST, SPILLS	Lower	3693, 0.699, SSW
61	1609 ALA WAI DIESEL	1609 ALA WAI BLVD	SHWS, SPILLS	Lower	3720, 0.705, WSW
62	RITZ CARLTON WAIKIKI	2139 KUHIO AVE	SHWS	Lower	3780, 0.716, South
P63	PUNAHOU SCHOOL WINNE	1601 PUNAHOU ST	SHWS, INST CONTROL	Higher	4067, 0.770, NNW
P64	PUNAHOU SCHOOL FIRIN	1601 PUNAHOU ST	SHWS	Higher	4067, 0.770, NNW
P65	PUNAHOU SCHOOL GRADE	1601 PUNAHOU ST	SHWS	Higher	4067, 0.770, NNW
66	HOBRON HOTEL	1744 KAIOO DR	SHWS	Lower	4123, 0.781, SW
67	HECO SUBSTATION: MAK	1544 MAKALOA ST	SHWS, INST CONTROL, SPILLS	Lower	4266, 0.808, West
68	YACHT HARBOR TOWERS	1600 ALA MOANA BLVD	SHWS, ENG CONTROLS, INST CONTROL, SPILLS	Lower	4282, 0.811, WSW
69	MEADOW GOLD DAIRIES	1418 YOUNG ST	SHWS, SPILLS, AIRS	Higher	4326, 0.819, WNW
70	WAIKIKI BAZAAR	2174 KALAKAUA AVE	SHWS, SPILLS	Lower	4413, 0.836, South
71	LIKE LIKE PLAZA PETR	745 KEEAUMOKU ST	SHWS	Higher	4486, 0.850, WNW
72	2319 ALA WAI BOULEVA	2319 ALA WAI BLVD	SHWS, SPILLS	Lower	4533, 0.859, SSE
73	WALGREENS KEEAMOKU	1460 KAPIOLANI BLVD	SHWS	Lower	4697, 0.890, West
74	CARTWRIGHT NEIGHBORH	KEEAUMOKU ST & MATLO	SHWS	Higher	4792, 0.908, NW
Q75	HALE PUA NUI UST REM	228 BEACH WALK	SHWS, SPILLS	Lower	4875, 0.923, SSW
R76	MOTOR SUPPLY	726 SHERIDAN ST	SHWS, INST CONTROL	Higher	5049, 0.956, WNW
R77	HAKUYOSHA HAWAII, IN	730 SHERIDAN ST	SHWS, INST CONTROL, SPILLS, AIRS, DRYCLEANERS	Higher	5059, 0.958, WNW
78	UH MANOA HENKE HALL	1800 EAST-WEST ROAD	SHWS	Higher	5122, 0.970, ENE

MAPPED SITES SUMMARY

Target Property Address:
2139 ALGAROBA ST
HONOLULU, HI 96826

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
Q79	WAIKIKI BEACH WALK R	205 BEACH WALK AVE	SHWS, INST CONTROL, SPILLS	Lower	5161, 0.977, SSW
80	FOOD SCIENCE TECHNOL	1920 EDMONDSON RD	SHWS, SPILLS	Higher	5170, 0.979, NE
81	MIRAMAR HOTEL INTERN	2345 KUHIO AVE	SHWS, ENG CONTROLS, INST CONTROL	Lower	5204, 0.986, South

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ..... National Priority List
Proposed NPL ..... Proposed National Priority List Sites
NPL LIENS ..... Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ..... National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ..... Federal Facility Site Information listing
SEMS ..... Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE ..... Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS ..... Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ..... RCRA - Treatment, Storage and Disposal

Federal institutional controls / engineering controls registries

LUCIS ..... Land Use Control Information System
US ENG CONTROLS ..... Engineering Controls Sites List
US INST CONTROL ..... Sites with Institutional Controls

Federal ERNS list

ERNS ..... Emergency Response Notification System

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ..... Permitted Landfills in the State of Hawaii

EXECUTIVE SUMMARY

State and tribal leaking storage tank lists

INDIAN LUST ---------- Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

FEMA UST ---------- Underground Storage Tank Listing
INDIAN UST ---------- Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

INDIAN VCP ---------- Voluntary Cleanup Priority Listing
VCP ---------- Voluntary Response Program Sites

State and tribal Brownfields sites

BROWNFIELDS ---------- Brownfields Sites

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---------- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

INDIAN ODI ---------- Report on the Status of Open Dumps on Indian Lands
ODI ---------- Open Dump Inventory
DEBRIS REGION 9 ---------- Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS ---------- Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL ---------- Delisted National Clandestine Laboratory Register
CDL ---------- Clandestine Drug Lab Listing
US CDL ---------- National Clandestine Laboratory Register

Local Land Records

LIENS 2 ---------- CERCLA Lien Information

Records of Emergency Release Reports

HMIRS ---------- Hazardous Materials Information Reporting System
SPILLS ---------- Release Notifications
SPILLS 90 ---------- SPILLS 90 data from FirstSearch

Other Ascertainable Records

FUDS ---------- Formerly Used Defense Sites
DOD ---------- Department of Defense Sites
SCRD DRYCLEANERS ---------- State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR ---------- Financial Assurance Information

EXECUTIVE SUMMARY

EPA WATCH LIST	EPA WATCH LIST
2020 COR ACTION	2020 Corrective Action Program List
TSCA	Toxic Substances Control Act
TRIS	Toxic Chemical Release Inventory System
SSTS	Section 7 Tracking Systems
ROD	Records Of Decision
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US MINES	Mines Master Index File
ABANDONED MINES	Abandoned Mines
FINDS	Facility Index System/Facility Registry System
DOCKET HWC	Hazardous Waste Compliance Docket Listing
UXO	Unexploded Ordnance Sites
ECHO	Enforcement & Compliance History Information
FUELS PROGRAM	EPA Fuels Program Registered Listing
AIRS	List of Permitted Facilities
DRYCLEANERS	Permitted Drycleaner Facility Listing
Financial Assurance	Financial Assurance Information Listing
LEAD	LEAD
UIC	Underground Injection Wells Listing

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	EDR Proprietary Manufactured Gas Plants

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS	Recovered Government Archive State Hazardous Waste Facilities List
RGA LF	Recovered Government Archive Solid Waste Facilities List
RGA LUST	Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

EXECUTIVE SUMMARY

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA generators list

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

A review of the RCRA-LQG list, as provided by EDR, and dated 03/01/2018 has revealed that there is 1 RCRA-LQG site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LONGS DRUG STORE #99 EPA ID:: HIR000141150	2470 S KING ST	E 1/8 - 1/4 (0.250 mi.)	H30	56

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 03/01/2018 has revealed that there is 1 RCRA-SQG site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
TEXACO SERVICE STATI EPA ID:: HIR000105825	2105 S KING AND WILI	NNW 0 - 1/8 (0.070 mi.)	A5	18

RCRA-CESQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

A review of the RCRA-CESQG list, as provided by EDR, and dated 03/01/2018 has revealed that there are

EXECUTIVE SUMMARY

5 RCRA-CESQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CYCLE PLAZA EPA ID:: HID981674450	***903 ISENBERG ST***	***ESE 1/8 - 1/4 (0.143 mi.)***	***D13***	***27***
UNOCAL 76 SS L 4462 EPA ID:: HID984468785	***2114 S BERETANIA ST***	***NNE 1/8 - 1/4 (0.200 mi.)***	***E19***	***33***
CONTINENTAL AUTO SER EPA ID:: HID981613086	***1918 ALGAROBA ST***	***WNW 1/8 - 1/4 (0.204 mi.)***	***G21***	***36***
GM AUTOMOTIVE CENTER EPA ID:: HID981674591	***1918 B ALGAROBA ST***	***WNW 1/8 - 1/4 (0.220 mi.)***	***G22***	***38***
MCCULLY SHELL EPA ID:: HIR000137406	1115 MCCULLY ST	NNW 1/8 - 1/4 (0.221 mi.)	F24	41

State- and tribal - equivalent CERCLIS

SHWS: The State Hazardous Waste Sites records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. The data come from the Department of Health.

A review of the SHWS list, as provided by EDR, and dated 09/27/2018 has revealed that there are 44 SHWS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MCCULLY UNION SERVIC	***2105 S KING ST***	***NNW 0 - 1/8 (0.070 mi.)***	***A4***	***9***
TOM ISHII'S UNION SE	2114 S KING ST	N 0 - 1/8 (0.076 mi.)	B6	19
CONTINENTAL AUTO SER	***1918 ALGAROBA ST***	***WNW 1/8 - 1/4 (0.204 mi.)***	***G20***	***35***
WALLYS GARDEN CENTER	***1935 S BERETANIA ST***	***NNW 1/4 - 1/2 (0.280 mi.)***	***I33***	***60***
2700 SOUTH KING STRE	***2700 S KING ST***	***ESE 1/2 - 1 (0.506 mi.)***	***K44***	***80***
1800 VANCOUVER DRIVE	***1800 VANCOUVER DRIVE***	***NNE 1/2 - 1 (0.600 mi.)***	***52***	***92***
KAPIOLANI WOMEN'S &	***1319 PUNAHOU ST***	***NW 1/2 - 1 (0.625 mi.)***	***54***	***94***
7-11 KALAKAUA	***1323 KALAKAUA AVE***	***NW 1/2 - 1 (0.642 mi.)***	***O55***	***96***
ALOHA/KING SELF STOR	***1414 KALAKAUA AVE***	***WNW 1/2 - 1 (0.651 mi.)***	***O56***	***98***
1003 AND 1013 KAHEKA	1003 KAHEKA ST	WNW 1/2 - 1 (0.694 mi.)	58	100
HAWAII HALL	***2500 CAMPUS RD***	***NE 1/2 - 1 (0.694 mi.)***	***59***	***101***
PUNAHOU SCHOOL WINNE	***1601 PUNAHOU ST***	***NNW 1/2 - 1 (0.770 mi.)***	***P63***	***107***
PUNAHOU SCHOOL FIRIN	1601 PUNAHOU ST	NNW 1/2 - 1 (0.770 mi.)	P64	108
PUNAHOU SCHOOL GRADE	1601 PUNAHOU ST	NNW 1/2 - 1 (0.770 mi.)	P65	109
MEADOW GOLD DAIRIES	***1418 YOUNG ST***	***WNW 1/2 - 1 (0.819 mi.)***	***69***	***115***
LIKE LIKE PLAZA PETR	745 KEEAUMOKU ST	WNW 1/2 - 1 (0.850 mi.)	71	122
CARTWRIGHT NEIGHBORH	KEEAUMOKU ST & MATLO	NW 1/2 - 1 (0.908 mi.)	74	125
MOTOR SUPPLY	***726 SHERIDAN ST***	***WNW 1/2 - 1 (0.956 mi.)***	***R76***	***127***
HAKUYOSHA HAWAII, IN	***730 SHERIDAN ST***	***WNW 1/2 - 1 (0.958 mi.)***	***R77***	***128***
UH MANOA HENKE HALL	1800 EAST-WEST ROAD	ENE 1/2 - 1 (0.970 mi.)	78	131
FOOD SCIENCE TECHNOL	***1920 EDMONDSON RD***	***NE 1/2 - 1 (0.979 mi.)***	***80***	***133***

Lower Elevation	Address	Direction / Distance	Map ID	Page
ALA WAI COVE CONDOMI	***509 UNIVERSITY AVE***	***S 1/4 - 1/2 (0.466 mi.)***	***41***	***72***
HAWAII CONVENTION CE	***1801 KALAKAUA AVE***	***WSW 1/2 - 1 (0.504 mi.)***	***L43***	***76***
IOLANI SCHOOL PETROL	***563 KAMOKU ST***	***SSE 1/2 - 1 (0.514 mi.)***	***M45***	***82***
IOLANI SCHOOL CAMPUS	563 KAMOKU ST	SSE 1/2 - 1 (0.514 mi.)	M46	84

EXECUTIVE SUMMARY

Lower Elevation	Address	Direction / Distance	Map ID	Page
ALOHA MOTORS 1777 KA	***1777 KAPIOLANI BLVD***	***WSW 1/2 - 1 (0.545 mi.)***	***47***	***84***
FORMER KALAKAUA TRAN	***1665 KALAKAUA AVE***	***W 1/2 - 1 (0.556 mi.)***	***N48***	***87***
ROGER'S REPAIR INC	1687 KALAKAUA AVE	W 1/2 - 1 (0.556 mi.)	N49	88
THE PAVILLION	***1925 KALAKAUA AVE***	***SW 1/2 - 1 (0.559 mi.)***	***50***	***89***
ROYAL GARDENS HOTEL	***440 OLOHANA ST***	***SSW 1/2 - 1 (0.576 mi.)***	***51***	***91***
CHEVRON U.S.A., INC.	***2002 KALAKAUA AVE***	***SSW 1/2 - 1 (0.601 mi.)***	***53***	***93***
WAIKIKI GATEWAY PARK	2044 KALAKAUA AVE	SSW 1/2 - 1 (0.656 mi.)	57	100
KING KALAKAUA PLAZA	***2080 KALAKAUA AVE***	***SSW 1/2 - 1 (0.699 mi.)***	***60***	***102***
1609 ALA WAI DIESEL	***1609 ALA WAI BLVD***	***WSW 1/2 - 1 (0.705 mi.)***	***61***	***104***
RITZ CARLTON WAIKIKI	2139 KUHIO AVE	S 1/2 - 1 (0.716 mi.)	62	106
HOBRON HOTEL	1744 KAIOO DR	SW 1/2 - 1 (0.781 mi.)	66	109
HECO SUBSTATION: MAK	***1544 MAKALOA ST***	***W 1/2 - 1 (0.808 mi.)***	***67***	***110***
YACHT HARBOR TOWERS	***1600 ALA MOANA BLVD***	***WSW 1/2 - 1 (0.811 mi.)***	***68***	***113***
WAIKIKI BAZAAR	***2174 KALAKAUA AVE***	***S 1/2 - 1 (0.836 mi.)***	***70***	***120***
2319 ALA WAI BOULEVA	***2319 ALA WAI BLVD***	***SSE 1/2 - 1 (0.859 mi.)***	***72***	***122***
WALGREENS KEEAMOKU	1460 KAPIOLANI BLVD	W 1/2 - 1 (0.890 mi.)	73	124
HALE PUA NUI UST REM	***228 BEACH WALK***	***SSW 1/2 - 1 (0.923 mi.)***	***Q75***	***126***
WAIKIKI BEACH WALK R	***205 BEACH WALK AVE***	***SSW 1/2 - 1 (0.977 mi.)***	***Q79***	***131***
MIRAMAR HOTEL INTERN	***2345 KUHIO AVE***	***S 1/2 - 1 (0.986 mi.)***	***81***	***134***

State and tribal leaking storage tank lists

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Health's Active Leaking Underground Storage Tank Log Listing.

A review of the LUST list, as provided by EDR, and dated 08/31/2018 has revealed that there are 19 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MCCULLY UNION SERVIC	***2105 S KING ST***	***NNW 0 - 1/8 (0.070 mi.)***	***A4***	***9***
Release ID: 020038				
Release ID: 940104				
Facility Id: 9-100341				
Facility Status: Site Cleanup Completed with EHE/EHMP				
TOM ISHII'S UNION L-	***2114 S KING ST***	***N 0 - 1/8 (0.076 mi.)***	***B8***	***20***
Release ID: 900023				
Facility Id: 9-100042				
Facility Status: Site Cleanup Completed (NFA)				
UNIVERSITY OF HAWAII	***2019 S KING ST***	***NW 1/8 - 1/4 (0.134 mi.)***	***C12***	***26***
Release ID: 960056				
Facility Id: 9-103157				
Facility Status: Site Cleanup Completed (NFA)				
GREEN MILL FOOD MANU	***914 COOLIDGE ST***	***ESE 1/8 - 1/4 (0.167 mi.)***	***D15***	***29***
Release ID: 950127				
Facility Id: 9-103103				
Facility Status: Site Cleanup Completed (NFA)				
HIRONAKA SERVICE STA	***2105 S BERETANIA ST***	***N 1/8 - 1/4 (0.170 mi.)***	***E17***	***31***
Release ID: 000067				

Facility Id: 9-101174
Facility Status: Site Cleanup Completed (NFA)

PUNAHOU CENTRAL OFFI	***2054 YOUNG ST***	***NNW 1/8 - 1/4 (0.172 mi.)***	***F18***	***32***

Release ID: 960080
Release ID: 920006
Facility Id: 9-100525
Facility Status: Site Cleanup Completed (NFA)

MCCULLY SHELL	***1115 MCCULLY ST***	***NNW 1/8 - 1/4 (0.221 mi.)***	***F23***	***40***

Release ID: 080031
Facility Id: 9-101017
Facility Status: Site Cleanup Completed with EHE

MCCULLY SERVICE STAT	***1901 S KING ST***	***NW 1/8 - 1/4 (0.230 mi.)***	***G25***	***43***

Release ID: 180016
Facility Id: 9-101274
Facility Status: Confirmed Release

LINDSEY'S CHEVRON SE	***2404 S BERETANIA ST***	***ENE 1/8 - 1/4 (0.248 mi.)***	***29***	***55***

Release ID: 910050
Facility Id: 9-101230
Facility Status: Site Cleanup Completed (NFA)

JAPANESE CULTURAL CE	***2454 S BERETANIA ST***	***ENE 1/4 - 1/2 (0.280 mi.)***	***J32***	***60***

Release ID: 930045
Facility Id: 9-102721
Facility Status: Site Cleanup Completed (NFA)

VARSITY MOTORS, LTD.	***2482 S BERETANIA ST***	***E 1/4 - 1/2 (0.284 mi.)***	***J34***	***62***

Release ID: 910020
Facility Id: 9-100855
Facility Status: Site Cleanup Completed (NFA)

ALEXANDER TOWER	***1226 ALEXANDER ST***	***NW 1/4 - 1/2 (0.427 mi.)***	***37***	***64***

Release ID: 010007
Facility Id: 9-103531
Facility Status: Site Cleanup Completed (NFA)

TEXACO STATION 61100	***1119 UNIVERSITY AVE***	***E 1/4 - 1/2 (0.431 mi.)***	***38***	***65***

Release ID: 900103
Facility Id: 9-100342
Facility Status: Site Cleanup Completed (NFA)

WILDER AVENUE 7-11 &	***2028 WILDER AVE.***	***NNE 1/4 - 1/2 (0.433 mi.)***	***39***	***67***

Release ID: 980152
Facility Id: 9-101866
Facility Status: Site Cleanup Completed (NFA)

Lower Elevation	Address	Direction / Distance	Map ID	Page
HONOLULU LIMITED	***911 HAUSTEN ST***	***ESE 1/4 - 1/2 (0.261 mi.)***	***31***	***59***

Release ID: 010049
Facility Id: 9-103656
Facility Status: Site Cleanup Completed (NFA)

KYLE'S SERVICE STA.	***2550 S BERETANIA ST***	***E 1/4 - 1/2 (0.345 mi.)***	***35***	***62***

Release ID: 910049
Facility Id: 9-100036
Facility Status: Site Cleanup Completed (NFA)

C&CH MCCULLY FIRE ST	***2425 DATE ST***	***SE 1/4 - 1/2 (0.350 mi.)***	***36***	***63***

Release ID: 910028
Facility Id: 9-100080
Facility Status: Site Cleanup Completed (NFA)

UNIVERSITY 76 / 7-11	***2646 S KING ST***	***E 1/4 - 1/2 (0.465 mi.)***	***K40***	***70***

Release ID: 090024
Facility Id: 9-101173
Facility Status: Site Cleanup Completed (NFA)

FUNAI'S UNION SERVIC	***1810 KAPIOLANI BLVD***	***WSW 1/4 - 1/2 (0.483 mi.)***	***L42***	***74***

Release ID: 910048
Facility Id: 9-100047
Facility Status: Site Cleanup Completed (NFA)

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Health's Listing of Underground Storage Tanks.

A review of the UST list, as provided by EDR, and dated 08/31/2018 has revealed that there are 11 UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MCCULLY UNION SERVIC	***2105 S KING ST***	***NNW 0 - 1/8 (0.070 mi.)***	***A4***	***9***

Tank Status: Currently In Use
Tank Status: Permanently Out of Use
Facility Id: 9-100341
Date Closed: 07/19/2002
Date Closed: 07/16/2002
Date Closed: 01/01/1983

TOM ISHII'S UNION L-	***2114 S KING ST***	***N 0 - 1/8 (0.076 mi.)***	***B8***	***20***

Tank Status: Permanently Out of Use
Facility Id: 9-100042
Date Closed: 07/01/1992
Date Closed: 11/30/1989

FRANCIS LEANDRO	2209 YOUNG ST	NNE 0 - 1/8 (0.116 mi.)	B11	25

Tank Status: Permanently Out of Use
Facility Id: 9-103738
Date Closed: 06/19/1989

UNIVERSITY OF HAWAII	***2019 S KING ST***	***NW 1/8 - 1/4 (0.134 mi.)***	***C12***	***26***

Tank Status: Permanently Out of Use
Facility Id: 9-103157
Date Closed: 03/01/1996

GREEN MILL FOOD MANU	***914 COOLIDGE ST***	***ESE 1/8 - 1/4 (0.167 mi.)***	***D15***	***29***

Tank Status: Permanently Out of Use
Facility Id: 9-103103
Date Closed: 08/04/1995

HIRONAKA SERVICE STA	***2105 S BERETANIA ST***	***N 1/8 - 1/4 (0.170 mi.)***	***E17***	***31***

Tank Status: Permanently Out of Use
Facility Id: 9-101174

Date Closed: 11/10/2000 Date Closed: 11/08/2000				
PUNAHOU CENTRAL OFFI Tank Status: Currently In Use Tank Status: Permanently Out of Use Facility Id: 9-100525 Date Closed: 07/23/1996	***2054 YOUNG ST***	***NNW 1/8 - 1/4 (0.172 mi.)***	***F18***	***32***
MCCULLY SHELL Tank Status: Currently In Use Facility Id: 9-101017	***1115 MCCULLY ST***	***NNW 1/8 - 1/4 (0.221 mi.)***	***F23***	***40***
MCCULLY SERVICE STAT Tank Status: Permanently Out of Use Facility Id: 9-101274 Date Closed: 07/01/1986	***1901 S KING ST***	***NW 1/8 - 1/4 (0.230 mi.)***	***G25***	***43***
LINDSEY'S CHEVRON SE Tank Status: Permanently Out of Use Facility Id: 9-101230	***2404 S BERETANIA ST***	***ENE 1/8 - 1/4 (0.248 mi.)***	***29***	***55***

Lower Elevation	Address	Direction / Distance	Map ID	Page
MCCULLY & MOILIILI S Tank Status: Permanently Out of Use Facility Id: 9-102149	MCCULLY ST X MOILIIL	W 1/8 - 1/4 (0.153 mi.)	14	29

State and tribal institutional control / engineering control registries

ENG CONTROLS: A listing of sites with engineering controls in place.

A review of the ENG CONTROLS list, as provided by EDR, and dated 09/27/2018 has revealed that there is 1 ENG CONTROLS site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MCCULLY UNION SERVIC	***2105 S KING ST***	***NNW 0 - 1/8 (0.070 mi.)***	***A4***	***9***

Voluntary Remediation Program and Brownfields sites with institutional controls in place.

A review of the INST CONTROL list, as provided by EDR, and dated 09/27/2018 has revealed that there is 1 INST CONTROL site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MCCULLY UNION SERVIC	***2105 S KING ST***	***NNW 0 - 1/8 (0.070 mi.)***	***A4***	***9***

ADDITIONAL ENVIRONMENTAL RECORDS

Other Ascertainable Records

EXECUTIVE SUMMARY

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 03/01/2018 has revealed that there are 6 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
PRECISION DENTAL LAB EPA ID:: HID033204231	***2104 S KING ST***	***N 0 - 1/8 (0.080 mi.)***	***B9***	***21***
LONGS DRUG STORE NO EPA ID:: HI0000883363	2220 S KING ST	NE 0 - 1/8 (0.103 mi.)	B10	23
930 MCCULLY BLDG EPA ID:: HIP000108506	930 MCCULLY ST	WNW 1/8 - 1/4 (0.170 mi.)	C16	30
ACCU PATH LABORATORY EPA ID:: HID990877615	***2469 S KING ST***	***E 1/8 - 1/4 (0.237 mi.)***	***H26***	***44***
HAWAII BIOTECH, INC. EPA ID:: HIR000143677	***1946 YOUNG ST SUITE***	***NNW 1/8 - 1/4 (0.243 mi.)***	***I27***	***46***
KAPIOLANI MED CTR GE EPA ID:: HIP000043455	1946 YOUNG ST STE 40	NNW 1/8 - 1/4 (0.243 mi.)	I28	54

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR Hist Auto: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Auto list, as provided by EDR, has revealed that there are 2 EDR Hist Auto sites within approximately 0.125 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MC CULLY SUPER SERVI	2105 S KING STREET	NNW 0 - 1/8 (0.070 mi.)	A3	8
ISHII ENTERPRISES IN	2114 S KING	N 0 - 1/8 (0.076 mi.)	B7	20

EXECUTIVE SUMMARY

EDR Hist Cleaner: EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Cleaner list, as provided by EDR, has revealed that there are 2 EDR Hist Cleaner sites within approximately 0.125 miles of the target property.

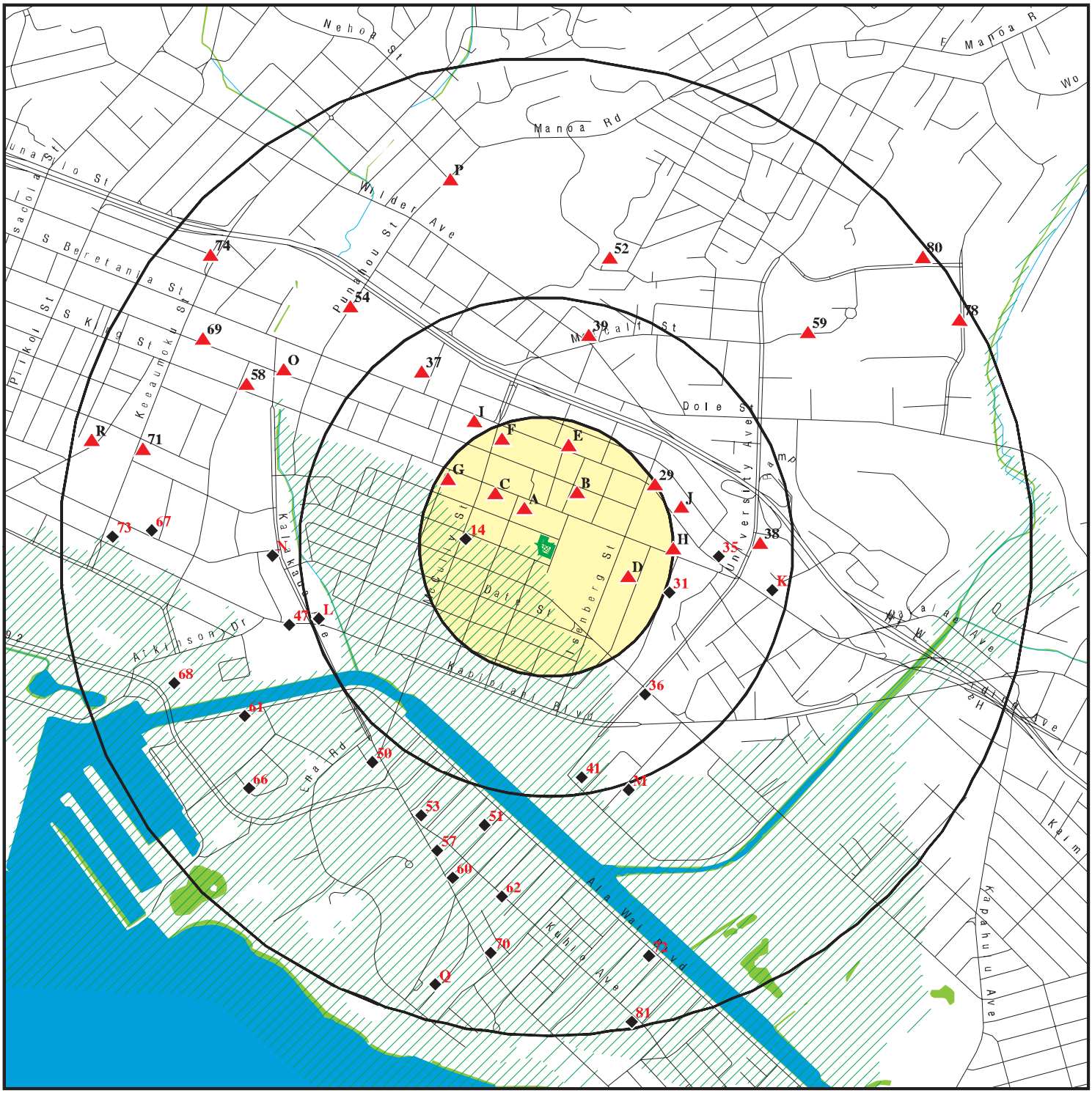
Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
PRESTIGE VALET SVC	2121 ALGAROBA ST APT	NW 0 - 1/8 (0.019 mi.)	A1	8
KIM MARY ANN	2104 ALGAROBA ST APT	NW 0 - 1/8 (0.065 mi.)	A2	8

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 7 records.

Site Name	Database(s)
333 & 351 N KING ST	SHWS, BROWNFIELDS
ALA WAI HARBOR BOAT REPAIR YARD	SHWS
UNIVERSITY OF HAWAII INTERCHANGE	SHWS
AMERICAN SAVINGS BANK CAMPUS	SHWS
2051-2057 KALAKAUA AVENUE	SHWS
HAWAIIAN BITUMULS PAVING & PRECAST	SHWS
HAWAII BITUMULS & PAVING CO.	SEMS-ARCHIVE

OVERVIEW MAP - 5544094.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

100-year flood zone

500-year flood zone

National Wetland Inventory

State Wetlands

N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 2139 Algaroba Street	CLIENT: Environmental Risk Analysis. LLC
ADDRESS: 2139 ALGAROBA ST	CONTACT: Vincent Yanagita
HONOLULU HI 96826	INQUIRY #: 5544094.2s
LAT/LONG: 21.292875 / 157.828121	DATE: January 25, 2019 12:11 pm

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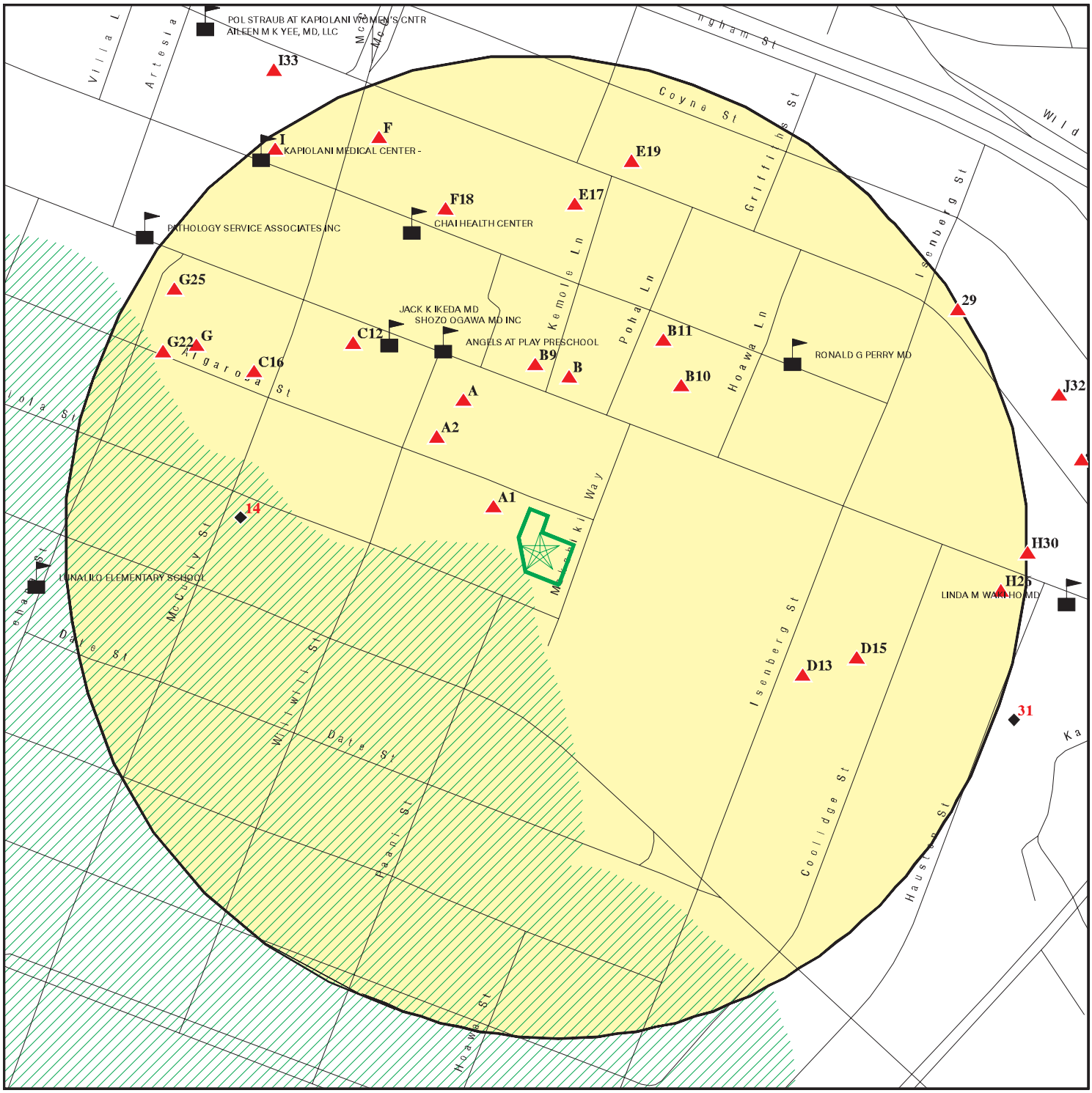
DETAIL MAP - 5544094.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

0 1/16 1/8 1/4 Miles

Indian Reservations BIA

100-year flood zone

500-year flood zone

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 2139 Algaroba Street	CLIENT: Environmental Risk Analysis. LLC
ADDRESS: 2139 ALGAROBA ST HONOLULU HI 96826	CONTACT: Vincent Yanagita
LAT/LONG: 21.292875 / 157.828121	INQUIRY #: 5544094.2s
	DATE: January 25, 2019 12:12 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	0.001		0	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	1	NR	NR	NR	1
RCRA-SQG	0.250		1	0	NR	NR	NR	1
RCRA-CESQG	0.250		0	5	NR	NR	NR	5
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
State- and tribal - equivalent CERCLIS								
SHWS	1.000		2	1	2	39	NR	44
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		2	7	10	NR	NR	19
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
UST	0.250		3	8	NR	NR	NR	11
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
ENG CONTROLS	0.500		1	0	0	NR	NR	1
INST CONTROL	0.500		1	0	0	NR	NR	1
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
Local Land Records								
LIENS 2	0.001		0	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
SPILLS	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		2	4	NR	NR	NR	6
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	0.001		0	NR	NR	NR	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.001		0	NR	NR	NR	NR	0
FINDS	0.001		0	NR	NR	NR	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
ECHO	0.001		0	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
AIRS	0.001		0	NR	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
LEAD	0.001		0	NR	NR	NR	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		2	NR	NR	NR	NR	2
EDR Hist Cleaner	0.125		2	NR	NR	NR	NR	2
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA HWS	0.001		0	NR	NR	NR	NR	0
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		0	16	26	12	39	0	93

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1
NW
< 1/8
0.019 mi.
101 ft.

PRESTIGE VALET SVC
2121 ALGAROBA ST APT 1502
HONOLULU, HI 96826

EDR Hist Cleaner **1018748901**
N/A

Site 1 of 5 in cluster A

Relative:
Higher

EDR Hist Cleaner

Actual:
7 ft.

Year:	Name:	Type:
2006	PRESTIGE VALET SVC	Laundry And Drycleaner Agents

A2
NW
< 1/8
0.065 mi.
343 ft.

KIM MARY ANN
2104 ALGAROBA ST APT D
HONOLULU, HI 96826

EDR Hist Cleaner **1020019516**
N/A

Site 2 of 5 in cluster A

Relative:
Higher

EDR Hist Cleaner

Actual:
7 ft.

Year:	Name:	Type:
2009	KIM MARY ANN	Drycleaning Plants, Except Rugs, NEC
2010	KIM MARY ANN	Drycleaning Plants, Except Rugs, NEC
2011	KIM MARY ANN	Drycleaning Plants, Except Rugs, NEC
2012	KIM MARY ANN	Drycleaning Plants, Except Rugs, NEC

A3
NNW
< 1/8
0.070 mi.
372 ft.

MC CULLY SUPER SERVICES INC
2105 S KING STREET
HONOLULU, HI 96826

EDR Hist Auto **1020946768**
N/A

Site 3 of 5 in cluster A

Relative:
Higher

EDR Hist Auto

Actual:
10 ft.

Year:	Name:	Type:
1969	SUGA SERVICE	Gasoline Service Stations
1970	SUGA SERVICE	Gasoline Service Stations
1971	SUGA SERVICE	Gasoline Service Stations
1972	SUGA SERVICE	Gasoline Service Stations
1973	SUGA SERVICE	Gasoline Service Stations
1974	SUGA SERVICE	Gasoline Service Stations
1975	SUGA SERVICE	Gasoline Service Stations
1976	SUGA SERVICE	Gasoline Service Stations
1977	SUGA SERVICE	Gasoline Service Stations
1986	SUGA GARAGE SERVICE	Gasoline Service Stations
1987	SUGA GARAGE SERVICE	Gasoline Service Stations
1988	SUGA GARAGE SERVICE	Gasoline Service Stations
1989	MC CULLY SUPER SERVICES INC	Gasoline Service Stations
1990	MC CULLY SUPER SERVICES INC	Gasoline Service Stations
1990	MOILIILI SERVICE STATION INC	Gasoline Service Stations
1991	MC CULLY SUPER SERVICES INC	Gasoline Service Stations
1991	MOILIILI SERVICE STATION INC	Gasoline Service Stations
1992	MC CULLY SUPER SERVICES INC	Gasoline Service Stations
1993	MC CULLY SUPER SERVICES INC	Gasoline Service Stations
1994	MC CULLY SUPER SERVICES INC	Gasoline Service Stations
1995	MC CULLY SUPER SERVICES INC	Gasoline Service Stations
1996	MC CULLY SUPER SERVICES INC	Gasoline Service Stations
1997	MC CULLY SUPER SERVICES INC	Gasoline Service Stations
2003	ELITE AUTO SERVICE	General Automotive Repair Shops

MC CULLY SUPER SERVICES INC (Continued) **1020946768**

2004	MCCULLY UNION SERVICE	General Automotive Repair Shops
2005	MCCULLY UNION SERVICE	General Automotive Repair Shops
2006	MCCULLY UNION SERVICE	General Automotive Repair Shops
2007	MCCULLY UNION SERVICE	General Automotive Repair Shops
2008	MCCULLY UNION SERVICE	General Automotive Repair Shops

A4 **MCCULLY UNION SERVICE #136** **SHWS** **U001235168**
NNW **2105 S KING ST** **LUST** **N/A**
< 1/8 **HONOLULU, HI 96826** **UST**
0.070 mi. **ENG CONTROLS**
372 ft. **Site 4 of 5 in cluster A** **INST CONTROL**
Financial Assurance

Relative:
Higher

Actual:
10 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Former ARCO AM/PM #82111
HID Number:	Not reported
Facility Registry Identifier:	110010627660
Lead Agency:	HEER
Program:	State
Project Manager:	Eric Sadoyama
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Managed With Controls
Island:	Oahu
SDAR Environmental Interest Name:	Former ARCO AM/PM #82111
HID Number:	Not reported
Facility Registry Identifier:	110010627660
Lead Agency:	HEER
Potential Hazard And Controls:	Hazard Managed With Controls
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: Petroleum in soil.
Nature of Residual Contamination:	benzo[a]pyrene in soil.
Use Restrictions:	Controls Required to Manage Contamination
Engineering Control:	Engineering Control Required
Description of Restrictions:	Not reported
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Restricted Use
Document Date:	08/24/2009
Document Number:	2009-538-ES
Document Subject:	Review of Hydraulic Hoist and Clarifier Removal Report, Nov 2002 by Walker Consultants, and Conditional No Further Action (NFA) Determination
Project Manager:	Eric Sadoyama
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

LUST:

Facility ID:	9-100341
Facility Status:	Site Cleanup Completed with EHE/EHMP
Facility Status Date:	04/10/2017
Release ID:	020038
Project Officer:	Shunsheng Fu

MCCULLY UNION SERVICE #136 (Continued) **U001235168**

Facility ID: 9-100341
Facility Status: Site Cleanup Completed with EHE/EHMP
Facility Status Date: 04/10/2017
Release ID: 940104
Project Officer: Shunsheng Fu

UST:
Facility ID: 9-100341
Owner: Mid Pac Petroleum LLC
Owner Address: 1100 Alakea Street, 8th floor
Owner City,St,Zip: Honolulu, 96826 96826
Latitude: 21.294320
Longitude: -157.828890
Horizontal Reference Datum Name: NAD27
Horizontal Collection Method Name: GPS

Tank ID: 1
Date Installed: 04/21/2003
Tank Status: Currently In Use
Date Closed: Not reported
Tank Capacity: 15000
Substance: Gasohol

Tank ID: 2A
Date Installed: 04/21/2003
Tank Status: Currently In Use
Date Closed: Not reported
Tank Capacity: 10000
Substance: Gasoline

Tank ID: 2B
Date Installed: 04/21/2003
Tank Status: Currently In Use
Date Closed: Not reported
Tank Capacity: 5000
Substance: Gasohol

Tank ID: R-2
Date Installed: 02/07/1983
Tank Status: Permanently Out of Use
Date Closed: 07/19/2002
Tank Capacity: 10000
Substance: Gasoline

Tank ID: R-3
Date Installed: 02/07/1983
Tank Status: Permanently Out of Use
Date Closed: 07/19/2002
Tank Capacity: 10000
Substance: Gasoline

Tank ID: R-4

MCCULLY UNION SERVICE #136 (Continued) **U001235168**

Date Installed:	02/07/1983
Tank Status:	**Permanently Out of Use**
Date Closed:	07/19/2002
Tank Capacity:	10000
Substance:	Gasoline

Tank ID:	R-5
Date Installed:	02/07/1983
Tank Status:	**Permanently Out of Use**
Date Closed:	07/19/2002
Tank Capacity:	10000
Substance:	Gasoline

Tank ID:	R-A1
Date Installed:	01/01/1968
Tank Status:	**Permanently Out of Use**
Date Closed:	01/01/1983
Tank Capacity:	Not reported
Substance:	Gasoline

Tank ID:	R-A2
Date Installed:	01/01/1968
Tank Status:	**Permanently Out of Use**
Date Closed:	01/01/1983
Tank Capacity:	Not reported
Substance:	Gasoline

Tank ID:	R-A3
Date Installed:	01/01/1968
Tank Status:	**Permanently Out of Use**
Date Closed:	01/01/1983
Tank Capacity:	Not reported
Substance:	Gasoline

Tank ID:	R-A4
Date Installed:	01/01/1968
Tank Status:	**Permanently Out of Use**
Date Closed:	01/01/1983
Tank Capacity:	Not reported
Substance:	Diesel

Tank ID:	R-A5
Date Installed:	01/01/1968
Tank Status:	**Permanently Out of Use**
Date Closed:	01/01/1983
Tank Capacity:	Not reported
Substance:	Used Oil

Tank ID:	R-I-1
Date Installed:	02/07/1983

MCCULLY UNION SERVICE #136 (Continued) **U001235168**

Tank Status:	**Permanently Out of Use**
Date Closed:	07/16/2002
Tank Capacity:	550
Substance:	Used Oil

ENG CONTROLS:

Supplemental Location Text:	Not reported
Zip Suffix:	Not reported
Island:	Oahu
Potential Hazards And Controls:	Hazard Managed With Controls
Engineering Control:	Engineering Control Required

INST CONTROL:

Potential hazards and controls:	Hazard Managed With Controls
Supplemental Location:	Not reported
Zip Suffix:	Not reported
Island:	Oahu
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued

HI Financial Assurance:

Alt Facility ID:	9-100341
Tank Id:	R-4
Tank Status:	Permanently Out of Use
FRTYPE:	Other
Expiration Date:	Not reported

Alt Facility ID:	9-100341
Tank Id:	R-2
Tank Status:	Permanently Out of Use
FRTYPE:	Other
Expiration Date:	Not reported

Alt Facility ID:	9-100341
Tank Id:	R-3
Tank Status:	Permanently Out of Use
FRTYPE:	Not reported
Expiration Date:	Not reported

Alt Facility ID:	9-100341
Tank Id:	R-A3
Tank Status:	Permanently Out of Use
FRTYPE:	Other
Expiration Date:	Not reported

Alt Facility ID:	9-100341
Tank Id:	R-A2
Tank Status:	Permanently Out of Use
FRTYPE:	Not reported
Expiration Date:	Not reported

Alt Facility ID:	9-100341
Tank Id:	R-3
Tank Status:	Permanently Out of Use
FRTYPE:	Other
Expiration Date:	Not reported

MCCULLY UNION SERVICE #136 (Continued) **U001235168**

Alt Facility ID: 9-100341
Tank Id: R-A1
Tank Status: Permanently Out of Use
FRTYPE: Not reported
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: R-A3
Tank Status: Permanently Out of Use
FRTYPE: Not reported
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: R-5
Tank Status: Permanently Out of Use
FRTYPE: Not reported
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: R-A2
Tank Status: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: R-5
Tank Status: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: R-A4
Tank Status: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: 2A
Tank Status: Currently In Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: R-4
Tank Status: Permanently Out of Use
FRTYPE: Not reported
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: 2A
Tank Status: Currently In Use
FRTYPE: Not reported
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: R-2
Tank Status: Permanently Out of Use

MCCULLY UNION SERVICE #136 (Continued) **U001235168**

FRTYPE: Not reported
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: 2B
Tank Status: Currently In Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: R-A4
Tank Status: Permanently Out of Use
FRTYPE: Not reported
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: 1
Tank Status: Currently In Use
FRTYPE: Not reported
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: 2B
Tank Status: Currently In Use
FRTYPE: Not reported
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: R-I-1
Tank Status: Permanently Out of Use
FRTYPE: Not reported
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: R-A5
Tank Status: Permanently Out of Use
FRTYPE: Not reported
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: R-A1
Tank Status: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: R-A5
Tank Status: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: 1
Tank Status: Currently In Use
FRTYPE: Other
Expiration Date: Not reported

MCCULLY UNION SERVICE #136 (Continued) **U001235168**

Alt Facility ID: 9-100341
Tank Id: R-I-1
Tank Status: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: R-A2
Tank Status: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: 03/31/2014

Alt Facility ID: 9-100341
Tank Id: R-A3
Tank Status: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: 03/31/2014

Alt Facility ID: 9-100341
Tank Id: R-A5
Tank Status: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: 03/31/2014

Alt Facility ID: 9-100341
Tank Id: R-A4
Tank Status: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: 03/31/2014

Alt Facility ID: 9-100341
Tank Id: R-I-1
Tank Status: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: 03/31/2014

Alt Facility ID: 9-100341
Tank Id: R-2
Tank Status: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: 03/31/2014

Alt Facility ID: 9-100341
Tank Id: R-A1
Tank Status: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: 03/31/2014

Alt Facility ID: 9-100341
Tank Id: R-5
Tank Status: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: 03/31/2014

Alt Facility ID: 9-100341
Tank Id: 2A
Tank Status: Currently In Use

MCCULLY UNION SERVICE #136 (Continued) **U001235168**

FRTYPE:	Insurance
Expiration Date:	03/31/2014
Alt Facility ID:	9-100341
Tank Id:	R-4
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	03/31/2014
Alt Facility ID:	9-100341
Tank Id:	2B
Tank Status:	Currently In Use
FRTYPE:	Insurance
Expiration Date:	03/31/2014
Alt Facility ID:	9-100341
Tank Id:	1
Tank Status:	Currently In Use
FRTYPE:	Insurance
Expiration Date:	03/31/2014
Alt Facility ID:	9-100341
Tank Id:	R-3
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	03/31/2014
Alt Facility ID:	9-100341
Tank Id:	R-A4
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	09/30/2017
Alt Facility ID:	9-100341
Tank Id:	R-I-1
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	09/30/2017
Alt Facility ID:	9-100341
Tank Id:	2A
Tank Status:	Currently In Use
FRTYPE:	Insurance
Expiration Date:	09/30/2017
Alt Facility ID:	9-100341
Tank Id:	R-A5
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	09/30/2017
Alt Facility ID:	9-100341
Tank Id:	2B
Tank Status:	Currently In Use
FRTYPE:	Insurance
Expiration Date:	09/30/2017

MCCULLY UNION SERVICE #136 (Continued) **U001235168**

Alt Facility ID: 9-100341
Tank Id: R-A1
Tank Status: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: 09/30/2017

Alt Facility ID: 9-100341
Tank Id: 1
Tank Status: Currently In Use
FRTYPE: Insurance
Expiration Date: 09/30/2017

Alt Facility ID: 9-100341
Tank Id: R-3
Tank Status: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: 09/30/2017

Alt Facility ID: 9-100341
Tank Id: R-A3
Tank Status: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: 09/30/2017

Alt Facility ID: 9-100341
Tank Id: R-4
Tank Status: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: 09/30/2017

Alt Facility ID: 9-100341
Tank Id: R-A2
Tank Status: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: 09/30/2017

Alt Facility ID: 9-100341
Tank Id: R-5
Tank Status: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: 09/30/2017

Alt Facility ID: 9-100341
Tank Id: R-2
Tank Status: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: 09/30/2017

A5 NNW < 1/8 0.070 mi. 372 ft. | **TEXACO SERVICE STATION**
2105 S KING AND WILIWILI
HONOLULU, HI 96826 | **RCRA-SQG** | **1004689056**
HIR000105825

Site 5 of 5 in cluster A

Relative: Higher

Actual: 10 ft.

RCRA-SQG:

Date form received by agency:	09/18/2001
Facility name:	TEXACO SERVICE STATION
Facility address:	2105 S KING AND WILIWILI SAP 120879 HONOLULU, HI 96826
EPA ID:	HIR000105825
Mailing address:	P O BOX 2648 HOUSTON, TX 77252-2648
Contact:	SONDRA BIENVENU
Contact address:	P O BOX 2648 HOUSTON, TX 77252-2648
Contact country:	US
Contact telephone:	713-241-5036
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	EQUILON ENTERPRISES L L C
Owner/operator address:	P O BOX 2648 HOUSTON, TX 77252
Owner/operator country:	Not reported
Owner/operator telephone:	713-241-5036
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No

TEXACO SERVICE STATION (Continued) **1004689056**

Used oil transporter: No

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

. Waste code: D018
. Waste name: BENZENE

Violation Status: No violations found

B6 **TOM ISHII'S UNION SERVICE (CLOSED 04/1992)** **SHWS** **S121406272**
North **2114 S KING ST** **N/A**
< 1/8 **HONOLULU, HI 96826**
0.076 mi.
401 ft. **Site 1 of 6 in cluster B**

Relative:
Higher

Actual:
10 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Tom Ishiis Union Service
HID Number:	Not reported
Facility Registry Identifier:	110014047931
Lead Agency:	HEER
Program:	State
Project Manager:	Steve Mow
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Island:	Oahu
SDAR Environmental Interest Name:	Tom Ishiis Union Service
HID Number:	Not reported
Facility Registry Identifier:	110014047931
Lead Agency:	HEER
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: TPH.
Nature of Residual Contamination:	Not reported
Use Restrictions:	No Hazard Present For Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	08/11/2016
Document Number:	2016-428-SPM
Document Subject:	No Further Action Determination
Project Manager:	Steve Mow
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

B7 ISHII ENTERPRISES INC **EDR Hist Auto** **1020615322**
North 2114 S KING **N/A**
< 1/8 HONOLULU, HI 96814
0.076 mi.
401 ft. Site 2 of 6 in cluster B

Relative: EDR Hist Auto
Higher

Actual:
10 ft.

Year:	Name:	Type:
1969	ISHII TOM T	Gasoline Service Stations
1970	ISHII TOM T	Gasoline Service Stations
1971	ISHII TOM T	Gasoline Service Stations
1972	ISHII ENTERPRISES INC	Gasoline Service Stations
1973	ISHII ENTERPRISES INC	Gasoline Service Stations
1974	ISHII ENTERPRISES INC	Gasoline Service Stations
1975	ISHII ENTERPRISES INC	Gasoline Service Stations
1976	ISHII ENTERPRISES INC	Gasoline Service Stations
1977	ISHII ENTERPRISES INC	Gasoline Service Stations
1978	ISHII ENTERPRISES INC	Gasoline Service Stations
1979	ISHII ENTERPRISES INC	Gasoline Service Stations
1980	ISHII ENTERPRISES INC	Gasoline Service Stations
1982	ISHII ENTERPRISES INC	Gasoline Service Stations
1983	ISHII ENTERPRISES INC	Gasoline Service Stations
1988	ISHII TOMS UNION SERVICE	Gasoline Service Stations
1989	ISHII TOMS UNION SERVICE	Gasoline Service Stations
1990	ISHIIS TOM UNION SERVICE	Gasoline Service Stations
1991	ISHIIS TOM UNION SERVICE	Gasoline Service Stations
1992	ISHIIS TOM UNION SERVICE	Gasoline Service Stations

B8 TOM ISHII'S UNION L-4462 **LUST** **U001235017**
North 2114 S KING ST **UST** **N/A**
< 1/8 HONOLULU, HI 96826
0.076 mi.
401 ft. Site 3 of 6 in cluster B

Relative: LUST:
Higher

Actual:
10 ft.

Facility ID:	9-100042
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	07/24/2001
Release ID:	900023
Project Officer:	Shaobin Li

UST:

Facility ID:	9-100042
Owner:	UNOCAL CORPORATION
Owner Address:	3915 Mission Avenue #7416
Owner City,St,Zip:	Honolulu, 96826 96826
Latitude:	21.294216
Longitude:	-157.827884
Horizontal Reference Datum Name:	NAD83
Horizontal Collection Method Name:	Address Matching
Tank ID:	R-1
Date Installed:	03/26/1958
Tank Status:	**Permanently Out of Use**
Date Closed:	11/30/1989
Tank Capacity:	4000
Substance:	Gasoline

TOM ISHII'S UNION L-4462 (Continued) **U001235017**

Tank ID:	R-1-2
Date Installed:	03/26/1958
Tank Status:	**Permanently Out of Use**
Date Closed:	07/01/1992
Tank Capacity:	4000
Substance:	Gasoline

Tank ID:	R-2
Date Installed:	03/26/1958
Tank Status:	**Permanently Out of Use**
Date Closed:	07/01/1992
Tank Capacity:	5000
Substance:	Gasoline

Tank ID:	R-4
Date Installed:	03/26/1958
Tank Status:	**Permanently Out of Use**
Date Closed:	07/01/1992
Tank Capacity:	550
Substance:	Used Oil

B9 **PRECISION DENTAL LABORATORY INC** **RCRA NonGen / NLR** **1000172404**
North **2104 S KING ST** **FINDS** **HID033204231**
< 1/8 **HONOLULU, HI 96826** **ECHO**
0.080 mi.
422 ft. **Site 4 of 6 in cluster B**

Relative:
Higher

Actual:
10 ft.

RCRA NonGen / NLR:

Date form received by agency:	12/10/1993
Facility name:	PRECISION DENTAL LABORATORY INC
Facility address:	2104 S KING ST HONOLULU, HI 96826
EPA ID:	HID033204231
Mailing address:	S KING ST HONOLULU, HI 96826
Contact:	R SHIGETA
Contact address:	2104 S KING ST HONOLULU, HI 96826
Contact country:	US
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	415-555-1212
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private

PRECISION DENTAL LABORATORY INC (Continued) **1000172404**

Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: 415-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110005284316

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1000172404
Registry ID: 110005284316
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110005284316

B10 NE < 1/8 0.103 mi. 543 ft. | **LONGS DRUG STORE NO 9954**
2220 S KING ST
HONOLULU, HI 96826 | **RCRA NonGen / NLR** | **1015742055**
HI0000883363

Site 5 of 6 in cluster B

Relative: Higher

Actual: 10 ft.

RCRA NonGen / NLR:

Date form received by agency:	06/25/2012
Facility name:	LONGS DRUG STORE NO 9954
Facility address:	2220 S KING ST HONOLULU, HI 96826
EPA ID:	HI0000883363
Mailing address:	1905 ASTON AVE CARLSBAD, CA 92008
Contact:	CHARLES A SAVAGE
Contact address:	1905 ASTON AVE CARLSBAD, CA 92008
Contact country:	US
Contact telephone:	760-602-8736
Contact email:	CSAVAGE@3ECOMPANY.COM
EPA Region:	09
Land type:	Private
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	CVS PHARMACY INC
Owner/operator address:	ONE CVS DR WOONSOCKET, RI 02895
Owner/operator country:	US
Owner/operator telephone:	401-765-1500
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	10/20/2008
Owner/Op end date:	Not reported

Owner/operator name:	CVS PHARMACY INC
Owner/operator address:	ONE CVS DR WOONSOCKET, RI 02895
Owner/operator country:	US
Owner/operator telephone:	401-765-1500
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	10/20/2008
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No

LONGS DRUG STORE NO 9954 (Continued) **1015742055**

Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency: 11/01/2010
Site name: LONGS DRUG STORE NO 9954
Classification: Conditionally Exempt Small Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

. Waste code: D002
. Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

. Waste code: D011
. Waste name: SILVER

. Waste code: P001
. Waste name: 2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%

. Waste code: P042
. Waste name: 1,2-BENZENEDIOL, 4-[1-HYDROXY-2-(METHYLAMINO)ETHYL]-, (R)-

. Waste code: P075
. Waste name: NICOTINE, & SALTS

. Waste code: P081
. Waste name: NITROGLYCERINE (R)

Date form received by agency: 03/23/1998
Site name: LONGS DRUG STORE NO 382
Classification: Conditionally Exempt Small Quantity Generator

. Waste code: D000
. Waste name: Not Defined

LONGS DRUG STORE NO 9954 (Continued) **1015742055**

. Waste code: D011
. Waste name: SILVER

Date form received by agency: 10/13/1994
Site name: LONGS DRUG STORE NO 382
Classification: Not a generator, verified

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 12/12/2008
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 12/11/1995
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

B11 **FRANCIS LEANDRO** **UST** **U003832859**
NNE **2209 YOUNG ST** **N/A**
< 1/8 **HONOLULU, HI 96818**
0.116 mi.
613 ft. **Site 6 of 6 in cluster B**

Relative:
Higher

Actual:
10 ft.

UST:
Facility ID: 9-103738
Owner: MR. FRANCIS LEANDRO
Owner Address: 280 AANIU LOOP
Owner City,St,Zip: Honolulu, 96818 96818
Latitude: Not reported
Longitude: Not reported
Horizontal Reference Datum Name: Not reported
Horizontal Collection Method Name: Not reported

Tank ID: R-1
Date Installed: 01/01/1950
Tank Status: **Permanently Out of Use**
Date Closed: 06/19/1989
Tank Capacity: 1000
Substance: Gasoline

Tank ID: R-2
Date Installed: 01/01/1950
Tank Status: **Permanently Out of Use**
Date Closed: 06/19/1989
Tank Capacity: 1000
Substance: Gasoline

C12 NW 1/8-1/4 0.134 mi. 706 ft. | **UNIVERSITY OF HAWAII FEDERAL CRE**
2019 S KING ST
HONOLULU, HI 96826

Site 1 of 2 in cluster C

LUST **U003154853**
UST **N/A**

Relative: Higher

Actual: 9 ft.

LUST:

Facility ID:	9-103157
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	01/30/1997
Release ID:	960056
Project Officer:	Jose Ruiz

UST:

Facility ID:	9-103157
Owner:	UNDETERMINED AT THIS TIME
Owner Address:	Address Unknown
Owner City,St,Zip:	Honolulu, 96826 96826
Latitude:	21.294530
Longitude:	-157.829727
Horizontal Reference Datum Name:	NAD83
Horizontal Collection Method Name:	Address Matching

Tank ID:	R-1
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	03/01/1996
Tank Capacity:	1000
Substance:	Not Listed

Tank ID:	R-2
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	03/01/1996
Tank Capacity:	300
Substance:	Not Listed

Tank ID:	R-3
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	03/01/1996
Tank Capacity:	300
Substance:	Not Listed

Tank ID:	R-4
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	03/01/1996
Tank Capacity:	550
Substance:	Not Listed

Tank ID:	R-5
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	03/01/1996

UNIVERSITY OF HAWAII FEDERAL CRE (Continued) **U003154853**

Tank Capacity: 300
Substance: Not Listed

D13 **CYCLE PLAZA** **RCRA-CESQG** **1000279392**
ESE **903 ISENBERG ST** **FINDS** **HID981674450**
1/8-1/4 **HONOLULU, HI 96826** **ECHO**
0.143 mi.
755 ft. **Site 1 of 2 in cluster D**

Relative:
Higher

Actual:
10 ft.

RCRA-CESQG:

Date form received by agency:	07/20/1993
Facility name:	CYCLE PLAZA
Facility address:	903 ISENBERG ST HONOLULU, HI 96826
EPA ID:	HID981674450
Mailing address:	ISENBERG ST HONOLULU, HI 96826
Contact:	YASUNOBI NIKAE
Contact address:	903 ISENBERG ST HONOLULU, HI 96826
Contact country:	US
Contact telephone:	808-946-1138
Contact email:	Not reported
EPA Region:	09
Land type:	Facility is not located on Indian land. Additional information is not known.
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	NIKAE YASUNOBU
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	415-555-1212
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported
Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED

CYCLE PLAZA (Continued) **1000279392**

NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: 415-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 04/22/2010
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 12/10/1987
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

FINDS:

Registry ID: 110005284441

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

STATE MASTER

CYCLE PLAZA (Continued) **1000279392**

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1000279392
Registry ID:	110005284441
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110005284441

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14 West 1/8-1/4 0.153 mi. 810 ft. **MCCULLY & MOILIILI ST** **UST** **U001237375**
MCCULLY ST X MOILIILI ST **N/A**
HONOLULU, HI 96826

Relative: Lower
Actual: 3 ft.

UST:

Facility ID:	9-102149
Owner:	UNDETERMINED AT THIS TIME
Owner Address:	Address Unknown
Owner City,St,Zip:	Honolulu, 96826 96826
Latitude:	Not reported
Longitude:	Not reported
Horizontal Reference Datum Name:	Not reported
Horizontal Collection Method Name:	Not reported
Tank ID:	1
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	Not reported
Tank Capacity:	Not reported
Substance:	Not Listed

D15 ESE 1/8-1/4 0.167 mi. 884 ft. **GREEN MILL FOOD MANUFACTURER LTD** **LUST** **U003154827**
914 COOLIDGE ST **UST** **N/A**
HONOLULU, HI 96826

Site 2 of 2 in cluster D

Relative: Higher
Actual: 10 ft.

LUST:

Facility ID:	9-103103
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	12/28/1995
Release ID:	950127
Project Officer:	Eric Sadoyama

UST:

Facility ID:	9-103103
Owner:	GREEN MILL FOOD MANUFACTURER LTD
Owner Address:	732 WILIWILI ST
Owner City,St,Zip:	Honolulu, 96826 96826
Latitude:	21.291991
Longitude:	-157.825266
Horizontal Reference Datum Name:	NAD83
Horizontal Collection Method Name:	Address Matching

GREEN MILL FOOD MANUFACTURER LTD (Continued) **U003154827**

Tank ID:	R-1
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	08/04/1995
Tank Capacity:	250
Substance:	Diesel

Tank ID:	R-2
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	08/04/1995
Tank Capacity:	350
Substance:	Diesel

C16 WNW 1/8-1/4 0.170 mi. 896 ft. **930 MCCULLY BLDG** **930 MCCULLY ST** **HONOLULU, HI 96826** **RCRA NonGen / NLR** **1010316447** **HIP000108506**

Site 2 of 2 in cluster C

Relative: Higher

Actual: 7 ft.

RCRA NonGen / NLR:

Date form received by agency:	05/29/2007
Facility name:	930 MCCULLY BLDG
Facility address:	930 MCCULLY ST HONOLULU, HI 96826
EPA ID:	HIP000108506
Mailing address:	1073 KINAU ST NO 1101 HONOLULU, HI 96814
Contact:	ROBERT K CHAR
Contact address:	1073 KINAU ST NO 1101 HONOLULU, HI 96814
Contact country:	US
Contact telephone:	808-531-2666
Contact email:	Not reported
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	ROBERT K CHAR
Owner/operator address:	1073 KINAU ST NO 1101 HONOLULU, HI 96814
Owner/operator country:	Not reported
Owner/operator telephone:	808-531-2666
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No

930 MCCULLY BLDG (Continued) **1010316447**

Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	11/05/2001
Site name:	930 MCCULLY BLDG
Classification:	Large Quantity Generator
. Waste code:	D000
. Waste name:	Not Defined
. Waste code:	D008
. Waste name:	LEAD
Violation Status:	No violations found

E17
North
1/8-1/4
0.170 mi.
897 ft.

HIRONAKA SERVICE STATION **LUST** **U003221653**
2105 S BERETANIA ST **UST** **N/A**
HONOLULU, HI 96826

Site 1 of 2 in cluster E

Relative:
Higher

Actual:
13 ft.

LUST:

Facility ID:	9-101174
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	05/13/2005
Release ID:	000067
Project Officer:	Shaobin Li

UST:

Facility ID:	9-101174
Owner:	UNKNOWN AT THIS TIME
Owner Address:	UNK
Owner City,St,Zip:	Honolulu, 96826 96826
Latitude:	21.295771
Longitude:	-157.827786
Horizontal Reference Datum Name:	NAD83
Horizontal Collection Method Name:	Address Matching
Tank ID:	R-1
Date Installed:	04/04/1957
Tank Status:	**Permanently Out of Use**
Date Closed:	11/08/2000
Tank Capacity:	4000
Substance:	Gasoline
Tank ID:	R-2

HIRONAKA SERVICE STATION (Continued) **U003221653**

Date Installed:	04/04/1957
Tank Status:	**Permanently Out of Use**
Date Closed:	11/08/2000
Tank Capacity:	5000
Substance:	Gasoline

Tank ID:	R-3
Date Installed:	04/04/1974
Tank Status:	**Permanently Out of Use**
Date Closed:	11/08/2000
Tank Capacity:	8000
Substance:	Gasoline

Tank ID:	R-4
Date Installed:	04/04/1970
Tank Status:	**Permanently Out of Use**
Date Closed:	11/10/2000
Tank Capacity:	550
Substance:	Used Oil

F18 **PUNAHOU CENTRAL OFFICE** **LUST** **U001235197**
NNW **2054 YOUNG ST** **UST** **N/A**
1/8-1/4 **HONOLULU, HI 96826** **Financial Assurance**
0.172 mi.
908 ft. **Site 1 of 3 in cluster F**

Relative:
Higher

Actual:
12 ft.

LUST:

Facility ID:	9-100525
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	10/29/1997
Release ID:	960080
Project Officer:	Eric Sadoyama

Facility ID:	9-100525
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	12/27/1994
Release ID:	920006
Project Officer:	Eric Sadoyama

UST:

Facility ID:	9-100525
Owner:	Hawaiian Telcom
Owner Address:	1177 Bishop Street, Suite 20
Owner City,St,Zip:	Honolulu, 96826 96826
Latitude:	21.295458
Longitude:	-157.828920
Horizontal Reference Datum Name:	NAD83
Horizontal Collection Method Name:	GPS

Tank ID:	M-1
Date Installed:	11/01/1996
Tank Status:	**Currently In Use**
Date Closed:	Not reported
Tank Capacity:	2500
Substance:	Diesel

PUNAHOU CENTRAL OFFICE (Continued) **U001235197**

Tank ID: R-M-001
Date Installed: 05/07/1970
Tank Status: Permanently Out of Use
Date Closed: 07/23/1996
Tank Capacity: 2500
Substance: Diesel

HI Financial Assurance:

Alt Facility ID: 9-100525
Tank Id: M-1
Tank Status: Currently In Use
FRTYPE: Insurance
Expiration Date: 05/02/2011

Alt Facility ID: 9-100525
Tank Id: R-M-001
Tank Status: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: 05/02/2011

Alt Facility ID: 9-100525
Tank Id: M-1
Tank Status: Currently In Use
FRTYPE: Insurance
Expiration Date: 05/02/2018

Alt Facility ID: 9-100525
Tank Id: R-M-001
Tank Status: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: 05/02/2018

E19
NNE
1/8-1/4
0.200 mi.
1054 ft.

UNOCAL 76 SS L 4462
2114 S BERETANIA ST
HONOLULU, HI 96826

RCRA-CESQG **1004688902**
FINDS **HID984468785**
ECHO

Site 2 of 2 in cluster E

Relative:
Higher

Actual:
13 ft.

RCRA-CESQG:

Date form received by agency: 08/27/1993
Facility name: UNOCAL 76 SS L 4462
Facility address: 2114 S BERETANIA ST
HONOLULU, HI 96826
EPA ID: HID984468785
Mailing address: PO BOX 659
HONOLULU, HI 96809
Contact: A FRITZ
Contact address: PO BOX 659
HONOLULU, HI 96809
Contact country: US
Contact telephone: 808-522-7657
Contact email: Not reported
EPA Region: 09
Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar

UNOCAL 76 SS L 4462 (Continued) **1004688902**

month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	UNOCAL 76
Owner/operator address:	911 WILSHIRE BLVD STE 1010 LOS ANGELES, CA 90017
Owner/operator country:	Not reported
Owner/operator telephone:	213-977-7600
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

FINDS:

Registry ID: 110005728187

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

UNOCAL 76 SS L 4462 (Continued) **1004688902**

STATE MASTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1004688902
Registry ID:	110005728187
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110005728187

G20 WNW 1/8-1/4 0.204 mi. 1079 ft. **CONTINENTAL AUTO SERVICES** **SHWS** **S104534121**
1918 ALGAROBA ST **SPILLS** **N/A**
HONOLULU, HI 96826

Site 1 of 4 in cluster G

Relative: Higher

Actual: 7 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Continental Auto Services
HID Number:	Not reported
Facility Registry Identifier:	110005723850
Lead Agency:	HEER
Program:	State
Project Manager:	Charley Langer
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Undetermined
Island:	Oahu
SDAR Environmental Interest Name:	Continental Auto Services
HID Number:	Not reported
Facility Registry Identifier:	110005723850
Lead Agency:	HEER
Potential Hazard And Controls:	Hazard Undetermined
Priority:	NFA
Assessment:	Assessment Ongoing
Response:	Not reported
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Not reported
Use Restrictions:	Undetermined
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action - Type Undetermined
Document Date:	10/08/1999
Document Number:	Not reported
Document Subject:	Not reported
Project Manager:	Charley Langer
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19990119-1030
HID Number:	Not reported

CONTINENTAL AUTO SERVICES (Continued) **S104534121**

Facility Registry Id:	110005723850
Lead and Program:	HEER EP&R
ER:	No
Units:	Continental Auto Service
Substances:	Hydraulic Fluid
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Liz Galvez
Assignment End Date:	Not reported
Result:	Refer to ISST
File Under:	Continental Auto Services
Latitude:	21.294563
Longitude:	-157.831031

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19990119-1030
HID Number:	Not reported
Facility Registry Id:	110005723850
Lead and Program:	HEER EP&R
ER:	No
Units:	Continental Auto Service
Substances:	Hydraulic Fluid
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Liz Galvez
Assignment End Date:	Not reported
Result:	Refer to ISST
File Under:	Continental Auto Services
Latitude:	21.291408000000001
Longitude:	-157.82630499999999

G21 **CONTINENTAL AUTO SERVICE INC** **RCRA-CESQG** **1004688777**
WNW **1918 ALGAROBA ST** **FINDS** **HID981613086**
1/8-1/4 **HONOLULU, HI 96826** **ECHO**
0.204 mi.
1079 ft. **Site 2 of 4 in cluster G**

Relative:
Higher

Actual:
7 ft.

RCRA-CESQG:

Date form received by agency:	07/23/1993
Facility name:	CONTINENTAL AUTO SERVICE INC
Facility address:	1918 ALGAROBA ST HONOLULU, HI 96826
EPA ID:	HID981613086
Mailing address:	ALGAROBA ST HONOLULU, HI 96826
Contact:	MELVIN MATSANO
Contact address:	1918 ALGAROBA ST HONOLULU, HI 96826
Contact country:	US
Contact telephone:	808-949-1545
Contact email:	Not reported
EPA Region:	09
Classification:	Conditionally Exempt Small Quantity Generator

CONTINENTAL AUTO SERVICE INC (Continued) **1004688777**

Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	CONTINENTAL AUTO SERVICE
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	415-555-1212
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	415-555-1212
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No

CONTINENTAL AUTO SERVICE INC (Continued) **1004688777**

Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110064301704

Environmental Interest/Information System
STATE MASTER

Registry ID: 110005723850

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

STATE MASTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1004688777
Registry ID: 110005723850
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110005723850

G22 WNW 1/8-1/4 0.220 mi. 1160 ft. | **GM AUTOMOTIVE CENTER INC** | **RCRA-CESQG FINDS ECHO** | **1000160221 HID981674591**
1918 B ALGAROBA ST
HONOLULU, HI 96826

Site 3 of 4 in cluster G

Relative: Higher
Actual: 7 ft.

RCRA-CESQG:
Date form received by agency: 07/21/1993
Facility name: GM AUTOMOTIVE CENTER INC
Facility address: 1918 B ALGAROBA ST
HONOLULU, HI 96826
EPA ID: HID981674591
Mailing address: P O BOX 1401
HONOLULU, HI 96807
Contact: MORRIS RYUSAKI
Contact address: 1918 B ALGAROBA ST
HONOLULU, HI 96826
Contact country: US
Contact telephone: 808-942-4358
Contact email: Not reported
EPA Region: 09
Land type: Other land type
Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time;

GM AUTOMOTIVE CENTER INC (Continued) **1000160221**

or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	GM AUTOMOTIVE
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	415-555-1212
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	415-555-1212
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

GM AUTOMOTIVE CENTER INC (Continued) **1000160221**

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 01/13/1997
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

FINDS:

Registry ID: 110005725439

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1000160221
Registry ID: 110005725439
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110005725439

F23 **MCCULLY SHELL** **LUST** **U001235337**
NNW **1115 MCCULLY ST** **UST** **N/A**
1/8-1/4 **HONOLULU, HI 96826** **Financial Assurance**
0.221 mi.
1167 ft. **Site 2 of 3 in cluster F**

Relative: Higher
Actual: 13 ft.

LUST:
Facility ID: 9-101017
Facility Status: Site Cleanup Completed with EHE
Facility Status Date: 10/23/2012
Release ID: 080031
Project Officer: Shunsheng Fu

UST:
Facility ID: 9-101017
Owner: ALOHA PETROLEUM, LTD.
Owner Address: 1132 BISHOP STREET, SUITE 1700
Owner City,St,Zip: Honolulu, 96826 96826
Latitude: 21.296352
Longitude: -157.829281
Horizontal Reference Datum Name: NAD83
Horizontal Collection Method Name: GPS

Tank ID: 1
Date Installed: 04/18/1985
Tank Status: **Currently In Use**
Date Closed: Not reported

MCCULLY SHELL (Continued) **U001235337**

Tank Capacity: 10000
Substance: Gasohol

Tank ID: 2
Date Installed: 04/18/1985
Tank Status: Currently In Use
Date Closed: Not reported
Tank Capacity: 10000
Substance: Diesel

Tank ID: 3
Date Installed: 04/18/1985
Tank Status: Currently In Use
Date Closed: Not reported
Tank Capacity: 10000
Substance: Gasohol

HI Financial Assurance:
Alt Facility ID: 9-101017
Tank Id: 2
Tank Status: Currently In Use
FRTYPE: Insurance
Expiration Date: 04/01/2015

Alt Facility ID: 9-101017
Tank Id: 3
Tank Status: Currently In Use
FRTYPE: Insurance
Expiration Date: 04/01/2015

Alt Facility ID: 9-101017
Tank Id: 1
Tank Status: Currently In Use
FRTYPE: Insurance
Expiration Date: 04/01/2015

F24 **MCCULLY SHELL** **RCRA-CESQG** **1009398533**
NNW **1115 MCCULLY ST** **HIR000137406**
1/8-1/4 **HONOLULU, HI 96826**
0.221 mi.
1167 ft. **Site 3 of 3 in cluster F**

Relative:
Higher

Actual:
13 ft.

RCRA-CESQG:
Date form received by agency: 03/01/2012
Facility name: MCCULLY SHELL
Facility address: 1115 MCCULLY ST
HONOLULU, HI 96826
EPA ID: HIR000137406
Contact: RICHARD L CONNER
Contact address: 1132 BISHOP ST, SUITE 1700
HONOLULU, HI 96813
Contact country: US
Contact telephone: 808-522-9704
Contact email: RCONNER@ALOHAGAS.COM
EPA Region: 09

MCCULLY SHELL (Continued) **1009398533**

Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	ALOHA PETROLEUM LTD
Owner/operator address:	1132 BISHOP ST, SUITE 1700 HONOLULU, HI 96813
Owner/operator country:	US
Owner/operator telephone:	808-522-9700
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	03/01/1999
Owner/Op end date:	Not reported

Owner/operator name:	ALOHA PETROLEUM LTD
Owner/operator address:	1132 BISHOP ST, SUITE 1700 HONOLULU, HI 96813
Owner/operator country:	US
Owner/operator telephone:	808-522-9700
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	03/01/1999
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No

MCCULLY SHELL (Continued) **1009398533**

Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

. Waste code: D018
. Waste name: BENZENE

Historical Generators:
Date form received by agency: 02/27/2006
Site name: SHELL OIL PRODUCTS SAP 139548
Classification: Small Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

. Waste code: D018
. Waste name: BENZENE

Violation Status: No violations found

G25 **MCCULLY SERVICE STATION** **LUST** **U001235441**
NW **1901 S KING ST** **UST** **N/A**
1/8-1/4 **HONOLULU, HI 96826**
0.230 mi.
1215 ft. **Site 4 of 4 in cluster G**

Relative:
Higher

Actual:
8 ft.

LUST:
Facility ID: 9-101274
Facility Status: Confirmed Release
Facility Status Date: 02/09/2018
Release ID: 180016
Project Officer: Richard Takaba

UST:
Facility ID: 9-101274
Owner: LIN F. KAM
Owner Address: 1616 KEWALO ST
Owner City,St,Zip: Honolulu, 96826 96826
Latitude: Not reported
Longitude: Not reported
Horizontal Reference Datum Name: Not reported
Horizontal Collection Method Name: Not reported

MCCULLY SERVICE STATION (Continued) **U001235441**

Tank ID: R-001
Date Installed: 04/26/1966
Tank Status: **Permanently Out of Use**
Date Closed: 07/01/1986
Tank Capacity: 1000
Substance: Gasoline

Tank ID: R-002
Date Installed: 04/26/1966
Tank Status: **Permanently Out of Use**
Date Closed: 07/01/1986
Tank Capacity: 1000
Substance: Gasoline

Tank ID: R-003
Date Installed: 04/26/1966
Tank Status: **Permanently Out of Use**
Date Closed: 07/01/1986
Tank Capacity: 500
Substance: Gasoline

Tank ID: R-004
Date Installed: 04/26/1966
Tank Status: **Permanently Out of Use**
Date Closed: 07/01/1986
Tank Capacity: 200
Substance: Used Oil

H26 **ACCU PATH LABORATORY INC** **RCRA NonGen / NLR** **1000423951**
East **2469 S KING ST** **FINDS** **HID990877615**
1/8-1/4 **HONOLULU, HI 96826** **ECHO**
0.237 mi.
1249 ft. **Site 1 of 2 in cluster H**

Relative:
Higher

Actual:
10 ft.

RCRA NonGen / NLR:
Date form received by agency: 12/10/1993
Facility name: ACCU PATH LABORATORY INC
Facility address: 2469 S KING ST
HONOLULU, HI 96826
EPA ID: HID990877615
Mailing address: S KING ST
HONOLULU, HI 96826
Contact: KEN SATO
Contact address: 2469 S KING ST
HONOLULU, HI 96826
Contact country: US
Contact telephone: 808-735-9855
Contact email: Not reported
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: SMITH KLINE BEECHAM

ACCU PATH LABORATORY INC (Continued) **1000423951**

Owner/operator address: 4400 KALANIANAOLE HWY
HONOLULU, HI 96821
Owner/operator country: Not reported
Owner/operator telephone: 808-735-9855
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: 415-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110005729097

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

ACCU PATH LABORATORY INC (Continued) **1000423951**

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1000423951
Registry ID:	110005729097
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110005729097

I27 NNW 1/8-1/4 0.243 mi. 1283 ft. **HAWAII BIOTECH, INC.** **RCRA NonGen / NLR** **1018274564**
1946 YOUNG ST SUITE 400 **FINDS** **HIR000143677**
HONOLULU, HI 96826 **ECHO**

Site 1 of 3 in cluster I

Relative: Higher
Actual: 13 ft.

RCRA NonGen / NLR:

Date form received by agency:	05/09/2017
Facility name:	HAWAII BIOTECH, INC.
Facility address:	1946 YOUNG ST SUITE 400 HONOLULU, HI 96826
EPA ID:	HIR000143677
Mailing address:	650 IWILEI RD SUITE 204 HONOLULU, HI 96817
Contact:	ALAN T JOHNSON
Contact address:	1946 YOUNG ST SUITE 400 HONOLULU, HI 96826
Contact country:	US
Contact telephone:	808-792-1302
Contact email:	JOHNSON@HIBIOTECH.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	BCB YOUNG, LLC
Owner/operator address:	1946 YOUNG ST SUITE 288 HONOLULU, HI 96826
Owner/operator country:	US
Owner/operator telephone:	808-955-8800
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	HAWAII BIOTECH, INC.
Owner/operator address:	Not reported Not reported
Owner/operator country:	US
Owner/operator telephone:	Not reported
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator

HAWAII BIOTECH, INC. (Continued) **1018274564**

Owner/Op start date: 12/30/2015
Owner/Op end date: Not reported

Owner/operator name: HAWAII BIOTECH, INC.
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 12/30/2015
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

. Waste code: D002
. Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

. Waste code: D003
. Waste name: A MATERIAL IS CONSIDERED TO BE A REACTIVE HAZARDOUS WASTE IF IT IS NORMALLY UNSTABLE, REACTS VIOLENTLY WITH WATER, GENERATES TOXIC GASES WHEN EXPOSED TO WATER OR CORROSIVE MATERIALS, OR IF IT IS CAPABLE OF DETONATION OR EXPLOSION WHEN EXPOSED TO HEAT OR A FLAME. ONE EXAMPLE OF SUCH WASTE WOULD BY WASTE GUNPOWDER.

HAWAII BIOTECH, INC. (Continued) **1018274564**

. Waste code: D007
. Waste name: CHROMIUM

. Waste code: D011
. Waste name: SILVER

. Waste code: D018
. Waste name: BENZENE

. Waste code: D022
. Waste name: CHLOROFORM

. Waste code: D028
. Waste name: 1,2-DICHLOROETHANE

. Waste code: D038
. Waste name: PYRIDINE

. Waste code: P014
. Waste name: BENZENETHIOL

. Waste code: P022
. Waste name: CARBON DISULFIDE

. Waste code: P028
. Waste name: BENZENE, (CHLOROMETHYL)-

. Waste code: P029
. Waste name: COPPER CYANIDE

. Waste code: P068
. Waste name: HYDRAZINE, METHYL-

. Waste code: P098
. Waste name: POTASSIUM CYANIDE

. Waste code: P102
. Waste name: PROPARGYL ALCOHOL

. Waste code: P105
. Waste name: SODIUM AZIDE

. Waste code: P106
. Waste name: SODIUM CYANIDE

. Waste code: U001
. Waste name: ACETALDEHYDE (I)

. Waste code: U002
. Waste name: ACETONE (I)

. Waste code: U003
. Waste name: ACETONITRILE (I,T)

. Waste code: U012
. Waste name: ANILINE (I,T)

HAWAII BIOTECH, INC. (Continued) **1018274564**

. Waste code: U019
. Waste name: BENZENE (I,T)

. Waste code: U020
. Waste name: BENZENESULFONIC ACID CHLORIDE (C,R)

. Waste code: U031
. Waste name: 1-BUTANOL (I)

. Waste code: U044
. Waste name: CHLOROFORM

. Waste code: U056
. Waste name: BENZENE, HEXAHYDRO- (I)

. Waste code: U057
. Waste name: CYCLOHEXANONE (I)

. Waste code: U067
. Waste name: ETHANE, 1,2-DIBROMO-

. Waste code: U080
. Waste name: METHANE, DICHLORO-

. Waste code: U092
. Waste name: DIMETHYLAMINE (I)

. Waste code: U103
. Waste name: DIMETHYL SULFATE

. Waste code: U108
. Waste name: 1,4-DIETHYLENEOXIDE

. Waste code: U110
. Waste name: DIPROPYLAMINE (I)

. Waste code: U112
. Waste name: ACETIC ACID ETHYL ESTER (I)

. Waste code: U117
. Waste name: ETHANE, 1,1'-OXYBIS-(I)

. Waste code: U118
. Waste name: ETHYL METHACRYLATE

. Waste code: U123
. Waste name: FORMIC ACID (C,T)

. Waste code: U133
. Waste name: HYDRAZINE (R,T)

. Waste code: U138
. Waste name: METHANE, IODO-

. Waste code: U144
. Waste name: ACETIC ACID, LEAD(2+) SALT

HAWAII BIOTECH, INC. (Continued) **1018274564**

. Waste code: U147
. Waste name: 2,5-FURANDIONE

. Waste code: U154
. Waste name: METHANOL (I)

. Waste code: U188
. Waste name: PHENOL

. Waste code: U194
. Waste name: 1-PROPANAMINE (I,T)

. Waste code: U196
. Waste name: PYRIDINE

. Waste code: U218
. Waste name: ETHANETHIOAMIDE

. Waste code: U220
. Waste name: BENZENE, METHYL-

. Waste code: U239
. Waste name: BENZENE, DIMETHYL- (I,T)

. Waste code: U404
. Waste name: ETHANAMINE, N,N-DIETHYL- (OR) TRIETHYLAMINE

Historical Generators:
Date form received by agency: 03/10/2016
Site name: HAWAII BIOTECH, INC.
Classification: Small Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

. Waste code: D002
. Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

. Waste code: D003
. Waste name: A MATERIAL IS CONSIDERED TO BE A REACTIVE HAZARDOUS WASTE IF IT IS NORMALLY UNSTABLE, REACTS VIOLENTLY WITH WATER, GENERATES TOXIC GASES WHEN EXPOSED TO WATER OR CORROSIVE MATERIALS, OR IF IT IS CAPABLE OF DETONATION OR EXPLOSION WHEN EXPOSED TO HEAT OR A FLAME. ONE EXAMPLE OF SUCH WASTE WOULD BY WASTE GUNPOWDER.

HAWAII BIOTECH, INC. (Continued) **1018274564**

. Waste code: D007
. Waste name: CHROMIUM

. Waste code: D011
. Waste name: SILVER

. Waste code: D018
. Waste name: BENZENE

. Waste code: D022
. Waste name: CHLOROFORM

. Waste code: D028
. Waste name: 1,2-DICHLOROETHANE

. Waste code: D038
. Waste name: PYRIDINE

. Waste code: P014
. Waste name: BENZENETHIOL

. Waste code: P022
. Waste name: CARBON DISULFIDE

. Waste code: P028
. Waste name: BENZENE, (CHLOROMETHYL)-

. Waste code: P029
. Waste name: COPPER CYANIDE

. Waste code: P068
. Waste name: HYDRAZINE, METHYL-

. Waste code: P098
. Waste name: POTASSIUM CYANIDE

. Waste code: P102
. Waste name: PROPARGYL ALCOHOL

. Waste code: P105
. Waste name: SODIUM AZIDE

. Waste code: P106
. Waste name: SODIUM CYANIDE

. Waste code: U001
. Waste name: ACETALDEHYDE (I)

. Waste code: U002
. Waste name: ACETONE (I)

. Waste code: U003
. Waste name: ACETONITRILE (I,T)

. Waste code: U012
. Waste name: ANILINE (I,T)

HAWAII BIOTECH, INC. (Continued) **1018274564**

. Waste code: U019
. Waste name: BENZENE (I,T)

. Waste code: U020
. Waste name: BENZENESULFONIC ACID CHLORIDE (C,R)

. Waste code: U031
. Waste name: 1-BUTANOL (I)

. Waste code: U044
. Waste name: CHLOROFORM

. Waste code: U056
. Waste name: BENZENE, HEXAHYDRO- (I)

. Waste code: U057
. Waste name: CYCLOHEXANONE (I)

. Waste code: U067
. Waste name: ETHANE, 1,2-DIBROMO-

. Waste code: U080
. Waste name: METHANE, DICHLORO-

. Waste code: U092
. Waste name: DIMETHYLAMINE (I)

. Waste code: U103
. Waste name: DIMETHYL SULFATE

. Waste code: U108
. Waste name: 1,4-DIETHYLENEOXIDE

. Waste code: U110
. Waste name: DIPROPYLAMINE (I)

. Waste code: U112
. Waste name: ACETIC ACID ETHYL ESTER (I)

. Waste code: U117
. Waste name: ETHANE, 1,1'-OXYBIS-(I)

. Waste code: U118
. Waste name: ETHYL METHACRYLATE

. Waste code: U123
. Waste name: FORMIC ACID (C,T)

. Waste code: U133
. Waste name: HYDRAZINE (R,T)

. Waste code: U138
. Waste name: METHANE, IODO-

. Waste code: U144
. Waste name: ACETIC ACID, LEAD(2+) SALT

HAWAII BIOTECH, INC. (Continued) **1018274564**

. Waste code: U147
. Waste name: 2,5-FURANDIONE

. Waste code: U154
. Waste name: METHANOL (I)

. Waste code: U188
. Waste name: PHENOL

. Waste code: U194
. Waste name: 1-PROPANAMINE (I,T)

. Waste code: U196
. Waste name: PYRIDINE

. Waste code: U218
. Waste name: ETHANETHIOAMIDE

. Waste code: U220
. Waste name: BENZENE, METHYL-

. Waste code: U239
. Waste name: BENZENE, DIMETHYL- (I,T)

. Waste code: U404
. Waste name: ETHANAMINE, N,N-DIETHYL- (OR) TRIETHYLAMINE

Violation Status: No violations found

FINDS:

Registry ID: 110067532897

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

STATE MASTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1018274564
Registry ID: 110067532897
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110067532897

I28 NNW 1/8-1/4 0.243 mi. 1283 ft. | **KAPIOLANI MED CTR GENETICS LAB**
1946 YOUNG ST STE 400
HONOLULU, HI 96826 | **RCRA NonGen / NLR** | **1012178126**
HIP000043455

Site 2 of 3 in cluster I

Relative: Higher

Actual: 13 ft.

RCRA NonGen / NLR:

Date form received by agency:	08/14/2009
Facility name:	KAPIOLANI MED CTR GENETICS LAB
Facility address:	1946 YOUNG ST STE 400 HONOLULU, HI 96826
EPA ID:	HIP000043455
Mailing address:	1319 PUNAHOU ST HONOLULU, HI 96826
Contact:	CATHY CAMP
Contact address:	1319 PUNAHOU ST HONOLULU, HI 96826
Contact country:	US
Contact telephone:	808-983-8342
Contact email:	Not reported
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	KAPIOLANI HEALTH HAWAII
Owner/operator address:	55 MERCHANT ST 27TH HONOLULU, HI 96813
Owner/operator country:	Not reported
Owner/operator telephone:	808-535-7401
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	07/08/1998
Site name:	KAPIOLANI MED CTR GENETICS LAB

KAPIOLANI MED CTR GENETICS LAB (Continued) **1012178126**

Classification: Conditionally Exempt Small Quantity Generator

Violation Status: No violations found

29
ENE
1/8-1/4
0.248 mi.
1310 ft.

LINDSEY'S CHEVRON SERVICE
2404 S BERETANIA ST
HONOLULU, HI 96826

LUST **U003221659**
UST **N/A**

Relative:
Higher

Actual:
10 ft.

LUST:

Facility ID:	9-101230
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	06/22/1993
Release ID:	910050
Project Officer:	Rhonda Goyke

UST:

Facility ID:	9-101230
Owner:	CHEVRON PRODUCTS COMPANY
Owner Address:	91-480 MALAKOLE ST.
Owner City,St,Zip:	Honolulu, 96826 96826
Latitude:	21.294948
Longitude:	-157.824663
Horizontal Reference Datum Name:	NAD83
Horizontal Collection Method Name:	Address Matching

Tank ID:	R-1
Date Installed:	11/30/1984
Tank Status:	**Permanently Out of Use**
Date Closed:	Not reported
Tank Capacity:	10000
Substance:	Gasoline

Tank ID:	R-2
Date Installed:	11/30/1984
Tank Status:	**Permanently Out of Use**
Date Closed:	Not reported
Tank Capacity:	10000
Substance:	Gasoline

Tank ID:	R-3
Date Installed:	11/30/1984
Tank Status:	**Permanently Out of Use**
Date Closed:	Not reported
Tank Capacity:	10000
Substance:	Gasoline

Tank ID:	R-4
Date Installed:	11/30/1984
Tank Status:	**Permanently Out of Use**
Date Closed:	Not reported
Tank Capacity:	1000
Substance:	Used Oil

H30 East 1/8-1/4 0.250 mi. 1319 ft. | **LONGS DRUG STORE #9954**
2470 S KING ST
HONOLULU, HI 96826

Site 2 of 2 in cluster H

RCRA-LQG | **1014952461**
HIR000141150

Relative: Higher

Actual: 10 ft.

RCRA-LQG:

Date form received by agency:	09/19/2016
Facility name:	LONGS DRUG STORE #9954
Facility address:	2470 S KING ST HONOLULU, HI 96826
EPA ID:	HIR000141150
Mailing address:	ONE CVS DR MAIL CODE 2340 WOONSOCKET, RI 02895
Contact:	NICOLE WILKINSON
Contact address:	ONE CVS DR MAIL CODE 2340 WOONSOCKET, RI 02895
Contact country:	US
Contact telephone:	401-770-7132
Contact email:	NICOLE.WILKINSON@CVSHEALTH.COM
EPA Region:	09
Classification:	Large Quantity Generator
Description:	Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:

Owner/operator name:	LONGS DRUG STORES CALIFORNIA LLC
Owner/operator address:	Not reported Not reported
Owner/operator country:	US
Owner/operator telephone:	Not reported
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	06/05/2011
Owner/Op end date:	Not reported
Owner/operator name:	BANK OF HAWAII
Owner/operator address:	ALAKEA CORPORATE TOWER 1100 ALAKEA ST, 20TH FL HONOLULU, HI 96813
Owner/operator country:	US
Owner/operator telephone:	808-550-4990
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner

LONGS DRUG STORE #9954 (Continued) **1014952461**

Owner/Op start date: 06/05/2011
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

. Waste code: D002
. Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

. Waste code: D006
. Waste name: CADMIUM

. Waste code: D007
. Waste name: CHROMIUM

. Waste code: D009
. Waste name: MERCURY

. Waste code: D010
. Waste name: SELENIUM

. Waste code: P001
. Waste name: 2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%

. Waste code: P042
. Waste name: 1,2-BENZENEDIOL, 4-[1-HYDROXY-2-(METHYLAMINO)ETHYL]-, (R)-

LONGS DRUG STORE #9954 (Continued) **1014952461**

. Waste code: P075
. Waste name: NICOTINE, & SALTS

. Waste code: P081
. Waste name: NITROGLYCERINE (R)

Historical Generators:
Date form received by agency: 10/05/2012
Site name: LONGS DRUG STORE NO 9954
Classification: Conditionally Exempt Small Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

. Waste code: D002
. Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

. Waste code: D006
. Waste name: CADMIUM

. Waste code: D007
. Waste name: CHROMIUM

. Waste code: D009
. Waste name: MERCURY

. Waste code: D010
. Waste name: SELENIUM

. Waste code: P001
. Waste name: 2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%

. Waste code: P042
. Waste name: 1,2-BENZENEDIOL, 4-[1-HYDROXY-2-(METHYLAMINO)ETHYL]-, (R)-

. Waste code: P075
. Waste name: NICOTINE, & SALTS

. Waste code: P081
. Waste name: NITROGLYCERINE (R)

Date form received by agency: 06/29/2012
Site name: LONGS DRUG STORE NO 9954
Classification: Conditionally Exempt Small Quantity Generator

LONGS DRUG STORE #9954 (Continued) **1014952461**

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

. Waste code: D002
. Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

. Waste code: P001
. Waste name: 2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%

. Waste code: P042
. Waste name: 1,2-BENZENEDIOL, 4-[1-HYDROXY-2-(METHYLAMINO)ETHYL]-, (R)-

. Waste code: P075
. Waste name: NICOTINE, & SALTS

. Waste code: P081
. Waste name: NITROGLYCERINE (R)

Violation Status: No violations found

31
ESE
1/4-1/2
0.261 mi.
1376 ft.

HONOLULU LIMITED
911 HAUSTEN ST
HONOLULU, HI 96826

LUST **U003762116**
UST **N/A**

Relative:
Lower

Actual:
6 ft.

LUST:
Facility ID: 9-103656
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 12/03/2001
Release ID: 010049
Project Officer: Mark Sutterfield

UST:
Facility ID: 9-103656
Owner: HONOLULU LIMITED
Owner Address: 3660 WAIALAE AVE, SUITE 400
Owner City,St,Zip: Honolulu, 96826 96826
Latitude: 21.291532
Longitude: -157.824129
Horizontal Reference Datum Name: NAD83
Horizontal Collection Method Name: Address Matching

Tank ID: R-1
Date Installed: Not reported

HONOLULU LIMITED (Continued) **U003762116**

Tank Status:	**Permanently Out of Use**
Date Closed:	07/19/2000
Tank Capacity:	1000
Substance:	Not Listed

Tank ID:	R-2
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	07/19/2000
Tank Capacity:	1000
Substance:	Not Listed

J32 **JAPANESE CULTURAL CENTER OF HAWAII** **LUST** **U003221789**
ENE **2454 S BERETANIA ST** **UST** **N/A**
1/4-1/2 **HONOLULU, HI 96826**
0.280 mi.
1476 ft. **Site 1 of 2 in cluster J**

Relative:
Higher

Actual:
9 ft.

LUST:

Facility ID:	9-102721
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	05/14/1996
Release ID:	930045
Project Officer:	Jose Ruiz

UST:

Facility ID:	9-102721
Owner:	JAPANESE CULTURAL CENTER OF HAWAII
Owner Address:	2454 S BERETANIA ST
Owner City,St,Zip:	Honolulu, 96826 96826
Latitude:	21.294072
Longitude:	-157.823903
Horizontal Reference Datum Name:	NAD83
Horizontal Collection Method Name:	Address Matching

Tank ID:	R-1
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	01/26/1993
Tank Capacity:	1000
Substance:	Used Oil

I33 **WALLYS GARDEN CENTER** **SHWS** **S111678012**
NNW **1935 S BERETANIA ST** **SPILLS** **N/A**
1/4-1/2 **HONOLULU, HI**
0.280 mi.
1478 ft. **Site 3 of 3 in cluster I**

Relative:
Higher

Actual:
19 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Wallys Garden Center
HID Number:	Not reported
Facility Registry Identifier:	Not reported

WALLYS GARDEN CENTER (Continued) **S111678012**

Lead Agency:	HEER
Program:	State
Project Manager:	Cal Miyahara
Hazard Priority:	Low
Potential Hazards And Controls:	Hazard Present
Island:	Oahu
SDAR Environmental Interest Name:	Wallys Garden Center
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Potential Hazard And Controls:	Hazard Present
Priority:	Low
Assessment:	Assessment Ongoing
Response:	Not reported
Nature of Contamination:	Found: TPH diesel (326 mg/kg) and oil (2390 mg/kg) in the parking lot at 4.5 ft bgs.
Nature of Residual Contamination:	Not reported
Use Restrictions:	Controls Required to Manage Contamination
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	Not reported
Document Date:	Not reported
Document Number:	Not reported
Document Subject:	Not reported
Project Manager:	Cal Miyahara
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	20100518-1410
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	None
Units:	1935 South Beretania Street
Substances:	Oil
Less Or Greater Than:	Not reported
Numerical Quantity:	0
Units:	Unknown
Activity Type:	Response
Activity Lead:	Liz Galvez
Assignment End Date:	2010-06-21 00:00:00
Result:	Refer to SDAR
File Under:	Asanoma Trust
Latitude:	21.296600000000002
Longitude:	-157.8304

J34 East 1/4-1/2 0.284 mi. 1497 ft. | **VARSITY MOTORS, LTD.**
2482 S BERETANIA ST
HONOLULU, HI 96826

LUST **U003221620**
UST **N/A**

Site 2 of 2 in cluster J

Relative: Higher

Actual: 7 ft.

LUST:

Facility ID:	9-100855
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	09/17/1992
Release ID:	910020
Project Officer:	Not Assigned

UST:

Facility ID:	9-100855
Owner:	VARSITY MOTORS, LTD.
Owner Address:	2482 S BERETANIA ST
Owner City,St,Zip:	Honolulu, 96826 96826
Latitude:	21.293623
Longitude:	-157.823550
Horizontal Reference Datum Name:	NAD83
Horizontal Collection Method Name:	Address Matching

Tank ID:	R-1
Date Installed:	05/06/1966
Tank Status:	**Permanently Out of Use**
Date Closed:	10/23/1990
Tank Capacity:	8000
Substance:	Gasoline

Tank ID:	R-2
Date Installed:	05/06/1966
Tank Status:	**Permanently Out of Use**
Date Closed:	10/23/1990
Tank Capacity:	6000
Substance:	Gasoline

Tank ID:	R-3
Date Installed:	05/06/1966
Tank Status:	**Permanently Out of Use**
Date Closed:	10/23/1990
Tank Capacity:	550
Substance:	Used Oil

---

35 East 1/4-1/2 0.345 mi. 1823 ft. | **KYLE'S SERVICE STA. L-0995**
2550 S BERETANIA ST
HONOLULU, HI 96826

LUST **U003221549**
UST **N/A**

Relative: Lower

Actual: 3 ft.

LUST:

Facility ID:	9-100036
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	09/15/1994
Release ID:	910049
Project Officer:	Eric Sadoyama

KYLE'S SERVICE STA. L-0995 (Continued) **U003221549**

UST:

Facility ID:	9-100036
Owner:	UNOCAL CORPORATION
Owner Address:	3915 Mission Avenue #7416
Owner City,St,Zip:	Honolulu, 96826 96826
Latitude:	21.292552
Longitude:	-157.822523
Horizontal Reference Datum Name:	NAD83
Horizontal Collection Method Name:	Address Matching
Tank ID:	R-1
Date Installed:	03/27/1963
Tank Status:	**Permanently Out of Use**
Date Closed:	Not reported
Tank Capacity:	6000
Substance:	Gasoline
Tank ID:	R-2
Date Installed:	03/27/1963
Tank Status:	**Permanently Out of Use**
Date Closed:	Not reported
Tank Capacity:	6000
Substance:	Gasoline
Tank ID:	R-4
Date Installed:	03/27/1963
Tank Status:	**Permanently Out of Use**
Date Closed:	Not reported
Tank Capacity:	280
Substance:	Used Oil

---

36 **C&CH MCCULLY FIRE STATION** **LUST** **U001235038**
SE **2425 DATE ST** **UST** **N/A**
1/4-1/2 **HONOLULU, HI 96826** **Financial Assurance**
0.350 mi.
1846 ft.

Relative:
Lower

Actual:
3 ft.

LUST:

Facility ID:	9-100080
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	10/06/1995
Release ID:	910028
Project Officer:	Roger Brewer

UST:

Facility ID:	9-100080
Owner:	C&C OF HNL - HONOLULU FIRE DEPARATMENT
Owner Address:	636 South Street
Owner City,St,Zip:	Honolulu, 96826 96826
Latitude:	21.288098
Longitude:	-157.825100
Horizontal Reference Datum Name:	NAD83
Horizontal Collection Method Name:	GPS
Tank ID:	R-1

C&CH MCCULLY FIRE STATION (Continued) **U001235038**

Date Installed:	09/02/1955
Tank Status:	**Permanently Out of Use**
Date Closed:	02/28/1991
Tank Capacity:	550
Substance:	Diesel

Tank ID:	r-2
Date Installed:	03/30/1991
Tank Status:	**Permanently out of Use**
Date Closed:	07/02/2008
Tank Capacity:	1000
Substance:	Diesel

HI Financial Assurance:

Alt Facility ID:	9-100080
Tank Id:	R-1
Tank Status:	Permanently Out of Use
FRTYPE:	Other
Expiration Date:	Not reported

Alt Facility ID:	9-100080
Tank Id:	r-2
Tank Status:	Permanently out of Use
FRTYPE:	Other
Expiration Date:	Not reported

37
NW
1/4-1/2
0.427 mi.
2252 ft.

ALEXANDER TOWER **LUST** **U003711696**
1226 ALEXANDER ST **UST** **N/A**
HONOLULU, HI 96826

Relative:
Higher

Actual:
27 ft.

LUST:

Facility ID:	9-103531
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	06/13/2001
Release ID:	010007
Project Officer:	Jose Ruiz

UST:

Facility ID:	9-103531
Owner:	ALEXANDER TOWER
Owner Address:	1226 ALEXANDER ST, APT 302
Owner City,St,Zip:	Honolulu, 96826 96826
Latitude:	21.297907
Longitude:	-157.832020
Horizontal Reference Datum Name:	NAD83
Horizontal Collection Method Name:	Address Matching

Tank ID:	R-M-1
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	10/27/2000
Tank Capacity:	120
Substance:	Diesel

38 East 1/4-1/2 0.431 mi. 2278 ft.

TEXACO STATION 611000550
1119 UNIVERSITY AVE
HONOLULU, HI 96826

LUST **1000431692**
UST **HID981638117**
RCRA NonGen / NLR

Relative: Higher

Actual: 8 ft.

LUST:

Facility ID:	9-100342
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	05/12/1999
Release ID:	900103
Project Officer:	Lene Ichinotsubo

UST:

Facility ID:	9-100342
Owner:	TEXACO REFINING & MARKETING INC.
Owner Address:	ENVIRONMENTAL SERVICES 800 SW FIRST AVE., SUITE 180
Owner City,St,Zip:	Honolulu, 96826 96826
Latitude:	21.293007
Longitude:	-157.821064
Horizontal Reference Datum Name:	NAD83
Horizontal Collection Method Name:	Address Matching

Tank ID:	R-002
Date Installed:	02/06/1966
Tank Status:	**Permanently Out of Use**
Date Closed:	09/18/1996
Tank Capacity:	4000
Substance:	Gasoline

Tank ID:	R-003
Date Installed:	02/06/1966
Tank Status:	**Permanently Out of Use**
Date Closed:	09/18/1996
Tank Capacity:	4000
Substance:	Gasoline

Tank ID:	R-004
Date Installed:	02/06/1966
Tank Status:	**Permanently Out of Use**
Date Closed:	09/18/1996
Tank Capacity:	4000
Substance:	Gasoline

Tank ID:	R-005
Date Installed:	02/06/1966
Tank Status:	**Permanently Out of Use**
Date Closed:	09/18/1996
Tank Capacity:	4000
Substance:	Gasoline

Tank ID:	R-1
Date Installed:	02/06/1966
Tank Status:	**Permanently Out of Use**
Date Closed:	10/27/1992

TEXACO STATION 611000550 (Continued) **1000431692**

Tank Capacity: 550
Substance: Used Oil

RCRA NonGen / NLR:
Date form received by agency: 01/26/1987
Facility name: TEXACO STATION 611000550
Facility address: 1119 UNIVERSITY AVE
HONOLULU, HI 96826
EPA ID: HID981638117
Contact: DALE ANDERT
Contact address: 1800 SW FIRST AVE STE 180
PORTLAND, OR 97201
Contact country: US
Contact telephone: 503-226-3575
Contact email: Not reported
EPA Region: 09
Land type: Private
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: 415-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: UNIVERSITY VILLAGE APTS WJ OKI
Owner/operator address: 1281 S KING ST RM 5
HONOLULU, HI 96814
Owner/operator country: Not reported
Owner/operator telephone: 808-523-5933
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No

TEXACO STATION 611000550 (Continued) **1000431692**

Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 12/12/1995
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

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39 NNE 1/4-1/2 0.433 mi. 2285 ft. | **WILDER AVENUE 7-11 & 76 STATION** | **LUST** | **U003221699**
2028 WILDER AVE. | **UST** | **N/A**
HONOLULU, HI 96822 | **Financial Assurance**

Relative: Higher
Actual: 35 ft.

LUST:
Facility ID: 9-101866
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 10/20/1998
Release ID: 980152
Project Officer: Jose Ruiz

UST:
Facility ID: 9-101866
Owner: Mid Pac Petroleum LLC
Owner Address: 1100 Alakea Street, 8th floor
Owner City,St,Zip: Honolulu, 96822 96822
Latitude: 21.299280
Longitude: -157.826462
Horizontal Reference Datum Name: NAD83
Horizontal Collection Method Name: GPS

Tank ID: 1
Date Installed: 12/01/2012
Tank Status: Currently In Use
Date Closed: Not reported
Tank Capacity: 12000
Substance: Gasohol

Tank ID: 2
Date Installed: 12/01/2012
Tank Status: Currently In Use
Date Closed: Not reported
Tank Capacity: 12000
Substance: Gasohol

Tank ID: r-87
Date Installed: 06/30/1989

WILDER AVENUE 7-11 & 76 STATION (Continued) **U003221699**

Tank Status:	**Permanently out of Use**
Date Closed:	09/14/2012
Tank Capacity:	10000
Substance:	Gasoline

Tank ID:	r-89
Date Installed:	06/30/1989
Tank Status:	**Permanently out of Use**
Date Closed:	09/14/2012
Tank Capacity:	10000
Substance:	Gasoline

Tank ID:	r-92
Date Installed:	06/30/1989
Tank Status:	**Permanently out of Use**
Date Closed:	09/14/2012
Tank Capacity:	10000
Substance:	Gasoline

HI Financial Assurance:

Alt Facility ID:	9-101866
Tank Id:	r-87
Tank Status:	Permanently out of Use
FRTYPE:	Other
Expiration Date:	Not reported

Alt Facility ID:	9-101866
Tank Id:	r-92
Tank Status:	Permanently out of Use
FRTYPE:	Other
Expiration Date:	Not reported

Alt Facility ID:	9-101866
Tank Id:	1
Tank Status:	Currently In Use
FRTYPE:	Other
Expiration Date:	Not reported

Alt Facility ID:	9-101866
Tank Id:	r-89
Tank Status:	Permanently out of Use
FRTYPE:	Other
Expiration Date:	Not reported

Alt Facility ID:	9-101866
Tank Id:	2
Tank Status:	Currently In Use
FRTYPE:	Other
Expiration Date:	Not reported

Alt Facility ID:	9-101866
Tank Id:	r-92
Tank Status:	Permanently out of Use
FRTYPE:	Insurance
Expiration Date:	04/01/2013

WILDER AVENUE 7-11 & 76 STATION (Continued) **U003221699**

Alt Facility ID: 9-101866
Tank Id: r-89
Tank Status: Permanently out of Use
FRTYPE: Insurance
Expiration Date: 04/01/2013

Alt Facility ID: 9-101866
Tank Id: r-87
Tank Status: Permanently out of Use
FRTYPE: Insurance
Expiration Date: 04/01/2013

Alt Facility ID: 9-101866
Tank Id: 2
Tank Status: Currently In Use
FRTYPE: Insurance
Expiration Date: 04/01/2013

Alt Facility ID: 9-101866
Tank Id: 1
Tank Status: Currently In Use
FRTYPE: Insurance
Expiration Date: 04/01/2013

Alt Facility ID: 9-101866
Tank Id: r-89
Tank Status: Permanently out of Use
FRTYPE: Insurance
Expiration Date: 03/31/2014

Alt Facility ID: 9-101866
Tank Id: 2
Tank Status: Currently In Use
FRTYPE: Insurance
Expiration Date: 03/31/2014

Alt Facility ID: 9-101866
Tank Id: r-92
Tank Status: Permanently out of Use
FRTYPE: Insurance
Expiration Date: 03/31/2014

Alt Facility ID: 9-101866
Tank Id: 1
Tank Status: Currently In Use
FRTYPE: Insurance
Expiration Date: 03/31/2014

Alt Facility ID: 9-101866
Tank Id: r-87
Tank Status: Permanently out of Use
FRTYPE: Insurance
Expiration Date: 03/31/2014

K40 East 1/4-1/2 0.465 mi. 2456 ft. | **UNIVERSITY 76 / 7-11 #168**
2646 S KING ST
HONOLULU, HI 96826

LUST **U001235397**
UST **N/A**
Financial Assurance

Site 1 of 2 in cluster K

Relative: Lower

Actual: 3 ft.

LUST:

Facility ID:	9-101173
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	09/21/2009
Release ID:	090024
Project Officer:	Josh Nagashima

UST:

Facility ID:	9-101173
Owner:	Mid Pac Petroleum LLC
Owner Address:	1100 Alakea St., 8th Floor
Owner City,St,Zip:	Honolulu, 96826 96826
Latitude:	21.291566
Longitude:	-157.820758
Horizontal Reference Datum Name:	NAD83
Horizontal Collection Method Name:	GPS

Tank ID:	1a
Date Installed:	09/23/2009
Tank Status:	**Currently In Use**
Date Closed:	Not reported
Tank Capacity:	7000
Substance:	Gasoline

Tank ID:	1a
Date Installed:	09/23/2009
Tank Status:	**Currently In Use**
Date Closed:	Not reported
Tank Capacity:	7000
Substance:	Gasoline

Tank ID:	1b
Date Installed:	09/23/2009
Tank Status:	**Currently In Use**
Date Closed:	Not reported
Tank Capacity:	5000
Substance:	Gasoline

Tank ID:	1b
Date Installed:	09/23/2009
Tank Status:	**Currently In Use**
Date Closed:	Not reported
Tank Capacity:	5000
Substance:	Gasoline

Tank ID:	r-87
Date Installed:	04/04/1985
Tank Status:	**Permanently out of Use**
Date Closed:	07/07/2009

UNIVERSITY 76 / 7-11 #168 (Continued) **U001235397**

Tank Capacity: 8000
Substance: Gasoline

Tank ID: r-87
Date Installed: 04/04/1985
Tank Status: **Permanently out of Use**
Date Closed: 07/07/2009
Tank Capacity: 8000
Substance: Gasoline

Tank ID: r-89
Date Installed: 04/04/1985
Tank Status: **Permanently out of Use**
Date Closed: 07/07/2009
Tank Capacity: 8000
Substance: Gasoline

Tank ID: r-89
Date Installed: 04/04/1985
Tank Status: **Permanently out of Use**
Date Closed: 07/07/2009
Tank Capacity: 8000
Substance: Gasoline

Tank ID: r-92
Date Installed: 04/04/1985
Tank Status: **Permanently out of Use**
Date Closed: 07/07/2009
Tank Capacity: 8000
Substance: Gasoline

Tank ID: r-92
Date Installed: 04/04/1985
Tank Status: **Permanently out of Use**
Date Closed: 07/07/2009
Tank Capacity: 8000
Substance: Gasoline

HI Financial Assurance:
Alt Facility ID: 9-101173
Tank Id: r-89
Tank Status: Permanently out of Use
FRTYPE: Insurance
Expiration Date: 03/31/2012

Alt Facility ID: 9-101173
Tank Id: 1a
Tank Status: Currently In Use
FRTYPE: Insurance
Expiration Date: 03/31/2012

Alt Facility ID: 9-101173

UNIVERSITY 76 / 7-11 #168 (Continued) **U001235397**

Tank Id: r-92
Tank Status: Permanently out of Use
FRTYPE: Insurance
Expiration Date: 03/31/2012

Alt Facility ID: 9-101173
Tank Id: r-87
Tank Status: Permanently out of Use
FRTYPE: Insurance
Expiration Date: 03/31/2012

Alt Facility ID: 9-101173
Tank Id: 1b
Tank Status: Currently In Use
FRTYPE: Insurance
Expiration Date: 03/31/2012

Alt Facility ID: 9-101173
Tank Id: 1b
Tank Status: Currently In Use
FRTYPE: Insurance
Expiration Date: 09/30/2017

Alt Facility ID: 9-101173
Tank Id: r-87
Tank Status: Permanently out of Use
FRTYPE: Insurance
Expiration Date: 09/30/2017

Alt Facility ID: 9-101173
Tank Id: 1a
Tank Status: Currently In Use
FRTYPE: Insurance
Expiration Date: 09/30/2017

Alt Facility ID: 9-101173
Tank Id: r-92
Tank Status: Permanently out of Use
FRTYPE: Insurance
Expiration Date: 09/30/2017

Alt Facility ID: 9-101173
Tank Id: r-89
Tank Status: Permanently out of Use
FRTYPE: Insurance
Expiration Date: 09/30/2017

41
South
1/4-1/2
0.466 mi.
2458 ft.

ALA WAI COVE CONDOMINIUM APARTMENTS
509 UNIVERSITY AVE
HONOLULU, HI 96815

SHWS **1006820430**
SPILLS **N/A**

Relative:
Lower

Actual:
3 ft.

SHWS:
Organization: Not reported
Supplemental Location: Not reported
Island: Oahu
Environmental Interest: Ala Wai Cove Condominium Apartments

ALA WAI COVE CONDOMINIUM APARTMENTS (Continued) **1006820430**

HID Number:	Not reported
Facility Registry Identifier:	110013783888
Lead Agency:	HEER
Program:	State
Project Manager:	John Peard
Hazard Priority:	Low
Potential Hazards And Controls:	Hazard Undetermined
Island:	Oahu
SDAR Environmental Interest Name:	Ala Wai Cove Condominium Apartments
HID Number:	Not reported
Facility Registry Identifier:	110013783888
Lead Agency:	HEER
Potential Hazard And Controls:	Hazard Undetermined
Priority:	Low
Assessment:	Assessment Ongoing
Response:	Not reported
Nature of Contamination:	Found: Petroleum in soil.
Nature of Residual Contamination:	Not reported
Use Restrictions:	Undetermined
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	Closed - Documentation Inadequate to Evaluate Risk
Document Date:	07/14/1992
Document Number:	Not reported
Document Subject:	Site Assessment for the Removal of an UST at the Ala Wai Cove Condominium Apartments, Honolulu HI, Prepared for M. Nakai Repair Service Ltd, Project 00459
Project Manager:	John Peard
Contact Information:	(808) 933-9921 Environmental Health Bldg, 1582 Kamehameha Ave, Hilo, HI 96720

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19920714
HID Number:	Not reported
Facility Registry Id:	110013783888
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Ala Wai Cove Condominium Apartments
Substances:	Not reported
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Not reported
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Ala Wai Cove Condominium Apartments
Latitude:	21.285903000000001
Longitude:	-157.826919

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19920714

ALA WAI COVE CONDOMINIUM APARTMENTS (Continued) **1006820430**

HID Number:	Not reported
Facility Registry Id:	110013783888
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Ala Wai Cove Condominium Apartments
Substances:	Not reported
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Not reported
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Ala Wai Cove Condominium Apartments
Latitude:	21.286078
Longitude:	-157.827248

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19920714
HID Number:	Not reported
Facility Registry Id:	110013783888
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Ala Wai Cove Condominium Apartments
Substances:	Not reported
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Not reported
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Ala Wai Cove Condominium Apartments
Latitude:	21.271197000000001
Longitude:	-157.81720899999999

L42 **FUNAI'S UNION SERVICE L-5583** **LUST** **U001235021**
WSW **1810 KAPIOLANI BLVD** **UST** **N/A**
1/4-1/2 **HONOLULU, HI 96813** **Financial Assurance**
0.483 mi.
2548 ft. **Site 1 of 2 in cluster L**

Relative:
Lower

Actual:
3 ft.

LUST:

Facility ID:	9-100047
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	02/08/2002
Release ID:	910048
Project Officer:	Shunsheng Fu

UST:

Facility ID:	9-100047
Owner:	UNOCAL CORPORATION
Owner Address:	3915 Mission Avenue #7416
Owner City,St,Zip:	Honolulu, 96813 96813
Latitude:	21.290739
Longitude:	-157.835372

FUNAI'S UNION SERVICE L-5583 (Continued) **U001235021**

Horizontal Reference Datum Name: NAD83
Horizontal Collection Method Name: Address Matching

Tank ID: R-1
Date Installed: 03/26/1966
Tank Status: Permanently Out of Use
Date Closed: 06/10/1991
Tank Capacity: 8000
Substance: Gasoline

Tank ID: R-2
Date Installed: 03/26/1966
Tank Status: Permanently Out of Use
Date Closed: 06/10/1991
Tank Capacity: 6000
Substance: Gasoline

Tank ID: R-3
Date Installed: 03/26/1966
Tank Status: Permanently Out of Use
Date Closed: 06/10/1991
Tank Capacity: 250
Substance: Used Oil

HI Financial Assurance:
Alt Facility ID: 9-100047
Tank Id: R-3
Tank Status: Permanently Out of Use
FRTYPE: Not Listed
Expiration Date: Not reported

Alt Facility ID: 9-100047
Tank Id: R-3
Tank Status: Permanently Out of Use
FRTYPE: Risk Retention Group
Expiration Date: Not reported

Alt Facility ID: 9-100047
Tank Id: R-2
Tank Status: Permanently Out of Use
FRTYPE: Risk Retention Group
Expiration Date: Not reported

Alt Facility ID: 9-100047
Tank Id: R-2
Tank Status: Permanently Out of Use
FRTYPE: Not Listed
Expiration Date: Not reported

Alt Facility ID: 9-100047
Tank Id: R-1
Tank Status: Permanently Out of Use
FRTYPE: Risk Retention Group
Expiration Date: Not reported

FUNAI'S UNION SERVICE L-5583 (Continued) **U001235021**

Alt Facility ID:	9-100047
Tank Id:	R-1
Tank Status:	Permanently Out of Use
FRTYPE:	Not Listed
Expiration Date:	Not reported

L43 WSW 1/2-1 0.504 mi. 2662 ft. **HAWAII CONVENTION CENTER 1801 KALAKAUA AVE HONOLULU, HI 96814** **SHWS SPILLS** **1006820847 N/A**

Site 2 of 2 in cluster L

Relative: Lower

Actual: 3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Kalakaua Ave & Kapiolani Blvd
Island:	Oahu
Environmental Interest:	Hawaii Convention Center
HID Number:	Not reported
Facility Registry Identifier:	110013788641
Lead Agency:	SHWB
Program:	State
Project Manager:	Not reported
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Undetermined
Island:	Oahu
SDAR Environmental Interest Name:	Hawaii Convention Center
HID Number:	Not reported
Facility Registry Identifier:	110013788641
Lead Agency:	SHWB
Potential Hazard And Controls:	Hazard Undetermined
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Not reported
Use Restrictions:	Undetermined
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action - Type Undetermined
Document Date:	09/03/1997
Document Number:	Not reported
Document Subject:	Letter Report Removal and Disposal of Transite Pipes, Hawaii Convention Center, Honolulu HI
Project Manager:	Not reported
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Kalakaua Ave & Kapiolani Blvd
Case Number:	19980426-1349
HID Number:	Not reported
Facility Registry Id:	110013788641
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Hawaii Convention Center Brick Sealer Odor

HAWAII CONVENTION CENTER (Continued) **1006820847**

Substances:	Not reported
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Liz Galvez
Assignment End Date:	2017-01-31 00:00:00
Result:	Closed Incomplete Documentation
File Under:	State of Hawaii, Department of Business, Economic Development & Tourism, Convention Center Authority
Latitude:	21.289655
Longitude:	-157.83659399999999

Island:	Oahu
Supplemental Loc. Text:	Kalakaua Ave & Kapiolani Blvd
Case Number:	19980426-1349
HID Number:	Not reported
Facility Registry Id:	110013788641
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Hawaii Convention Center Brick Sealer Odor
Substances:	Not reported
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Liz Galvez
Assignment End Date:	2017-01-31 00:00:00
Result:	Closed Incomplete Documentation
File Under:	State of Hawaii, Department of Business, Economic Development & Tourism, Convention Center Authority
Latitude:	21.289482
Longitude:	-157.83518699999999

Island:	Oahu
Supplemental Loc. Text:	Kalakaua Ave & Kapiolani Blvd
Case Number:	19980426-1349
HID Number:	Not reported
Facility Registry Id:	110013788641
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Hawaii Convention Center Brick Sealer Odor
Substances:	Not reported
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Liz Galvez
Assignment End Date:	2017-01-31 00:00:00
Result:	Closed Incomplete Documentation
File Under:	State of Hawaii, Department of Business, Economic Development & Tourism, Convention Center Authority
Latitude:	21.295252000000001
Longitude:	-157.84531899999999

Island:	Oahu
Supplemental Loc. Text:	Kalakaua Ave & Kapiolani Blvd

HAWAII CONVENTION CENTER (Continued) **1006820847**

Case Number:	19970301-1010
HID Number:	Not reported
Facility Registry Id:	110013788641
Lead and Program:	HEER EP&R
ER:	No
Units:	Convention Center White Liquid Emptying Into Ala Wai
Substances:	UNKN white liquid
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Terry Corpus
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	State of Hawaii, Department of Business, Economic Development & Tourism, Convention Center Authority
Latitude:	21.289655
Longitude:	-157.83659399999999
Island:	Oahu
Supplemental Loc. Text:	Kalakaua Ave & Kapiolani Blvd
Case Number:	19970301-1010
HID Number:	Not reported
Facility Registry Id:	110013788641
Lead and Program:	HEER EP&R
ER:	No
Units:	Convention Center White Liquid Emptying Into Ala Wai
Substances:	UNKN white liquid
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Terry Corpus
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	State of Hawaii, Department of Business, Economic Development & Tourism, Convention Center Authority
Latitude:	21.289482
Longitude:	-157.83518699999999
Island:	Oahu
Supplemental Loc. Text:	Kalakaua Ave & Kapiolani Blvd
Case Number:	19970301-1010
HID Number:	Not reported
Facility Registry Id:	110013788641
Lead and Program:	HEER EP&R
ER:	No
Units:	Convention Center White Liquid Emptying Into Ala Wai
Substances:	UNKN white liquid
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Terry Corpus
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	State of Hawaii, Department of Business, Economic Development &

HAWAII CONVENTION CENTER (Continued) **1006820847**

	Tourism, Convention Center Authority
Latitude:	21.295252000000001
Longitude:	-157.84531899999999
Island:	Oahu
Supplemental Loc. Text:	Kalakaua Ave & Kapiolani Blvd
Case Number:	19960207-1016
HID Number:	Not reported
Facility Registry Id:	110013788641
Lead and Program:	HEER EP&R
ER:	No
Units:	Convention Center
Substances:	Oil
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Terry Corpus
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	State of Hawaii, Department of Business, Economic Development & Tourism, Convention Center Authority
Latitude:	21.289655
Longitude:	-157.83659399999999
Island:	Oahu
Supplemental Loc. Text:	Kalakaua Ave & Kapiolani Blvd
Case Number:	19960207-1016
HID Number:	Not reported
Facility Registry Id:	110013788641
Lead and Program:	HEER EP&R
ER:	No
Units:	Convention Center
Substances:	Oil
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Terry Corpus
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	State of Hawaii, Department of Business, Economic Development & Tourism, Convention Center Authority
Latitude:	21.289482
Longitude:	-157.83518699999999
Island:	Oahu
Supplemental Loc. Text:	Kalakaua Ave & Kapiolani Blvd
Case Number:	19960207-1016
HID Number:	Not reported
Facility Registry Id:	110013788641
Lead and Program:	HEER EP&R
ER:	No
Units:	Convention Center
Substances:	Oil
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported

HAWAII CONVENTION CENTER (Continued) **1006820847**

Units:	Not reported
Activity Type:	Response
Activity Lead:	Terry Corpus
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	State of Hawaii, Department of Business, Economic Development & Tourism, Convention Center Authority
Latitude:	21.295252000000001
Longitude:	-157.84531899999999
Island:	Oahu
Supplemental Loc. Text:	Kalakaua Ave & Kapiolani Blvd
Case Number:	19960314-0000
HID Number:	Not reported
Facility Registry Id:	110013788641
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Hawaii Convention Center
Substances:	Lubricating Oil.
Less Or Greater Than:	Not reported
Numerical Quantity:	1
Units:	Gallons
Activity Type:	Response
Activity Lead:	Not reported
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	State of Hawaii, Department of Business, Economic Development & Tourism, Convention Center Authority
Latitude:	21.289482
Longitude:	-157.83518699999999

Click this hyperlink while viewing on your computer to access
2 additional HI SPILLS: record(s) in the EDR Site Report.

K44 **2700 SOUTH KING STREET** **SHWS** **S106815419**
ESE **2700 S KING ST** **ENG CONTROLS** **N/A**
1/2-1 **HONOLULU, HI 96826** **INST CONTROL**
0.506 mi. **SPILLS**
2670 ft. **Site 2 of 2 in cluster K**

Relative:
Higher

Actual:
8 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	2700 South King Street
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	State
Project Manager:	Clarence Callahan
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Managed With Controls
Island:	Oahu
SDAR Environmental Interest Name:	2700 South King Street
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Potential Hazard And Controls:	Hazard Managed With Controls

2700 SOUTH KING STREET (Continued) **S106815419**

Priority:	NFA
Assessment:	Response Not Necessary
Response:	Not reported
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Lead above industrial EALs is present under an asphalt cap.
Use Restrictions:	Controls Required to Manage Contamination
Engineering Control:	Engineering Control Required
Description of Restrictions:	The Site is limited to commercial use. The parking lot cover (asphalt) must remain in place, otherwise the ash layer with lead contamination at 15 inches bgs must be removed.
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Restricted Use
Document Date:	02/03/2004
Document Number:	2004-039-CAC
Document Subject:	No Further Characterization Required
Project Manager:	Clarence Callahan
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

ENG CONTROLS:

Supplemental Location Text:	Not reported
Zip Suffix:	Not reported
Island:	Oahu
Potential Hazards And Controls:	Hazard Managed With Controls
Engineering Control:	Engineering Control Required

INST CONTROL:

Potential hazards and controls:	Hazard Managed With Controls
Supplemental Location:	Not reported
Zip Suffix:	Not reported
Island:	Oahu
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	20031126-0717
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Lead Above DOH Tier 1 Action Levels
Substances:	Lead
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Liz Galvez
Assignment End Date:	2003-11-25 00:00:00
Result:	Refer to ISST
File Under:	AMM Family Patners, C/o Mr. Roy Sekiguchi
Latitude:	21.291354999999999
Longitude:	-157.819861

Island:	Oahu
Supplemental Loc. Text:	Not reported

2700 SOUTH KING STREET (Continued) **S106815419**

Case Number:	20031126-0717
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Lead Above DOH Tier 1 Action Levels
Substances:	Lead
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Liz Galvez
Assignment End Date:	2003-11-25 00:00:00
Result:	Refer to ISST
File Under:	AMM Family Patners, C/o Mr. Roy Sekiguchi
Latitude:	21.291378999999999
Longitude:	-157.81989200000001

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	20031126-0717
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Lead Above DOH Tier 1 Action Levels
Substances:	Lead
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Liz Galvez
Assignment End Date:	2003-11-25 00:00:00
Result:	Refer to ISST
File Under:	AMM Family Patners, C/o Mr. Roy Sekiguchi
Latitude:	21.291408000000001
Longitude:	-157.82630499999999

M45 **IOLANI SCHOOL PETROLEUM ODOR** **SHWS** **S106817948**
SSE **563 KAMOKU ST** **SPILLS** **N/A**
1/2-1 **HONOLULU, HI 96826**
0.514 mi.
2713 ft. **Site 1 of 2 in cluster M**

Relative:
Lower

Actual:
3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Iolani School Petroleum
HID Number:	Not reported
Facility Registry Identifier:	110005723208
Lead Agency:	HEER
Program:	State
Project Manager:	Liz Galvez
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Island:	Oahu
SDAR Environmental Interest Name:	Iolani School Petroleum

IOLANI SCHOOL PETROLEUM ODOR (Continued) **S106817948**

HID Number:	Not reported
Facility Registry Identifier:	110005723208
Lead Agency:	HEER
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Not reported
Use Restrictions:	No Hazard Present For Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	02/13/2001
Document Number:	Not reported
Document Subject:	Limited Phase II ESA Report
Project Manager:	Liz Galvez
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	20000814-1440
HID Number:	Not reported
Facility Registry Id:	110005723208
Lead and Program:	HEER EP&R
ER:	Site Visit
Units:	Iolani School Petroleum odor
Substances:	Not reported
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Liz Galvez
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Iolani School
Latitude:	21.291408000000001
Longitude:	-157.82630499999999

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	20000814-1440
HID Number:	Not reported
Facility Registry Id:	110005723208
Lead and Program:	HEER EP&R
ER:	Site Visit
Units:	Iolani School Petroleum odor
Substances:	Not reported
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Liz Galvez
Assignment End Date:	Not reported

IOLANI SCHOOL PETROLEUM ODOR (Continued) **S106817948**

Result:	SOSC NFA
File Under:	Iolani School
Latitude:	21.286301000000002
Longitude:	-157.82484600000001

M46 SSE 1/2-1 0.514 mi. 2713 ft.

IOLANI SCHOOL CAMPUS EXPANSION **SHWS** **S121406119**
563 KAMOKU ST **N/A**
HONOLULU, HI 96826

Site 2 of 2 in cluster M

Relative: Lower
Actual: 3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Iolani School Campus Expansion
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	State
Project Manager:	Eric Sadoyama
Hazard Priority:	High
Potential Hazards And Controls:	Hazard Present
Island:	Oahu
SDAR Environmental Interest Name:	Iolani School Campus Expansion
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Potential Hazard And Controls:	Hazard Present
Priority:	High
Assessment:	Response Necessary
Response:	Response Ongoing
Nature of Contamination:	Found: Organochlorine termiticides
Nature of Residual Contamination:	Not reported
Use Restrictions:	Controls Required to Manage Contamination
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	Not reported
Document Date:	Not reported
Document Number:	Not reported
Document Subject:	Not reported
Project Manager:	Eric Sadoyama
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

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47 WSW 1/2-1 0.545 mi. 2880 ft.

ALOHA MOTORS 1777 KAPIOLANI BLVD **SHWS** **1006820308**
1777 KAPIOLANI BLVD **SPILLS** **N/A**
HONOLULU, HI 96813

Relative: Lower
Actual: 3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu

ALOHA MOTORS 1777 KAPIOLANI BLVD (Continued) **1006820308**

Environmental Interest:	Aloha Motors
HID Number:	HID984466060
Facility Registry Identifier:	110013782479
Lead Agency:	HEER
Program:	State
Project Manager:	Unassigned
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Undetermined
Island:	Oahu
SDAR Environmental Interest Name:	Aloha Motors
HID Number:	HID984466060
Facility Registry Identifier:	110013782479
Lead Agency:	HEER
Potential Hazard And Controls:	Hazard Undetermined
Priority:	NFA
Assessment:	Assessment Ongoing
Response:	Not reported
Nature of Contamination:	Found: Petroleum products.
Nature of Residual Contamination:	Not reported
Use Restrictions:	Undetermined
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	ISST NFA - No Letter
Document Date:	03/06/1995
Document Number:	Not reported
Document Subject:	Aloha Motors, Honolulu HI Honolulu Convention Center
Project Manager:	Unassigned
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19920128
HID Number:	HID984466060
Facility Registry Id:	110013782479
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Aloha Motors - Kapiolani & Kalakaua Avenues
Substances:	Petroleum Hyrocarbons Spent solvents & thinners
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Not reported
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Aloha Motors
Latitude:	21.290458999999998
Longitude:	-157.83628100000001

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19920128
HID Number:	HID984466060
Facility Registry Id:	110013782479

ALOHA MOTORS 1777 KAPIOLANI BLVD (Continued) **1006820308**

Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Aloha Motors - Kapiolani & Kalakaua Avenues
Substances:	Petroleum Hyrocarbons Spent solvents & thinners
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Not reported
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Aloha Motors
Latitude:	21.328598
Longitude:	-157.827823

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19900411-1
HID Number:	HID984466060
Facility Registry Id:	110013782479
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Aloha Motors, First Development Inc.
Substances:	Not reported
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Sheila Mackenzie
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Aloha Motors
Latitude:	21.328598
Longitude:	-157.827823

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19900411-1
HID Number:	HID984466060
Facility Registry Id:	110013782479
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Aloha Motors, First Development Inc.
Substances:	Not reported
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Sheila Mackenzie
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Aloha Motors
Latitude:	21.290458999999998
Longitude:	-157.83628100000001

Island:	Oahu
Supplemental Loc. Text:	Not reported

ALOHA MOTORS 1777 KAPIOLANI BLVD (Continued) **1006820308**

Case Number:	19900821-5
HID Number:	HID984466060
Facility Registry Id:	110013782479
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	ALOHA MOTORS, KALAKAUA AVE.
Substances:	Unknown
Less Or Greater Than:	Not reported
Numerical Quantity:	15
Units:	Gallons
Activity Type:	Response
Activity Lead:	Not reported
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Aloha Motors
Latitude:	21.290458999999998
Longitude:	-157.83628100000001
Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19900821-5
HID Number:	HID984466060
Facility Registry Id:	110013782479
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	ALOHA MOTORS, KALAKAUA AVE.
Substances:	Unknown
Less Or Greater Than:	Not reported
Numerical Quantity:	15
Units:	Gallons
Activity Type:	Response
Activity Lead:	Not reported
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Aloha Motors
Latitude:	21.328598
Longitude:	-157.827823

N48 **FORMER KALAKAUA TRANSMISSION INC** **SHWS** **S106817112**
West **1665 KALAKAUA AVE** **ENG CONTROLS** **N/A**
1/2-1 **HONOLULU, HI 96826** **INST CONTROL**
0.556 mi.
2936 ft. **Site 1 of 2 in cluster N**

Relative:
Lower

Actual:
3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Former Kalakaua Transmission Inc
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	State
Project Manager:	Diane England
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Managed With Controls
Island:	Oahu
SDAR Environmental Interest Name:	Former Kalakaua Transmission Inc

FORMER KALAKAUA TRANSMISSION INC (Continued) **S106817112**

HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Potential Hazard And Controls:	Hazard Managed With Controls
Priority:	NFA
Assessment:	Assessment Ongoing
Response:	Not reported
Nature of Contamination:	Found: Petroleum and soil in groundwater.
Nature of Residual Contamination:	Not reported
Use Restrictions:	Controls Required to Manage Contamination
Engineering Control:	Engineering Control Required
Description of Restrictions:	(Concrete Cap) Building foundation must remain in place. If the foundation is disturbed/removed, additional soil and groundwater characterization must be conducted and appropriate remedial measures employed.
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Restricted Use
Document Date:	03/28/2006
Document Number:	2006-185-DE
Document Subject:	No Further Action Determination for Oil-Range Hydrocarbons in Soil and Groundwater
Project Manager:	Diane England
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

ENG CONTROLS:

Supplemental Location Text:	Not reported
Zip Suffix:	Not reported
Island:	Oahu
Potential Hazards And Controls:	Hazard Managed With Controls
Engineering Control:	Engineering Control Required

INST CONTROL:

Potential hazards and controls:	Hazard Managed With Controls
Supplemental Location:	Not reported
Zip Suffix:	Not reported
Island:	Oahu
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued

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N49 West 1/2-1 0.556 mi. 2938 ft. **ROGER'S REPAIR INC** **SHWS** **S106820247**
1687 KALAKAUA AVE **N/A**
HONOLULU, HI 96826

Site 2 of 2 in cluster N

Relative: Lower

Actual: 3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Roger's Repair Inc
HID Number:	Not reported
Facility Registry Identifier:	110005723903
Lead Agency:	HEER
Program:	State
Project Manager:	Laura Young
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Undetermined

ROGER'S REPAIR INC (Continued) **S106820247**

Island:	Oahu
SDAR Environmental Interest Name:	Roger's Repair Inc
HID Number:	Not reported
Facility Registry Identifier:	110005723903
Lead Agency:	HEER
Potential Hazard And Controls:	Hazard Undetermined
Priority:	NFA
Assessment:	Assessment Ongoing
Response:	Not reported
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Not reported
Use Restrictions:	Undetermined
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action - Type Undetermined
Document Date:	06/04/1999
Document Number:	Not reported
Document Subject:	Not reported
Project Manager:	Laura Young
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

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50 SW 1/2-1 0.559 mi. 2954 ft. **THE PAVILLION 1925 KALAKAUA AVE HONOLULU, HI 96815** **SHWS SPILLS** **S106820617 N/A**

Relative: Lower

Actual: 5 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	The Pavillion
HID Number:	Not reported
Facility Registry Identifier:	110013773693
Lead Agency:	SHWB
Program:	State
Project Manager:	Steve Mow
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Undetermined
Island:	Oahu
SDAR Environmental Interest Name:	The Pavillion
HID Number:	Not reported
Facility Registry Identifier:	110013773693
Lead Agency:	SHWB
Potential Hazard And Controls:	Hazard Undetermined
Priority:	NFA
Assessment:	Response Not Necessary
Response:	Not reported
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Not reported
Use Restrictions:	Undetermined
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action - Type Undetermined

THE PAVILLION (Continued) **S106820617**

Document Date: 03/02/1998
Document Number: Not reported
Document Subject: Results of Soil Sampling and Analysis for AOAO the Pavillion
Project Manager: Steve Mow
Contact Information: (808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

HI SPILLS:
Island: Oahu
Supplemental Loc. Text: Not reported
Case Number: 19980120-1455
HID Number: Not reported
Facility Registry Id: 110013773693
Lead and Program: HEER EP&R
ER: No
Units: The Pavilion at Waikiki Contaminated Soil
Substances: Gasoline
Less Or Greater Than: Not reported
Numerical Quantity: Not reported
Units: Not reported
Activity Type: Response
Activity Lead: Terry Corpus
Assignment End Date: Not reported
Result: Referred
File Under: The Pavilion
Latitude: 21.286362
Longitude: -157.83352400000001

Island: Oahu
Supplemental Loc. Text: Not reported
Case Number: 19980120-1455
HID Number: Not reported
Facility Registry Id: 110013773693
Lead and Program: HEER EP&R
ER: No
Units: The Pavilion at Waikiki Contaminated Soil
Substances: Gasoline
Less Or Greater Than: Not reported
Numerical Quantity: Not reported
Units: Not reported
Activity Type: Response
Activity Lead: Terry Corpus
Assignment End Date: Not reported
Result: Referred
File Under: The Pavilion
Latitude: 21.286363999999999
Longitude: -157.833687

Island: Oahu
Supplemental Loc. Text: Not reported
Case Number: 19980120-1455
HID Number: Not reported
Facility Registry Id: 110013773693
Lead and Program: HEER EP&R
ER: No
Units: The Pavilion at Waikiki Contaminated Soil
Substances: Gasoline
Less Or Greater Than: Not reported

THE PAVILLION (Continued) **S106820617**

Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Terry Corpus
Assignment End Date:	Not reported
Result:	Referred
File Under:	The Pavilion
Latitude:	21.271197000000001
Longitude:	-157.81720899999999

51
SSW
1/2-1
0.576 mi.
3041 ft.

ROYAL GARDENS HOTEL DIESEL **SHWS** **S110061800**
440 OLOHANA ST **SPILLS** **N/A**
HONOLULU, HI

Relative:
Lower

Actual:
3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Dumpster alleyway right side of bldg from street.
Island:	Oahu
Environmental Interest:	Royal Gardens Hotel Diesel
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	State
Project Manager:	Roger Brewer
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Island:	Oahu
SDAR Environmental Interest Name:	Royal Gardens Hotel Diesel
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Not Necessary
Response:	Not reported
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Diesel in soil at less than EALs.
Use Restrictions:	No Hazard Present for Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Action Letter
Document Date:	12/27/2007
Document Number:	2007-862-RB
Document Subject:	NFA for minor Soil removal under drums (not a formal case)
Project Manager:	Roger Brewer
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Dumpster alleyway right side of bldg from street.
Case Number:	20071029-0953
HID Number:	Not reported
Facility Registry Id:	Not reported

ROYAL GARDENS HOTEL DIESEL (Continued) **S110061800**

Lead and Program:	HEER EP&R
ER:	Off Scene
Units:	Royal Gardens Hotel Diesel
Substances:	Diesel Fuel
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Unknown
Activity Type:	Response
Activity Lead:	Mike Cripps
Assignment End Date:	2008-01-07 00:00:00
Result:	SOSC NFA
File Under:	Royal Gardens Hotel
Latitude:	21.284495
Longitude:	-157.830163

52
NNE
1/2-1
0.600 mi.
3166 ft.

1800 VANCOUVER DRIVE
1800 VANCOUVER DRIVE
HONOLULU, HI 96822

SHWS **S110526102**
INST CONTROL **N/A**
CDL

Relative:
Higher

Actual:
154 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	1800 Vancouver Drive
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	State
Project Manager:	Lynn Bailey
Hazard Priority:	Medium
Potential Hazards And Controls:	Hazard Undetermined
Island:	Oahu
SDAR Environmental Interest Name:	1800 Vancouver Drive
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Potential Hazard And Controls:	Hazard Undetermined
Priority:	Medium
Assessment:	Assessment Ongoing
Response:	Not reported
Nature of Contamination:	Presumed: Suspected contamination associated with a clandestine meth lab
Nature of Residual Contamination:	Not reported
Use Restrictions:	Undetermined
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	Not reported
Document Date:	Not reported
Document Number:	Not reported
Document Subject:	Not reported
Project Manager:	Lynn Bailey
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

1800 VANCOUVER DRIVE (Continued) **S110526102**

INST CONTROL:

Potential hazards and controls:	Hazard Undetermined
Supplemental Location:	Not reported
Zip Suffix:	Not reported
Island:	Oahu
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued

CDL:

Date Notified:	8/4/2010
Cleanup Status:	Ongoing

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53 SSW 1/2-1 0.601 mi. 3173 ft. **CHEVRON U.S.A., INC.** **SHWS U001235436**
2002 KALAKAUA AVE **LUST N/A**
HONOLULU, HI 96815

Relative: Lower
Actual: 3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Chevron 2002 Kalakaua
HID Number:	Not reported
Facility Registry Identifier:	110013779045
Lead Agency:	EPA
Program:	State
Project Manager:	Amy Playdon
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Island:	Oahu
SDAR Environmental Interest Name:	Chevron 2002 Kalakaua
HID Number:	Not reported
Facility Registry Identifier:	110013779045
Lead Agency:	EPA
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Not Necessary
Response:	Not reported
Nature of Contamination:	Found: TPH as diesel and gasoline, BTEX, PAHs, HVOCs, PCBs, metals
Nature of Residual Contamination:	Most TPH levels below HDOH EALs
Use Restrictions:	No Hazard Present For Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	Historic NFA - Incomplete Documentation
Document Date:	10/01/1997
Document Number:	Not reported
Document Subject:	Not reported
Project Manager:	Amy Playdon
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

LUST:

Facility ID:	9-101266
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	06/10/1997

CHEVRON U.S.A., INC. (Continued) **U001235436**

Release ID: 920073
Project Officer: Steven Okoji

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54 NW 1/2-1 0.625 mi. 3302 ft.

KAPIOLANI WOMEN'S & CHILDREN'S MEDICAL CENTER
1319 PUNAHOU ST
HONOLULU, HI 96826

SHWS **U001235208**
UST **N/A**
AIRS
Financial Assurance

Relative: Higher
Actual: 42 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Kapiolani Medical Center for Women and Children
HID Number:	Not reported
Facility Registry Identifier:	110005730067
Lead Agency:	HEER
Program:	State
Project Manager:	Unassigned
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Island:	Oahu
SDAR Environmental Interest Name:	Kapiolani Medical Center for Women and Children
HID Number:	Not reported
Facility Registry Identifier:	110005730067
Lead Agency:	HEER
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Not Necessary
Response:	Not reported
Nature of Contamination:	Found: TPH as diesel below DOH EALs following removal of storage tanks
Nature of Residual Contamination:	No contamination remaining
Use Restrictions:	No Hazard Present For Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	07/17/1997
Document Number:	1997-249-RK
Document Subject:	Hazardous Waste Release Response Determination, Kapiolani Medical Center for Women & Children, 1319 Punahou St, Honolulu HI
Project Manager:	Unassigned
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

UST:

Facility ID:	9-100740
Owner:	KAPIOLANI WOMEN'S & CHILDREN'S MEDICAL CENTER
Owner Address:	1319 PUNAHOU ST
Owner City,St,Zip:	Honolulu, 96826 96826
Latitude:	21.299429
Longitude:	-157.832592
Horizontal Reference Datum Name:	NAD83
Horizontal Collection Method Name:	Map
Tank ID:	R-001
Date Installed:	03/22/1971

KAPIOLANI WOMEN'S & CHILDREN'S MEDICAL CENTER (Continued) **U001235208**

Tank Status:	**Permanently Out of Use**
Date Closed:	04/16/1996
Tank Capacity:	1000
Substance:	Diesel

Tank ID:	r-1
Date Installed:	10/01/1995
Tank Status:	**Permanently out of Use**
Date Closed:	07/23/2014
Tank Capacity:	15000
Substance:	Diesel

AIRS:

Facility Identifier:	0588-01-N
Island:	Oahu
Mailing Address:	1319 Punahou Street
Locale:	Not reported
Mailing City:	Honolulu
Contact Name:	Francisco "Kiko" Riego De Dios
Mailing State:	Hawaii
Mailing Zip:	96826
Contact Phone:	Facilities Management Director
Business Phone:	Not reported
Issue Date:	03/14/2013
Expiration Date:	01/23/2018
Closed Date:	08/12/2015
Description:	125 HP Boiler and 50 HP Exempt Boiler1.Boiler No.1 - 50 HP Cleaver-Brooks boiler #1 (model no. CB 200-50, serial no. L102531, 2.09 MMBtu/hr, fired primarily on synthetic natural gas (SNG) and fuel oil no.2 as a back-up). This boiler is exempt pursuant to Director s discretion as specified in Attachment II, Special Conditions No. B.1.d.2.Boiler No.2 - 125 HP Cleaver-Brooks boiler (model no. CB 200-125-150ST, serial no. L88692, 5.23 MMBtu/hr, fired primarily on SNG and fuel oil no. 2 as back-up).

HI Financial Assurance:

Alt Facility ID:	9-100740
Tank Id:	R-001
Tank Status:	Permanently Out of Use
FRTYPE:	Other
Expiration Date:	Not reported

Alt Facility ID:	9-100740
Tank Id:	r-1
Tank Status:	Permanently out of Use
FRTYPE:	Other
Expiration Date:	Not reported

Alt Facility ID:	9-100740
Tank Id:	R-001
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	08/01/2014

KAPIOLANI WOMEN'S & CHILDREN'S MEDICAL CENTER (Continued) **U001235208**

Alt Facility ID:	9-100740
Tank Id:	r-1
Tank Status:	Permanently out of Use
FRTYPE:	Insurance
Expiration Date:	08/01/2014

O55 **7-11 KALAKAUA** **SHWS** **U001235396**
NW **1323 KALAKAUA AVE** **UST** **N/A**
1/2-1 **HONOLULU, HI 96826** **Financial Assurance**
0.642 mi.
3390 ft. **Site 1 of 2 in cluster O**

Relative:
Higher

Actual:
25 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Kalakaua Ave & Young St
Island:	Oahu
Environmental Interest:	Aloha 7-Eleven Kalakaua
HID Number:	Not reported
Facility Registry Identifier:	110013782184
Lead Agency:	HEER
Program:	State
Project Manager:	Mark Sutterfield
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Island:	Oahu
SDAR Environmental Interest Name:	Aloha 7-Eleven Kalakaua
HID Number:	Not reported
Facility Registry Identifier:	110013782184
Lead Agency:	HEER
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Assessment Ongoing
Response:	Response Complete
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Not reported
Use Restrictions:	No Hazard Present For Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	05/20/2004
Document Number:	Not reported
Document Subject:	Not reported
Project Manager:	Mark Sutterfield
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

UST:

Facility ID:	9-101172
Owner:	Mid Pac Petroleum LLC
Owner Address:	1100 Alakea Street, 8th floor
Owner City,St,Zip:	Honolulu, 96826 96826
Latitude:	21.298427
Longitude:	-157.836658
Horizontal Reference Datum Name:	NAD83
Horizontal Collection Method Name:	GPS

7-11 KALAKAUA (Continued) **U001235396**

Tank ID: 1a
Date Installed: 06/19/2009
Tank Status: **Currently in Use**
Date Closed: Not reported
Tank Capacity: 7000
Substance: Gasoline

Tank ID: 1b
Date Installed: 06/19/2009
Tank Status: **Currently In Use**
Date Closed: Not reported
Tank Capacity: 5000
Substance: Gasoline

Tank ID: r-87
Date Installed: 04/04/1985
Tank Status: **Permanently out of Use**
Date Closed: 06/12/2009
Tank Capacity: 8000
Substance: Gasoline

Tank ID: r-89
Date Installed: 04/04/1985
Tank Status: **Permanently out of Use**
Date Closed: 06/12/2009
Tank Capacity: 8000
Substance: Gasoline

Tank ID: r-92
Date Installed: 04/04/1985
Tank Status: **Permanently out of Use**
Date Closed: 06/12/2009
Tank Capacity: 8000
Substance: Gasoline

HI Financial Assurance:
Alt Facility ID: 9-101172
Tank Id: r-89
Tank Status: Permanently out of Use
FRTYPE: Insurance
Expiration Date: 03/31/2013

Alt Facility ID: 9-101172
Tank Id: 1a
Tank Status: Currently in Use
FRTYPE: Insurance
Expiration Date: 03/31/2013

Alt Facility ID: 9-101172
Tank Id: r-92
Tank Status: Permanently out of Use
FRTYPE: Insurance
Expiration Date: 03/31/2013

7-11 KALAKAUA (Continued) **U001235396**

Alt Facility ID: 9-101172
Tank Id: 1b
Tank Status: Currently In Use
FRTYPE: Insurance
Expiration Date: 03/31/2013

Alt Facility ID: 9-101172
Tank Id: r-87
Tank Status: Permanently out of Use
FRTYPE: Insurance
Expiration Date: 03/31/2013

Alt Facility ID: 9-101172
Tank Id: r-92
Tank Status: Permanently out of Use
FRTYPE: Insurance
Expiration Date: 03/31/2015

Alt Facility ID: 9-101172
Tank Id: r-89
Tank Status: Permanently out of Use
FRTYPE: Insurance
Expiration Date: 03/31/2015

Alt Facility ID: 9-101172
Tank Id: 1b
Tank Status: Currently In Use
FRTYPE: Insurance
Expiration Date: 03/31/2015

Alt Facility ID: 9-101172
Tank Id: r-87
Tank Status: Permanently out of Use
FRTYPE: Insurance
Expiration Date: 03/31/2015

Alt Facility ID: 9-101172
Tank Id: 1a
Tank Status: Currently in Use
FRTYPE: Insurance
Expiration Date: 03/31/2015

O56 **ALOHA/KING SELF STORAGE** **SHWS** **S106816203**
WNW **1414 KALAKAUA AVE** **ENG CONTROLS** **N/A**
1/2-1 **HONOLULU, HI** **INST CONTROL**
0.651 mi. **VCP**
3438 ft. **Site 2 of 2 in cluster O**

Relative:
Higher

Actual:
20 ft.

SHWS:
Organization: Not reported
Supplemental Location: 1524 S King St corner (property on both addresses)
Island: Oahu
Environmental Interest: 1414 Kalakaua Avenue-Aloha/King LLC
HID Number: Not reported
Facility Registry Identifier: Not reported
Lead Agency: HEER
Program: Voluntary Response Program
Project Manager: Cal Miyahara

ALOHA/KING SELF STORAGE (Continued) **S106816203**

Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Managed With Controls
Island:	Oahu
SDAR Environmental Interest Name:	1414 Kalakaua Avenue-Aloha/King LLC
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Potential Hazard And Controls:	Hazard Managed With Controls
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: TPH-GRO, Benzene, Ethylbenzene, and Xylene remain in the soil at concentrations above residential EALs. Poses Direct Exposure, Gross Contamination, and Soil Vapor hazards.
Nature of Residual Contamination:	Not reported
Use Restrictions:	Controls Required to Manage Contamination
Engineering Control:	Engineering Control Required
Description of Restrictions:	Prohibit Any Activity That May Disturb the Integrity of the Capping System
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	Letter of Completion - Restricted Use
Document Date:	07/27/2011
Document Number:	2011-438-CMM
Document Subject:	Memo to ASO - Refund for VRP Site (Aloha/King)
Project Manager:	Cal Miyahara
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

ENG CONTROLS:

Supplemental Location Text:	1524 S King St corner (property on both addresses)
Zip Suffix:	Not reported
Island:	Oahu
Potential Hazards And Controls:	Hazard Managed With Controls
Engineering Control:	Engineering Control Required

INST CONTROL:

Potential hazards and controls:	Hazard Managed With Controls
Supplemental Location:	1524 S King St corner (property on both addresses)
Zip Suffix:	Not reported
Island:	Oahu
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued

VCP:

Program:	Voluntary Response Program
Zip Suffix:	Not reported
Supplemental Location:	1524 S King St corner (property on both addresses)
Island:	Oahu

57 SSW 1/2-1 0.656 mi. 3464 ft. | **WAIKIKI GATEWAY PARK 2044 KALAKAUA AVE HONOLULU, HI** | **SHWS** | **S121406294 N/A**

Relative: Lower
Actual: 3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Gateway Park Explosion
HID Number:	Not reported
Facility Registry Identifier:	110013776002
Lead Agency:	HEER
Program:	State
Project Manager:	Unassigned
Hazard Priority:	Not reported
Potential Hazards And Controls:	Hazard Undetermined
Island:	Oahu
SDAR Environmental Interest Name:	Gateway Park Explosion
HID Number:	Not reported
Facility Registry Identifier:	110013776002
Lead Agency:	HEER
Potential Hazard And Controls:	Hazard Undetermined
Priority:	Not reported
Assessment:	Assessment Ongoing
Response:	Not reported
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Not reported
Use Restrictions:	Undetermined
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	Closed - Documentation Inadequate to Evaluate Risk
Document Date:	05/23/1996
Document Number:	Not reported
Document Subject:	Final Report on the Findings of the PETREX Soil Gas Survey Performed at the Waikiki Gateway Park, Waikiki, Hawaii, Prepared for: State of Hawaii-Department of Health Hazard Evaluation and Emergency Response
Project Manager:	Unassigned
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

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58 WNW 1/2-1 0.694 mi. 3664 ft. | **1003 AND 1013 KAHEKA STREET 1003 KAHEKA ST HONOLULU, HI 96814** | **SHWS** | **S118943644 N/A**

Relative: Higher
Actual: 19 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	1003 and 1013 Kaheka Street
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	State
Project Manager:	Eric Sadoyama
Hazard Priority:	NFA

1003 AND 1013 KAHEKA STREET (Continued) **S118943644**

Potential Hazards And Controls:	No Hazard
Island:	Oahu
SDAR Environmental Interest Name:	1003 and 1013 Kaheka Street
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Not Necessary
Response:	Not reported
Nature of Contamination:	Found: Lead-only one hit at 2 to 3 feet bgs over residential EAL.
Nature of Residual Contamination:	Not reported
Use Restrictions:	No Hazard Present For Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	08/25/2016
Document Number:	2016-449-ES
Document Subject:	Review of Additional Limited Phase II Environmental Investigation, 1003 and 1013 Kaheka St, TMK 1-2-4-005-005 and -006, Honolulu, Oahu HI, Aug 24, 2016, Project No. 17016-016076.00
Project Manager:	Eric Sadoyama
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

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59 **HAWAII HALL** **SHWS** **S111677953**
NE **2500 CAMPUS RD** **SPILLS** **N/A**
1/2-1 **HONOLULU, HI 96822**
0.694 mi.
3664 ft.

Relative:
Higher

Actual:
83 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Manoa Campus
Island:	Oahu
Environmental Interest:	Hawaii Hall Renovation
HID Number:	Not reported
Facility Registry Identifier:	110013789622
Lead Agency:	HEER
Program:	State
Project Manager:	Richard Palmer
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Undetermined
Island:	Oahu
SDAR Environmental Interest Name:	Hawaii Hall Renovation
HID Number:	Not reported
Facility Registry Identifier:	110013789622
Lead Agency:	HEER
Potential Hazard And Controls:	Hazard Undetermined
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: chlordane exposed during foundation work, and reburied onsite
Nature of Residual Contamination:	Not reported
Use Restrictions:	Undetermined
Engineering Control:	Not reported
Description of Restrictions:	Not reported

HAWAII HALL (Continued) **S111677953**

Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	Historic NFA - Incomplete Documentation
Document Date:	09/02/2004
Document Number:	Not reported
Document Subject:	Not reported
Project Manager:	Richard Palmer
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	UH Manoa Duke Kahanamoku Swimming pool
Case Number:	20091103-1755
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	Site Visit
Units:	UH Duke Kahanamoku Swimming Pool Sodium Hypoclorite Release
Substances:	Sodium Hypochlorite
Less Or Greater Than:	Not reported
Numerical Quantity:	600
Units:	Gallons
Activity Type:	Response
Activity Lead:	Paul Chong
Assignment End Date:	2009-11-04 00:00:00
Result:	SOSC NFA
File Under:	Not reported
Latitude:	Not reported
Longitude:	Not reported

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60 SSW 1/2-1 0.699 mi. 3693 ft. **KING KALAKAUA PLAZA** **2080 KALAKAUA AVE** **HONOLULU, HI 96815** **SHWS LUST UST SPILLS** **U003154872** **N/A**

Relative: Lower

Actual: 3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Block bounded by Kalakaua/Olohana/Kuhio/Kalanimoku
Island:	Oahu
Environmental Interest:	King Kalakaua Plaza Development
HID Number:	Not reported
Facility Registry Identifier:	110013769886
Lead Agency:	HEER
Program:	State
Project Manager:	Greg Olmsted
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Island:	Oahu
SDAR Environmental Interest Name:	King Kalakaua Plaza Development
HID Number:	Not reported
Facility Registry Identifier:	110013769886
Lead Agency:	HEER
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete

KING KALAKAUA PLAZA (Continued) **U003154872**

Nature of Contamination:	Not reported
Nature of Residual Contamination:	Confirmation samples showed maximum concentrations of contaminants including TPH at 14 mg/kg; BTX at 0.15 mg/kg. PAHs were not detected. No contamination above HDOH EALs
Use Restrictions:	No Hazard Present For Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	09/28/1998
Document Number:	1998-311-SO
Document Subject:	NFA for Waikiki Gateway Park Site (2080 Kalakaua Ave)
Project Manager:	Greg Olmsted
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

LUST:

Facility ID:	9-103235
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	03/17/2000
Release ID:	960085
Project Officer:	Renato Maniulit

UST:

Facility ID:	9-103235
Owner:	K. YOUNG KALAKAUA PARTNERS INC.
Owner Address:	841 BISHOP ST, SUITE 2250
Owner City,St,Zip:	Honolulu, 96815 96815
Latitude:	21.282881
Longitude:	-157.831128
Horizontal Reference Datum Name:	NAD83
Horizontal Collection Method Name:	Address Matching
Tank ID:	R-1
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	07/24/1996
Tank Capacity:	300
Substance:	Diesel

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Block bounded by Kalakaua/Olohana/Kuhio/Kalanimoku
Case Number:	20011017-1508
HID Number:	Not reported
Facility Registry Id:	110013769886
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Fed Ex boxes with white powdery substance
Substances:	Not reported
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Terry Corpus
Assignment End Date:	Not reported

KING KALAKAUA PLAZA (Continued) **U003154872**

Result:	SOSC NFA
File Under:	K. Young-Kalakaua Partners
Latitude:	21.282941000000001
Longitude:	-157.83128199999999
Island:	Oahu
Supplemental Loc. Text:	Block bounded by Kalakaua/Olohana/Kuhio/Kalanimoku
Case Number:	19951114-0900
HID Number:	Not reported
Facility Registry Id:	110013769886
Lead and Program:	HEER EP&R
ER:	No
Units:	Nike Town Building (2080 Kalakaua Ave)
Substances:	Gasoline
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Chris Takeno
Assignment End Date:	Not reported
Result:	Refer to ISST
File Under:	K. Young-Kalakaua Partners
Latitude:	21.282941000000001
Longitude:	-157.83128199999999

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61 **1609 ALA WAI DIESEL RELEASE** **SHWS** **S108008656**
WSW **1609 ALA WAI BLVD** **SPILLS** **N/A**
1/2-1 **HONOLULU, HI**
0.705 mi.
3720 ft.

Relative:
Lower

Actual:
3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	1609 Ala Wai Diesel Release
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	State
Project Manager:	Laura Young
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Island:	Oahu
SDAR Environmental Interest Name:	1609 Ala Wai Diesel Release
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Diesel contaminated soil.
Use Restrictions:	No Hazard Present For Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported

1609 ALA WAI DIESEL RELEASE (Continued) **S108008656**

Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	10/07/2005
Document Number:	2005-511-LY
Document Subject:	1609 Ala Wai Diesel Release No Further Action Letter
Project Manager:	Laura Young
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	20050523-1552
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	Site Visit
Units:	1609 Ala Wai Diesel Release
Substances:	Diesel Fuel
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Sheen
Activity Type:	Response
Activity Lead:	Liz Galvez
Assignment End Date:	2005-06-09 00:00:00
Result:	Refer to SDAR
File Under:	Ala Wai Watermark Development , LLC
Latitude:	21.287590999999999
Longitude:	-157.83786900000001

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	20050523-1552
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	Site Visit
Units:	1609 Ala Wai Diesel Release
Substances:	Diesel Fuel
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Sheen
Activity Type:	Response
Activity Lead:	Liz Galvez
Assignment End Date:	2005-06-09 00:00:00
Result:	Refer to SDAR
File Under:	Ala Wai Watermark Development , LLC
Latitude:	21.287483000000002
Longitude:	-157.838472

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	20050523-1552
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	Site Visit
Units:	1609 Ala Wai Diesel Release

1609 ALA WAI DIESEL RELEASE (Continued) **S108008656**

Substances:	Diesel Fuel
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Sheen
Activity Type:	Response
Activity Lead:	Liz Galvez
Assignment End Date:	2005-06-09 00:00:00
Result:	Refer to SDAR
File Under:	Ala Wai Watermark Development , LLC
Latitude:	21.287593000000001
Longitude:	-157.83787100000001
Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	20050523-1552
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	Site Visit
Units:	1609 Ala Wai Diesel Release
Substances:	Diesel Fuel
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Sheen
Activity Type:	Response
Activity Lead:	Liz Galvez
Assignment End Date:	2005-06-09 00:00:00
Result:	Refer to SDAR
File Under:	Ala Wai Watermark Development , LLC
Latitude:	21.287234000000002
Longitude:	-157.83829499999999

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62 South 1/2-1 0.716 mi. 3780 ft. **RITZ CARLTON WAIKIKI RESIDENCE & RESORT** **SHWS** **S118422853**
2139 KUHIO AVE **N/A**
HONOLULU, HI 96815

Relative: Lower
Actual: 3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Ritz Carlton Waikiki Residence & Resort
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	State
Project Manager:	Roger Brewer
Hazard Priority:	Medium
Potential Hazards And Controls:	Hazard Present
Island:	Oahu
SDAR Environmental Interest Name:	Ritz Carlton Waikiki Residence & Resort
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Potential Hazard And Controls:	Hazard Present
Priority:	Medium
Assessment:	Response Necessary

RITZ CARLTON WAIKIKI RESIDENCE & RESORT (Continued) **S118422853**

Response:	Response Ongoing
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Not reported
Use Restrictions:	Controls Required to Manage Contamination
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	Not reported
Document Date:	Not reported
Document Number:	Not reported
Document Subject:	Not reported
Project Manager:	Roger Brewer
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

P63
NNW
1/2-1
0.770 mi.
4067 ft.

PUNAHOU SCHOOL WINNE UNITS C AND D **SHWS** **S121406247**
1601 PUNAHOU ST **INST CONTROL** **N/A**
HONOLULU, HI 96822

Site 1 of 3 in cluster P

Relative:
Higher

Actual:
76 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Punahou School Winne Units C and D
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	State
Project Manager:	Eric Sadoyama
Hazard Priority:	Medium
Potential Hazards And Controls:	Hazard Managed With Controls
Island:	Oahu
SDAR Environmental Interest Name:	Punahou School Winne Units C and D
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Potential Hazard And Controls:	Hazard Managed With Controls
Priority:	Medium
Assessment:	Response Necessary
Response:	Response Ongoing
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Not reported
Use Restrictions:	Controls Required to Manage Contamination
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	Not reported
Document Date:	Not reported
Document Number:	Not reported
Document Subject:	Not reported
Project Manager:	Eric Sadoyama
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

INST CONTROL:

PUNAHOU SCHOOL WINNE UNITS C AND D (Continued) **S121406247**

Potential hazards and controls:	Hazard Managed With Controls
Supplemental Location:	Not reported
Zip Suffix:	Not reported
Island:	Oahu
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued

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P64 **PUNAHOU SCHOOL FIRING RANGE** **SHWS** **S121406246**
NNW **1601 PUNAHOU ST** **N/A**
1/2-1 **HONOLULU, HI 96822**
0.770 mi.
4067 ft. **Site 2 of 3 in cluster P**

Relative:
Higher

Actual:
76 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Punahou School Firing Range
Island:	Oahu
Environmental Interest:	Punahou School Firing Range
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	State
Project Manager:	Kelton Otsuka
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Island:	Oahu
SDAR Environmental Interest Name:	Punahou School Firing Range
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: Lead in soil.
Nature of Residual Contamination:	Confirmation samples were below HDOH EALs for unrestricted use.
Use Restrictions:	No Hazard Present For Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	04/06/2010
Document Number:	2010-228-KO
Document Subject:	No Further Action Determination at the Punahou School Firing Range Site
Project Manager:	Kelton Otsuka
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

P65 NNW 1/2-1 0.770 mi. 4067 ft. | **PUNAHOU SCHOOL GRADES 2-5 PROJECT** | **SHWS** | **S118943716** | **N/A**
1601 PUNAHOU ST
HONOLULU, HI 96822

Site 3 of 3 in cluster P

Relative: Higher
Actual: 76 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Punahou School Grades 2-5 Project
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	State
Project Manager:	Eric Sadoyama
Hazard Priority:	Medium
Potential Hazards And Controls:	Hazard Present
Island:	Oahu
SDAR Environmental Interest Name:	Punahou School Grades 2-5 Project
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Potential Hazard And Controls:	Hazard Present
Priority:	Medium
Assessment:	Response Necessary
Response:	Response Ongoing
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Not reported
Use Restrictions:	Controls Required to Manage Contamination
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	Not reported
Document Date:	Not reported
Document Number:	Not reported
Document Subject:	Not reported
Project Manager:	Eric Sadoyama
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

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66 SW 1/2-1 0.781 mi. 4123 ft. | **HOBRON HOTEL** | **SHWS** | **S106817744** | **N/A**
1744 KAIOO DR
HONOLULU, HI 96815

Relative: Lower
Actual: 3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Hobron Hotel
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	State
Project Manager:	Clarence Callahan
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Island:	Oahu

HOBRON HOTEL (Continued) **S106817744**

SDAR Environmental Interest Name:	Hobron Hotel
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: diesel fuel from leaking UST
Nature of Residual Contamination:	Petroleum from UST
Use Restrictions:	No Hazard Present For Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	01/15/2004
Document Number:	2004-015-CAC
Document Subject:	NFA Additional Site Assessment, Former Hobron Hotel, 1744 Kaioo Dr, Honolulu HI (TMK 1-2-6-012-042)
Project Manager:	Clarence Callahan
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

67
West
1/2-1
0.808 mi.
4266 ft.

HECO SUBSTATION: MAKALOA SUBSTATION **SHWS** **S106817457**
1544 MAKALOA ST **INST CONTROL** **N/A**
HONOLULU, HI 96814 **SPILLS**

Relative:
Lower

Actual:
3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	HECO Makaloa Substation
HID Number:	Not reported
Facility Registry Identifier:	110013790237
Lead Agency:	HEER
Program:	State
Project Manager:	Laura Young
Hazard Priority:	Low
Potential Hazards And Controls:	Hazard Managed With Controls
Island:	Oahu
SDAR Environmental Interest Name:	HECO Makaloa Substation
HID Number:	Not reported
Facility Registry Identifier:	110013790237
Lead Agency:	HEER
Potential Hazard And Controls:	Hazard Managed With Controls
Priority:	Low
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: COCs below DOH EALs, except arsenic in soil (20.7 mg/kg in one sample)
Nature of Residual Contamination:	Soil below the pad should be investigated if the pad is ever removed or damaged. Contaminants of concern include TPH as diesel and/or transformer oil, and possible PCB.
Use Restrictions:	Controls Required to Manage Contamination
Engineering Control:	Not reported
Description of Restrictions:	Not reported

HECO SUBSTATION: MAKALOA SUBSTATION (Continued) **S106817457**

Institutional Control:	Government - Hawaii Dept. of Health Letter Issued
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Restricted Use
Document Date:	03/06/2007
Document Number:	2007-109-LY
Document Subject:	No Further Action Determination
Project Manager:	Laura Young
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

INST CONTROL:

Potential hazards and controls:	Hazard Managed With Controls
Supplemental Location:	Not reported
Zip Suffix:	Not reported
Island:	Oahu
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	20110620-1451
HID Number:	Not reported
Facility Registry Id:	110013790237
Lead and Program:	HEER EP&R
ER:	None
Units:	HECO Substation Transformer #18639 Release
Substances:	Transformer Oil
Less Or Greater Than:	>
Numerical Quantity:	5
Units:	Gallons
Activity Type:	Response
Activity Lead:	Curtis Martin
Assignment End Date:	Not reported
Result:	Not reported
File Under:	Hawaiian Electric Co., Inc. (HECO)
Latitude:	5.362698
Longitude:	-142.486604

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	20110620-1451
HID Number:	Not reported
Facility Registry Id:	110013790237
Lead and Program:	HEER EP&R
ER:	None
Units:	HECO Substation Transformer #18639 Release
Substances:	Transformer Oil
Less Or Greater Than:	>
Numerical Quantity:	5
Units:	Gallons
Activity Type:	Response
Activity Lead:	Curtis Martin
Assignment End Date:	Not reported
Result:	Not reported
File Under:	Hawaiian Electric Co., Inc. (HECO)
Latitude:	21.293392000000001
Longitude:	-157.84082900000001

HECO SUBSTATION: MAKALOA SUBSTATION (Continued) **S106817457**

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	20110620-1451
HID Number:	Not reported
Facility Registry Id:	110013790237
Lead and Program:	HEER EP&R
ER:	None
Units:	HECO Substation Transformer #18639 Release
Substances:	Transformer Oil
Less Or Greater Than:	>
Numerical Quantity:	5
Units:	Gallons
Activity Type:	Response
Activity Lead:	Curtis Martin
Assignment End Date:	Not reported
Result:	Not reported
File Under:	Hawaiian Electric Co., Inc. (HECO)
Latitude:	21.295252000000001
Longitude:	-157.84531899999999

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	20020815-1119
HID Number:	Not reported
Facility Registry Id:	110013790237
Lead and Program:	HEER EP&R
ER:	Site Visit
Units:	HECO Transformer 21707
Substances:	Shell Diala Oil
Less Or Greater Than:	>
Numerical Quantity:	25
Units:	Gallons
Activity Type:	Response
Activity Lead:	Terry Corpus
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Hawaiian Electric Co., Inc. (HECO)
Latitude:	21.293392000000001
Longitude:	-157.84082900000001

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	20020815-1119
HID Number:	Not reported
Facility Registry Id:	110013790237
Lead and Program:	HEER EP&R
ER:	Site Visit
Units:	HECO Transformer 21707
Substances:	Shell Diala Oil
Less Or Greater Than:	>
Numerical Quantity:	25
Units:	Gallons
Activity Type:	Response
Activity Lead:	Terry Corpus
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Hawaiian Electric Co., Inc. (HECO)

HECO SUBSTATION: MAKALOA SUBSTATION (Continued) **S106817457**

Latitude:	21.295252000000001
Longitude:	-157.84531899999999
Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	20020815-1119
HID Number:	Not reported
Facility Registry Id:	110013790237
Lead and Program:	HEER EP&R
ER:	Site Visit
Units:	HECO Transformer 21707
Substances:	Shell Diala Oil
Less Or Greater Than:	>
Numerical Quantity:	25
Units:	Gallons
Activity Type:	Response
Activity Lead:	Terry Corpus
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Hawaiian Electric Co., Inc. (HECO)
Latitude:	5.362698
Longitude:	-142.486604

68
WSW
1/2-1
0.811 mi.
4282 ft.

YACHT HARBOR TOWERS
1600 ALA MOANA BLVD
HONOLULU, HI 96815

SHWS **S106821166**
ENG CONTROLS **N/A**
INST CONTROL
SPILLS

Relative:
Lower

Actual:
3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Yacht Harbor Towers
Island:	Oahu
Environmental Interest:	Yacht Harbor Towers Generator
HID Number:	Not reported
Facility Registry Identifier:	110013774629
Lead Agency:	HEER
Program:	State
Project Manager:	Anna Fernandez
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Managed With Controls
Island:	Oahu
SDAR Environmental Interest Name:	Yacht Harbor Towers Generator
HID Number:	Not reported
Facility Registry Identifier:	110013774629
Lead Agency:	HEER
Potential Hazard And Controls:	Hazard Managed With Controls
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: TPH-D
Nature of Residual Contamination:	Soil exceeding Tier 1 levels near the generator.
Use Restrictions:	Controls Required to Manage Contamination
Engineering Control:	Engineering Control Required
Description of Restrictions:	The No Further Action with Institutional Controls determination is in effect only as long as the generator and associated concrete pad remain in place. When they are removed, appropriate response action will be required.

YACHT HARBOR TOWERS (Continued) **S106821166**

Institutional Control:	Government - Hawaii Dept. of Health Letter Issued
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Restricted Use
Document Date:	01/08/2009
Document Number:	2009-009-SPM
Document Subject:	No Further Action (NFA) with Institutional Controls Determination, for the Yacht Harbor Towers Generator Site
Project Manager:	Anna Fernandez
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

ENG CONTROLS:

Supplemental Location Text:	Yacht Harbor Towers
Zip Suffix:	Not reported
Island:	Oahu
Potential Hazards And Controls:	Hazard Managed With Controls
Engineering Control:	Engineering Control Required

INST CONTROL:

Potential hazards and controls:	Hazard Managed With Controls
Supplemental Location:	Yacht Harbor Towers
Zip Suffix:	Not reported
Island:	Oahu
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Yacht Harbor Towers
Case Number:	19990301-1550
HID Number:	Not reported
Facility Registry Id:	110013774629
Lead and Program:	HEER EP&R
ER:	Referred
Units:	Yacht Harbor Tower Generator
Substances:	Unknown
Less Or Greater Than:	Not reported
Numerical Quantity:	60
Units:	Gallons
Activity Type:	Response
Activity Lead:	Mike Cripps
Assignment End Date:	Not reported
Result:	Refer to ISST
File Under:	Yacht Harbor Towers
Latitude:	21.288177000000001
Longitude:	-157.84027900000001

Island:	Oahu
Supplemental Loc. Text:	Yacht Harbor Towers
Case Number:	19990301-1550
HID Number:	Not reported
Facility Registry Id:	110013774629
Lead and Program:	HEER EP&R
ER:	Referred
Units:	Yacht Harbor Tower Generator
Substances:	Unknown
Less Or Greater Than:	Not reported
Numerical Quantity:	60

YACHT HARBOR TOWERS (Continued) **S106821166**

Units:	Gallons
Activity Type:	Response
Activity Lead:	Mike Cripps
Assignment End Date:	Not reported
Result:	Refer to ISST
File Under:	Yacht Harbor Towers
Latitude:	21.28877
Longitude:	-157.84010699999999

Island:	Oahu
Supplemental Loc. Text:	Yacht Harbor Towers
Case Number:	19990301-1550
HID Number:	Not reported
Facility Registry Id:	110013774629
Lead and Program:	HEER EP&R
ER:	Referred
Units:	Yacht Harbor Tower Generator
Substances:	Unknown
Less Or Greater Than:	Not reported
Numerical Quantity:	60
Units:	Gallons
Activity Type:	Response
Activity Lead:	Mike Cripps
Assignment End Date:	Not reported
Result:	Refer to ISST
File Under:	Yacht Harbor Towers
Latitude:	21.271197000000001
Longitude:	-157.81720899999999

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69 WNW 1/2-1 0.819 mi. 4326 ft. | **MEADOW GOLD DAIRIES (ICE CREAM PLANT)**
1418 YOUNG ST
HONOLULU, HI 96814 | **SHWS SPILLS AIRS** | **S104657475 N/A**

Relative: Higher
Actual: 20 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Meadow Gold Ice Cream Plant Fuel Oil Spill
HID Number:	Not reported
Facility Registry Identifier:	110013767726
Lead Agency:	HEER
Program:	State
Project Manager:	Cal Miyahara
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Island:	Oahu
SDAR Environmental Interest Name:	Meadow Gold Ice Cream Plant Fuel Oil Spill
HID Number:	Not reported
Facility Registry Identifier:	110013767726
Lead Agency:	HEER
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: Low levels of TPH diesel and oil in soil and groundwater - no EAL exceedances.

MEADOW GOLD DAIRIES (ICE CREAM PLANT) (Continued) **S104657475**

Nature of Residual Contamination:	Residual TPH at GW smear zone located approximately 20 feet bgs.
Use Restrictions:	No Hazard Present for Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	09/30/2008
Document Number:	2008-664-CMM
Document Subject:	Removal Action Report, Former Meadow Gold Dairy 1418 Young St, Honolulu HI
Project Manager:	Cal Miyahara
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19960603-1628
HID Number:	Not reported
Facility Registry Id:	110013767726
Lead and Program:	HEER EP&R
ER:	No
Units:	Meadow Gold - Hawaii
Substances:	Ammonia
Less Or Greater Than:	Not reported
Numerical Quantity:	600
Units:	Pounds
Activity Type:	Response
Activity Lead:	Terry Corpus
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Meadow Gold Dairies, Division of Southern Foods Group, LP
Latitude:	21.299202999999999
Longitude:	-157.83946499999999

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19960603-1628
HID Number:	Not reported
Facility Registry Id:	110013767726
Lead and Program:	HEER EP&R
ER:	No
Units:	Meadow Gold - Hawaii
Substances:	Ammonia
Less Or Greater Than:	Not reported
Numerical Quantity:	600
Units:	Pounds
Activity Type:	Response
Activity Lead:	Terry Corpus
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Meadow Gold Dairies, Division of Southern Foods Group, LP
Latitude:	21.295252000000001
Longitude:	-157.84531899999999

Island:	Oahu
Supplemental Loc. Text:	Not reported

MEADOW GOLD DAIRIES (ICE CREAM PLANT) (Continued) **S104657475**

Case Number:	19970307-1540
HID Number:	Not reported
Facility Registry Id:	110013767726
Lead and Program:	HEER EP&R
ER:	No
Units:	Meadow Gold Ice Cream Plant Fuel Oil Spill
Substances:	Fuel Oil #6
Less Or Greater Than:	Not reported
Numerical Quantity:	500
Units:	Gallons
Activity Type:	Response
Activity Lead:	Liz Galvez
Assignment End Date:	Not reported
Result:	Refer to ISST
File Under:	Meadow Gold Dairies, Division of Southern Foods Group, LP
Latitude:	21.295252000000001
Longitude:	-157.84531899999999

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19970307-1540
HID Number:	Not reported
Facility Registry Id:	110013767726
Lead and Program:	HEER EP&R
ER:	No
Units:	Meadow Gold Ice Cream Plant Fuel Oil Spill
Substances:	Fuel Oil #6
Less Or Greater Than:	Not reported
Numerical Quantity:	500
Units:	Gallons
Activity Type:	Response
Activity Lead:	Liz Galvez
Assignment End Date:	Not reported
Result:	Refer to ISST
File Under:	Meadow Gold Dairies, Division of Southern Foods Group, LP
Latitude:	21.299202999999999
Longitude:	-157.83946499999999

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	20000407-1035
HID Number:	Not reported
Facility Registry Id:	110013767726
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Meadow Gold Ice Cream Plant-Ammonia release
Substances:	Ammonia
Less Or Greater Than:	Not reported
Numerical Quantity:	2
Units:	Pounds
Activity Type:	Response
Activity Lead:	Mike Cripps
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Meadow Gold Dairies, Division of Southern Foods Group, LP
Latitude:	21.299202999999999
Longitude:	-157.83946499999999

MEADOW GOLD DAIRIES (ICE CREAM PLANT) (Continued) **S104657475**

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	20000407-1035
HID Number:	Not reported
Facility Registry Id:	110013767726
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Meadow Gold Ice Cream Plant-Ammonia release
Substances:	Ammonia
Less Or Greater Than:	Not reported
Numerical Quantity:	2
Units:	Pounds
Activity Type:	Response
Activity Lead:	Mike Cripps
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Meadow Gold Dairies, Division of Southern Foods Group, LP
Latitude:	21.295252000000001
Longitude:	-157.84531899999999

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	20071212-1530
HID Number:	Not reported
Facility Registry Id:	110013767726
Lead and Program:	HEER EP&R
ER:	No
Units:	Meadow Gold oil release from a 1000-gallon tank
Substances:	Oil
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Unknown
Activity Type:	Response
Activity Lead:	Liz Galvez
Assignment End Date:	2007-12-13 00:00:00
Result:	Refer to SDAR
File Under:	Meadow Gold Dairies, Division of Southern Foods Group, LP
Latitude:	21.299202999999999
Longitude:	-157.83946499999999

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	20071212-1530
HID Number:	Not reported
Facility Registry Id:	110013767726
Lead and Program:	HEER EP&R
ER:	No
Units:	Meadow Gold oil release from a 1000-gallon tank
Substances:	Oil
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Unknown
Activity Type:	Response
Activity Lead:	Liz Galvez
Assignment End Date:	2007-12-13 00:00:00
Result:	Refer to SDAR
File Under:	Meadow Gold Dairies, Division of Southern Foods Group, LP

MEADOW GOLD DAIRIES (ICE CREAM PLANT) (Continued) **S104657475**

Latitude:	21.295252000000001
Longitude:	-157.84531899999999

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19901224
HID Number:	Not reported
Facility Registry Id:	110013767726
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Meadow Gold Ammonia Leak from Chiller
Substances:	Ammonia
Less Or Greater Than:	Not reported
Numerical Quantity:	250
Units:	Pounds
Activity Type:	Response
Activity Lead:	Not reported
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Meadow Gold Dairies, Division of Southern Foods Group, LP
Latitude:	21.295252000000001
Longitude:	-157.84531899999999

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19901224
HID Number:	Not reported
Facility Registry Id:	110013767726
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Meadow Gold Ammonia Leak from Chiller
Substances:	Ammonia
Less Or Greater Than:	Not reported
Numerical Quantity:	250
Units:	Pounds
Activity Type:	Response
Activity Lead:	Not reported
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Meadow Gold Dairies, Division of Southern Foods Group, LP
Latitude:	21.299202999999999
Longitude:	-157.83946499999999

Click this hyperlink while viewing on your computer to access
8 additional HI SPILLS: record(s) in the EDR Site Report.

AIRS:

Facility Identifier:	0402-01-N
Island:	Oahu
Mailing Address:	Not reported
Locale:	Not reported
Mailing City:	Not reported
Contact Name:	Not reported
Mailing State:	Not reported
Mailing Zip:	Not reported
Contact Phone:	Not reported
Business Phone:	Not reported

MEADOW GOLD DAIRIES (ICE CREAM PLANT) (Continued) **S104657475**

Issue Date:	08/18/1998
Expiration Date:	08/01/2003
Closed Date:	06/24/2003
Description:	This permit encompasses one 100 Hp Cleaver-Brooks Boiler, Model No. CB400-100, Serial No. L-59208.

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70 South 1/2-1 0.836 mi. 4413 ft. | **WAIKIKI BAZAAR**
2174 KALAKAUA AVE
HONOLULU, HI 96816 | **SHWS** **1006819697**
SPILLS **N/A**

Relative: Lower

Actual: 5 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	2174/2190 Kalakaua Ave
Island:	Oahu
Environmental Interest:	Waikiki Bazaar
HID Number:	Not reported
Facility Registry Identifier:	110013775478
Lead Agency:	HEER
Program:	State
Project Manager:	Diane England
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Island:	Oahu
SDAR Environmental Interest Name:	Waikiki Bazaar
HID Number:	Not reported
Facility Registry Identifier:	110013775478
Lead Agency:	HEER
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: Petroleum in soil
Nature of Residual Contamination:	No (petroleum in soil) contamination left on site is above EALs.
Use Restrictions:	No Hazard Present For Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	11/09/2005
Document Number:	2005-573-DE
Document Subject:	No Further Action Determination for Release ID 19950222-2
Project Manager:	Diane England
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	2174/2190 Kalakaua Ave
Case Number:	19950222-2
HID Number:	Not reported
Facility Registry Id:	110013775478
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Waikiki Bazaar

WAIKIKI BAZAAR (Continued) **1006819697**

Substances:	petroleum
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Terry Corpus
Assignment End Date:	Not reported
Result:	Refer to ISST
File Under:	Yoneoka and Associates
Latitude:	21.295943000000001
Longitude:	-157.789548

Island:	Oahu
Supplemental Loc. Text:	2174/2190 Kalakaua Ave
Case Number:	19950222-2
HID Number:	Not reported
Facility Registry Id:	110013775478
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Waikiki Bazaar
Substances:	petroleum
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Terry Corpus
Assignment End Date:	Not reported
Result:	Refer to ISST
File Under:	Yoneoka and Associates
Latitude:	21.280588000000002
Longitude:	-157.829838

Island:	Oahu
Supplemental Loc. Text:	2174/2190 Kalakaua Ave
Case Number:	19950222-2
HID Number:	Not reported
Facility Registry Id:	110013775478
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Waikiki Bazaar
Substances:	petroleum
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Terry Corpus
Assignment End Date:	Not reported
Result:	Refer to ISST
File Under:	Yoneoka and Associates
Latitude:	21.280816999999999
Longitude:	-157.83013199999999

71 WNW 1/2-1 0.850 mi. 4486 ft. | **LIKE LIKE PLAZA PETROLEUM CONTAMINATION**
745 KEEAUMOKU ST
HONOLULU, HI 96814 | **SHWS** | **1006819347**
N/A

Relative: Higher

Actual: 7 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Like Like Plaza Petroleum Contamination
HID Number:	Not reported
Facility Registry Identifier:	110013771383
Lead Agency:	HEER
Program:	State
Project Manager:	Anna Fernandez
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Island:	Oahu
SDAR Environmental Interest Name:	Like Like Plaza Petroleum Contamination
HID Number:	Not reported
Facility Registry Identifier:	110013771383
Lead Agency:	HEER
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: petroleum-impacted soils
Nature of Residual Contamination:	Petroleum impacted soil
Use Restrictions:	No Hazard Present For Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	05/04/2006
Document Number:	2006-266-AF
Document Subject:	NFA determination
Project Manager:	Anna Fernandez
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

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72 SSE 1/2-1 0.859 mi. 4533 ft. | **2319 ALA WAI BOULEVARD (UST REMOVAL & CONTAMINATED**
2319 ALA WAI BLVD
HONOLULU, HI 96815 | **SHWS**
SPILLS | **S105263376**
N/A

Relative: Lower

Actual: 3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	2319 Ala Wai Blvd
HID Number:	Not reported
Facility Registry Identifier:	110013783441
Lead Agency:	HEER
Program:	State
Project Manager:	Chris Takeno
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Undetermined
Island:	Oahu

2319 ALA WAI BOULEVARD (UST REMOVAL & CONTAMINATED SOIL REME (Continued) S105263376

SDAR Environmental Interest Name:	2319 Ala Wai Blvd
HID Number:	Not reported
Facility Registry Identifier:	110013783441
Lead Agency:	HEER
Potential Hazard And Controls:	Hazard Undetermined
Priority:	NFA
Assessment:	Assessment Ongoing
Response:	Not reported
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Not reported
Use Restrictions:	Undetermined
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action - Type Undetermined
Document Date:	03/19/1996
Document Number:	1996-094-SA
Document Subject:	No Further Action Letter
Project Manager:	Chris Takeno
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19951219
HID Number:	Not reported
Facility Registry Id:	110013783441
Lead and Program:	HEER EP&R
ER:	Yes
Units:	Apartment Complex on Ala Wai Blvd. diesel UST removal
Substances:	Diesel Fuel
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Terry Corpus
Assignment End Date:	Not reported
Result:	Refer to ISST
File Under:	Starts International Hawaii, Inc.
Latitude:	21.271197000000001
Longitude:	-157.81720899999999

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19951219
HID Number:	Not reported
Facility Registry Id:	110013783441
Lead and Program:	HEER EP&R
ER:	Yes
Units:	Apartment Complex on Ala Wai Blvd. diesel UST removal
Substances:	Diesel Fuel
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Terry Corpus

2319 ALA WAI BOULEVARD (UST REMOVAL & CONTAMINATED SOIL REME (Continued) **S105263376**

Assignment End Date:	Not reported
Result:	Refer to ISST
File Under:	Starts International Hawaii, Inc.
Latitude:	21.28051
Longitude:	-157.82462100000001

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19960226-0801
HID Number:	Not reported
Facility Registry Id:	110013783441
Lead and Program:	HEER EP&R
ER:	No
Units:	Ala Wai Boulevard Diesel Fuel Leak
Substances:	Diesel Fuel
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Chris Takeno
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Starts International Hawaii, Inc.
Latitude:	21.271197000000001
Longitude:	-157.81720899999999

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19960226-0801
HID Number:	Not reported
Facility Registry Id:	110013783441
Lead and Program:	HEER EP&R
ER:	No
Units:	Ala Wai Boulevard Diesel Fuel Leak
Substances:	Diesel Fuel
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Chris Takeno
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Starts International Hawaii, Inc.
Latitude:	21.28051
Longitude:	-157.82462100000001

73
West
1/2-1
0.890 mi.
4697 ft.

WALGREENS KEEAMOKU **SHWS** **S115488729**
1460 KAPIOLANI BLVD **N/A**
HONOLULU, HI 96814

Relative:
Lower

Actual:
3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Walgreens Keeamoku
HID Number:	Not reported

WALGREENS KEEAMOKU (Continued) **S115488729**

Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	Fast Track
Project Manager:	Jordan Nakayama
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Island:	Oahu
SDAR Environmental Interest Name:	Walgreens Keeamoku
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: The soil sample from SB-3-S-2.25-3.0 had a concentration of 1,400 milligrams per kilogram (mg/kg) TPH-DRO which exceeds the EAL of 100 mg/kg.
Nature of Residual Contamination:	Petroleum contaminated soils removed.
Use Restrictions:	No Hazard Present For Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	09/28/2015
Document Number:	2015-557-JQN
Document Subject:	No Further Action Determination for Walgreens Keeaumoku based upon review of Fast Track Cleanup Removal Action Report"
Project Manager:	Jordan Nakayama
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

74
NW
1/2-1
0.908 mi.
4792 ft.

CARTWRIGHT NEIGHBORHOOD PARK
KEEAUMOKU ST & MATLOCK AVE
HONOLULU, HI 96814

SHWS **1006820122**
N/A

Relative:
Higher

Actual:
30 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Cartwright Neighborhood Park
HID Number:	Not reported
Facility Registry Identifier:	110013780257
Lead Agency:	HEER
Program:	State
Project Manager:	Steve Mow
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Island:	Oahu
SDAR Environmental Interest Name:	Cartwright Neighborhood Park
HID Number:	Not reported
Facility Registry Identifier:	110013780257
Lead Agency:	HEER
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Necessary

CARTWRIGHT NEIGHBORHOOD PARK (Continued) **1006820122**

Response:	Response Complete
Nature of Contamination:	Found: Transformer oil (no PCBs) found on site.
Nature of Residual Contamination:	Not reported
Use Restrictions:	No Hazard Present for Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	05/12/2005
Document Number:	2005-257-SPM
Document Subject:	No Further Action Required at Cartwright Neighborhood Park
Project Manager:	Steve Mow
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

Q75 **HALE PUA NUI UST REMOVAL** **SHWS** **S108859671**
SSW **228 BEACH WALK** **SPILLS** **N/A**
1/2-1 **HONOLULU, HI 96815**
0.923 mi.
4875 ft. **Site 1 of 2 in cluster Q**

Relative:
Lower

Actual:
3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Former Hale Pua Nui Hotel
Island:	Oahu
Environmental Interest:	Hale Pua Nui UST Removal
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	State
Project Manager:	Paul Chong
Hazard Priority:	Low
Potential Hazards And Controls:	Hazard Present
Island:	Oahu
SDAR Environmental Interest Name:	Hale Pua Nui UST Removal
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Potential Hazard And Controls:	Hazard Present
Priority:	Low
Assessment:	Response Necessary
Response:	Response Ongoing
Nature of Contamination:	Found: Diesel Fuel.
Nature of Residual Contamination:	Not reported
Use Restrictions:	Controls Required to Manage Contamination
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	Not reported
Document Date:	Not reported
Document Number:	Not reported
Document Subject:	Not reported
Project Manager:	Paul Chong
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

HI SPILLS:

HALE PUA NUI UST REMOVAL (Continued) **S108859671**

Island:	Oahu
Supplemental Loc. Text:	Former Hale Pua Nui Hotel
Case Number:	20061020-1430
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	UST Release Former Hale Pua Nui Hotel
Substances:	Unknown
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Not reported
Assignment End Date:	Not reported
Result:	Not reported
File Under:	Brett Hill Management Group
Latitude:	21.271197000000001
Longitude:	-157.81720899999999

R76 **MOTOR SUPPLY** **SHWS** **S108008592**
WNW **726 SHERIDAN ST** **INST CONTROL** **N/A**
1/2-1 **HONOLULU, HI 96814**
0.956 mi.
5049 ft. **Site 1 of 2 in cluster R**

Relative:
Higher

Actual:
7 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Motor Supply
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	State
Project Manager:	Steve Mow
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Managed With Controls
Island:	Oahu
SDAR Environmental Interest Name:	Motor Supply
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Potential Hazard And Controls:	Hazard Managed With Controls
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: Tetrachloroethylene.
Nature of Residual Contamination:	Not reported
Use Restrictions:	Controls Required to Manage Contamination
Engineering Control:	Not reported
Description of Restrictions:	Prohibit Any Activity That May Disturb the Integrity of the Capping or Monitoring Systems
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Restricted Use
Document Date:	03/30/2011
Document Number:	2011-184-SPM

MOTOR SUPPLY (Continued) **S108008592**

Document Subject:	No Further Action with Institutional Controls Determination for Clean Living - Hakuyosha International Inc, 710 & 730 Sheridan St, Honolulu HI 96814
Project Manager:	Steve Mow
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

INST CONTROL:

Potential hazards and controls:	Hazard Managed With Controls
Supplemental Location:	Not reported
Zip Suffix:	Not reported
Island:	Oahu
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued

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R77 **HAKUYOSHA HAWAII, INC** **SHWS** **S106817254**
WNW **730 SHERIDAN ST** **INST CONTROL** **N/A**
1/2-1 **HONOLULU, HI 96814** **SPILLS**
0.958 mi. **AIRS**
5059 ft. **Site 2 of 2 in cluster R** **DRYCLEANERS**

Relative:
Higher

Actual:
7 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Hakuyosha Hawaii, Inc.
HID Number:	Not reported
Facility Registry Identifier:	110005284414
Lead Agency:	HEER
Program:	State
Project Manager:	Steve Mow
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Managed With Controls
Island:	Oahu
SDAR Environmental Interest Name:	Hakuyosha Hawaii, Inc.
HID Number:	Not reported
Facility Registry Identifier:	110005284414
Lead Agency:	HEER
Potential Hazard And Controls:	Hazard Managed With Controls
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: tetrachloroethylene
Nature of Residual Contamination:	Not reported
Use Restrictions:	Controls Required to Manage Contamination
Engineering Control:	Not reported
Description of Restrictions:	Prohibit Any Activity That May Disturb the Integrity of the Capping or Monitoring System
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Restricted Use
Document Date:	03/30/2011
Document Number:	2011-184-SPM
Document Subject:	No Further Action with Institutional Controls Determination for Clean Living - Hakuyosha International Inc, 710 & 730 Sheridan St, Honolulu HI 96814
Project Manager:	Steve Mow
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

HAKUYOSHA HAWAII, INC (Continued) **S106817254**

INST CONTROL:

Potential hazards and controls:	Hazard Managed With Controls
Supplemental Location:	Not reported
Zip Suffix:	Not reported
Island:	Oahu
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19950303
HID Number:	Not reported
Facility Registry Id:	110005284414
Lead and Program:	HEER EP&R
ER:	No
Units:	Hakuyosha Hawaii Inc.
Substances:	Diesel Fuel
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Bryce Hataoka
Assignment End Date:	Not reported
Result:	Refer to ISST
File Under:	Hakuyosha Hawaii Inc.
Latitude:	21.295824
Longitude:	-157.84307999999999

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19950303
HID Number:	Not reported
Facility Registry Id:	110005284414
Lead and Program:	HEER EP&R
ER:	No
Units:	Hakuyosha Hawaii Inc.
Substances:	Diesel Fuel
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Bryce Hataoka
Assignment End Date:	Not reported
Result:	Refer to ISST
File Under:	Hakuyosha Hawaii Inc.
Latitude:	21.295252000000001
Longitude:	-157.84531899999999

AIRS:

Facility Identifier:	0462-01-N
Island:	Oahu
Mailing Address:	1481 South King Street
Locale:	Not reported
Mailing City:	Honolulu
Contact Name:	James Morrow
Mailing State:	Hawaii

HAKUYOSHA HAWAII, INC (Continued) **S106817254**

Mailing Zip:	96814-2506
Contact Phone:	Consultant
Business Phone:	Not reported
Issue Date:	09/15/2014
Expiration Date:	09/14/2019
Closed Date:	08/07/2015
Description:	100 hp Steam Boiler1. This noncovered source permit encompasses the following equipment and associated appurtenances: 100 HP Cleaver Brooks Steam Boiler, model no. CB.100-100, maximum pressure 150 psi, serial no. L-78781, oil fired.

Facility Identifier:	0564-01-C
Island:	Oahu
Mailing Address:	1481 South King Street
Locale:	Not reported
Mailing City:	Honolulu
Contact Name:	James Morrow
Mailing State:	Hawaii
Mailing Zip:	96814-2506
Contact Phone:	Consultant
Business Phone:	Not reported
Issue Date:	12/22/2014
Expiration Date:	12/21/2019
Closed Date:	08/13/2015
Description:	Petroleum Solvent Dry Cleaning EquipmentThis permit encompasses the following equipment and associated appurtenances:a.Hoyt Petro-Miser Petroleum Solvent Recovery DryerModel PET-50 Serial no. 50-519-GE Maximum capacity: 50 poundsb.Hoyt Petro-Miser Petroleum Solvent Recovery DryerModel PET-50 Serial no. 50-707-GE Maximum capacity: 50 poundsc.Hoyt Petro-Miser Petroleum Solvent Recovery DryerModel PET-50RSerial no. 50R-1074GEMaximum capacity: 50 poundsd.J & T Petroleum Solvent WasherModel 40Serial no. 1024Maximum capacity: 40 poundse.J & T Petroleum Solvent WasherModel 40Serial no. 1023Maximum capacity: 40 pounds

HI DRYCLEANERS:

Pernit Number:	0564-01-C
Island:	Oahu
Issued Date:	12/22/2014
Phone Number:	Not reported
Responsible Official Name:	James Morrow
Responsible Official Title:	Consultant
Responsible Official Address:	1481 South King Street
Responsible Official City,St,Zip:	Honolulu, HI 96814-2506
Date Permit Expiration:	12/21/2019
Value:	Not reported
Last of Facility Description:	Petroleum Solvent Dry Cleaning Equipment This permit encompasses the following equipment and associated appurtenances: a. Hoyt Petro-Miser Petroleum Solvent Recovery Dryer Model PET-50 Serial no. 50-519-GE Maximum capacity: 50 pounds b. Hoyt Petro-Miser Petroleum Solvent Recovery Dryer Model PET-50 Serial no. 50-707-GE Maximum capacity: 50 pounds c. Hoyt Petro-Miser Petroleum Solvent Recovery Dryer Model PET-50R Serial no. 50R-1074GE Maximum capacity: 50 pounds d. J & T Petroleum Solvent Washer Model 40 Serial no. 1024 Maximum capacity: 40 pounds e. J & T Petroleum Solvent Washer Model 40 Serial no. 1023

HAKUYOSHA HAWAII, INC (Continued) **S106817254**

Maximum capacity: 40 pounds
Date Permit Closing: 08/13/2015

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78 ENE 1/2-1 0.970 mi. 5122 ft.

UH MANOA HENKE HALL
1800 EAST-WEST ROAD
HONOLULU, HI 96822

SHWS **S123106624**
N/A

Relative: Higher
Actual: 94 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	UH Manoa Henke Hall
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	State
Project Manager:	Eric Sadoyama
Hazard Priority:	Not reported
Potential Hazards And Controls:	Hazard Present
Island:	Oahu
SDAR Environmental Interest Name:	UH Manoa Henke Hall
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Potential Hazard And Controls:	Hazard Present
Priority:	Not reported
Assessment:	Response Necessary
Response:	Response Ongoing
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Not reported
Use Restrictions:	Controls Required to Manage Contamination
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	Not reported
Document Date:	Not reported
Document Number:	Not reported
Document Subject:	Not reported
Project Manager:	Eric Sadoyama
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

Q79 SSW 1/2-1 0.977 mi. 5161 ft.

WAIKIKI BEACH WALK RESORT
205 BEACH WALK AVE
HONOLULU, HI

SHWS **S108859866**
INST CONTROL **N/A**
SPILLS

Site 2 of 2 in cluster Q

Relative: Lower
Actual: 3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Waikiki
Island:	Oahu
Environmental Interest:	205 Beach Walk
HID Number:	Not reported

WAIKIKI BEACH WALK RESORT (Continued) **S108859866**

Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	State
Project Manager:	Diane England
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Managed With Controls
Island:	Oahu
SDAR Environmental Interest Name:	205 Beach Walk
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Potential Hazard And Controls:	Hazard Managed With Controls
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: Petroleum in groundwater and soil
Nature of Residual Contamination:	TPH D and Bis(2-theylhexy1)phthalate
Use Restrictions:	Controls Required to Manage Contamination
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Restricted Use
Document Date:	10/16/2006
Document Number:	2006-641-DE
Document Subject:	No Further Action Determination for Release ID 20051116-1220
Project Manager:	Diane England
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

INST CONTROL:

Potential hazards and controls:	Hazard Managed With Controls
Supplemental Location:	Waikiki
Zip Suffix:	Not reported
Island:	Oahu
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Waikiki
Case Number:	20051116-1220
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	No
Units:	Fuel Oil (Diesel) Release
Substances:	Diesel Fuel
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Mike Cripps
Assignment End Date:	2005-11-17 00:00:00
Result:	SOSC NFA
File Under:	Waikiki Beach Walk Resort
Latitude:	21.279568999999999
Longitude:	-157.83085600000001

WAIKIKI BEACH WALK RESORT (Continued) **S108859866**

Island:	Oahu
Supplemental Loc. Text:	Waikiki
Case Number:	20051116-1220
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	No
Units:	Fuel Oil (Diesel) Release
Substances:	Diesel Fuel
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Mike Cripps
Assignment End Date:	2005-11-17 00:00:00
Result:	SOSC NFA
File Under:	Waikiki Beach Walk Resort
Latitude:	21.279752999999999
Longitude:	-157.83065400000001

80
NE
1/2-1
0.979 mi.
5170 ft.

FOOD SCIENCE TECHNOLOGY BUILDING **SHWS** **1006820224**
1920 EDMONDSON RD **SPILLS** **N/A**
HONOLULU, HI 96822

Relative:
Higher

Actual:
95 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Manoa Campus
Island:	Oahu
Environmental Interest:	University of Hawaii at Manoa Food Science Technology Building
HID Number:	Not reported
Facility Registry Identifier:	110013781489
Lead Agency:	HEER
Program:	State
Project Manager:	Mark Sutterfield
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Island:	Oahu
SDAR Environmental Interest Name:	University of Hawaii at Manoa Food Science Technology Building
HID Number:	Not reported
Facility Registry Identifier:	110013781489
Lead Agency:	HEER
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Petroleum contaminated soil
Use Restrictions:	No Hazard Present for Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	12/09/2004
Document Number:	2004-528-MS
Document Subject:	NFA for removal of a 500 gallon diesel UST at the Food Sciences

FOOD SCIENCE TECHNOLOGY BUILDING (Continued) **1006820224**

	Building
Project Manager:	Mark Sutterfield
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Manoa Campus
Case Number:	20010329-1218
HID Number:	Not reported
Facility Registry Id:	110013781489
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Food Science Technology Building UH Manoa
Substances:	Diesel Fuel
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Terry Corpus
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	State of Hawaii, University of Hawaii
Latitude:	21.319856999999999
Longitude:	-157.80983599999999

Island:	Oahu
Supplemental Loc. Text:	Manoa Campus
Case Number:	20010329-1218
HID Number:	Not reported
Facility Registry Id:	110013781489
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Food Science Technology Building UH Manoa
Substances:	Diesel Fuel
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Terry Corpus
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	State of Hawaii, University of Hawaii
Latitude:	21.301445000000001
Longitude:	-157.81585999999999

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81 South 1/2-1 0.986 mi. 5204 ft. | **MIRAMAR HOTEL INTERNATIONAL MARKET PLACE REDEVELOP** | **SHWS** | **S115488716**
2345 KUHIO AVE | **ENG CONTROLS** | **N/A**
HONOLULU, HI 96815 | **INST CONTROL**

Relative: Lower
Actual: 3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Miramar Hotel International Market Place Redevelopment
HID Number:	Not reported

MIRAMAR HOTEL INTERNATIONAL MARKET PLACE REDEVELOPMENT (Continued) **S115488716**

Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	Fast Track
Project Manager:	Steve Mow
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Managed With Controls
Island:	Oahu
SDAR Environmental Interest Name:	Miramar Hotel International Market Place Redevelopment
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Potential Hazard And Controls:	Hazard Managed With Controls
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: Pb, PAHs.
Nature of Residual Contamination:	Lead under a slab.
Use Restrictions:	Controls Required to Manage Contamination
Engineering Control:	Engineering Control Required
Description of Restrictions:	Not reported
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Restricted Use
Document Date:	01/05/2017
Document Number:	2017-005-SPM
Document Subject:	No Further Action Determination for International Market Place, 2330 Kalakaua Ave
Project Manager:	Steve Mow
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

ENG CONTROLS:

Supplemental Location Text:	Not reported
Zip Suffix:	Not reported
Island:	Oahu
Potential Hazards And Controls:	Hazard Managed With Controls
Engineering Control:	Engineering Control Required

INST CONTROL:

Potential hazards and controls:	Hazard Managed With Controls
Supplemental Location:	Not reported
Zip Suffix:	Not reported
Island:	Oahu
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued

Count: 7 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
HONOLULU	S123106535	333 & 351 N KING ST	333 & 351 N KING ST		SHWS, BROWNFIELDS
HONOLULU	S111704669	ALA WAI HARBOR BOAT REPAIR YARD	ALA MOANA BLVD		SHWS
HONOLULU	S118943721	UNIVERSITY OF HAWAII INTERCHANGE	H-1 AND UNIVERSITY AVE		SHWS
HONOLULU	S121405806	AMERICAN SAVINGS BANK CAMPUS	300 BERETANIA STREET		SHWS
HONOLULU	S118422780	2051-2057 KALAKAUA AVENUE	2051-2057 KALAKAUA AVE	96815	SHWS
MOKULEIA	S106817395	HAWAIIAN BITUMULS PAVING & PRECAST	FARRINGTON HWY	96826	SHWS
MOKULEIA	1003879503	HAWAII BITUMULS & PAVING CO.	TMK: 6-6-1: 2, 33 & 36/FARRING	96826	SEMS-ARCHIVE

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 12/12/2018
Date Data Arrived at EDR: 12/28/2018
Date Made Active in Reports: 01/11/2019
Number of Days to Update: 14

Source: EPA
Telephone: N/A
Last EDR Contact: 12/28/2018
Next Scheduled EDR Contact: 04/15/2019
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 12/12/2018
Date Data Arrived at EDR: 12/28/2018
Date Made Active in Reports: 01/11/2019
Number of Days to Update: 14

Source: EPA
Telephone: N/A
Last EDR Contact: 12/28/2018
Next Scheduled EDR Contact: 04/15/2019
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 12/12/2018
Date Data Arrived at EDR: 12/28/2018
Date Made Active in Reports: 01/11/2019
Number of Days to Update: 14

Source: EPA
Telephone: N/A
Last EDR Contact: 12/28/2018
Next Scheduled EDR Contact: 04/15/2019
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 11/07/2016
Date Data Arrived at EDR: 01/05/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 92

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 01/04/2019
Next Scheduled EDR Contact: 04/15/2019
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 12/12/2018
Date Data Arrived at EDR: 12/28/2018
Date Made Active in Reports: 01/11/2019
Number of Days to Update: 14

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 12/28/2018
Next Scheduled EDR Contact: 04/29/2019
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 12/13/2018
Date Data Arrived at EDR: 12/28/2018
Date Made Active in Reports: 01/11/2019
Number of Days to Update: 14

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 12/28/2018
Next Scheduled EDR Contact: 04/29/2019
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report
CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 12/03/2018
Next Scheduled EDR Contact: 04/08/2019
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal
RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/03/2018
Next Scheduled EDR Contact: 04/08/2019
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators
RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/03/2018
Next Scheduled EDR Contact: 04/08/2019
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/03/2018
Next Scheduled EDR Contact: 04/08/2019
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/03/2018
Next Scheduled EDR Contact: 04/08/2019
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 10/17/2018
Date Data Arrived at EDR: 10/25/2018
Date Made Active in Reports: 12/07/2018
Number of Days to Update: 43

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 10/15/2018
Next Scheduled EDR Contact: 02/25/2019
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 07/31/2018
Date Data Arrived at EDR: 08/28/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 17

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 11/28/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 07/31/2018
Date Data Arrived at EDR: 08/28/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 17

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 11/28/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 09/24/2018
Date Data Arrived at EDR: 09/25/2018
Date Made Active in Reports: 11/09/2018
Number of Days to Update: 45

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 01/08/2019
Next Scheduled EDR Contact: 04/08/2019
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

SHWS: Sites List

Facilities, sites or areas in which the Office of Hazard Evaluation and Emergency Response has an interest, has investigated or may investigate under HRS 128D (includes CERCLIS sites).

Date of Government Version: 09/27/2018
Date Data Arrived at EDR: 11/19/2018
Date Made Active in Reports: 12/04/2018
Number of Days to Update: 15

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 11/19/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Semi-Annually

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Permitted Landfills in the State of Hawaii

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 09/17/2012
Date Data Arrived at EDR: 04/03/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 37

Source: Department of Health
Telephone: 808-586-4245
Last EDR Contact: 12/27/2018
Next Scheduled EDR Contact: 04/08/2019
Data Release Frequency: Varies

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 08/31/2018
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 10/10/2018
Number of Days to Update: 29

Source: Department of Health
Telephone: 808-586-4228
Last EDR Contact: 11/30/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: Semi-Annually

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 05/08/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 04/01/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 04/12/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 04/25/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 04/10/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 04/12/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/13/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/24/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 05/15/2017
Date Data Arrived at EDR: 05/30/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 136

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 01/08/2019
Next Scheduled EDR Contact: 04/22/2019
Data Release Frequency: Varies

UST: Underground Storage Tank Database
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 08/31/2018
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 10/10/2018
Number of Days to Update: 29

Source: Department of Health
Telephone: 808-586-4228
Last EDR Contact: 11/30/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: Semi-Annually

INDIAN UST R1: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/13/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 04/01/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/24/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 04/25/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 04/10/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 04/12/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 05/08/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/12/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

ENG CONTROLS: Engineering Control Sites
A listing of sites with engineering controls in place.

Date of Government Version: 09/27/2018
Date Data Arrived at EDR: 11/19/2018
Date Made Active in Reports: 12/04/2018
Number of Days to Update: 15

Source: Department of Health
Telephone: 404-586-4249
Last EDR Contact: 11/19/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Varies

INST CONTROL: Sites with Institutional Controls
Voluntary Remediation Program and Brownfields sites with institutional controls in place.

Date of Government Version: 09/27/2018
Date Data Arrived at EDR: 11/19/2018
Date Made Active in Reports: 12/04/2018
Number of Days to Update: 15

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 11/19/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 12/19/2018
Next Scheduled EDR Contact: 04/08/2019
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

VCP: Voluntary Response Program Sites
Sites participating in the Voluntary Response Program. The purpose of the VRP is to streamline the cleanup process in a way that will encourage prospective developers, lenders, and purchasers to voluntarily cleanup properties.

Date of Government Version: 09/27/2018
Date Data Arrived at EDR: 11/19/2018
Date Made Active in Reports: 12/04/2018
Number of Days to Update: 15

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 11/19/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Brownfields Sites
With certain legal exclusions and additions, the term ‘brownfield site’ means real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.

Date of Government Version: 09/27/2018
Date Data Arrived at EDR: 11/19/2018
Date Made Active in Reports: 12/04/2018
Number of Days to Update: 15

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 11/19/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 12/17/2018
Date Data Arrived at EDR: 12/18/2018
Date Made Active in Reports: 01/11/2019
Number of Days to Update: 24

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 12/18/2018
Next Scheduled EDR Contact: 04/01/2019
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 10/25/2018
Next Scheduled EDR Contact: 02/11/2019
Data Release Frequency: Varies

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 01/17/2019
Next Scheduled EDR Contact: 05/06/2019
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 11/02/2018
Next Scheduled EDR Contact: 02/11/2019
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register
A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 09/21/2018
Date Data Arrived at EDR: 09/21/2018
Date Made Active in Reports: 11/09/2018
Number of Days to Update: 49

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/26/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: No Update Planned

CDL: Clandestine Drug Lab Listing
A listing of clandestine drug lab site locations.

Date of Government Version: 08/04/2010
Date Data Arrived at EDR: 09/10/2010
Date Made Active in Reports: 10/22/2010
Number of Days to Update: 42

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 11/26/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: Varies

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/21/2018
Date Data Arrived at EDR: 09/21/2018
Date Made Active in Reports: 11/09/2018
Number of Days to Update: 49

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/26/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: Quarterly

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 12/12/2018
Date Data Arrived at EDR: 12/28/2018
Date Made Active in Reports: 01/11/2019
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 12/28/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 03/26/2018
Date Data Arrived at EDR: 03/27/2018
Date Made Active in Reports: 06/08/2018
Number of Days to Update: 73

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 01/08/2019
Next Scheduled EDR Contact: 04/08/2019
Data Release Frequency: Quarterly

SPILLS: Release Notifications

Releases of hazardous substances to the environment reported to the Office of Hazard Evaluation and Emergency Response since 1988.

Date of Government Version: 08/14/2018
Date Data Arrived at EDR: 08/21/2018
Date Made Active in Reports: 09/11/2018
Number of Days to Update: 21

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 11/19/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Varies

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 03/10/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/11/2013
Number of Days to Update: 39

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/03/2018
Next Scheduled EDR Contact: 04/08/2019
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/31/2015
Date Data Arrived at EDR: 07/08/2015
Date Made Active in Reports: 10/13/2015
Number of Days to Update: 97

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 11/19/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 01/11/2019
Next Scheduled EDR Contact: 04/22/2019
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 01/11/2019
Next Scheduled EDR Contact: 04/22/2019
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 11/16/2018
Next Scheduled EDR Contact: 02/25/2019
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 08/31/2018
Date Data Arrived at EDR: 09/25/2018
Date Made Active in Reports: 11/09/2018
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 12/21/2018
Next Scheduled EDR Contact: 04/08/2019
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 11/05/2018
Next Scheduled EDR Contact: 02/18/2019
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 11/09/2018
Next Scheduled EDR Contact: 02/18/2019
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 198

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 12/21/2018
Next Scheduled EDR Contact: 04/01/2019
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 01/10/2018
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 2

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 11/16/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 10/24/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 12/12/2018
Date Data Arrived at EDR: 12/28/2018
Date Made Active in Reports: 01/11/2019
Number of Days to Update: 14

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 12/28/2018
Next Scheduled EDR Contact: 03/18/2019
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 10/26/2018
Date Data Arrived at EDR: 11/06/2018
Date Made Active in Reports: 01/11/2019
Number of Days to Update: 66

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 01/22/2019
Next Scheduled EDR Contact: 05/06/2019
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 08/13/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/09/2018
Number of Days to Update: 36

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 12/28/2018
Next Scheduled EDR Contact: 02/18/2019
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 09/14/2018
Date Data Arrived at EDR: 10/11/2018
Date Made Active in Reports: 12/07/2018
Number of Days to Update: 57

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 01/11/2019
Next Scheduled EDR Contact: 04/22/2019
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 01/07/2019
Next Scheduled EDR Contact: 04/22/2019
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 08/30/2016
Date Data Arrived at EDR: 09/08/2016
Date Made Active in Reports: 10/21/2016
Number of Days to Update: 43

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 01/22/2019
Next Scheduled EDR Contact: 05/06/2019
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 12/05/2018
Next Scheduled EDR Contact: 03/18/2019
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 12/03/2018
Next Scheduled EDR Contact: 03/18/2019
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 05/24/2017
Date Data Arrived at EDR: 11/30/2017
Date Made Active in Reports: 12/15/2017
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 10/02/2018
Date Data Arrived at EDR: 10/03/2018
Date Made Active in Reports: 11/09/2018
Number of Days to Update: 37

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 01/03/2019
Next Scheduled EDR Contact: 04/15/2019
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data
Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 10/01/2018
Date Data Arrived at EDR: 10/30/2018
Date Made Active in Reports: 01/18/2019
Number of Days to Update: 80

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 10/30/2018
Next Scheduled EDR Contact: 02/11/2019
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 09/30/2018
Date Data Arrived at EDR: 10/12/2018
Date Made Active in Reports: 12/07/2018
Number of Days to Update: 56

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 01/07/2019
Next Scheduled EDR Contact: 04/22/2019
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 11/21/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 01/07/2019
Next Scheduled EDR Contact: 04/22/2019
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 3

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 11/01/2018
Next Scheduled EDR Contact: 02/18/2019
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 06/23/2017
Date Data Arrived at EDR: 10/11/2017
Date Made Active in Reports: 11/03/2017
Number of Days to Update: 23

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 12/14/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 12/12/2018
Date Data Arrived at EDR: 12/28/2018
Date Made Active in Reports: 01/11/2019
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 12/28/2018
Next Scheduled EDR Contact: 04/15/2019
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/01/2018
Date Data Arrived at EDR: 08/29/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 37

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 11/30/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 11/30/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 11/30/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 09/10/2018
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 3

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 12/19/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 11/15/2018
Date Data Arrived at EDR: 12/05/2018
Date Made Active in Reports: 01/11/2019
Number of Days to Update: 37

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 01/08/2019
Next Scheduled EDR Contact: 03/18/2019
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 06/19/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 87

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 01/14/2019
Next Scheduled EDR Contact: 04/29/2019
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 09/02/2018
Date Data Arrived at EDR: 09/05/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 9

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 01/07/2019
Next Scheduled EDR Contact: 03/18/2019
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 07/26/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 71

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 11/30/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 08/22/2018
Date Data Arrived at EDR: 08/22/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 44

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 11/19/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Quarterly

AIRS: List of Permitted Facilities
A listing of permitted facilities in the state.

Date of Government Version: 10/23/2018
Date Data Arrived at EDR: 10/24/2018
Date Made Active in Reports: 12/04/2018
Number of Days to Update: 41

Source: Department of Health
Telephone: 808-586-4200
Last EDR Contact: 12/26/2018
Next Scheduled EDR Contact: 04/15/2019
Data Release Frequency: Varies

DRYCLEANERS: Permitted Drycleaner Facility Listing
A listing of permitted drycleaner facilities in the state.

Date of Government Version: 10/23/2018
Date Data Arrived at EDR: 10/24/2018
Date Made Active in Reports: 12/04/2018
Number of Days to Update: 41

Source: Department of Health
Telephone: 808-586-4200
Last EDR Contact: 12/26/2018
Next Scheduled EDR Contact: 04/15/2019
Data Release Frequency: Varies

Financial Assurance: Financial Assurance Information Listing
A listing of financial assurance information for underground storage tank facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 09/19/2018
Date Data Arrived at EDR: 09/20/2018
Date Made Active in Reports: 10/10/2018
Number of Days to Update: 20

Source: Department of Health
Telephone: 808-586-4226
Last EDR Contact: 12/19/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Varies

LEAD: Lead Inspection Listing
Lead inspections

Date of Government Version: 09/24/2018
Date Data Arrived at EDR: 09/25/2018
Date Made Active in Reports: 10/10/2018
Number of Days to Update: 15

Source: Department of Health
Telephone: 808-586-5800
Last EDR Contact: 12/07/2018
Next Scheduled EDR Contact: 03/25/2019
Data Release Frequency: Varies

UIC: Underground Injection Wells Listing
A listing of underground injection well locations.

Date of Government Version: 02/07/2013
Date Data Arrived at EDR: 02/12/2013
Date Made Active in Reports: 04/09/2013
Number of Days to Update: 56

Source: Department of Health
Telephone: 808-586-4258
Last EDR Contact: 11/26/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Health in Hawaii.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/08/2014
Number of Days to Update: 191

Source: Department of Health
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Health in Hawaii.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/17/2014
Number of Days to Update: 200

Source: Department of Health
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank
The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Health in Hawaii.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/03/2014
Number of Days to Update: 186

Source: Department of Health
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

Oil/Gas Pipelines
Source: PennWell Corporation
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data
Source: PennWell Corporation
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory
Source: Office of Planning
Telephone: 808-587-2895

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

2139 ALGAROBA STREET
2139 ALGAROBA ST
HONOLULU, HI 96826

TARGET PROPERTY COORDINATES

Latitude (North):	21.292875 - 21˚ 17' 34.35''
Longitude (West):	157.828121 - 157˚ 49' 41.24''
Universal Tranverse Mercator:	Zone 4
UTM X (Meters):	621561.0
UTM Y (Meters):	2354874.2
Elevation:	7 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5941635 HONOLULU, HI
Version Date:	2013

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

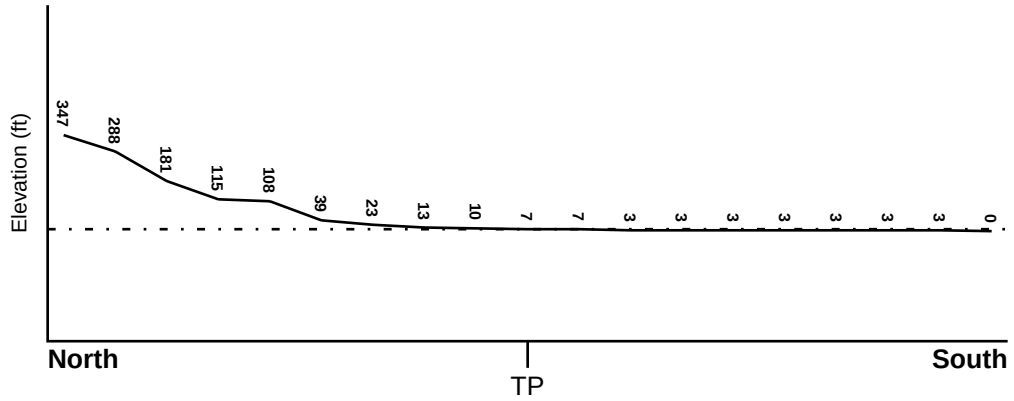
TOPOGRAPHIC INFORMATION

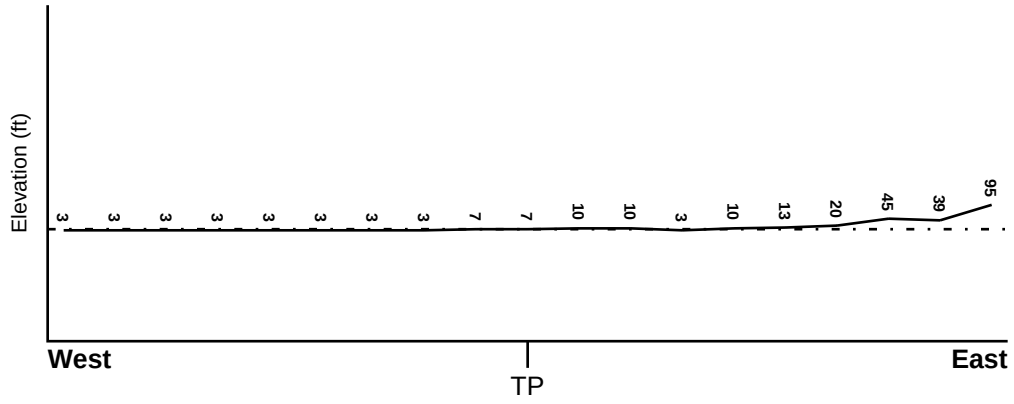
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SSW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES





Target Property Elevation: 7 ft.

0 1/2 1 Miles

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
15003C0366G	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
15003C0362G	FEMA FIRM Flood data
15003C0368G	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
HONOLULU	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

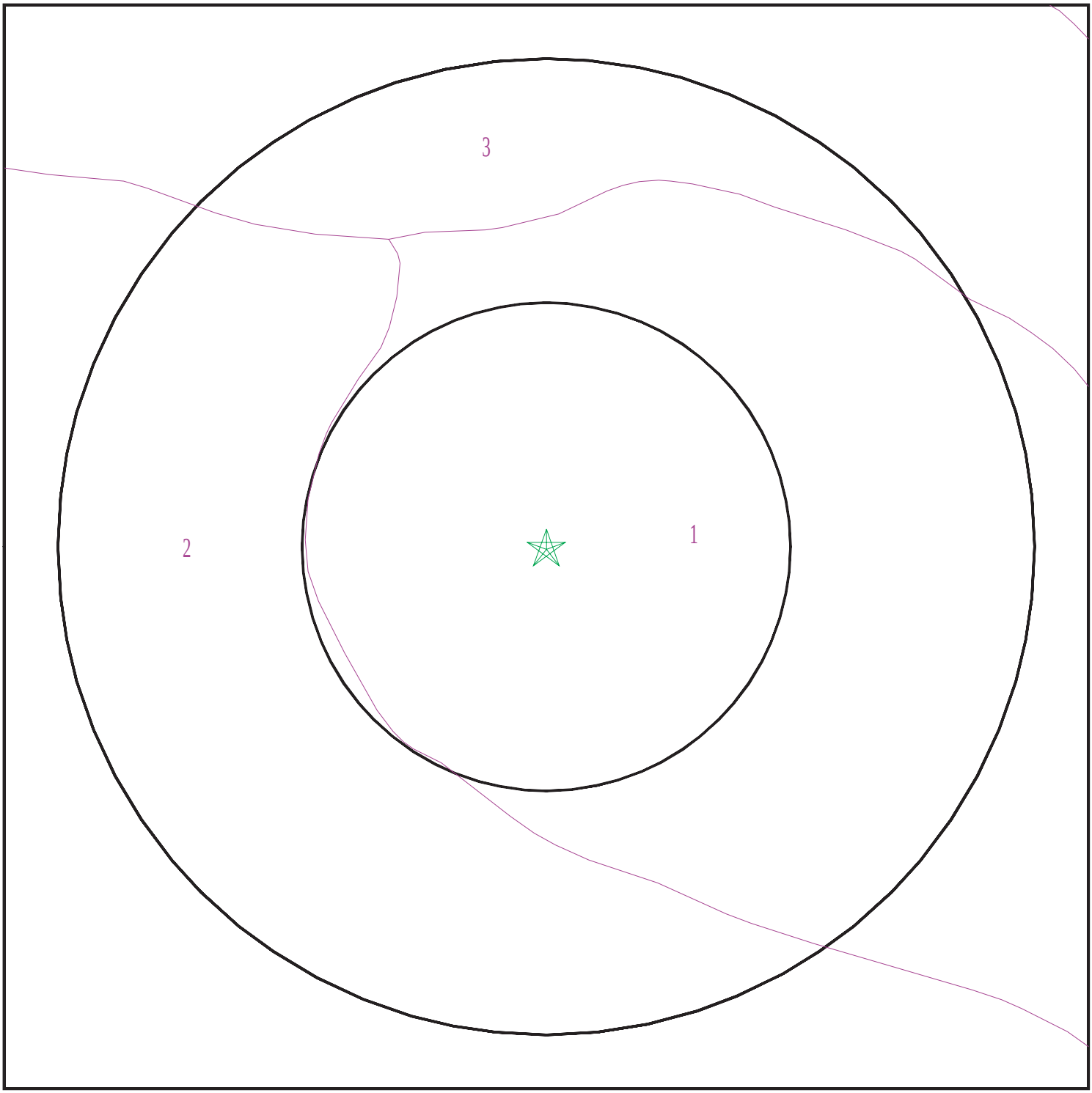
Era:	-
System:	-
Series:	-
Code:	N/A *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: -

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 5544094.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME: 2139 Algaroba Street ADDRESS: 2139 ALGAROBA ST HONOLULU HI 96826 LAT/LONG: 21.292875 / 157.828121	CLIENT: Environmental Risk Analysis. LLC CONTACT: Vincent Yanagita INQUIRY #: 5544094.2s DATE: January 25, 2019 12:13 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Ewa

Soil Surface Texture: silty clay loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 42 Min: 1	Max: Min:
2	7 inches	29 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 42 Min: 1	Max: Min:
3	29 inches	38 inches	bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 42 Min: 1	Max: Min:

Soil Map ID: 2

Soil Component Name: Fill land, mixed

Soil Surface Texture: gravelly sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 152 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	gravelly sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 0.42 Min: 0.02	Max: Min:
2	5 inches	59 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 0.42 Min: 0.02	Max: Min:
3	59 inches	70 inches	bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 0.42 Min: 0.02	Max: Min:

Soil Map ID: 3

Soil Component Name: Makiki

Soil Surface Texture: clay loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	20 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.14 Min: 14.11	Max: 6 Min: 5.6
2	20 inches	29 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.14 Min: 14.11	Max: 6 Min: 5.6
3	29 inches	59 inches	paragravelly clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.14 Min: 14.11	Max: 6 Min: 5.6

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 0.001 miles
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A1	USGS40000269555	1/8 - 1/4 Mile NW

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
B3	USGS40000269543	1/4 - 1/2 Mile East
B4	USGS40000269544	1/4 - 1/2 Mile East
C7	USGS40000269564	1/4 - 1/2 Mile North
C8	USGS40000269565	1/4 - 1/2 Mile NNW
C11	USGS40000269566	1/4 - 1/2 Mile NNW
D14	USGS40000269530	1/4 - 1/2 Mile SE
E15	USGS40000269573	1/4 - 1/2 Mile NNW
E17	USGS40000269574	1/4 - 1/2 Mile NNW
F19	USGS40000269559	1/4 - 1/2 Mile WNW
F21	USGS40000269562	1/4 - 1/2 Mile NW
E23	USGS40000269575	1/4 - 1/2 Mile NNW
G25	USGS40000269570	1/4 - 1/2 Mile NW
H27	USGS40000269587	1/4 - 1/2 Mile NNW
H29	USGS40000269589	1/4 - 1/2 Mile NNW
I30	USGS40000269583	1/4 - 1/2 Mile NNW
J33	USGS40000269529	1/4 - 1/2 Mile SE
K35	USGS40000269593	1/2 - 1 Mile North
I39	USGS40000269590	1/2 - 1 Mile NNW
K41	USGS40000269602	1/2 - 1 Mile North
K42	USGS40000269601	1/2 - 1 Mile North
K45	USGS40000269597	1/2 - 1 Mile North
K46	USGS40000269596	1/2 - 1 Mile North
K47	USGS40000269595	1/2 - 1 Mile North
K48	USGS40000269598	1/2 - 1 Mile North
K49	USGS40000269600	1/2 - 1 Mile North
K50	USGS40000269599	1/2 - 1 Mile North
L53	USGS40000269578	1/2 - 1 Mile NW
M55	USGS40000269591	1/2 - 1 Mile NW
N57	USGS40000269611	1/2 - 1 Mile NNW
O59	USGS40000269556	1/2 - 1 Mile WNW
P64	USGS40000269511	1/2 - 1 Mile SE
P65	USGS40000269509	1/2 - 1 Mile SE
Q66	USGS40000269516	1/2 - 1 Mile SE
R67	USGS40000269567	1/2 - 1 Mile WNW
S68	USGS40000269580	1/2 - 1 Mile NW
P74	USGS40000269513	1/2 - 1 Mile SE
P75	USGS40000269514	1/2 - 1 Mile SE
P77	USGS40000269508	1/2 - 1 Mile SE
T78	USGS40000269607	1/2 - 1 Mile NW
80	USGS40000269594	1/2 - 1 Mile NE
P82	USGS40000269506	1/2 - 1 Mile SE
R84	USGS40000269568	1/2 - 1 Mile WNW
R85	USGS40000269571	1/2 - 1 Mile WNW
U87	USGS40000269614	1/2 - 1 Mile NW
V89	USGS40000269572	1/2 - 1 Mile WNW
W92	USGS40000269510	1/2 - 1 Mile SE
Y94	USGS40000269533	1/2 - 1 Mile East
X96	USGS40000269487	1/2 - 1 Mile ESE
Z100	USGS40000269561	1/2 - 1 Mile WNW
AA101	USGS40000269497	1/2 - 1 Mile SW
AA102	USGS40000269498	1/2 - 1 Mile SW
X103	USGS40000269532	1/2 - 1 Mile ESE

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
AC108	USGS40000269494	1/2 - 1 Mile SW
AD109	USGS40000269592	1/2 - 1 Mile WNW
AD110	USGS40000269603	1/2 - 1 Mile NW
AE113	USGS40000269503	1/2 - 1 Mile SE
AE114	USGS40000269505	1/2 - 1 Mile SE
AE115	USGS40000269504	1/2 - 1 Mile SE
AF116	USGS40000269676	1/2 - 1 Mile North
AE121	USGS40000269502	1/2 - 1 Mile SE
AG122	USGS40000269680	1/2 - 1 Mile North
AH124	USGS40000269677	1/2 - 1 Mile NNW
AI128	USGS40000269495	1/2 - 1 Mile SE
132	USGS40000269490	1/2 - 1 Mile SW
AJ133	USGS40000269554	1/2 - 1 Mile East
AK134	USGS40000269569	1/2 - 1 Mile WNW
AL137	USGS40000269528	1/2 - 1 Mile ESE
AM138	USGS40000269531	1/2 - 1 Mile ESE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

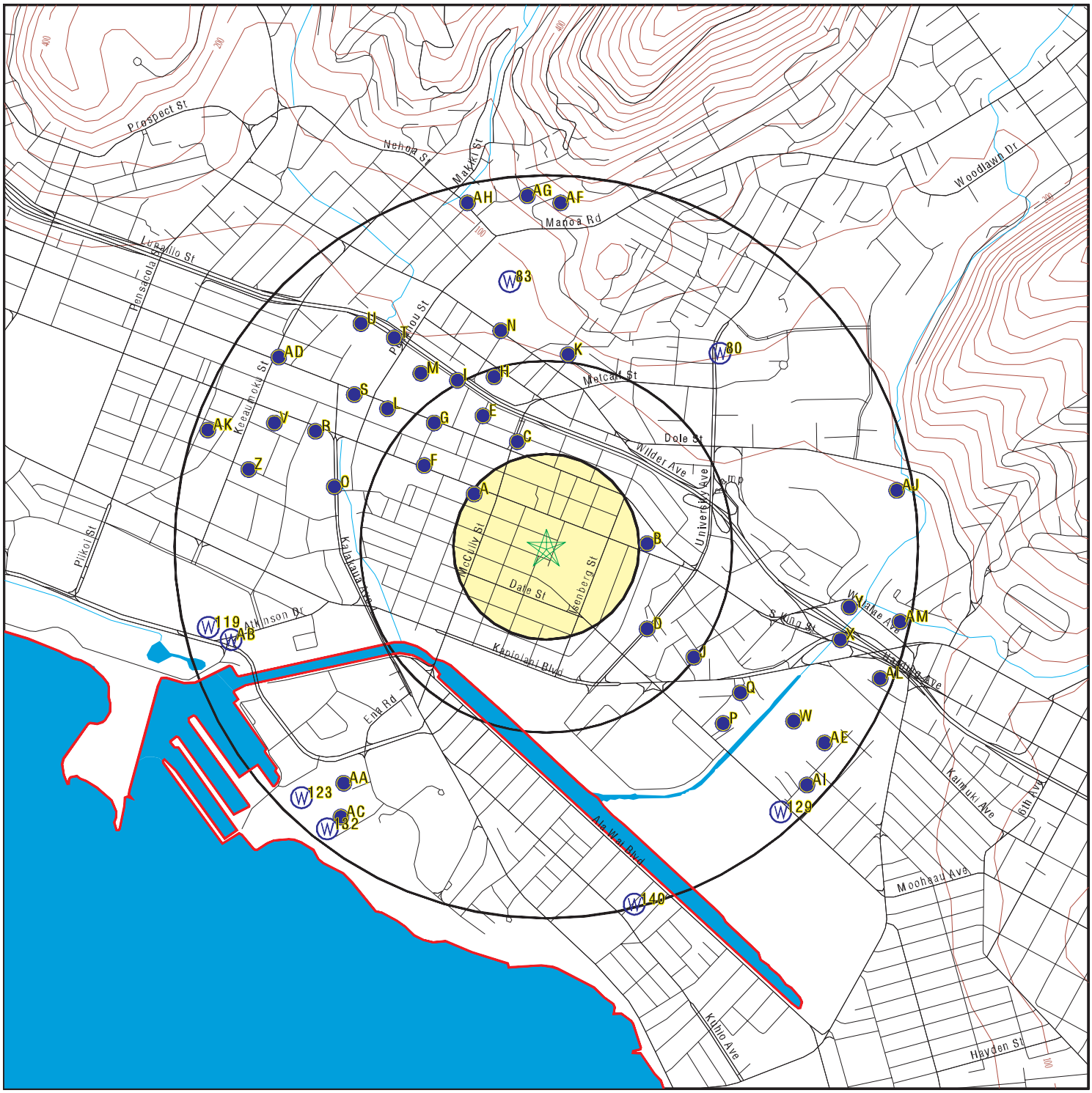
STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A2	HI1100000000619	1/8 - 1/4 Mile NW
B5	HI1100000000612	1/4 - 1/2 Mile East
B6	HI1100000000613	1/4 - 1/2 Mile East
C9	HI1100000000716	1/4 - 1/2 Mile NNW
C10	HI1100000000717	1/4 - 1/2 Mile NNW
C12	HI1100000000718	1/4 - 1/2 Mile NNW
D13	HI1100000000595	1/4 - 1/2 Mile SE
E16	HI1100000000712	1/4 - 1/2 Mile NNW
E18	HI1100000000738	1/4 - 1/2 Mile NNW
F20	HI1100000000620	1/4 - 1/2 Mile WNW
F22	HI1100000000622	1/4 - 1/2 Mile NW
E24	HI1100000000736	1/4 - 1/2 Mile NNW
G26	HI1100000000728	1/4 - 1/2 Mile NW
H28	HI1100000000714	1/4 - 1/2 Mile NNW
J31	HI1100000000597	1/4 - 1/2 Mile SE
H32	HI1100000000739	1/4 - 1/2 Mile NNW
I34	HI1100000000737	1/4 - 1/2 Mile NNW
K36	HI1100000000711	1/2 - 1 Mile North
K37	HI1100000000720	1/2 - 1 Mile North
K38	HI1100000000723	1/2 - 1 Mile North
K40	HI1100000000726	1/2 - 1 Mile North

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
I43	HI1100000000740	1/2 - 1 Mile NNW
K44	HI1100000000724	1/2 - 1 Mile North
K51	HI1100000000722	1/2 - 1 Mile North
K52	HI1100000000721	1/2 - 1 Mile North
L54	HI1100000000744	1/2 - 1 Mile NW
M56	HI1100000000730	1/2 - 1 Mile NW
O58	HI1100000000618	1/2 - 1 Mile WNW
N60	HI1100000000715	1/2 - 1 Mile NNW
P61	HI1100000000605	1/2 - 1 Mile SE
P62	HI1100000000604	1/2 - 1 Mile SE
Q63	HI1100000000593	1/2 - 1 Mile SE
R69	HI1100000000752	1/2 - 1 Mile WNW
S70	HI1100000000731	1/2 - 1 Mile NW
R71	HI1100000000747	1/2 - 1 Mile WNW
P72	HI1100000000603	1/2 - 1 Mile SE
P73	HI1100000000602	1/2 - 1 Mile SE
P76	HI1100000000594	1/2 - 1 Mile SE
T79	HI1100000000732	1/2 - 1 Mile NW
P81	HI1100000000609	1/2 - 1 Mile SE
83	HI1100000000725	1/2 - 1 Mile North
R86	HI1100000000748	1/2 - 1 Mile WNW
U88	HI1100000000745	1/2 - 1 Mile NW
V90	HI1100000000746	1/2 - 1 Mile WNW
W91	HI1100000000606	1/2 - 1 Mile SE
X93	HI1100000000611	1/2 - 1 Mile ESE
Z95	HI1100000000626	1/2 - 1 Mile WNW
Y97	HI1100000000596	1/2 - 1 Mile East
AA98	HI1100000000624	1/2 - 1 Mile SW
AA99	HI1100000000625	1/2 - 1 Mile SW
Y104	HI1100000000598	1/2 - 1 Mile ESE
AB105	HI1100000000629	1/2 - 1 Mile WSW
AB106	HI1100000000630	1/2 - 1 Mile WSW
AA107	HI1100000000623	1/2 - 1 Mile SW
AD111	HI1100000000742	1/2 - 1 Mile NW
AE112	HI1100000000599	1/2 - 1 Mile SE
AF117	HI1100000000713	1/2 - 1 Mile North
AE118	HI1100000000614	1/2 - 1 Mile SE
119	HI1100000000628	1/2 - 1 Mile WSW
AB120	HI1100000000627	1/2 - 1 Mile WSW
123	HI1100000000631	1/2 - 1 Mile SW
AI125	HI1100000000600	1/2 - 1 Mile SE
AJ126	HI1100000000591	1/2 - 1 Mile East
AG127	HI1100000000719	1/2 - 1 Mile North
129	HI1100000000615	1/2 - 1 Mile SE
AH130	HI1100000000749	1/2 - 1 Mile NNW
AC131	HI1100000000621	1/2 - 1 Mile SW
AK135	HI1100000000753	1/2 - 1 Mile WNW
AL136	HI1100000000607	1/2 - 1 Mile ESE
AM139	HI1100000000580	1/2 - 1 Mile ESE
140	HI1100000000544	1/2 - 1 Mile SSE

PHYSICAL SETTING SOURCE MAP - 5544094.2s



County Boundary
Major Roads
Contour Lines
Earthquake epicenter, Richter 5 or greater
Water Wells
Public Water Supply Wells
Cluster of Multiple Icons

0 1/4 1/2 1 Miles

Groundwater Flow Direction
GI Indeterminate Groundwater Flow at Location
GV Groundwater Flow Varies at Location

N

SITE NAME: 2139 Algaroba Street	CLIENT: Environmental Risk Analysis. LLC
ADDRESS: 2139 ALGAROBA ST HONOLULU HI 96826	CONTACT: Vincent Yanagita
LAT/LONG: 21.292875 / 157.828121	INQUIRY #: 5544094.2s
	DATE: January 25, 2019 12:13 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation	Database	EDR ID Number
A1 **NW** **1/8 - 1/4 Mile** **Higher**	**FED USGS**	**USGS40000269555**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1750-02 W45 MCCULY	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18900101
Well Depth:	416	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

A2 **NW** **1/8 - 1/4 Mile** **Higher**	**HI WELLS**	**HI1100000000619**

Well ID:	3-1750-002	Well Name:	McCully
Well Owner:	Y. Kam	Land Owner:	Not Reported
Pump Rate (g/m):	0	Year Drillled:	1890
Original Well Name:	Not Reported	Driller:	Not Reported
Well Construction Type:	Not Reported	Casing Diameter (in):	6
Ground Elevation (ft):	9	Well Depth (ft):	416
Solid Casing Depth:	363	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	29.6
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	75	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-407	Solid Casing Bottom Elevation:	-354
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	Not Reported	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

---

B3 **East** **1/4 - 1/2 Mile** **Higher**	**FED USGS**	**USGS40000269543**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1749-20 W35-1A MOI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	19540101
Well Depth:	28	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Map ID Direction Distance Elevation	Database	EDR ID Number
B4 **East** **1/4 - 1/2 Mile** **Higher**	**FED USGS**	**USGS40000269544**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1749.01 STAR MARKET	Type:	Well
Description:	FILE INFO FROM STATE COMPUTER PRINTOUT		
HUC:	20060000	Drainage Area:	Not Reported
Drainage Area Units:	Not Reported	Contrib Drainage Area:	Not Reported
Contrib Drainage Area Unts:	Not Reported	Aquifer:	Not Reported
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19540910	Well Depth:	28
Well Depth Units:	ft	Well Hole Depth:	32
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:	1	Level reading date:	1954-09-10
Feet below surface:	8.30	Feet to sea level:	Not Reported
Note:	A nearby site that taps the same aquifer had been pumped recently.		

B5 **East** **1/4 - 1/2 Mile** **Higher**	**HI WELLS**	**HI1100000000612**

Well ID:	3-1749-020	Well Name:	Moiliili
Well Owner:	Star Market	Land Owner:	Not Reported
Pump Rate (g/m):	18	Year Drillled:	1954
Original Well Name:	Not Reported	Driller:	Layne International
Well Construction Type:	Not Reported	Casing Diameter (in):	12
Ground Elevation (ft):	Not Reported	Well Depth (ft):	28
Solid Casing Depth:	10	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	Not Reported
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	0	Date Tested:	Not Reported
Test Pump Rate (g/m):	200	Test Drawdown Rate (ft):	2.4
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	Not Reported	Solid Casing Bottom Elevation:	Not Reported
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	0.025
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	1/1/1954	Latest WCR2 Report:	1/1/1954
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

---

B6 **East** **1/4 - 1/2 Mile** **Higher**	**HI WELLS**	**HI1100000000613**

Well ID:	3-1749-021	Well Name:	Moiliili
Well Owner:	Star Market	Land Owner:	Not Reported
Pump Rate (g/m):	Not Reported	Year Drillled:	1954
Original Well Name:	Not Reported	Driller:	Layne International
Well Construction Type:	Not Reported	Casing Diameter (in):	12
Ground Elevation (ft):	Not Reported	Well Depth (ft):	28

Solid Casing Depth:	11	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	Not Reported
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	0	Date Tested:	Not Reported
Test Pump Rate (g/m):	100	Test Drawdown Rate (ft):	1
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	Not Reported	Solid Casing Bottom Elevation:	Not Reported
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	1/1/1954	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

---

C7
North
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000269564**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1849-06 W42 MAKIKI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18910101
Well Depth:	160	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

C8
NNW
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000269565**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1849-07 W43 MAKIKI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18910701
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

C9
NNW
1/4 - 1/2 Mile
Higher

HI WELLS **HI1100000000716**

Well ID:	3-1849-006	Well Name:	Manoa Valley
Well Owner:	Carl P & Eleanor C Mudrick		
Land Owner:	Carl P & Eleanor C Mudrick		
Pump Rate (g/m):	Not Reported	Year Drillled:	1891
Original Well Name:	Not Reported	Driller:	L. McCandless
Well Construction Type:	Not Reported	Casing Diameter (in):	8
Ground Elevation (ft):	17	Well Depth (ft):	160

Solid Casing Depth:	Not Reported	Perforated Casing Depth:	Not Reported
Major Well Use:	Unused	Inital Water Level (ft):	30.6
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	54	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-143	Solid Casing Bottom Elevation:	Not Reported
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	01/01/1891	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

---

C10
NNW
1/4 - 1/2 Mile
Higher

HI WELLS **HI1100000000717**

Well ID:	3-1849-007	Well Name:	Manoa Valley
Well Owner:	Land Process Service Corp.		
Land Owner:	Kam, Wah Trust Est.	Pump Rate (g/m):	Not Reported
Year Drillled:	1891	Original Well Name:	Not Reported
Driller:	L. McCandless	Well Construction Type:	Not Reported
Casing Diameter (in):	8	Ground Elevation (ft):	18
Well Depth (ft):	0	Solid Casing Depth:	Not Reported
Perforated Casing Depth:	Not Reported	Major Well Use:	Abandoned
Inital Water Level (ft):	30	Water Level After Drilling:	Not Reported
Water Level After Install:	Not Reported	Chloride Content (mg/L):	55
Date Tested:	Not Reported	Test Pump Rate (g/m):	Not Reported
Test Drawdown Rate (ft):	Not Reported	Test Chloride Content (MG/L):	Not Reported
Test Water Temp:	Not Reported	Temp Unit:	Not Reported
Max Chloride Level:	Not Reported	Minimum Chloride Level:	Not Reported
Draft Year:	Not Reported	Hole Bottom Elevation:	Not Reported
Solid Casing Bottom Elevation:	Not Reported	Year Installed:	Not Reported
Pump Capacity (MM gal/day):	Not Reported	Pump Intake Depth:	Not Reported
Latest Head:	Not Reported	Latest WCR1 Report:	01/01/1891
Latest WCR2 Report:	Not Reported	Transmissivity:	Not Reported
Min to pump 5 volumes:	Not Reported		

C11
NNW
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000269566**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1849-08 W44 MAKIKI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18940101
Well Depth:	397	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Map ID Direction Distance Elevation	Database	EDR ID Number
C12 **NNW** **1/4 - 1/2 Mile** **Higher**	**HI WELLS**	**HI1100000000718**

Well ID:	3-1849-008	Well Name:	Manoa Valley
Well Owner:	J. Shinn	Land Owner:	Not Reported
Pump Rate (g/m):	Not Reported	Year Drillled:	1894
Original Well Name:	Not Reported	Driller:	Not Reported
Well Construction Type:	Not Reported	Casing Diameter (in):	8
Ground Elevation (ft):	20	Well Depth (ft):	397
Solid Casing Depth:	337	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	30.8
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	56	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-377	Solid Casing Bottom Elevation:	-317
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	01/01/1894	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

---

D13 **SE** **1/4 - 1/2 Mile** **Lower**	**HI WELLS**	**HI1100000000595**

Well ID:	3-1749-003	Well Name:	Kapahulu
Well Owner:	Magoon Trust	Land Owner:	Not Reported
Pump Rate (g/m):	Not Reported	Year Drillled:	1882
Original Well Name:	Not Reported	Driller:	Cooke-Peddler
Well Construction Type:	Not Reported	Casing Diameter (in):	Not Reported
Ground Elevation (ft):	10	Well Depth (ft):	730
Solid Casing Depth:	Not Reported	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Lost	Inital Water Level (ft):	Not Reported
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	0	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-720	Solid Casing Bottom Elevation:	Not Reported
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	01/01/1882	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

Map ID Direction Distance Elevation	Database	EDR ID Number
D14 **SE** **1/4 - 1/2 Mile** **Lower**	**FED USGS**	**USGS40000269530**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1749-03 W40 PALOLO	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18820101
Well Depth:	730	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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E15 **NNW** **1/4 - 1/2 Mile** **Higher**	**FED USGS**	**USGS40000269573**	

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1849-02 W48 MAKIKI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18810101
Well Depth:	358	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1881-01-01
Feet below surface:	-42.00	Feet to sea level:	Not Reported
Note:	Not Reported		

E16 **NNW** **1/4 - 1/2 Mile** **Higher**	**HI WELLS**	**HI1100000000712**	

Well ID:	3-1849-002	Well Name:	Manoa Valley
Well Owner:	Howard Murai (Maui Lani Partners)		
Land Owner:	Not Reported	Pump Rate (g/m):	Not Reported
Year Drillled:	1881	Original Well Name:	Not Reported
Driller:	Fessler	Well Construction Type:	Not Reported
Casing Diameter (in):	8	Ground Elevation (ft):	25
Well Depth (ft):	358	Solid Casing Depth:	306
Perforated Casing Depth:	Not Reported	Major Well Use:	Abandoned-Sealed
Inital Water Level (ft):	30	Water Level After Drilling:	Not Reported
Water Level After Install:	Not Reported	Chloride Content (mg/L):	51
Date Tested:	Not Reported	Test Pump Rate (g/m):	Not Reported
Test Drawdown Rate (ft):	Not Reported	Test Chloride Content (MG/L):	Not Reported
Test Water Temp:	Not Reported	Temp Unit:	Not Reported
Max Chloride Level:	Not Reported	Minimum Chloride Level:	Not Reported
Draft Year:	Not Reported	Hole Bottom Elevation:	-333
Solid Casing Bottom Elevation:	-281	Year Installed:	Not Reported
Pump Capacity (MM gal/day):	Not Reported	Pump Intake Depth:	Not Reported

Latest Head:	Not Reported	Latest WCR1 Report:	01/01/1881
Latest WCR2 Report:	Not Reported	Transmissivity:	Not Reported
Min to pump 5 volumes:	Not Reported		

E17
NNW
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000269574**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1850-12 W47 MAKIKI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18840101
Well Depth:	311	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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E18
NNW
1/4 - 1/2 Mile
Higher

HI WELLS **HI1100000000738**

Well ID:	3-1850-012	Well Name:	Makiki
Well Owner:	Howard Murai (Maui Lani Partners)		
Land Owner:	Not Reported	Pump Rate (g/m):	Not Reported
Year Drillled:	1884	Original Well Name:	Not Reported
Driller:	Not Reported	Well Construction Type:	Not Reported
Casing Diameter (in):	6	Ground Elevation (ft):	25
Well Depth (ft):	311	Solid Casing Depth:	305
Perforated Casing Depth:	Not Reported	Major Well Use:	Abandoned-Sealed
Inital Water Level (ft):	30.7	Water Level After Drilling:	Not Reported
Water Level After Install:	Not Reported	Chloride Content (mg/L):	60
Date Tested:	Not Reported	Test Pump Rate (g/m):	Not Reported
Test Drawdown Rate (ft):	Not Reported	Test Chloride Content (MG/L):	Not Reported
Test Water Temp:	Not Reported	Temp Unit:	Not Reported
Max Chloride Level:	Not Reported	Minimum Chloride Level:	Not Reported
Draft Year:	Not Reported	Hole Bottom Elevation:	-286
Solid Casing Bottom Elevation:	-280	Year Installed:	Not Reported
Pump Capacity (MM gal/day):	Not Reported	Pump Intake Depth:	Not Reported
Latest Head:	Not Reported	Latest WCR1 Report:	01/01/1884
Latest WCR2 Report:	Not Reported	Transmissivity:	Not Reported
Min to pump 5 volumes:	Not Reported		

F19
WNW
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000269559**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1750-03 W46 MCCULY	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported

Aquifer Type:	Not Reported	Construction Date:	18900101
Well Depth:	374	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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F20
WNW
1/4 - 1/2 Mile
Higher

HI WELLS **HI1100000000620**

Well ID:	3-1750-003	Well Name:	McCully
Well Owner:	Diamond Bakery	Land Owner:	Not Reported
Pump Rate (g/m):	0	Year Drillled:	1890
Original Well Name:	Not Reported	Driller:	Not Reported
Well Construction Type:	Not Reported	Casing Diameter (in):	8
Ground Elevation (ft):	10	Well Depth (ft):	374
Solid Casing Depth:	340	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	28.2
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	0	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-364	Solid Casing Bottom Elevation:	-330
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	Not Reported	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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F21
NW
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000269562**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1750-05 W50 MCCULY	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	19530801
Well Depth:	154	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1953-08-01
Feet below surface:	12.00	Feet to sea level:	Not Reported
Note:	Not Reported		

F22
NW
1/4 - 1/2 Mile
Higher

HI WELLS **HI1100000000622**

Well ID:	3-1750-005	Well Name:	McCully
Well Owner:	Times Market	Land Owner:	Not Reported
Pump Rate (g/m):	0	Year Drillled:	1953

Original Well Name:	Not Reported	Driller:	Not Reported
Well Construction Type:	Not Reported	Casing Diameter (in):	8
Ground Elevation (ft):	Not Reported	Well Depth (ft):	154
Solid Casing Depth:	70	Perforated Casing Depth:	Not Reported
Major Well Use:	Unused	Inital Water Level (ft):	Not Reported
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	0	Date Tested:	Not Reported
Test Pump Rate (g/m):	50	Test Drawdown Rate (ft):	8
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	Not Reported	Solid Casing Bottom Elevation:	Not Reported
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	Not Reported	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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E23
NNW
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000269575**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1850-10 W49 MAKIKI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18830101
Well Depth:	281	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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E24
NNW
1/4 - 1/2 Mile
Higher

HI WELLS **HI1100000000736**

Well ID:	3-1850-010	Well Name:	Makiki
Well Owner:	Lin Yap	Land Owner:	Not Reported
Pump Rate (g/m):	Not Reported	Year Drillled:	1883
Original Well Name:	Not Reported	Driller:	Not Reported
Well Construction Type:	Not Reported	Casing Diameter (in):	6
Ground Elevation (ft):	28	Well Depth (ft):	281
Solid Casing Depth:	234	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	30.3
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	0	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-253	Solid Casing Bottom Elevation:	-206
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	01/01/1883	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

Map ID Direction Distance Elevation	Database	EDR ID Number
G25 **NW** **1/4 - 1/2 Mile** **Higher**	**FED USGS**	**USGS40000269570**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1850-02 W51 MAKIKI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18800101
Well Depth:	475	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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G26 **NW** **1/4 - 1/2 Mile** **Higher**	**HI WELLS**	**HI1100000000728**

Well ID:	3-1850-002	Well Name:	Makiki
Well Owner:	Kamehameha Schools	Land Owner:	Not Reported
Pump Rate (g/m):	Not Reported	Year Drillled:	1880
Original Well Name:	Not Reported	Driller:	Pierce
Well Construction Type:	Not Reported	Casing Diameter (in):	5
Ground Elevation (ft):	25	Well Depth (ft):	475
Solid Casing Depth:	347	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	29.8
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	51	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-450	Solid Casing Bottom Elevation:	-322
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	01/01/1880	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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H27 **NNW** **1/4 - 1/2 Mile** **Higher**	**FED USGS**	**USGS40000269587**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1849-04 W41 MAKIKI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18850101
Well Depth:	260	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1885-06-01
Feet below surface:	-42.00	Feet to sea level:	Not Reported
Note:	Not Reported		

H28
NNW
1/4 - 1/2 Mile
Higher

HI WELLS **HI1100000000714**

Well ID:	3-1849-004	Well Name:	Manoa Valley
Well Owner:	T. Soon	Land Owner:	Not Reported
Pump Rate (g/m):	Not Reported	Year Drillled:	1885
Original Well Name:	Not Reported	Driller:	Not Reported
Well Construction Type:	Not Reported	Casing Diameter (in):	6
Ground Elevation (ft):	30	Well Depth (ft):	260
Solid Casing Depth:	181	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	42
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	52	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-230	Solid Casing Bottom Elevation:	-151
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	01/01/1885	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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H29
NNW
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000269589**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1850-13 W52 MAKIKI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18840101
Well Depth:	357	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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I30
NNW
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000269583**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1850-11 W53 MAKIKI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18830101
Well Depth:	310	Well Depth Units:	ft

Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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J31
SE
1/4 - 1/2 Mile
Higher

HI WELLS **HI1100000000597**

Well ID:	3-1749-005	Well Name:	Kapahulu
Well Owner:	T. Ung	Land Owner:	Not Reported
Pump Rate (g/m):	Not Reported	Year Drillled:	1883
Original Well Name:	Not Reported	Driller:	Not Reported
Well Construction Type:	Not Reported	Casing Diameter (in):	6
Ground Elevation (ft):	8	Well Depth (ft):	587
Solid Casing Depth:	564	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	24.8
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	37	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-579	Solid Casing Bottom Elevation:	-556
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	01/01/1883	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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H32
NNW
1/4 - 1/2 Mile
Higher

HI WELLS **HI1100000000739**

Well ID:	3-1850-013	Well Name:	Makiki
Well Owner:	J. Villada	Land Owner:	Not Reported
Pump Rate (g/m):	Not Reported	Year Drillled:	1884
Original Well Name:	Not Reported	Driller:	Not Reported
Well Construction Type:	Not Reported	Casing Diameter (in):	6
Ground Elevation (ft):	37	Well Depth (ft):	357
Solid Casing Depth:	254	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	42.9
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	54	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-320	Solid Casing Bottom Elevation:	-217
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	01/01/1884	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

Map ID Direction Distance Elevation	Database	EDR ID Number
J33 **SE** **1/4 - 1/2 Mile** **Higher**	**FED USGS**	**USGS40000269529**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1749-05 W35 PALOLO	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18830101
Well Depth:	587	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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I34 **NNW** **1/4 - 1/2 Mile** **Higher**	**HI WELLS**	**HI1100000000737**

Well ID:	3-1850-011	Well Name:	Makiki
Well Owner:	W. Dillingham	Land Owner:	Not Reported
Pump Rate (g/m):	Not Reported	Year Drillled:	1882
Original Well Name:	Not Reported	Driller:	Not Reported
Well Construction Type:	Not Reported	Casing Diameter (in):	6
Ground Elevation (ft):	36	Well Depth (ft):	310
Solid Casing Depth:	267	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	24.1
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	0	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-274	Solid Casing Bottom Elevation:	-231
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	01/01/1882	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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K35 **North** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269593**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1849-01 W38 MAKIKI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18800101
Well Depth:	295	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Map ID Direction Distance Elevation	Database	EDR ID Number
K36 **North** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI1100000000711**

Well ID:	3-1849-001	Well Name:	Manoa Valley
Well Owner:	Elmer Marques	Land Owner:	Not Reported
Pump Rate (g/m):	Not Reported	Year Drillled:	1880
Original Well Name:	Not Reported	Driller:	Pierce
Well Construction Type:	Not Reported	Casing Diameter (in):	3
Ground Elevation (ft):	37	Well Depth (ft):	295
Solid Casing Depth:	273	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	43.5
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	49	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-258	Solid Casing Bottom Elevation:	-236
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	01/01/1880	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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K37 **North** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI1100000000720**

Well ID:	3-1849-010	Well Name:	Punahou
Well Owner:	Punahou School	Land Owner:	Punahou School
Pump Rate (g/m):	Not Reported	Year Drillled:	1909
Original Well Name:	Not Reported	Driller:	L. McCandless
Well Construction Type:	Not Reported	Casing Diameter (in):	8
Ground Elevation (ft):	36	Well Depth (ft):	315
Solid Casing Depth:	195	Perforated Casing Depth:	Not Reported
Major Well Use:	Schools	Inital Water Level (ft):	29.1
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	48	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-279	Solid Casing Bottom Elevation:	-159
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	1/1/1909	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

Map ID Direction Distance Elevation	Database	EDR ID Number
K38 **North** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI1100000000723**

Well ID:	3-1849-013	Well Name:	Wilder Avenue Well 3
Well Owner:	Honolulu Board of Water Supply, BWS		
Land Owner:	Honolulu Board of Water Supply, BWS		
Pump Rate (g/m):	1750	Year Drillled:	1961
Original Well Name:	Not Reported		
Driller:	Goodfellow Construction, Inc. Corporate		
Well Construction Type:	Rotary	Casing Diameter (in):	10
Ground Elevation (ft):	53	Well Depth (ft):	475
Solid Casing Depth:	354	Perforated Casing Depth:	Not Reported
Major Well Use:	County	Inital Water Level (ft):	Not Reported
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	0	Date Tested:	12/6/1996
Test Pump Rate (g/m):	1438	Test Drawdown Rate (ft):	3.5
Test Chloride Content (MG/L):	71	Test Water Temp:	21.6
Temp Unit:	C	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-422	Solid Casing Bottom Elevation:	-301
Year Installed:	1977	Pump Capacity (MM gal/day):	2.52
Pump Intake Depth:	85	Latest Head:	Not Reported
Latest WCR1 Report:	1/1/1961	Latest WCR2 Report:	1/1/1961
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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I39 **NNW** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269590**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1850-14 W54 MAKIKI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18840101
Well Depth:	271	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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K40 **North** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI1100000000726**

Well ID:	3-1849-016	Well Name:	Wilder Avenue Well 2
Well Owner:	Honolulu Board of Water Supply, BWS		
Land Owner:	Honolulu Board of Water Supply, BWS		
Pump Rate (g/m):	1750	Year Drillled:	1962
Original Well Name:	Not Reported		
Driller:	Goodfellow Construction, Inc. Corporate		
Well Construction Type:	Rotary	Casing Diameter (in):	10
Ground Elevation (ft):	56	Well Depth (ft):	466
Solid Casing Depth:	345	Perforated Casing Depth:	Not Reported

Major Well Use:	County	Inital Water Level (ft):	Not Reported
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	0	Date Tested:	6/3/1996
Test Pump Rate (g/m):	1345	Test Drawdown Rate (ft):	7
Test Chloride Content (MG/L):	34	Test Water Temp:	21.3
Temp Unit:	C	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-410	Solid Casing Bottom Elevation:	-289
Year Installed:	1977	Pump Capacity (MM gal/day):	2.52
Pump Intake Depth:	105	Latest Head:	Not Reported
Latest WCR1 Report:	1/1/1962	Latest WCR2 Report:	7/2/2015
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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K41
North
1/2 - 1 Mile
Higher

FED USGS **USGS40000269602**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1849-10 W37 MAKIKI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	19091101
Well Depth:	302	Well Depth Units:	ft
Well Hole Depth:	315	Well Hole Depth Units:	ft

K42
North
1/2 - 1 Mile
Higher

FED USGS **USGS40000269601**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1849-16 Wilder Ave Wells no. 2, Oahu, HI		
Type:	Well		
Description:	former W36-F,NAWQA entry ver. 05/15/2002 Hunt C		
HUC:	20060000	Drainage Area:	Not Reported
Drainage Area Units:	Not Reported	Contrib Drainage Area:	Not Reported
Contrib Drainage Area Unts:	Not Reported	Aquifer:	Hawaii volcanic-rock aquifers
Formation Type:	Koolau Volcanic Series, Lava Flows		
Aquifer Type:	Confined single aquifer	Construction Date:	19620316
Well Depth:	371	Well Depth Units:	ft
Well Hole Depth:	371	Well Hole Depth Units:	ft

I43
NNW
1/2 - 1 Mile
Higher

HI WELLS **HI1100000000740**

Well ID:	3-1850-014	Well Name:	Makiki
Well Owner:	R. King	Land Owner:	Not Reported
Pump Rate (g/m):	Not Reported	Year Drillled:	1884
Original Well Name:	Not Reported	Driller:	Not Reported
Well Construction Type:	Not Reported	Casing Diameter (in):	6
Ground Elevation (ft):	40	Well Depth (ft):	271

Solid Casing Depth:	240	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	30.8
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	0	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-231	Solid Casing Bottom Elevation:	-200
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	01/01/1884	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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K44
North
1/2 - 1 Mile
Higher

HI WELLS **HI1100000000724**

Well ID:	3-1849-014	Well Name:	Wilder Avenue Well 1
Well Owner:	Honolulu Board of Water Supply, BWS		
Land Owner:	Honolulu Board of Water Supply, BWS		
Pump Rate (g/m):	1750	Year Drillled:	1961
Original Well Name:	Not Reported		
Driller:	Goodfellow Construction, Inc. Corporate		
Well Construction Type:	Rotary	Casing Diameter (in):	10
Ground Elevation (ft):	59	Well Depth (ft):	460
Solid Casing Depth:	343	Perforated Casing Depth:	Not Reported
Major Well Use:	County	Inital Water Level (ft):	Not Reported
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	0	Date Tested:	6/23/1995
Test Pump Rate (g/m):	1231	Test Drawdown Rate (ft):	4.6
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	22.1
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-401	Solid Casing Bottom Elevation:	-284
Year Installed:	1977	Pump Capacity (MM gal/day):	2.52
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	1/1/1961	Latest WCR2 Report:	1/1/1961
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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K45
North
1/2 - 1 Mile
Higher

FED USGS **USGS40000269597**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1849-12 W36-B MAKI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	19120101
Well Depth:	430	Well Depth Units:	ft
Well Hole Depth:	430	Well Hole Depth Units:	ft

Map ID Direction Distance Elevation	Database	EDR ID Number
K46 **North** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269596**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1849-11 W36-A MAKI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	19120101
Well Depth:	298	Well Depth Units:	ft
Well Hole Depth:	395	Well Hole Depth Units:	ft

K47 **North** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269595**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1849-11 TO 16	Type:	Well: Multiple wells
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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K48 **North** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269598**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1849-13 W36-D MAKI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	19611121
Well Depth:	405	Well Depth Units:	ft
Well Hole Depth:	405	Well Hole Depth Units:	ft

K49 **North** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269600**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1849-15 W36-C MAKI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported

Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	19620202
Well Depth:	396	Well Depth Units:	ft
Well Hole Depth:	409	Well Hole Depth Units:	ft

K50
North
1/2 - 1 Mile
Higher

FED USGS **USGS40000269599**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1849-14 W36-E MAKI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	19611223
Well Depth:	410	Well Depth Units:	ft
Well Hole Depth:	413	Well Hole Depth Units:	ft

K51
North
1/2 - 1 Mile
Higher

HI WELLS **HI1100000000722**

Well ID:	3-1849-012	Well Name:	Wilder Ave
Well Owner:	Honolulu Board of Water Supply, BWS		
Land Owner:	Not Reported	Pump Rate (g/m):	0
Year Drillled:	1912	Original Well Name:	Not Reported
Driller:	L. McCandless	Well Construction Type:	Rotary
Casing Diameter (in):	12	Ground Elevation (ft):	43
Well Depth (ft):	430	Solid Casing Depth:	300
Perforated Casing Depth:	Not Reported	Major Well Use:	Observation
Inital Water Level (ft):	Not Reported	Water Level After Drilling:	Not Reported
Water Level After Install:	Not Reported	Chloride Content (mg/L):	0
Date Tested:	Not Reported	Test Pump Rate (g/m):	Not Reported
Test Drawdown Rate (ft):	Not Reported	Test Chloride Content (MG/L):	Not Reported
Test Water Temp:	Not Reported	Temp Unit:	Not Reported
Max Chloride Level:	Not Reported	Minimum Chloride Level:	Not Reported
Draft Year:	Not Reported	Hole Bottom Elevation:	-387
Solid Casing Bottom Elevation:	-257	Year Installed:	Not Reported
Pump Capacity (MM gal/day):	Not Reported	Pump Intake Depth:	Not Reported
Latest Head:	Not Reported	Latest WCR1 Report:	1/1/1912
Latest WCR2 Report:	Not Reported	Transmissivity:	Not Reported
Min to pump 5 volumes:	Not Reported		

K52
North
1/2 - 1 Mile
Higher

HI WELLS **HI1100000000721**

Well ID:	3-1849-011	Well Name:	Wilder Ave
Well Owner:	Honolulu Board of Water Supply, BWS		
Land Owner:	Not Reported	Pump Rate (g/m):	0
Year Drillled:	1912	Original Well Name:	Not Reported

Driller:	L. McCandless	Well Construction Type:	Rotary
Casing Diameter (in):	12	Ground Elevation (ft):	43
Well Depth (ft):	304	Solid Casing Depth:	272
Perforated Casing Depth:	Not Reported	Major Well Use:	Observation
Inital Water Level (ft):	27.7	Water Level After Drilling:	Not Reported
Water Level After Install:	Not Reported	Chloride Content (mg/L):	52
Date Tested:	Not Reported	Test Pump Rate (g/m):	Not Reported
Test Drawdown Rate (ft):	Not Reported	Test Chloride Content (MG/L):	Not Reported
Test Water Temp:	Not Reported	Temp Unit:	Not Reported
Max Chloride Level:	Not Reported	Minimum Chloride Level:	Not Reported
Draft Year:	Not Reported	Hole Bottom Elevation:	-261
Solid Casing Bottom Elevation:	-229	Year Installed:	Not Reported
Pump Capacity (MM gal/day):	Not Reported	Pump Intake Depth:	Not Reported
Latest Head:	Not Reported	Latest WCR1 Report:	1/1/1912
Latest WCR2 Report:	Not Reported	Transmissivity:	Not Reported
Min to pump 5 volumes:	Not Reported		

L53
NW
1/2 - 1 Mile
Higher

FED USGS **USGS40000269578**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1850-18 W56 MAKIKI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18900101
Well Depth:	383	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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L54
NW
1/2 - 1 Mile
Higher

HI WELLS **HI1100000000744**

Well ID:	3-1850-018	Well Name:	Makiki
Well Owner:	J. Tanner	Land Owner:	Not Reported
Pump Rate (g/m):	Not Reported	Year Drillled:	1890
Original Well Name:	Not Reported	Driller:	Not Reported
Well Construction Type:	Not Reported	Casing Diameter (in):	8
Ground Elevation (ft):	29	Well Depth (ft):	383
Solid Casing Depth:	Not Reported	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	26.4
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	0	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-354	Solid Casing Bottom Elevation:	Not Reported
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	01/01/1890	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

Map ID Direction Distance Elevation	Database	EDR ID Number
M55 **NW** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269591**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1850-04 W55 MAKIKI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18820101
Well Depth:	300	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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M56 **NW** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI1100000000730**

Well ID:	3-1850-004	Well Name:	Makiki
Well Owner:	B. Dillingham	Land Owner:	Not Reported
Pump Rate (g/m):	Not Reported	Year Drillled:	1882
Original Well Name:	Not Reported	Driller:	Pierce
Well Construction Type:	Not Reported	Casing Diameter (in):	6
Ground Elevation (ft):	36	Well Depth (ft):	300
Solid Casing Depth:	Not Reported	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	30
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	0	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-264	Solid Casing Bottom Elevation:	Not Reported
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	01/01/1882	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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N57 **NNW** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269611**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1849-05 W39 MAKIKI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18890101
Well Depth:	213	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Map ID Direction Distance Elevation	Database	EDR ID Number
O58 **WNW** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI1100000000618**

Well ID:	3-1750-001	Well Name:	McCully
Well Owner:	City & County of Honolulu, C&CH		
Land Owner:	Not Reported	Pump Rate (g/m):	Not Reported
Year Drillled:	1881	Original Well Name:	Not Reported
Driller:	Not Reported	Well Construction Type:	Not Reported
Casing Diameter (in):	8	Ground Elevation (ft):	14
Well Depth (ft):	475	Solid Casing Depth:	Not Reported
Perforated Casing Depth:	Not Reported	Major Well Use:	Abandoned-Sealed
Inital Water Level (ft):	29.9	Water Level After Drilling:	Not Reported
Water Level After Install:	Not Reported	Chloride Content (mg/L):	42
Date Tested:	Not Reported	Test Pump Rate (g/m):	Not Reported
Test Drawdown Rate (ft):	Not Reported	Test Chloride Content (MG/L):	Not Reported
Test Water Temp:	Not Reported	Temp Unit:	Not Reported
Max Chloride Level:	Not Reported	Minimum Chloride Level:	Not Reported
Draft Year:	Not Reported	Hole Bottom Elevation:	-461
Solid Casing Bottom Elevation:	Not Reported	Year Installed:	Not Reported
Pump Capacity (MM gal/day):	Not Reported	Pump Intake Depth:	Not Reported
Latest Head:	Not Reported	Latest WCR1 Report:	01/01/1881
Latest WCR2 Report:	Not Reported	Transmissivity:	Not Reported
Min to pump 5 volumes:	Not Reported		

O59 **WNW** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269556**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1750-01 W61 MCCULY	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18810101
Well Depth:	475	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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N60 **NNW** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI1100000000715**

Well ID:	3-1849-005	Well Name:	Manoa Valley
Well Owner:	Punahou School	Land Owner:	Not Reported
Pump Rate (g/m):	Not Reported	Year Drillled:	1889
Original Well Name:	Not Reported	Driller:	Not Reported
Well Construction Type:	Not Reported	Casing Diameter (in):	6
Ground Elevation (ft):	48	Well Depth (ft):	213
Solid Casing Depth:	172	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	35.8
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	55	Date Tested:	Not Reported

Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-165	Solid Casing Bottom Elevation:	-124
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	01/01/1889	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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P61
SE
1/2 - 1 Mile
Higher

HI WELLS **HI1100000000605**

Well ID:	3-1749-013	Well Name:	Kapahulu
Well Owner:	L. Whee	Land Owner:	Not Reported
Pump Rate (g/m):	Not Reported	Year Drillled:	1889
Original Well Name:	Not Reported	Driller:	Not Reported
Well Construction Type:	Not Reported	Casing Diameter (in):	8
Ground Elevation (ft):	14	Well Depth (ft):	500
Solid Casing Depth:	430	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	23
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	216	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-486	Solid Casing Bottom Elevation:	-416
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	01/01/1889	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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P62
SE
1/2 - 1 Mile
Higher

HI WELLS **HI1100000000604**

Well ID:	3-1749-012	Well Name:	Kapahulu
Well Owner:	Y. Char	Land Owner:	Not Reported
Pump Rate (g/m):	Not Reported	Year Drillled:	1889
Original Well Name:	Not Reported	Driller:	Not Reported
Well Construction Type:	Not Reported	Casing Diameter (in):	6
Ground Elevation (ft):	12	Well Depth (ft):	521
Solid Casing Depth:	418	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	19.9
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	240	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-509	Solid Casing Bottom Elevation:	-406
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	01/01/1889	Latest WCR2 Report:	Not Reported

Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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Q63
SE
1/2 - 1 Mile
Higher

HI WELLS **HI1100000000593**

Well ID:	3-1749-001	Well Name:	Kapahulu
Well Owner:	C. Spencer	Land Owner:	Not Reported
Pump Rate (g/m):	Not Reported	Year Drillled:	1881
Original Well Name:	Not Reported	Driller:	Not Reported
Well Construction Type:	Not Reported	Casing Diameter (in):	6
Ground Elevation (ft):	15	Well Depth (ft):	407
Solid Casing Depth:	Not Reported	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	22.7
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	28	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-392	Solid Casing Bottom Elevation:	Not Reported
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	01/01/1881	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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P64
SE
1/2 - 1 Mile
Higher

FED USGS **USGS40000269511**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1749-13 W34 PALOLO	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18890101
Well Depth:	500	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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P65
SE
1/2 - 1 Mile
Higher

FED USGS **USGS40000269509**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1749-12 W33 PALOLO	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18890101
Well Depth:	521	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Map ID Direction Distance Elevation	Database	EDR ID Number
Q66 **SE** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269516**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1749-01 W27 PALOLO	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18810101
Well Depth:	407	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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R67 **WNW** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269567**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1850-26 W59 MAKIKI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	19100101
Well Depth:	450	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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S68 **NW** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269580**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1850-05 W57 MAKIKI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18820101
Well Depth:	310	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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R69 **WNW** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI1100000000752**

Well ID:	3-1850-026	Well Name:	Makiki
Well Owner:	II Estate	Land Owner:	Not Reported
Pump Rate (g/m):	Not Reported	Year Drillled:	1910
Original Well Name:	Not Reported	Driller:	L. McCandless

Well Construction Type:	Not Reported	Casing Diameter (in):	10
Ground Elevation (ft):	15	Well Depth (ft):	450
Solid Casing Depth:	356	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	27.7
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	57	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-435	Solid Casing Bottom Elevation:	-341
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	1/1/1910	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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S70
NW
1/2 - 1 Mile
Higher

HI WELLS **HI1100000000731**

Well ID:	3-1850-005	Well Name:	Makiki
Well Owner:	M. Rawlins	Land Owner:	Not Reported
Pump Rate (g/m):	Not Reported	Year Drillled:	1882
Original Well Name:	Not Reported	Driller:	Fessler
Well Construction Type:	Not Reported	Casing Diameter (in):	5
Ground Elevation (ft):	28	Well Depth (ft):	310
Solid Casing Depth:	237	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	29.7
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	61	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-282	Solid Casing Bottom Elevation:	-209
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	01/01/1882	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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R71
WNW
1/2 - 1 Mile
Higher

HI WELLS **HI1100000000747**

Well ID:	3-1850-021	Well Name:	Makiki
Well Owner:	Honolulu Board of Water Supply, BWS		
Land Owner:	Not Reported	Pump Rate (g/m):	Not Reported
Year Drillled:	1894	Original Well Name:	Not Reported
Driller:	L. McCandless	Well Construction Type:	Not Reported
Casing Diameter (in):	8	Ground Elevation (ft):	20
Well Depth (ft):	409	Solid Casing Depth:	312
Perforated Casing Depth:	Not Reported	Major Well Use:	Abandoned-Sealed
Inital Water Level (ft):	29.8	Water Level After Drilling:	Not Reported
Water Level After Install:	Not Reported	Chloride Content (mg/L):	62
Date Tested:	Not Reported	Test Pump Rate (g/m):	Not Reported
Test Drawdown Rate (ft):	Not Reported	Test Chloride Content (MG/L):	Not Reported

Test Water Temp:	Not Reported	Temp Unit:	Not Reported
Max Chloride Level:	Not Reported	Minimum Chloride Level:	Not Reported
Draft Year:	Not Reported	Hole Bottom Elevation:	-389
Solid Casing Bottom Elevation:	-292	Year Installed:	Not Reported
Pump Capacity (MM gal/day):	Not Reported	Pump Intake Depth:	Not Reported
Latest Head:	Not Reported	Latest WCR1 Report:	01/01/1894
Latest WCR2 Report:	Not Reported	Transmissivity:	Not Reported
Min to pump 5 volumes:	Not Reported		

P72
SE
1/2 - 1 Mile
Higher

HI WELLS **HI1100000000603**

Well ID:	3-1749-011	Well Name:	Kapahulu
Well Owner:	S. Dumae	Land Owner:	Not Reported
Pump Rate (g/m):	Not Reported	Year Drillled:	1889
Original Well Name:	Not Reported	Driller:	Not Reported
Well Construction Type:	Not Reported	Casing Diameter (in):	10
Ground Elevation (ft):	14	Well Depth (ft):	475
Solid Casing Depth:	420	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	24
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	47	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-461	Solid Casing Bottom Elevation:	-406
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	01/01/1889	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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P73
SE
1/2 - 1 Mile
Higher

HI WELLS **HI1100000000602**

Well ID:	3-1749-010	Well Name:	Kapahulu
Well Owner:	F. Tsumoto	Land Owner:	Not Reported
Pump Rate (g/m):	Not Reported	Year Drillled:	1889
Original Well Name:	Not Reported	Driller:	Not Reported
Well Construction Type:	Not Reported	Casing Diameter (in):	12
Ground Elevation (ft):	13	Well Depth (ft):	463
Solid Casing Depth:	424	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	23.2
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	47	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-450	Solid Casing Bottom Elevation:	-411
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	01/01/1889	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

Map ID Direction Distance Elevation	Database	EDR ID Number
P74 **SE** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269513**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1749-10 W31 PALOLO	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18890101
Well Depth:	463	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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P75 **SE** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269514**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1749-11 W32 PALOLO	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18890101
Well Depth:	435	Well Depth Units:	ft
Well Hole Depth:	475	Well Hole Depth Units:	ft

P76 **SE** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI1100000000594**

Well ID:	3-1749-002	Well Name:	Kapahulu
Well Owner:	Y. Shee	Land Owner:	Not Reported
Pump Rate (g/m):	Not Reported	Year Drillled:	1881
Original Well Name:	Not Reported	Driller:	Not Reported
Well Construction Type:	Not Reported	Casing Diameter (in):	6
Ground Elevation (ft):	13	Well Depth (ft):	428
Solid Casing Depth:	Not Reported	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	Not Reported
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	0	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-415	Solid Casing Bottom Elevation:	Not Reported
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	01/01/1881	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

Map ID Direction Distance Elevation	Database	EDR ID Number
P77 **SE** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269508**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1749-02 W28 PALOLO	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18810101
Well Depth:	428	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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T78 **NW** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269607**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1850-06 W64 MAKIKI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18820101
Well Depth:	419	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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T79 **NW** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI1100000000732**

Well ID:	3-1850-006	Well Name:	Makiki
Well Owner:	James Dowsett (Mokuleia Land Co.)		
Land Owner:	Not Reported	Pump Rate (g/m):	Not Reported
Year Drillled:	1882	Original Well Name:	Not Reported
Driller:	Not Reported	Well Construction Type:	Not Reported
Casing Diameter (in):	4	Ground Elevation (ft):	47
Well Depth (ft):	419	Solid Casing Depth:	177
Perforated Casing Depth:	Not Reported	Major Well Use:	Abandoned-Sealed
Inital Water Level (ft):	27.5	Water Level After Drilling:	Not Reported
Water Level After Install:	Not Reported	Chloride Content (mg/L):	0
Date Tested:	Not Reported	Test Pump Rate (g/m):	Not Reported
Test Drawdown Rate (ft):	Not Reported	Test Chloride Content (MG/L):	Not Reported
Test Water Temp:	Not Reported	Temp Unit:	Not Reported
Max Chloride Level:	Not Reported	Minimum Chloride Level:	Not Reported
Draft Year:	Not Reported	Hole Bottom Elevation:	-372
Solid Casing Bottom Elevation:	-130	Year Installed:	Not Reported
Pump Capacity (MM gal/day):	Not Reported	Pump Intake Depth:	Not Reported
Latest Head:	Not Reported	Latest WCR1 Report:	01/01/1882
Latest WCR2 Report:	Not Reported	Transmissivity:	Not Reported
Min to pump 5 volumes:	Not Reported		

Map ID Direction Distance Elevation	Database	EDR ID Number
80 **NE** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269594**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1849-01M U.HAWAII MONITOR HOLE, PARKING LOT		
Type:	Well	Description:	Not Reported
HUC:	20060000	Drainage Area:	Not Reported
Drainage Area Units:	Not Reported	Contrib Drainage Area:	Not Reported
Contrib Drainage Area Unts:	Not Reported	Aquifer:	Not Reported
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19900203	Well Depth:	41.5
Well Depth Units:	ft	Well Hole Depth:	41.5
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:	1	Level reading date:	1990-02-04
Feet below surface:	0.0	Feet to sea level:	Not Reported
Note:	Not Reported		

P81 **SE** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI1100000000609**

Well ID:	3-1749-017	Well Name:	Kapahulu
Well Owner:	Hawn. Hotels	Land Owner:	Not Reported
Pump Rate (g/m):	Not Reported	Year Drillled:	1917
Original Well Name:	Not Reported	Driller:	L. McCandless
Well Construction Type:	Not Reported	Casing Diameter (in):	10
Ground Elevation (ft):	11	Well Depth (ft):	468
Solid Casing Depth:	402	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	18.5
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	83	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-457	Solid Casing Bottom Elevation:	-391
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	1/1/1917	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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P82 **SE** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269506**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1749-17 W29 PALOLO	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported

Aquifer Type:	Not Reported	Construction Date:	19170101
Well Depth:	468	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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83
North
1/2 - 1 Mile
Higher

HI WELLS **HI1100000000725**

Well ID:	3-1849-015	Well Name:	Wilder Avenue Well 4
Well Owner:	Honolulu Board of Water Supply, BWS		
Land Owner:	Honolulu Board of Water Supply, BWS		
Pump Rate (g/m):	1750	Year Drillled:	1962
Original Well Name:	Not Reported		
Driller:	Goodfellow Construction, Inc. Corporate		
Well Construction Type:	Rotary	Casing Diameter (in):	10
Ground Elevation (ft):	47	Well Depth (ft):	445
Solid Casing Depth:	321	Perforated Casing Depth:	Not Reported
Major Well Use:	County	Inital Water Level (ft):	0
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	0	Date Tested:	2/22/1995
Test Pump Rate (g/m):	1141	Test Drawdown Rate (ft):	4
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-398	Solid Casing Bottom Elevation:	-274
Year Installed:	1977	Pump Capacity (MM gal/day):	2.52
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	1/1/1962	Latest WCR2 Report:	4/22/2013
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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R84
WNW
1/2 - 1 Mile
Higher

FED USGS **USGS40000269568**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1850-22 W62 MAKIKI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18940101
Well Depth:	521	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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R85
WNW
1/2 - 1 Mile
Higher

FED USGS **USGS40000269571**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1850-21 W58 MAKIKI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported

Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18940101
Well Depth:	409	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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R86
WNW
1/2 - 1 Mile
Higher

HI WELLS **HI1100000000748**

Well ID:	3-1850-022	Well Name:	Makiki
Well Owner:	Kamehameha Schools	Land Owner:	Not Reported
Pump Rate (g/m):	Not Reported	Year Drillled:	1894
Original Well Name:	Not Reported	Driller:	Not Reported
Well Construction Type:	Not Reported	Casing Diameter (in):	8
Ground Elevation (ft):	16	Well Depth (ft):	521
Solid Casing Depth:	419	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	27.6
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	61	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-505	Solid Casing Bottom Elevation:	-403
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	01/01/1894	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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U87
NW
1/2 - 1 Mile
Higher

FED USGS **USGS40000269614**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1850-19 W65 MAKIKI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18900101
Well Depth:	277	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

U88
NW
1/2 - 1 Mile
Higher

HI WELLS **HI1100000000745**

Well ID:	3-1850-019	Well Name:	Makiki
Well Owner:	Jodo Mission	Land Owner:	Not Reported
Pump Rate (g/m):	Not Reported	Year Drillled:	1890
Original Well Name:	Not Reported	Driller:	Not Reported
Well Construction Type:	Not Reported	Casing Diameter (in):	10
Ground Elevation (ft):	41	Well Depth (ft):	277

Solid Casing Depth:	220	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	30.6
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	0	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-236	Solid Casing Bottom Elevation:	-179
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	01/01/1890	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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V89
WNW
1/2 - 1 Mile
Higher

FED USGS **USGS40000269572**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1850-20 W63 MAKIKI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18910101
Well Depth:	437	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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V90
WNW
1/2 - 1 Mile
Higher

HI WELLS **HI1100000000746**

Well ID:	3-1850-020	Well Name:	Makiki
Well Owner:	Plews & Wichman	Land Owner:	Not Reported
Pump Rate (g/m):	Not Reported	Year Drillled:	1891
Original Well Name:	Not Reported	Driller:	L. McCandless
Well Construction Type:	Not Reported	Casing Diameter (in):	8
Ground Elevation (ft):	16	Well Depth (ft):	437
Solid Casing Depth:	377	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	31
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	56	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-421	Solid Casing Bottom Elevation:	-361
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	01/01/1891	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

Map ID Direction Distance Elevation	Database	EDR ID Number
W91 **SE** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI1100000000606**

Well ID:	3-1749-014	Well Name:	Kaimuki High School
Well Owner:	Honolulu Board of Water Supply, BWS		
Land Owner:	City & County of Honolulu, C&CH		
Pump Rate (g/m):	0	Year Drillled:	1891
Original Well Name:	Not Reported	Driller:	Not Reported
Well Construction Type:	Not Reported	Casing Diameter (in):	8
Ground Elevation (ft):	13	Well Depth (ft):	417
Solid Casing Depth:	282	Perforated Casing Depth:	Not Reported
Major Well Use:	Observation	Inital Water Level (ft):	24.8
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	57	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-404	Solid Casing Bottom Elevation:	-269
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	01/01/1891	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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W92 **SE** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269510**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1749-14 W26 PALOLO	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18910101
Well Depth:	417	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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X93 **ESE** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI1100000000611**

Well ID:	3-1749-019	Well Name:	Kapahulu
Well Owner:	Kyo-Ya Company, LLC	Land Owner:	Kyo-Ya Company, LLC
Pump Rate (g/m):	500	Year Drillled:	1927
Original Well Name:	Not Reported	Driller:	L. McCandless
Well Construction Type:	Not Reported	Casing Diameter (in):	12
Ground Elevation (ft):	21	Well Depth (ft):	276
Solid Casing Depth:	175	Perforated Casing Depth:	Not Reported
Major Well Use:	Private (but Public-DOH definition)		
Inital Water Level (ft):	24.7	Water Level After Drilling:	Not Reported
Water Level After Install:	Not Reported	Chloride Content (mg/L):	24

Date Tested:	Not Reported	Test Pump Rate (g/m):	Not Reported
Test Drawdown Rate (ft):	Not Reported	Test Chloride Content (MG/L):	Not Reported
Test Water Temp:	Not Reported	Temp Unit:	Not Reported
Max Chloride Level:	Not Reported	Minimum Chloride Level:	Not Reported
Draft Year:	Not Reported	Hole Bottom Elevation:	-255
Solid Casing Bottom Elevation:	-154	Year Installed:	1989
Pump Capacity (MM gal/day):	0.72	Pump Intake Depth:	30
Latest Head:	Not Reported	Latest WCR1 Report:	1/1/1927
Latest WCR2 Report:	8/10/1989	Transmissivity:	Not Reported
Min to pump 5 volumes:	Not Reported		

Y94
East
1/2 - 1 Mile
Higher

FED USGS **USGS40000269533**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1749-04 W4 PALOLO	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18830101
Well Depth:	286	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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Z95
WNW
1/2 - 1 Mile
Higher

HI WELLS **HI1100000000626**

Well ID:	3-1750-009	Well Name:	Ala Moana
Well Owner:	HIH Pagoda Operating Company LLC		
Land Owner:	Kamehameha Schools	Pump Rate (g/m):	Not Reported
Year Drillled:	1964	Original Well Name:	Not Reported
Driller:	Layne International	Well Construction Type:	Not Reported
Casing Diameter (in):	16	Ground Elevation (ft):	7
Well Depth (ft):	53	Solid Casing Depth:	21
Perforated Casing Depth:	Not Reported	Major Well Use:	Landscape/Water Features
Inital Water Level (ft):	Not Reported	Water Level After Drilling:	Not Reported
Water Level After Install:	Not Reported	Chloride Content (mg/L):	0
Date Tested:	Not Reported	Test Pump Rate (g/m):	550
Test Drawdown Rate (ft):	2.9	Test Chloride Content (MG/L):	Not Reported
Test Water Temp:	Not Reported	Temp Unit:	Not Reported
Max Chloride Level:	Not Reported	Minimum Chloride Level:	Not Reported
Draft Year:	Not Reported	Hole Bottom Elevation:	-46
Solid Casing Bottom Elevation:	-14	Year Installed:	Not Reported
Pump Capacity (MM gal/day):	Not Reported	Pump Intake Depth:	Not Reported
Latest Head:	Not Reported	Latest WCR1 Report:	3/1/1964
Latest WCR2 Report:	Not Reported	Transmissivity:	Not Reported
Min to pump 5 volumes:	Not Reported		

Map ID Direction Distance Elevation	Database	EDR ID Number
X96 **ESE** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269487**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1749-19 Princess Kaiulani, Palolo, Oahu, HI		
Type:	Well		
Description:	former W6 Palolo,NAWQA entry ver. 05/15/2002 Hunt		
HUC:	20060000	Drainage Area:	Not Reported
Drainage Area Units:	Not Reported	Contrib Drainage Area:	Not Reported
Contrib Drainage Area Unts:	Not Reported	Aquifer:	Hawaii volcanic-rock aquifers
Formation Type:	Koolau Volcanic Series, Lava Flows		
Aquifer Type:	Confined single aquifer	Construction Date:	19270801
Well Depth:	276	Well Depth Units:	ft
Well Hole Depth:	276	Well Hole Depth Units:	ft

Y97 **East** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI1100000000596**

Well ID:	3-1749-004	Well Name:	Kapahulu
Well Owner:	State of Hawaii	Land Owner:	State of Hawaii
Pump Rate (g/m):	Not Reported	Year Drillled:	1883
Original Well Name:	Not Reported	Driller:	Not Reported
Well Construction Type:	Not Reported	Casing Diameter (in):	8
Ground Elevation (ft):	28	Well Depth (ft):	286
Solid Casing Depth:	190	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	Not Reported
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	0	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-258	Solid Casing Bottom Elevation:	-162
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	01/01/1883	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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AA98 **SW** **1/2 - 1 Mile** **Lower**	**HI WELLS**	**HI1100000000624**

Well ID:	3-1750-007	Well Name:	Waikiki
Well Owner:	Hilton Hawaiian Villages LLC		
Land Owner:	Hilton Hawaiian Villages LLC		
Pump Rate (g/m):	Not Reported	Year Drillled:	1955
Original Well Name:	Not Reported	Driller:	Samson/Smock
Well Construction Type:	Not Reported	Casing Diameter (in):	8
Ground Elevation (ft):	Not Reported	Well Depth (ft):	120
Solid Casing Depth:	98	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Lost	Inital Water Level (ft):	Not Reported

Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	0	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	Not Reported	Solid Casing Bottom Elevation:	Not Reported
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	1/1/1955	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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AA99
SW
1/2 - 1 Mile
Lower

HI WELLS **HI1100000000625**

Well ID:	3-1750-008	Well Name:	Waikiki
Well Owner:	Hilton Hawaiian Villages LLC		
Land Owner:	Not Reported	Pump Rate (g/m):	0
Year Drillled:	1955	Original Well Name:	Not Reported
Driller:	Samson/Smock	Well Construction Type:	Not Reported
Casing Diameter (in):	8	Ground Elevation (ft):	Not Reported
Well Depth (ft):	90	Solid Casing Depth:	42
Perforated Casing Depth:	Not Reported	Major Well Use:	Unused
Inital Water Level (ft):	Not Reported	Water Level After Drilling:	Not Reported
Water Level After Install:	Not Reported	Chloride Content (mg/L):	0
Date Tested:	Not Reported	Test Pump Rate (g/m):	Not Reported
Test Drawdown Rate (ft):	Not Reported	Test Chloride Content (MG/L):	Not Reported
Test Water Temp:	Not Reported	Temp Unit:	Not Reported
Max Chloride Level:	Not Reported	Minimum Chloride Level:	Not Reported
Draft Year:	Not Reported	Hole Bottom Elevation:	Not Reported
Solid Casing Bottom Elevation:	Not Reported	Year Installed:	Not Reported
Pump Capacity (MM gal/day):	Not Reported	Pump Intake Depth:	Not Reported
Latest Head:	Not Reported	Latest WCR1 Report:	Not Reported
Latest WCR2 Report:	Not Reported	Transmissivity:	Not Reported
Min to pump 5 volumes:	Not Reported		

Z100
WNW
1/2 - 1 Mile
Higher

FED USGS **USGS40000269561**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1750-09 W63-1 KAPI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	19640101
Well Depth:	53	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Map ID Direction Distance Elevation	Database	EDR ID Number
AA101 **SW** **1/2 - 1 Mile** **Lower**	**FED USGS**	**USGS40000269497**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1750-07 W30-1 DERU	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	19551107
Well Depth:	120	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

AA102 **SW** **1/2 - 1 Mile** **Lower**	**FED USGS**	**USGS40000269498**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1750-08 W30-2 DERU	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	19551107
Well Depth:	90	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

X103 **ESE** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269532**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1749-06 W5 PALOLO	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18840101
Well Depth:	162	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Y104 **ESE** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI1100000000598**

Well ID:	3-1749-006	Well Name:	Kapahulu
Well Owner:	Kamehameha Schools	Land Owner:	Not Reported
Pump Rate (g/m):	Not Reported	Year Drillled:	1884
Original Well Name:	Not Reported	Driller:	Not Reported

Well Construction Type:	Not Reported	Casing Diameter (in):	10
Ground Elevation (ft):	22	Well Depth (ft):	162
Solid Casing Depth:	125	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	23.3
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	34	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-140	Solid Casing Bottom Elevation:	-103
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	01/01/1884	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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AB105
WSW **HI WELLS** **HI1100000000629**
1/2 - 1 Mile
Lower

Well ID:	3-1750-012	Well Name:	Yacht Harbor 1
Well Owner:	Yacht Harbor Towers	Land Owner:	Yacht Harbor Towers
Pump Rate (g/m):	1800	Year Drillled:	1972
Original Well Name:	Not Reported	Driller:	Not Reported
Well Construction Type:	Not Reported	Casing Diameter (in):	Not Reported
Ground Elevation (ft):	Not Reported	Well Depth (ft):	0
Solid Casing Depth:	Not Reported	Perforated Casing Depth:	Not Reported
Major Well Use:	Geothermal, Thermoelectric Cooling, Power Develop		
Inital Water Level (ft):	Not Reported	Water Level After Drilling:	Not Reported
Water Level After Install:	Not Reported	Chloride Content (mg/L):	18750
Date Tested:	Not Reported	Test Pump Rate (g/m):	Not Reported
Test Drawdown Rate (ft):	Not Reported	Test Chloride Content (MG/L):	Not Reported
Test Water Temp:	Not Reported	Temp Unit:	Not Reported
Max Chloride Level:	Not Reported	Minimum Chloride Level:	Not Reported
Draft Year:	Not Reported	Hole Bottom Elevation:	Not Reported
Solid Casing Bottom Elevation:	Not Reported	Year Installed:	Not Reported
Pump Capacity (MM gal/day):	2.592	Pump Intake Depth:	Not Reported
Latest Head:	Not Reported	Latest WCR1 Report:	Not Reported
Latest WCR2 Report:	Not Reported	Transmissivity:	Not Reported
Min to pump 5 volumes:	Not Reported		

AB106
WSW **HI WELLS** **HI1100000000630**
1/2 - 1 Mile
Lower

Well ID:	3-1750-013	Well Name:	Yacht Harbor 2
Well Owner:	Yacht Harbor Towers	Land Owner:	Yacht Harbor Towers
Pump Rate (g/m):	1800	Year Drillled:	1972
Original Well Name:	Not Reported	Driller:	Not Reported
Well Construction Type:	Not Reported	Casing Diameter (in):	Not Reported
Ground Elevation (ft):	Not Reported	Well Depth (ft):	0
Solid Casing Depth:	Not Reported	Perforated Casing Depth:	Not Reported
Major Well Use:	Geothermal, Thermoelectric Cooling, Power Develop		
Inital Water Level (ft):	Not Reported	Water Level After Drilling:	Not Reported
Water Level After Install:	Not Reported	Chloride Content (mg/L):	18750
Date Tested:	Not Reported	Test Pump Rate (g/m):	Not Reported

Test Drawdown Rate (ft):	Not Reported	Test Chloride Content (MG/L):	Not Reported
Test Water Temp:	Not Reported	Temp Unit:	Not Reported
Max Chloride Level:	Not Reported	Minimum Chloride Level:	Not Reported
Draft Year:	Not Reported	Hole Bottom Elevation:	Not Reported
Solid Casing Bottom Elevation:	Not Reported	Year Installed:	Not Reported
Pump Capacity (MM gal/day):	2.592	Pump Intake Depth:	Not Reported
Latest Head:	Not Reported	Latest WCR1 Report:	Not Reported
Latest WCR2 Report:	Not Reported	Transmissivity:	Not Reported
Min to pump 5 volumes:	Not Reported		

AA107
SW
1/2 - 1 Mile
Lower

HI WELLS **HI1100000000623**

Well ID:	3-1750-006	Well Name:	Waikiki
Well Owner:	Hilton Hawaiian Villages LLC		
Land Owner:	Hilton Hawaiian Villages LLC		
Pump Rate (g/m):	Not Reported	Year Drillled:	1955
Original Well Name:	Not Reported	Driller:	Samson/Smock
Well Construction Type:	Not Reported	Casing Diameter (in):	8
Ground Elevation (ft):	Not Reported	Well Depth (ft):	122
Solid Casing Depth:	93	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Lost	Inital Water Level (ft):	Not Reported
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	0	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	Not Reported	Solid Casing Bottom Elevation:	Not Reported
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	1/1/1955	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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AC108
SW
1/2 - 1 Mile
Lower

FED USGS **USGS40000269494**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1750-06 W30 DERUSY	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	19550607
Well Depth:	122	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Map ID Direction Distance Elevation	Database	EDR ID Number
AD109 **WNW** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269592**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1850-28 W74-1 MAKI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	19380101
Well Depth:	71	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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AD110 **NW** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269603**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1850-16 W74 MAKIKI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18860101
Well Depth:	442	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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AD111 **NW** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI1100000000742**

Well ID:	3-1850-016	Well Name:	Makiki
Well Owner:	City & County of Honolulu, C&CH		
Land Owner:	Not Reported	Pump Rate (g/m):	Not Reported
Year Drillled:	1886	Original Well Name:	Not Reported
Driller:	Not Reported	Well Construction Type:	Not Reported
Casing Diameter (in):	6	Ground Elevation (ft):	22
Well Depth (ft):	442	Solid Casing Depth:	400
Perforated Casing Depth:	Not Reported	Major Well Use:	Abandoned-Sealed
Inital Water Level (ft):	25.8	Water Level After Drilling:	Not Reported
Water Level After Install:	Not Reported	Chloride Content (mg/L):	53
Date Tested:	Not Reported	Test Pump Rate (g/m):	Not Reported
Test Drawdown Rate (ft):	Not Reported	Test Chloride Content (MG/L):	Not Reported
Test Water Temp:	Not Reported	Temp Unit:	Not Reported
Max Chloride Level:	Not Reported	Minimum Chloride Level:	Not Reported
Draft Year:	Not Reported	Hole Bottom Elevation:	-420
Solid Casing Bottom Elevation:	-378	Year Installed:	Not Reported
Pump Capacity (MM gal/day):	Not Reported	Pump Intake Depth:	Not Reported
Latest Head:	Not Reported	Latest WCR1 Report:	01/01/1886
Latest WCR2 Report:	Not Reported	Transmissivity:	Not Reported
Min to pump 5 volumes:	Not Reported		

Map ID Direction Distance Elevation	Database	EDR ID Number
AE112 **SE** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI1100000000599**

Well ID:	3-1749-007	Well Name:	Kapahulu
Well Owner:	City & County of Honolulu, C&CH		
Land Owner:	City & County of Honolulu, C&CH		
Pump Rate (g/m):	0	Year Drillled:	1885
Original Well Name:	Not Reported	Driller:	Not Reported
Well Construction Type:	Not Reported	Casing Diameter (in):	8
Ground Elevation (ft):	18	Well Depth (ft):	625
Solid Casing Depth:	309	Perforated Casing Depth:	Not Reported
Major Well Use:	Observation	Inital Water Level (ft):	25
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	56	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-607	Solid Casing Bottom Elevation:	-291
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	01/01/1885	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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AE113 **SE** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269503**	

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1749-07 W25	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18850101
Well Depth:	338	Well Depth Units:	ft
Well Hole Depth:	338	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	1	Level reading date:	1911-09-17
Feet below surface:	-10.70	Feet to sea level:	Not Reported
Note:	Not Reported		

AE114 **SE** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269505**	

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1749-07 W25 TB D	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported

Aquifer Type:	Not Reported	Construction Date:	19510801
Well Depth:	459	Well Depth Units:	ft
Well Hole Depth:	625	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	1	Level reading date:	1972-01-24
Feet below surface:	-11.20	Feet to sea level:	Not Reported
Note:	Not Reported		

AE115
SE
1/2 - 1 Mile
Higher

FED USGS **USGS40000269504**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1749-07 W25 TB E	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Hawaii volcanic-rock aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19510801	Well Depth:	393
Well Depth Units:	ft	Well Hole Depth:	625
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:	20	Level reading date:	1980-01-17
Feet below surface:	11.71	Feet to sea level:	Not Reported
Note:	Other conditions existed that would affect the measured water level.		

Level reading date:	1979-11-23	Feet below surface:	10.46
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		

Level reading date:	1979-10-22	Feet below surface:	10.07
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		

Level reading date:	1979-08-31	Feet below surface:	9.81
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		

Level reading date:	1979-07-18	Feet below surface:	11.26
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		

Level reading date:	1979-06-13	Feet below surface:	11.45
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		

Level reading date:	1979-04-24	Feet below surface:	10.49
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		

Level reading date:	1979-03-20	Feet below surface:	10.78
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		

Level reading date:	1979-02-02	Feet below surface:	10.10
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		

Level reading date:	1978-12-21	Feet below surface:	10.29
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1978-09-19	Feet below surface:	8.36
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1978-08-02	Feet below surface:	8.08
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1978-07-03	Feet below surface:	8.82
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1978-05-22	Feet below surface:	8.43
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1978-03-31	Feet below surface:	7.90
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1978-02-14	Feet below surface:	8.01
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1978-01-09	Feet below surface:	8.72
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1977-11-28	Feet below surface:	9.40
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1977-10-13	Feet below surface:	7.85
Feet to sea level:	Not Reported		
Note:	Other conditions existed that would affect the measured water level.		
Level reading date:	1964-07-31	Feet below surface:	-9.15
Feet to sea level:	Not Reported	Note:	Not Reported

AF116
North
1/2 - 1 Mile
Higher

FED USGS **USGS40000269676**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1849-03 W60 MAKIKI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18820101
Well Depth:	980	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Map ID Direction Distance Elevation	Database	EDR ID Number
AF117 **North** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI1100000000713**

Well ID:	3-1849-003	Well Name:	Manoa Valley
Well Owner:	D. Pietsch	Land Owner:	Not Reported
Pump Rate (g/m):	Not Reported	Year Drillled:	1882
Original Well Name:	Not Reported	Driller:	Not Reported
Well Construction Type:	Not Reported	Casing Diameter (in):	Not Reported
Ground Elevation (ft):	200	Well Depth (ft):	980
Solid Casing Depth:	Not Reported	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	Not Reported
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	0	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-780	Solid Casing Bottom Elevation:	Not Reported
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	01/01/1882	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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AE118 **SE** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI1100000000614**

Well ID:	3-1749-022	Well Name:	Kaimuki HS Deep Monitor
Well Owner:	Honolulu Board of Water Supply, BWS		
Land Owner:	City & County of Honolulu, C&CH		
Pump Rate (g/m):	0	Year Drillled:	1970
Original Well Name:	Not Reported	Driller:	Layne International
Well Construction Type:	Rotary	Casing Diameter (in):	8
Ground Elevation (ft):	14	Well Depth (ft):	911
Solid Casing Depth:	305	Perforated Casing Depth:	Not Reported
Major Well Use:	Deep (through Transition zone)		
Inital Water Level (ft):	23.4	Water Level After Drilling:	Not Reported
Water Level After Install:	Not Reported	Chloride Content (mg/L):	145
Date Tested:	Not Reported	Test Pump Rate (g/m):	Not Reported
Test Drawdown Rate (ft):	Not Reported	Test Chloride Content (MG/L):	Not Reported
Test Water Temp:	24	Temp Unit:	C
Max Chloride Level:	Not Reported	Minimum Chloride Level:	Not Reported
Draft Year:	Not Reported	Hole Bottom Elevation:	-897
Solid Casing Bottom Elevation:	-291	Year Installed:	Not Reported
Pump Capacity (MM gal/day):	Not Reported	Pump Intake Depth:	Not Reported
Latest Head:	Not Reported	Latest WCR1 Report:	1/1/1970
Latest WCR2 Report:	Not Reported	Transmissivity:	Not Reported
Min to pump 5 volumes:	Not Reported		

Map ID Direction Distance Elevation	Database	EDR ID Number
119 **WSW** **1/2 - 1 Mile** **Lower**	**HI WELLS**	**HI1100000000628**

Well ID:	3-1750-011	Well Name:	Ala Moana
Well Owner:	GGP Ala Moana L.L.C.	Land Owner:	GGP Ala Moana L.L.C.
Pump Rate (g/m):	Not Reported	Year Drillled:	1967
Original Well Name:	Not Reported	Driller:	Layne International
Well Construction Type:	Not Reported	Casing Diameter (in):	18
Ground Elevation (ft):	4.6	Well Depth (ft):	55
Solid Casing Depth:	37	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Lost	Inital Water Level (ft):	2.9
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	13451	Date Tested:	Not Reported
Test Pump Rate (g/m):	550	Test Drawdown Rate (ft):	0.5
Test Chloride Content (MG/L):	17680	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-50.4	Solid Casing Bottom Elevation:	-32.4
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	1/1/1967	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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AB120 **WSW** **1/2 - 1 Mile** **Lower**	**HI WELLS**	**HI1100000000627**

Well ID:	3-1750-010	Well Name:	Ala Moana
Well Owner:	GGP Ala Moana L.L.C.	Land Owner:	GGP Ala Moana L.L.C.
Pump Rate (g/m):	Not Reported	Year Drillled:	1967
Original Well Name:	Not Reported	Driller:	Layne International
Well Construction Type:	Not Reported	Casing Diameter (in):	18
Ground Elevation (ft):	4.3	Well Depth (ft):	88
Solid Casing Depth:	42	Perforated Casing Depth:	Not Reported
Major Well Use:	Other	Inital Water Level (ft):	2.8
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	13954	Date Tested:	Not Reported
Test Pump Rate (g/m):	600	Test Drawdown Rate (ft):	0.8
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-83.7	Solid Casing Bottom Elevation:	-37.7
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	1/1/1967	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

Map ID Direction Distance Elevation	Database	EDR ID Number
AE121 **SE** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269502**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1749-22 W25-1A PAL	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	19701001
Well Depth:	911	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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AG122 **North** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269680**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1849-09 W66 MAKIKI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	19010101
Well Depth:	194	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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123 **SW** **1/2 - 1 Mile** **Lower**	**HI WELLS**	**HI1100000000631**

Well ID:	3-1750-014	Well Name:	Hilton Lagoon
Well Owner:	Peter Schall (Hilton Hawaiian Villages LLC)		
Land Owner:	Peter Schall (Hilton Hawaiian Villages LLC)		
Pump Rate (g/m):	0	Year Drillled:	2003
Original Well Name:	Not Reported	Driller:	Beylik Drilling & Pump Service Inc.
Well Construction Type:	Percussion	Casing Diameter (in):	14
Ground Elevation (ft):	Not Reported	Well Depth (ft):	400
Solid Casing Depth:	29	Perforated Casing Depth:	Not Reported
Major Well Use:	Unused	Inital Water Level (ft):	Not Reported
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	18000	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	Not Reported	Solid Casing Bottom Elevation:	Not Reported
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	Not Reported	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

Map ID Direction Distance Elevation	Database	EDR ID Number
AH124 **NNW** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269677**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1850-23 W67 MAKIKI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18990101
Well Depth:	194	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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AI125 **SE** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI1100000000600**

Well ID:	3-1749-008	Well Name:	Kapahulu
Well Owner:	Kim Chang	Land Owner:	Cynthia C Akiyoshi Trust
Pump Rate (g/m):	Not Reported	Year Drillled:	1888
Original Well Name:	Not Reported	Driller:	Not Reported
Well Construction Type:	Not Reported	Casing Diameter (in):	4
Ground Elevation (ft):	10	Well Depth (ft):	410
Solid Casing Depth:	196	Perforated Casing Depth:	Not Reported
Major Well Use:	Unused	Inital Water Level (ft):	20.1
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	51	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-400	Solid Casing Bottom Elevation:	-186
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	01/01/1888	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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AJ126 **East** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI1100000000591**

Well ID:	3-1748-013	Well Name:	Manoa I
Well Owner:	Honolulu Board of Water Supply, BWS		
Land Owner:	State of Hawaii	Pump Rate (g/m):	Not Reported
Year Drillled:	1984	Original Well Name:	Not Reported
Driller:	Roscoe Moss Hawaii Inc	Well Construction Type:	Percussion
Casing Diameter (in):	12	Ground Elevation (ft):	40
Well Depth (ft):	100	Solid Casing Depth:	48
Perforated Casing Depth:	100	Major Well Use:	Unused
Inital Water Level (ft):	25	Water Level After Drilling:	Not Reported
Water Level After Install:	Not Reported	Chloride Content (mg/L):	33
Date Tested:	1/31/1984	Test Pump Rate (g/m):	700

Test Drawdown Rate (ft):	42.5	Test Chloride Content (MG/L):	30
Test Water Temp:	21.1	Temp Unit:	C
Max Chloride Level:	Not Reported	Minimum Chloride Level:	Not Reported
Draft Year:	Not Reported	Hole Bottom Elevation:	-60
Solid Casing Bottom Elevation:	-8	Year Installed:	Not Reported
Pump Capacity (MM gal/day):	Not Reported	Pump Intake Depth:	Not Reported
Latest Head:	Not Reported	Latest WCR1 Report:	1/24/1984
Latest WCR2 Report:	Not Reported	Transmissivity:	Not Reported
Min to pump 5 volumes:	Not Reported		

AG127
North
1/2 - 1 Mile
Higher

HI WELLS **HI1100000000719**

Well ID:	3-1849-009	Well Name:	Manoa Valley
Well Owner:	R. Morgan	Land Owner:	Not Reported
Pump Rate (g/m):	Not Reported	Year Drillled:	1901
Original Well Name:	Not Reported	Driller:	Not Reported
Well Construction Type:	Not Reported	Casing Diameter (in):	10
Ground Elevation (ft):	154	Well Depth (ft):	194
Solid Casing Depth:	103	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	37
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	55	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-40	Solid Casing Bottom Elevation:	51
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	1/1/1901	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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AI128
SE
1/2 - 1 Mile
Higher

FED USGS **USGS40000269495**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1749-08 W24 PALOLO	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18880101
Well Depth:	411	Well Depth Units:	ft
Well Hole Depth:	411	Well Hole Depth Units:	ft

Map ID Direction Distance Elevation	Database	EDR ID Number
129 **SE** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI1100000000615**

Well ID:	3-1749-023	Well Name:	Ala Wai Pit 5
Well Owner:	Department of Parks and Recreation, Honolulu, DPR		
Land Owner:	State of Hawaii	Pump Rate (g/m):	700
Year Drillled:	1964	Original Well Name:	Not Reported
Driller:	Not Reported	Well Construction Type:	Not Reported
Casing Diameter (in):	18	Ground Elevation (ft):	Not Reported
Well Depth (ft):	12	Solid Casing Depth:	4
Perforated Casing Depth:	Not Reported	Major Well Use:	Abandoned-Lost
Inital Water Level (ft):	Not Reported	Water Level After Drilling:	Not Reported
Water Level After Install:	Not Reported	Chloride Content (mg/L):	0
Date Tested:	Not Reported	Test Pump Rate (g/m):	Not Reported
Test Drawdown Rate (ft):	Not Reported	Test Chloride Content (MG/L):	Not Reported
Test Water Temp:	Not Reported	Temp Unit:	Not Reported
Max Chloride Level:	Not Reported	Minimum Chloride Level:	Not Reported
Draft Year:	Not Reported	Hole Bottom Elevation:	Not Reported
Solid Casing Bottom Elevation:	Not Reported	Year Installed:	Not Reported
Pump Capacity (MM gal/day):	1.008	Pump Intake Depth:	Not Reported
Latest Head:	Not Reported	Latest WCR1 Report:	1/1/1964
Latest WCR2 Report:	Not Reported	Transmissivity:	Not Reported
Min to pump 5 volumes:	Not Reported		

AH130 **NNW** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI1100000000749**

Well ID:	3-1850-023	Well Name:	Makiki
Well Owner:	M. Condon	Land Owner:	Not Reported
Pump Rate (g/m):	Not Reported	Year Drillled:	1899
Original Well Name:	Not Reported	Driller:	L. McCandless
Well Construction Type:	Not Reported	Casing Diameter (in):	10
Ground Elevation (ft):	104	Well Depth (ft):	194
Solid Casing Depth:	86	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	33
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	47	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-90	Solid Casing Bottom Elevation:	18
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	01/01/1899	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

Map ID Direction Distance Elevation	Database	EDR ID Number
AC131 **SW** **1/2 - 1 Mile** **Lower**	**HI WELLS**	**HI1100000000621**

Well ID:	3-1750-004	Well Name:	Waikiki
Well Owner:	Hilton Hawaiian Villages LLC		
Land Owner:	Hilton Hawaiian Villages LLC		
Pump Rate (g/m):	Not Reported	Year Drillled:	1950
Original Well Name:	Not Reported	Driller:	Samson/Smock
Well Construction Type:	Not Reported	Casing Diameter (in):	10
Ground Elevation (ft):	Not Reported	Well Depth (ft):	62
Solid Casing Depth:	61	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Lost	Inital Water Level (ft):	Not Reported
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	0	Date Tested:	Not Reported
Test Pump Rate (g/m):	230	Test Drawdown Rate (ft):	1
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	Not Reported	Solid Casing Bottom Elevation:	Not Reported
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	1/1/1950	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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132 **SW**<	**FED USGS**	**USGS40000269490**
1/2 - 1 Mile **Lower**		

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1750-04 W30-3	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	19500501
Well Depth:	62	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1950-05-01
Feet below surface:	3.00	Feet to sea level:	Not Reported
Note:	Not Reported		

AJ133 **East** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269554**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1748-13 MANOA I	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported

Aquifer Type:	Not Reported	Construction Date:	19840124
Well Depth:	100	Well Depth Units:	ft
Well Hole Depth:	100	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	1	Level reading date:	1984-01-30
Feet below surface:	25.00	Feet to sea level:	Not Reported
Note:	Not Reported		

AK134
WNW
1/2 - 1 Mile
Higher

FED USGS **USGS40000269569**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1850-27 W75 MAKIKI	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	19140101
Well Depth:	552	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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AK135
WNW
1/2 - 1 Mile
Higher

HI WELLS **HI1100000000753**

Well ID:	3-1850-027	Well Name:	Makiki
Well Owner:	Meadow Gold	Land Owner:	Not Reported
Pump Rate (g/m):	Not Reported	Year Drillled:	1914
Original Well Name:	Not Reported	Driller:	Not Reported
Well Construction Type:	Not Reported	Casing Diameter (in):	10
Ground Elevation (ft):	8	Well Depth (ft):	552
Solid Casing Depth:	486	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	27
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	75	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-544	Solid Casing Bottom Elevation:	-478
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	1/1/1914	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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AL136
ESE
1/2 - 1 Mile
Higher

HI WELLS **HI1100000000607**

Well ID:	3-1749-015	Well Name:	Kapahulu
Well Owner:	D. Nakano	Land Owner:	Not Reported
Pump Rate (g/m):	Not Reported	Year Drillled:	1892

Original Well Name:	Not Reported	Driller:	L. McCandless
Well Construction Type:	Not Reported	Casing Diameter (in):	6
Ground Elevation (ft):	19	Well Depth (ft):	165
Solid Casing Depth:	122	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	17.3
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	44	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-146	Solid Casing Bottom Elevation:	-103
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	01/01/1892	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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AL137
ESE
1/2 - 1 Mile
Higher

FED USGS **USGS40000269528**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1749-15 W8 PALOLO	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18920101
Well Depth:	165	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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AM138
ESE
1/2 - 1 Mile
Higher

FED USGS **USGS40000269531**

Organization ID:	USGS-HI	Organization Name:	USGS Hawaii Water Science Center
Monitor Location:	3-1748-02 W3 PALOLO	Type:	Well
Description:	Not Reported	HUC:	20060000
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	18960101
Well Depth:	159	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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AM139
ESE
1/2 - 1 Mile
Higher

HI WELLS **HI1100000000580**

Well ID:	3-1748-002	Well Name:	Palolo
Well Owner:	E. Booth	Land Owner:	Not Reported
Pump Rate (g/m):	Not Reported	Year Drillled:	1896
Original Well Name:	Not Reported	Driller:	L. McCandless

Well Construction Type:	Not Reported	Casing Diameter (in):	10
Ground Elevation (ft):	29	Well Depth (ft):	159
Solid Casing Depth:	100	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	Not Reported
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	0	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-130	Solid Casing Bottom Elevation:	-71
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	01/01/1896	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

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140
SSE
1/2 - 1 Mile
Lower

HI WELLS **HI1100000000544**

Well ID:	3-1649-009	Well Name:	Waikiki
Well Owner:	Matson Nav. Co.	Land Owner:	Not Reported
Pump Rate (g/m):	Not Reported	Year Drillled:	1914
Original Well Name:	Not Reported	Driller:	Not Reported
Well Construction Type:	Not Reported	Casing Diameter (in):	12
Ground Elevation (ft):	4	Well Depth (ft):	810
Solid Casing Depth:	781	Perforated Casing Depth:	Not Reported
Major Well Use:	Abandoned-Sealed	Inital Water Level (ft):	Not Reported
Water Level After Drilling:	Not Reported	Water Level After Install:	Not Reported
Chloride Content (mg/L):	0	Date Tested:	Not Reported
Test Pump Rate (g/m):	Not Reported	Test Drawdown Rate (ft):	Not Reported
Test Chloride Content (MG/L):	Not Reported	Test Water Temp:	Not Reported
Temp Unit:	Not Reported	Max Chloride Level:	Not Reported
Minimum Chloride Level:	Not Reported	Draft Year:	Not Reported
Hole Bottom Elevation:	-806	Solid Casing Bottom Elevation:	-777
Year Installed:	Not Reported	Pump Capacity (MM gal/day):	Not Reported
Pump Intake Depth:	Not Reported	Latest Head:	Not Reported
Latest WCR1 Report:	1/1/1914	Latest WCR2 Report:	Not Reported
Transmissivity:	Not Reported	Min to pump 5 volumes:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

Federal EPA Radon Zone for HONOLULU County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 96826

Number of sites tested: 2

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	-0.200 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	0.100 pCi/L	100%	0%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory
Source: Office of Planning
Telephone: 808-587-2895

HYDROGEOLOGIC INFORMATION

AQUIFLOW[R] Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Well Index Database
Source: Commission on Water Resource Management
Telephone: 808-587-0214
CWRM maintains a Well Index Database to track specific information pertaining to the construction and installation of production wells in Hawaii.

OTHER STATE DATABASE INFORMATION

RADON

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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2139 Algaroba Street

2139 ALGAROBA ST

HONOLULU, HI 96826

Inquiry Number: 5544094.3

January 25, 2019

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

01/25/19

Site Name:	Client Name:
2139 Algaroba Street	Environmental Risk Analysis. LLC
2139 ALGAROBA ST	905A Makahiki Way
HONOLULU, HI 96826	HONOLULU, HI 96826
EDR Inquiry # 5544094.3	Contact: Vincent Yanagita

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The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 390E-4C9D-ABDE

PO # NA

Project NA

Maps Provided:

1993	1949
1991	1927
1985	
1980	
1975	
1973	
1955	
1951	

Sanborn® Library search results

Certification #: 390E-4C9D-ABDE

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- ✔ Library of Congress
- ✔ University Publications of America
- ✔ EDR Private Collection

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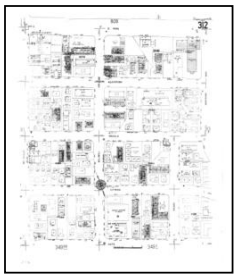
Sanborn Sheet Key

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

1993 Source Sheets



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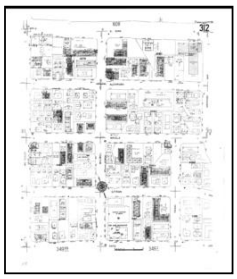
1993

Volume 3, Sheet 313
1993

1991 Source Sheets



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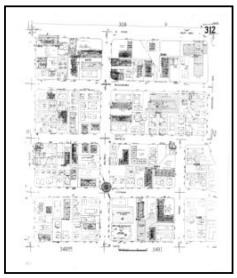
1991

Volume 3, Sheet 313
1991

1985 Source Sheets



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Volume 3, Sheet 313
1985

1980 Source Sheets

Volume 3, Sheet 312
1980

Volume 3, Sheet 313
1980

Sanborn Sheet Key

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

1975 Source Sheets

Volume 3, Sheet 313
1975

Volume 3, Sheet 312
1975

1973 Source Sheets

Volume 3, Sheet 312
1973

Volume 3, Sheet 313
1973

1955 Source Sheets

Volume 3, Sheet 312
1955

Volume 3, Sheet 313
1955

Volume 3, Sheet 312
1955

Volume 3, Sheet 313
1955

1951 Source Sheets

Volume 3, Sheet 312
1951

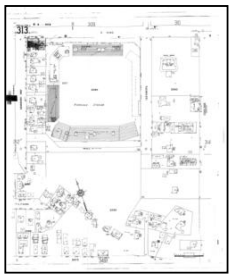
Volume 3, Sheet 313
1951

Sanborn Sheet Key

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

1949 Source Sheets

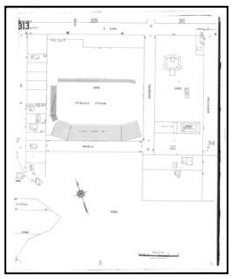
Volume 3, Sheet 312
1949



Volume 3, Sheet 313
1949

1927 Source Sheets

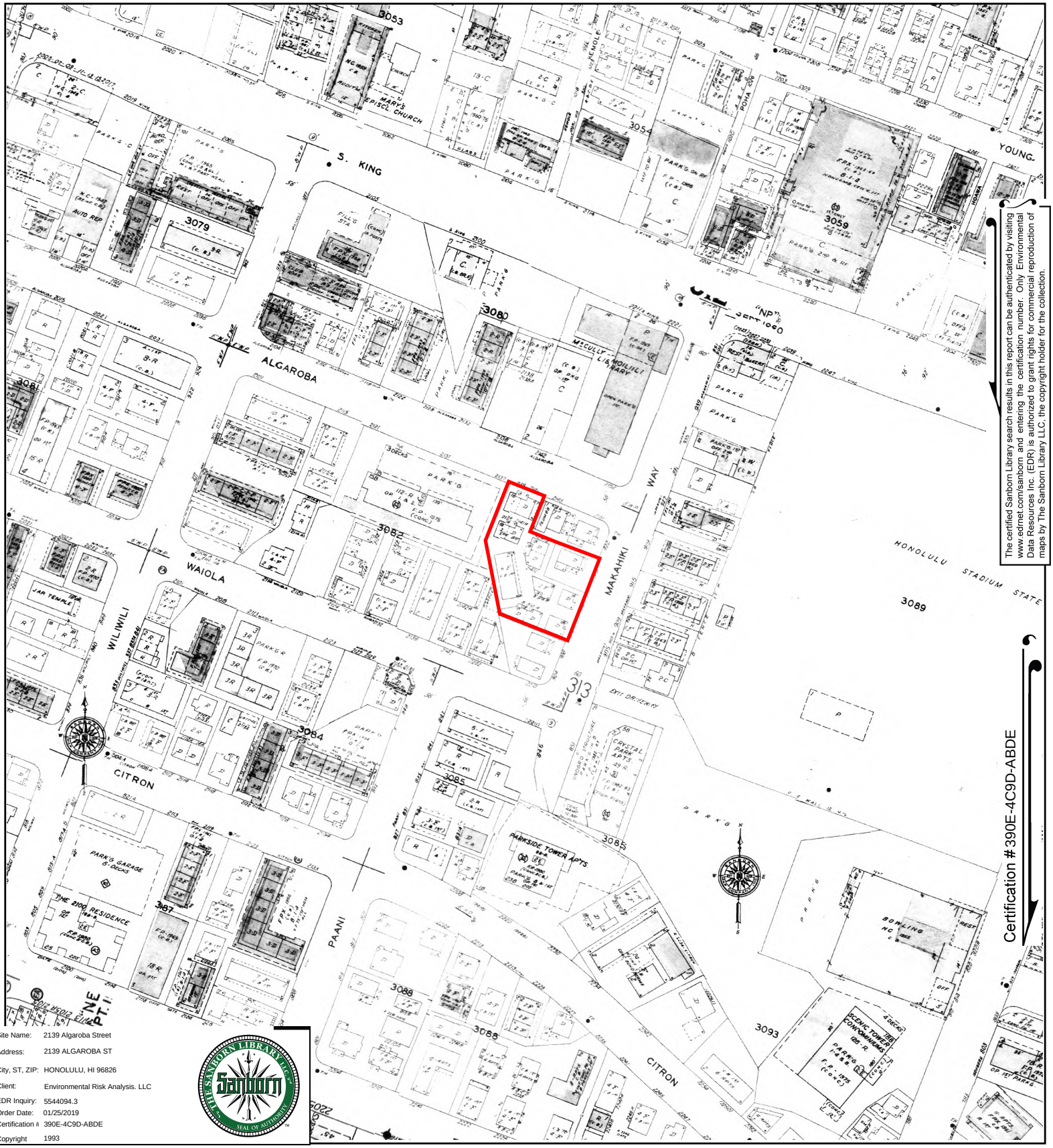
Volume 3, Sheet 312
1927



Volume 3, Sheet 313
1927

Certified Sanborn® Map

1993



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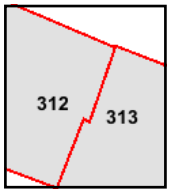
Certification #390E-4C9D-ABDE

Site Name:	2139 Algaroba Street
Address:	2139 ALGAROBA ST
City, ST, ZIP:	HONOLULU, HI 96826
Client:	Environmental Risk Analysis. LLC
EDR Inquiry:	5544094.3
Order Date:	01/25/2019
Certification #	390E-4C9D-ABDE
Copyright	1993

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

0 Feet 150 300 600

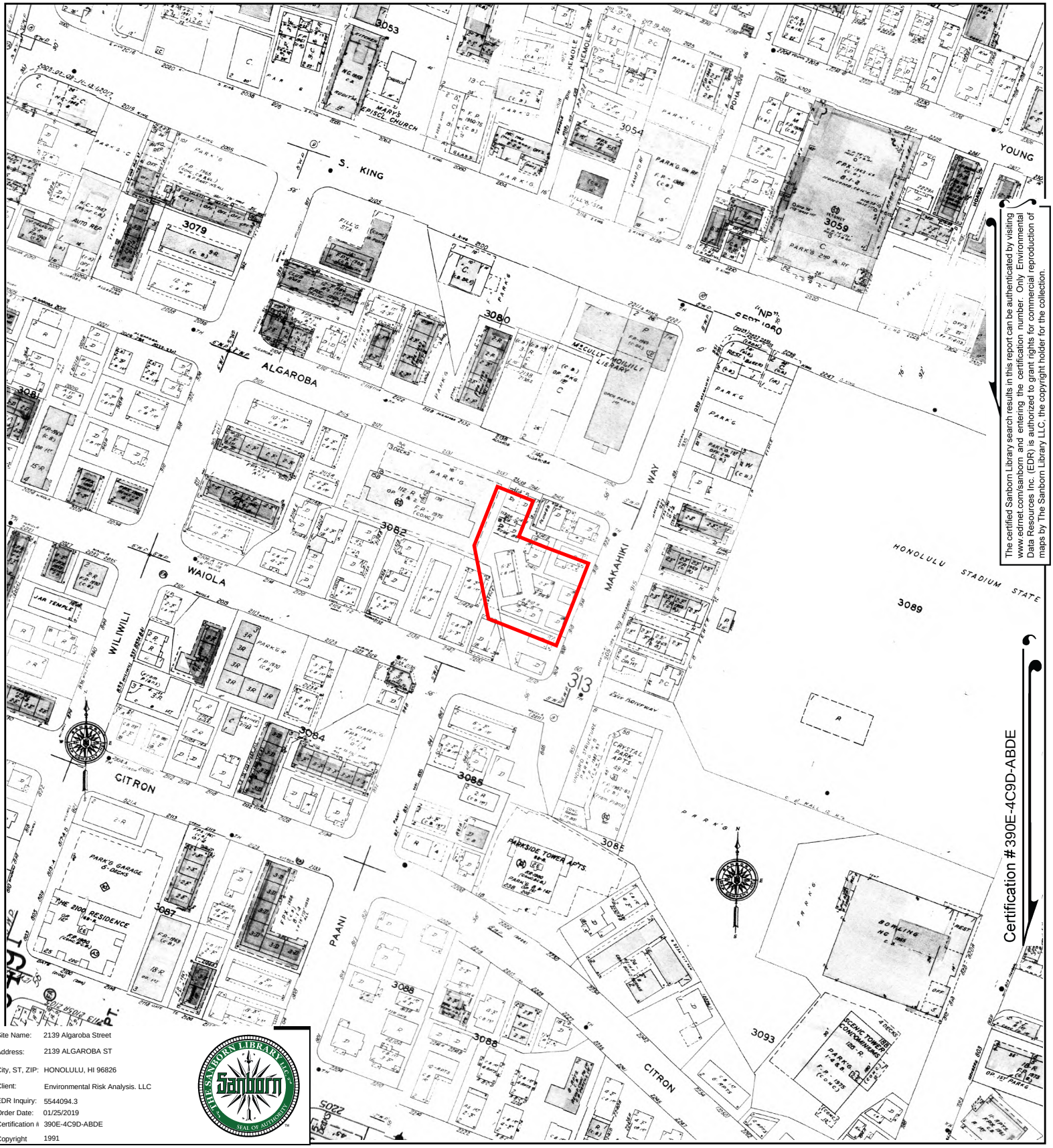


Volume 3, Sheet 313
Volume 3, Sheet 312

N

Certified Sanborn® Map

1991



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EDR Inquiry:	5544094.3
Order Date:	01/25/2019
Certification #	390E-4C9D-ABDE
Copyright	1991

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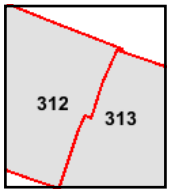
0 Feet 150 300 600

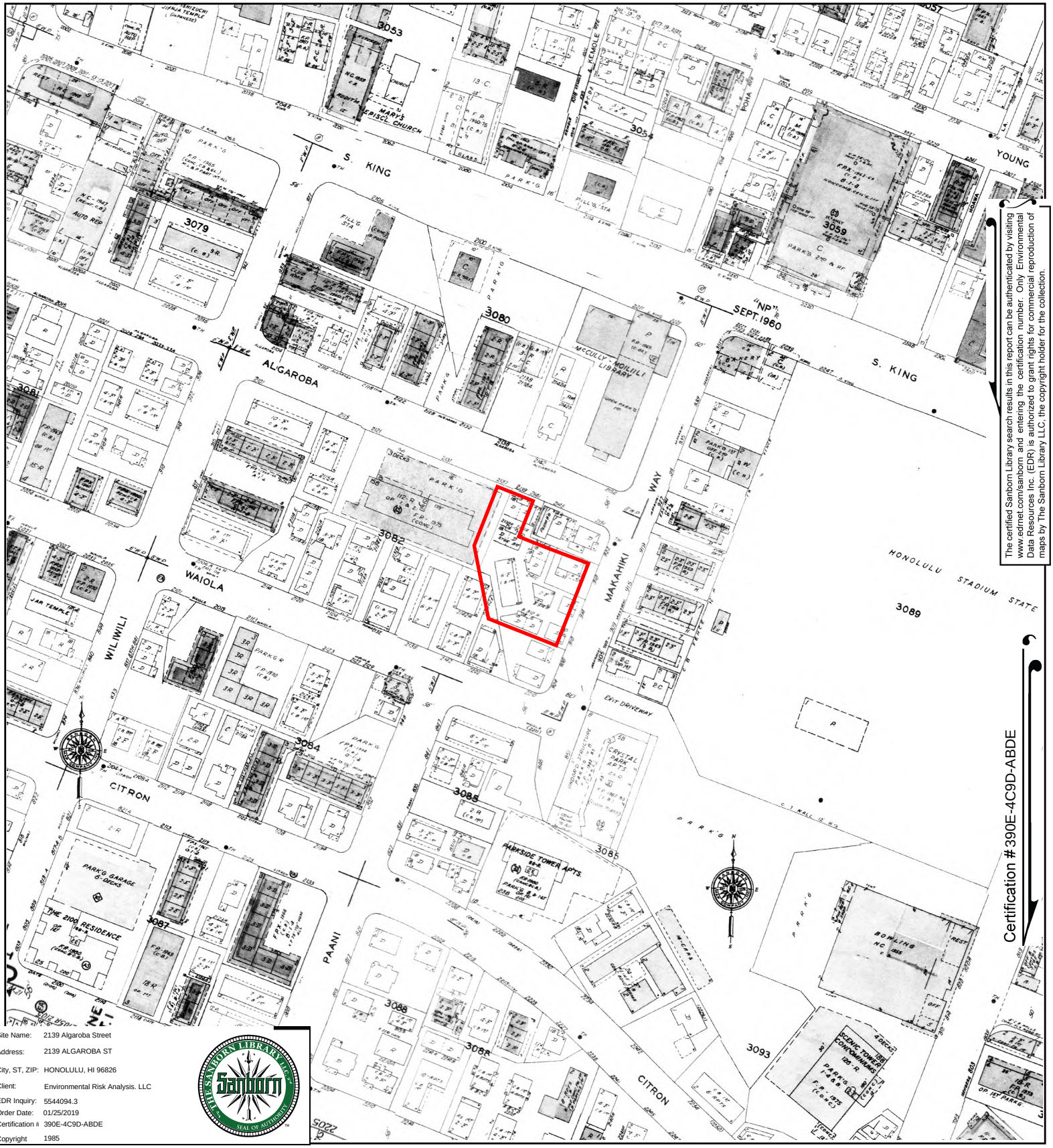


Volume 3, Sheet 313
Volume 3, Sheet 312

N

Certified Sanborn® Map

1985



Certification # 390E-4C9D-ABDE

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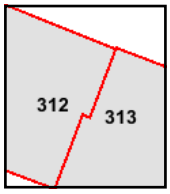
Site Name:	2139 Algaroba Street
Address:	2139 ALGAROBA ST
City, ST, ZIP:	HONOLULU, HI 96826
Client:	Environmental Risk Analysis. LLC
EDR Inquiry:	5544094.3
Order Date:	01/25/2019
Certification #	390E-4C9D-ABDE
Copyright	1985

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

0 Feet 150 300 600

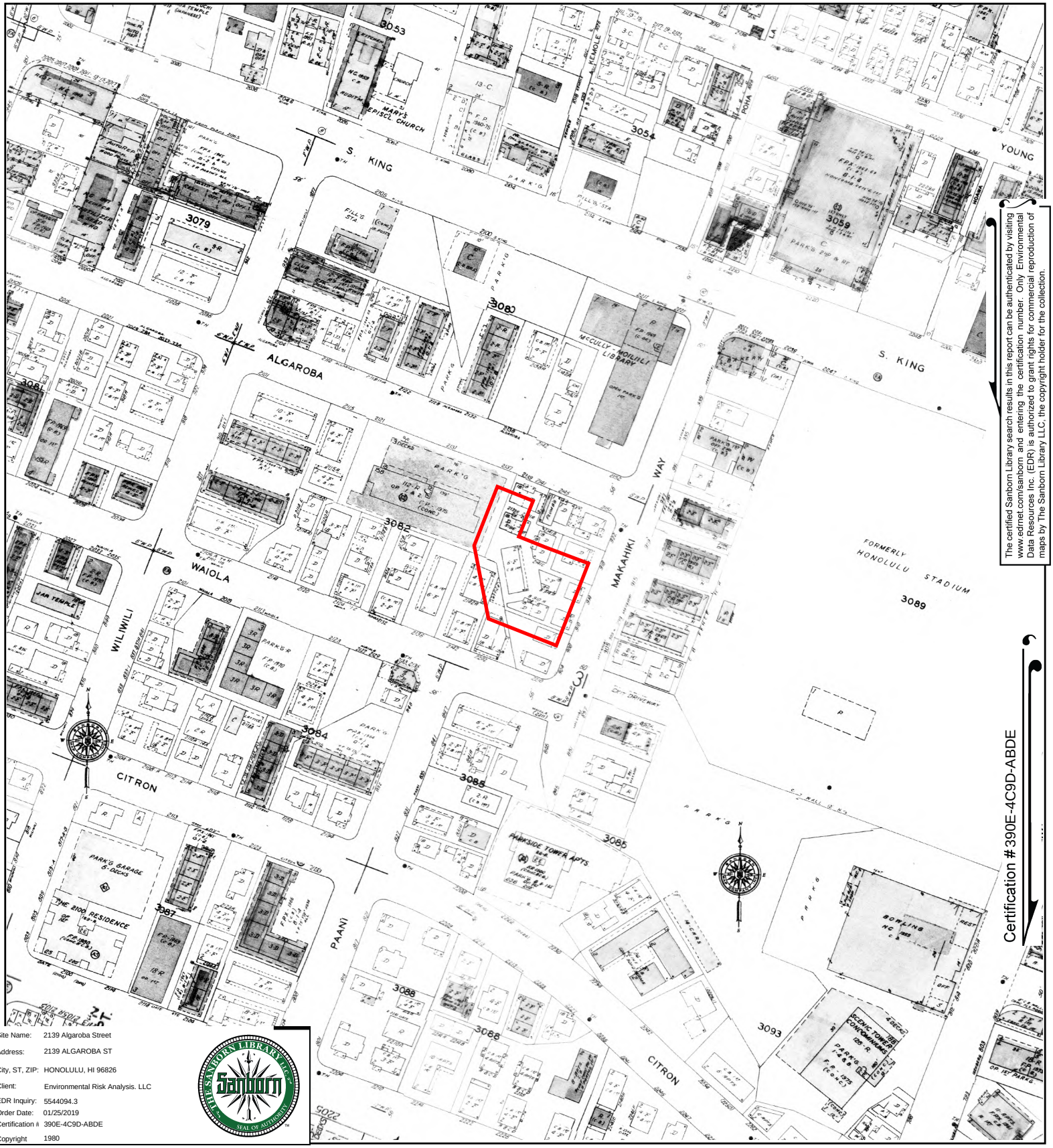


Volume 3, Sheet 313
Volume 3, Sheet 312

N

Certified Sanborn® Map

1980



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Certification #390E-4C9D-ABDE

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City, ST, ZIP:	HONOLULU, HI 96826
Client:	Environmental Risk Analysis. LLC
EDR Inquiry:	5544094.3
Order Date:	01/25/2019
Certification #	390E-4C9D-ABDE
Copyright	1980

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

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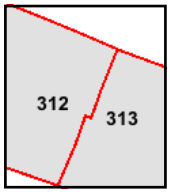
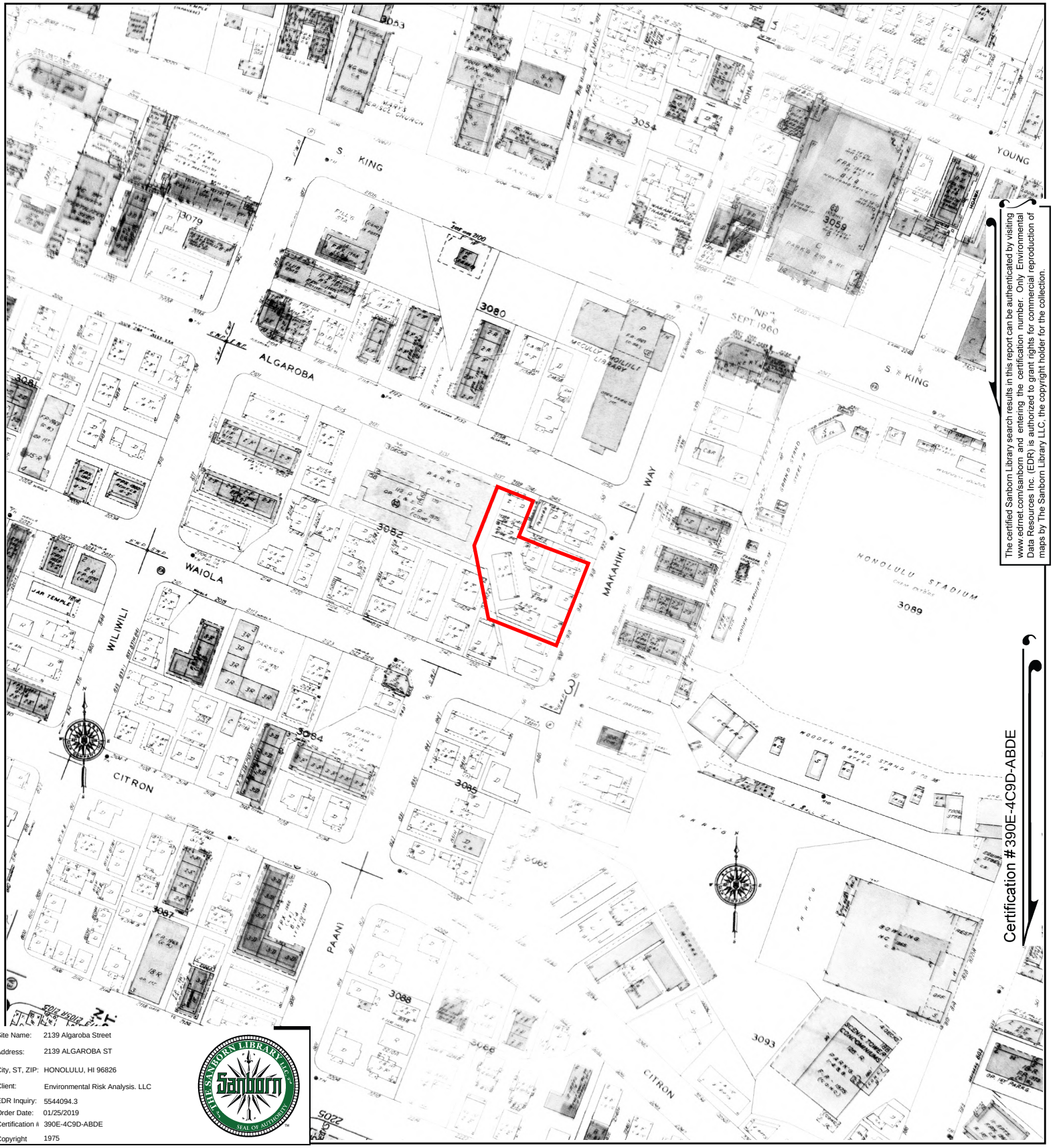


Volume 3, Sheet 313
Volume 3, Sheet 312

N

Certified Sanborn® Map

1975



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Address:	2139 ALGAROBA ST
City, ST, ZIP:	HONOLULU, HI 96826
Client:	Environmental Risk Analysis. LLC
EDR Inquiry:	5544094.3
Order Date:	01/25/2019
Certification #	390E-4C9D-ABDE
Copyright	1975

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

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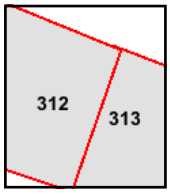
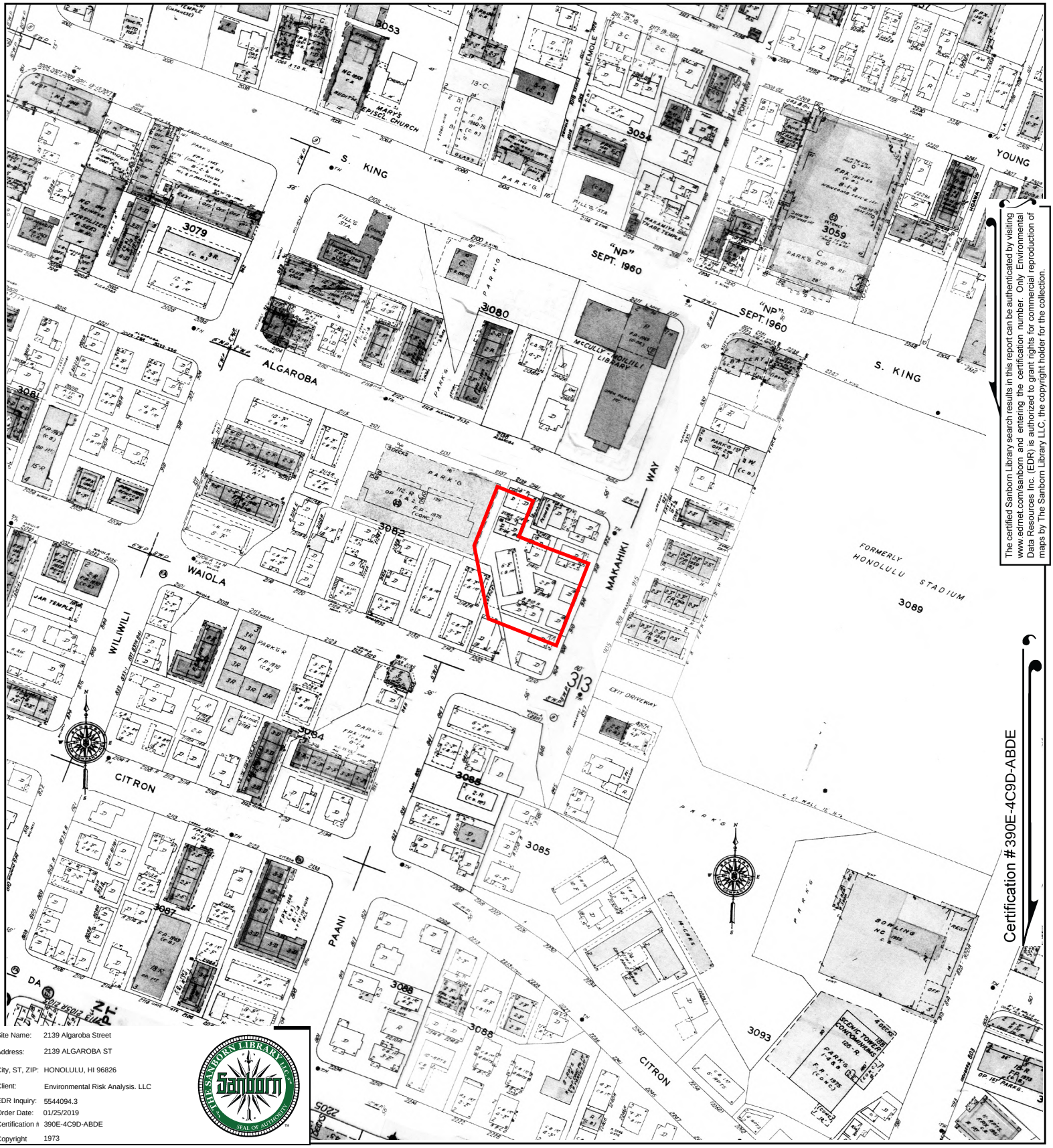


Volume 3, Sheet 312
Volume 3, Sheet 313

N

Certified Sanborn® Map

1973



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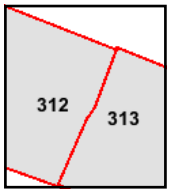
Certification #390E-4C9D-ABDE

Site Name:	2139 Algaroba Street
Address:	2139 ALGAROBA ST
City, ST, ZIP:	HONOLULU, HI 96826
Client:	Environmental Risk Analysis. LLC
EDR Inquiry:	5544094.3
Order Date:	01/25/2019
Certification #	390E-4C9D-ABDE
Copyright	1973

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

0 Feet 150 300 600

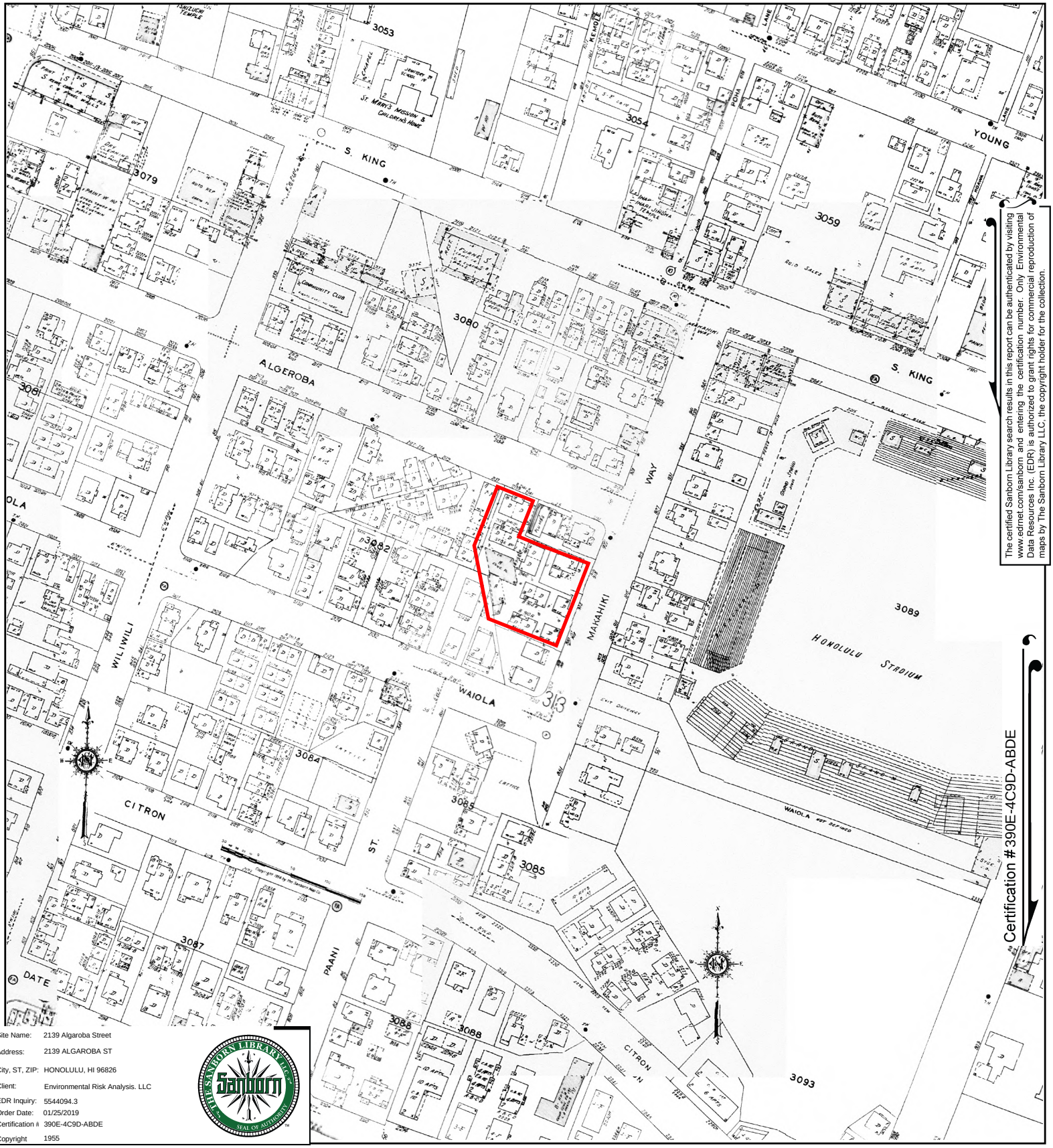


Volume 3, Sheet 313
Volume 3, Sheet 312

N

Certified Sanborn® Map

1955



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Certification #390E-4C9D-ABDE

Site Name:	2139 Algaroba Street
Address:	2139 ALGAROBA ST
City, ST, ZIP:	HONOLULU, HI 96826
Client:	Environmental Risk Analysis. LLC
EDR Inquiry:	5544094.3
Order Date:	01/25/2019
Certification #	390E-4C9D-ABDE
Copyright	1955

This Certified Sanborn Map combines the following sheets.
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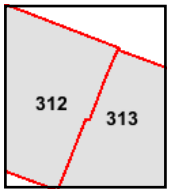
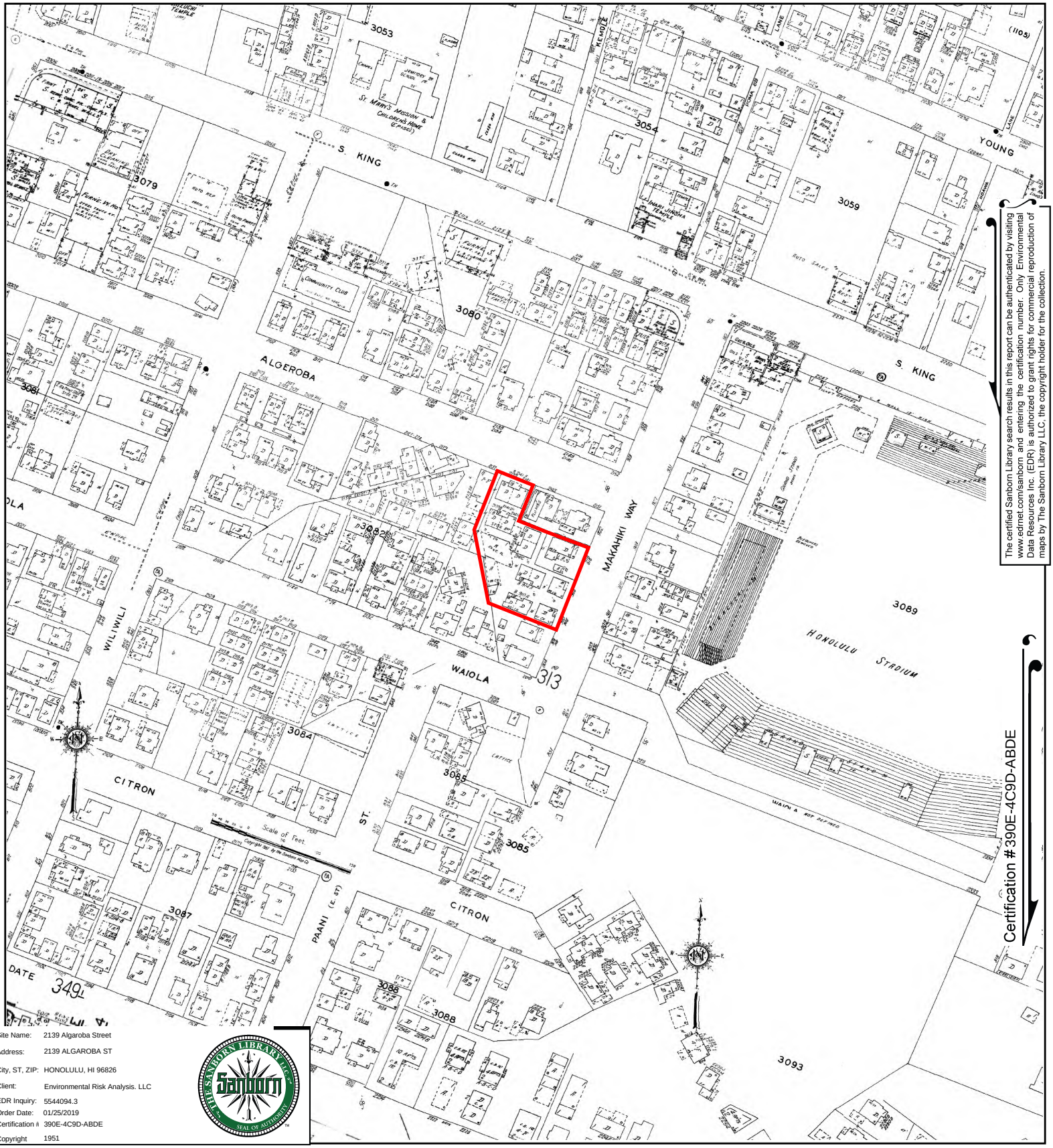


Volume 3, Sheet 313
Volume 3, Sheet 312
Volume 3, Sheet 313
Volume 3, Sheet 312

N

Certified Sanborn® Map

1951



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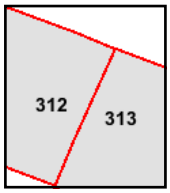
Certification #390E-4C9D-ABDE

Site Name:	2139 Algaroba Street
Address:	2139 ALGAROBA ST
City, ST, ZIP:	HONOLULU, HI 96826
Client:	Environmental Risk Analysis. LLC
EDR Inquiry:	5544094.3
Order Date:	01/25/2019
Certification #	390E-4C9D-ABDE
Copyright	1951

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

0 Feet 150 300 600

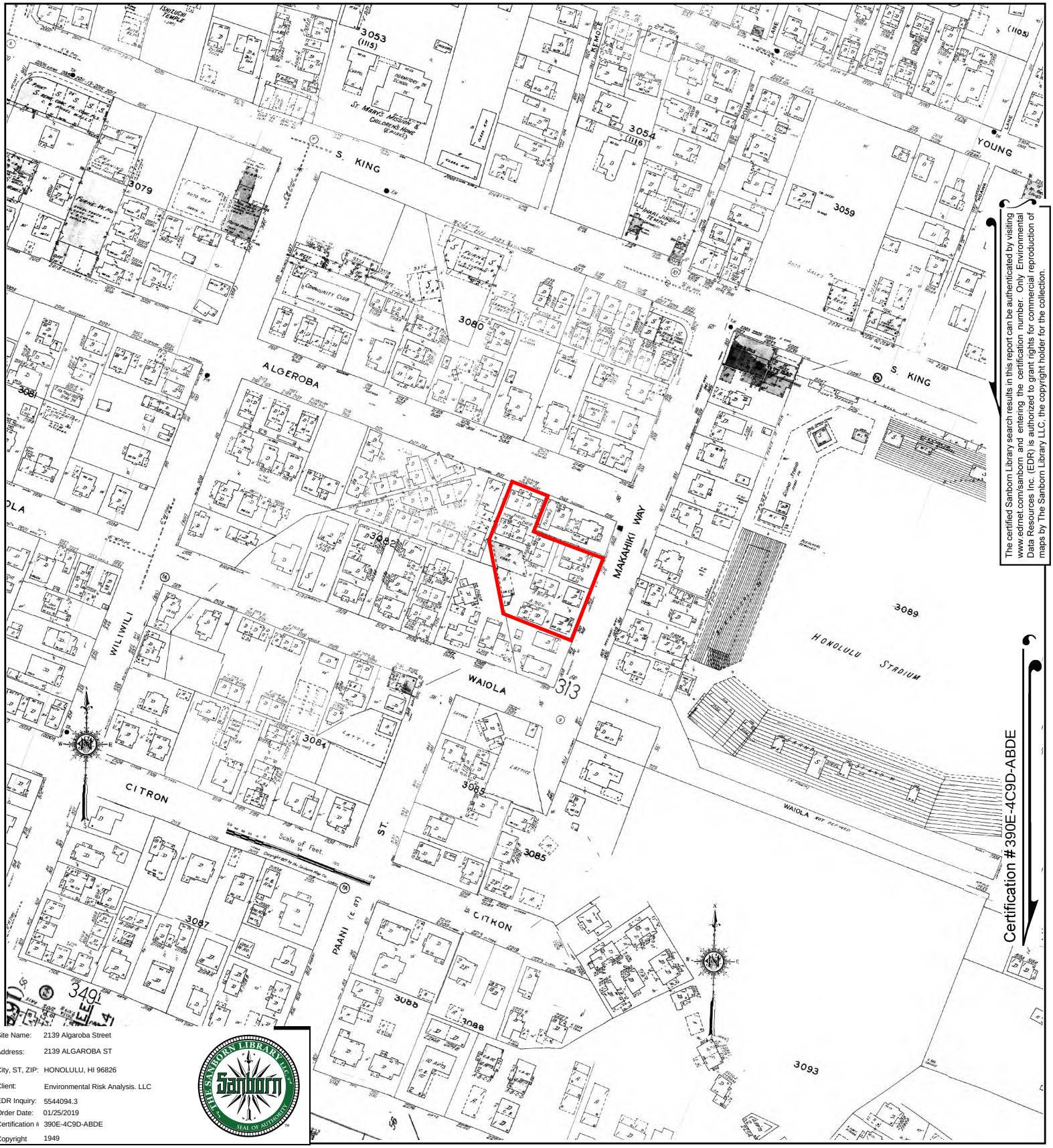


Volume 3, Sheet 313
Volume 3, Sheet 312

N

Certified Sanborn® Map

1949



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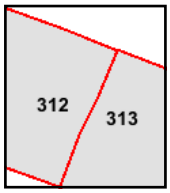
Site Name:	2139 Algaroba Street
Address:	2139 ALGAROBA ST
City, ST, ZIP:	HONOLULU, HI 96826
Client:	Environmental Risk Analysis. LLC
EDR Inquiry:	5544094.3
Order Date:	01/25/2019
Certification #	390E-4C9D-ABDE
Copyright	1949

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

0 Feet 150 300 600

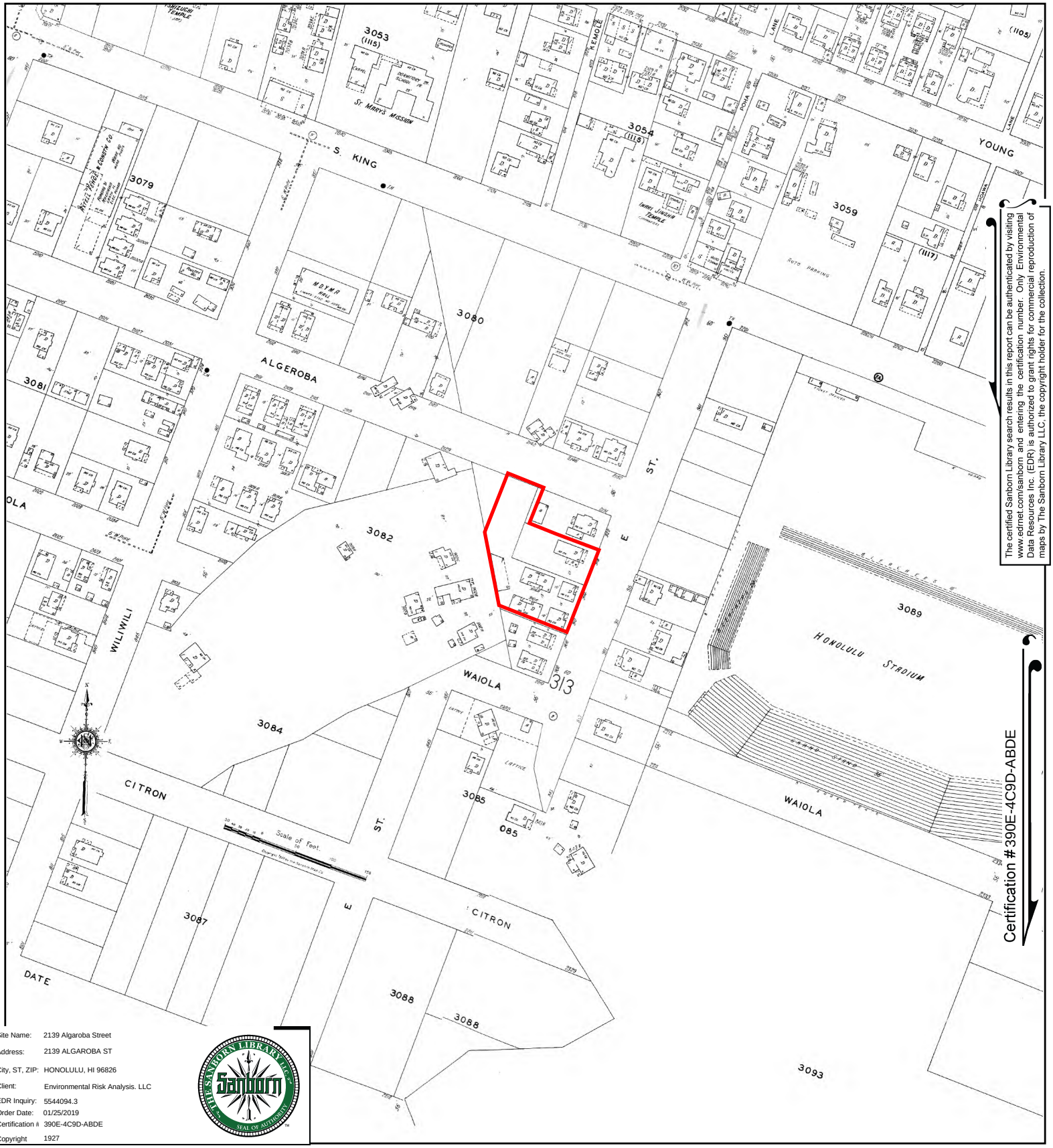


Volume 3, Sheet 313
Volume 3, Sheet 312

N

Certified Sanborn® Map

1927



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Certification #390E-4C9D-ABDE

Site Name:	2139 Algaroba Street
Address:	2139 ALGAROBA ST
City, ST, ZIP:	HONOLULU, HI 96826
Client:	Environmental Risk Analysis. LLC
EDR Inquiry:	5544094.3
Order Date:	01/25/2019
Certification #	390E-4C9D-ABDE
Copyright	1927

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

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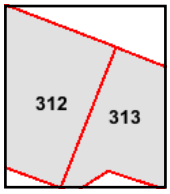

Volume 3, Sheet 313
Volume 3, Sheet 312

N

2139 Algaroba Street

2139 ALGAROBA ST

HONOLULU, HI 96826

Inquiry Number: 5544094.4

January 25, 2019

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

01/25/19

Site Name:	Client Name:
2139 Algaroba Street	Environmental Risk Analysis. LLC
2139 ALGAROBA ST	905A Makahiki Way
HONOLULU, HI 96826	HONOLULU, HI 96826
EDR Inquiry # 5544094.4	Contact: Vincent Yanagita

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Environmental Risk Analysis. LLC were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# NA

Project: NA

Coordinates:

Latitude:	21.292875 21° 17' 34" North
Longitude:	-157.828121 -157° 49' 41" West
UTM Zone:	Zone 4 North
UTM X Meters:	621559.11
UTM Y Meters:	2355012.95
Elevation:	9.29' above sea level

Maps Provided:

2013
1998
1983
1970
1969
1959
1954
1953
1928

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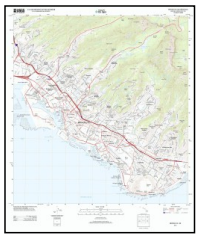
Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2013 Source Sheets



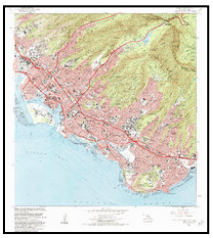
Honolulu
2013
7.5-minute, 24000

1998 Source Sheets

Honolulu
1998
7.5-minute, 24000
Aerial Photo Revised 1998

1983 Source Sheets

Honolulu
1983
7.5-minute, 24000
Aerial Photo Revised 1978



Honolua
1983
7.5-minute, 24000
Aerial Photo Revised 1978

1970 Source Sheets

OAHU
1970
15-minute, 62500

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

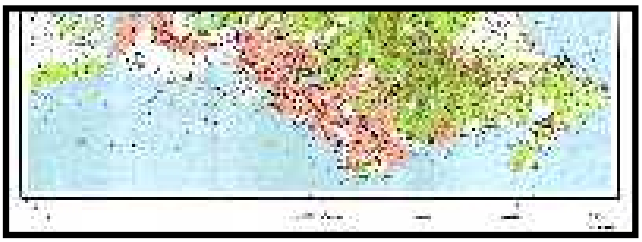
1969 Source Sheets

Honolulu
1969
7.5-minute, 24000
Aerial Photo Revised 1968

1959 Source Sheets

Honolulu
1959
7.5-minute, 24000
Aerial Photo Revised 1959

1954 Source Sheets



HONOLULUVICINITYSOUTH
1954
7.5-minute, 24000

1953 Source Sheets

Honolulu
1953
7.5-minute, 24000
Aerial Photo Revised 1952

Topo Sheet Key

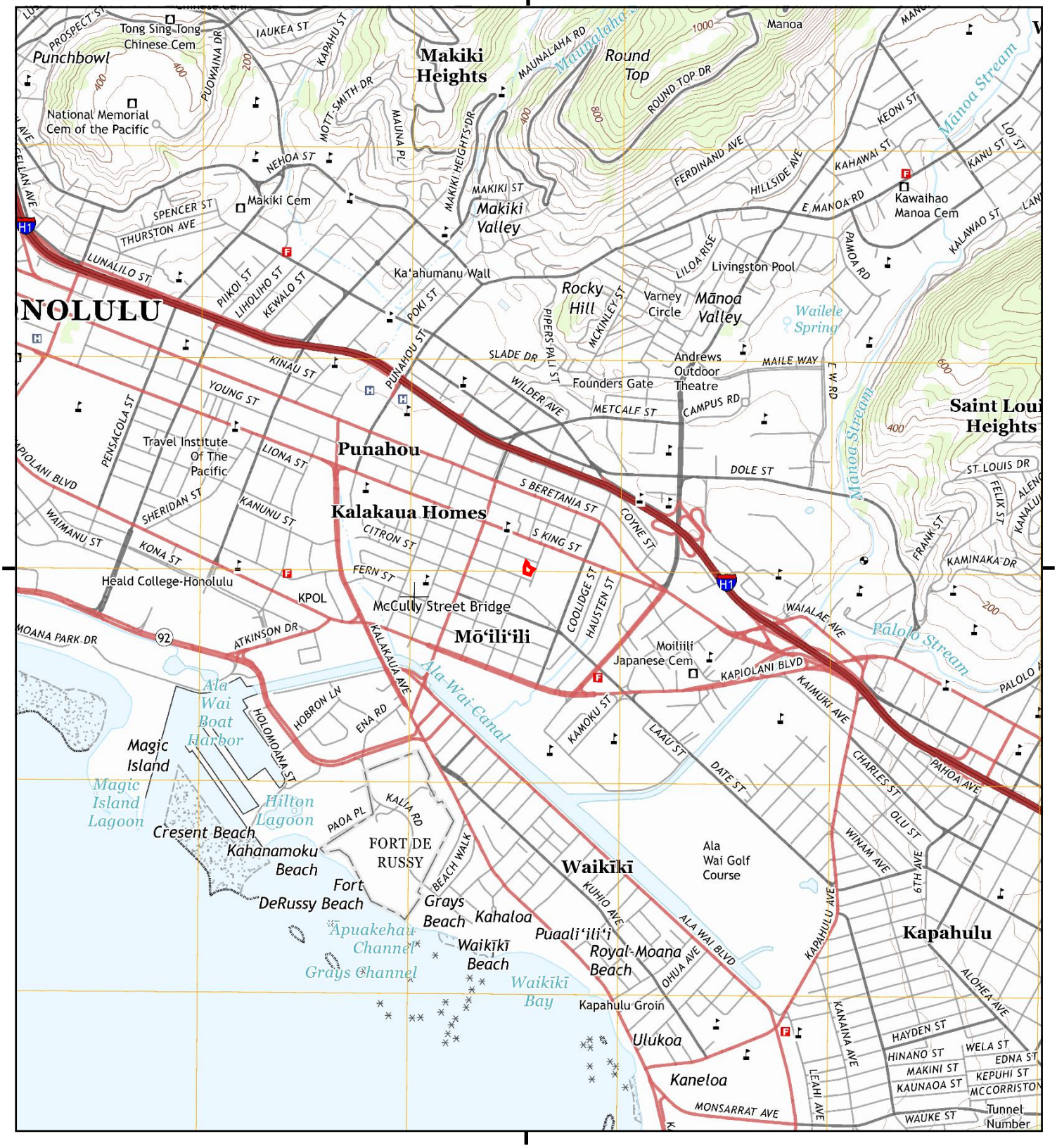
This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1928 Source Sheets

HONOLULU
1928
7.5-minute, 20000

Historical Topo Map

2013



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

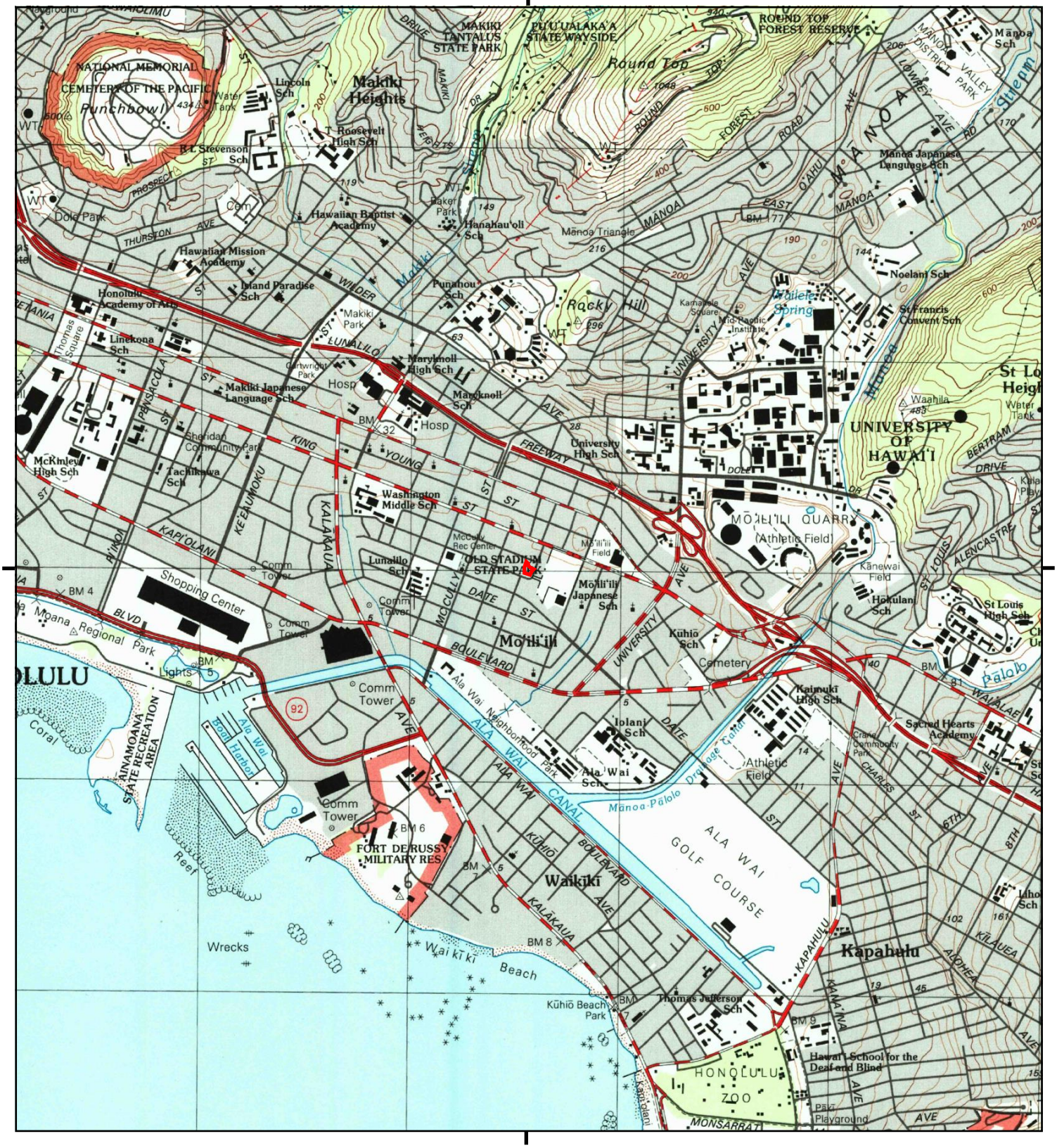
TP, Honolulu, 2013, 7.5-minute

SITE NAME: 2139 Algaroba Street
ADDRESS: 2139 ALGAROBA ST
HONOLULU, HI 96826
CLIENT: Environmental Risk Analysis. LLC

N

Historical Topo Map

1998



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

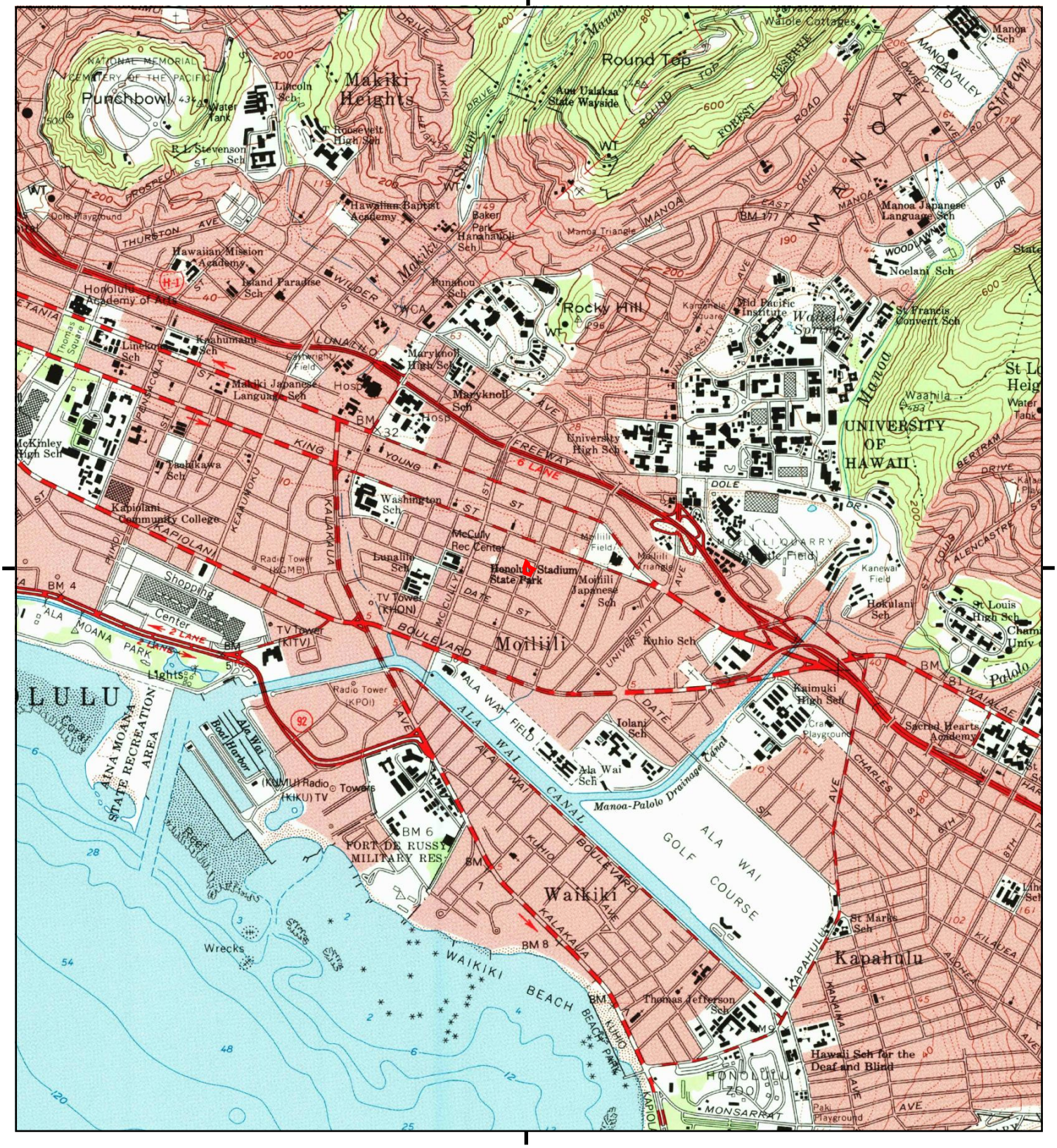
TP, Honolulu, 1998, 7.5-minute

SITE NAME: 2139 Algaroba Street
ADDRESS: 2139 ALGAROBA ST
HONOLULU, HI 96826
CLIENT: Environmental Risk Analysis. LLC

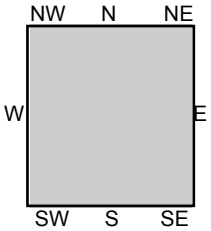
N

Historical Topo Map

1983



This report includes information from the following map sheet(s).



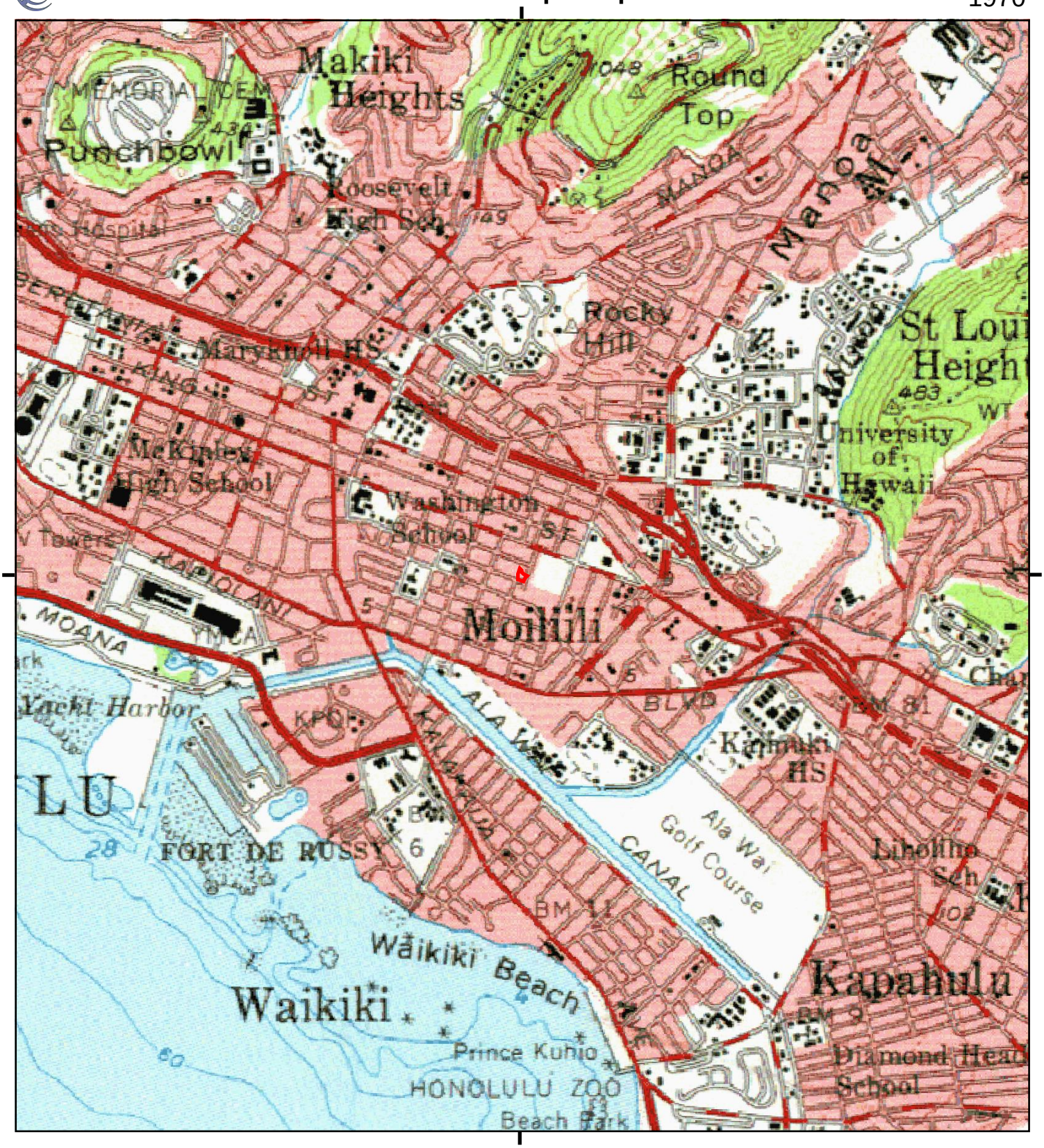
TP, Honolulu, 1983, 7.5-minute
E, Honolua, 1983, 7.5-minute

SITE NAME: 2139 Algaroba Street
ADDRESS: 2139 ALGAROBA ST
HONOLULU, HI 96826
CLIENT: Environmental Risk Analysis. LLC

N

Historical Topo Map

1970



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

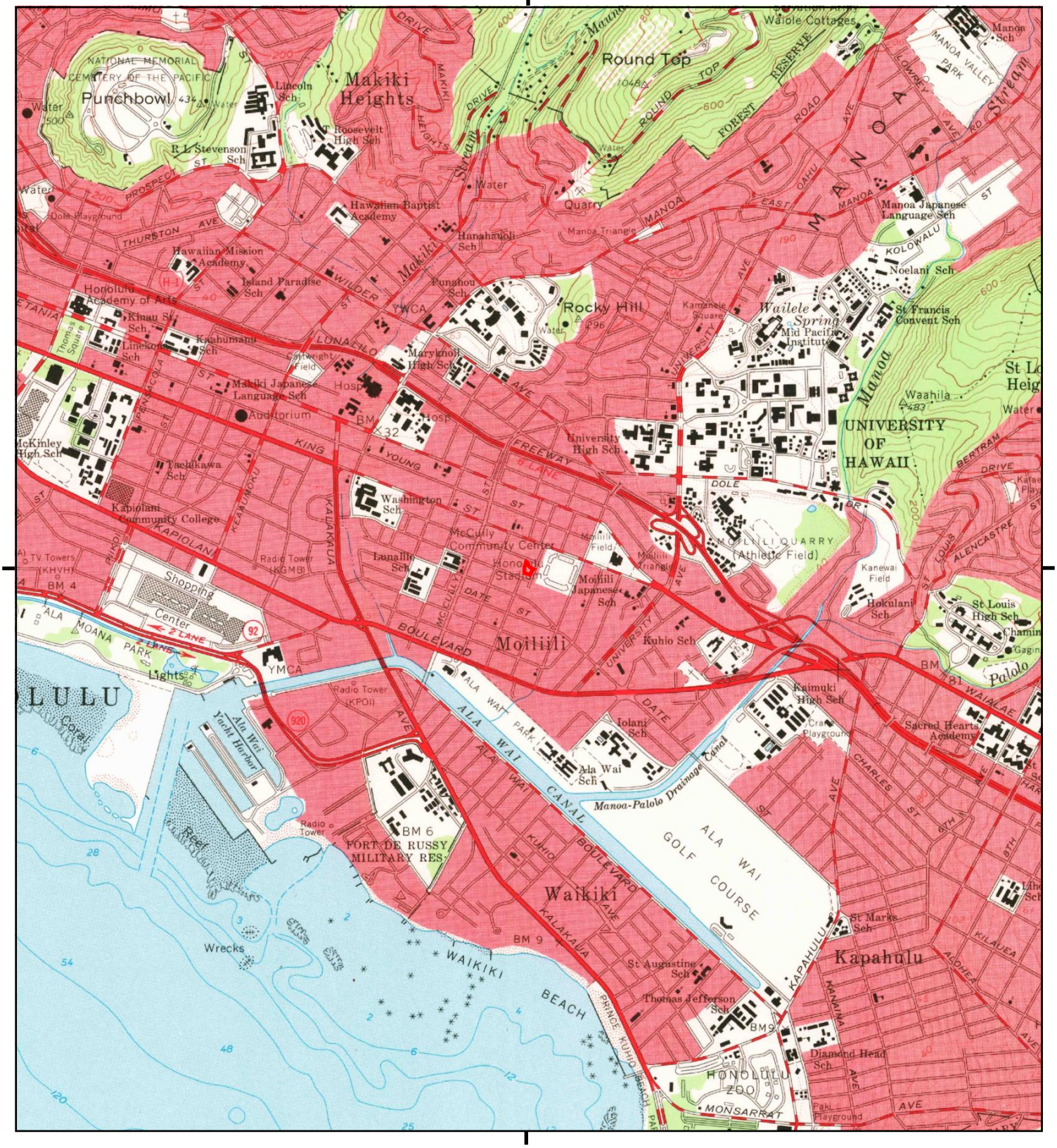
TP, OAHU, 1970, 15-minute

SITE NAME: 2139 Algaroba Street
ADDRESS: 2139 ALGAROBA ST
HONOLULU, HI 96826
CLIENT: Environmental Risk Analysis. LLC

N

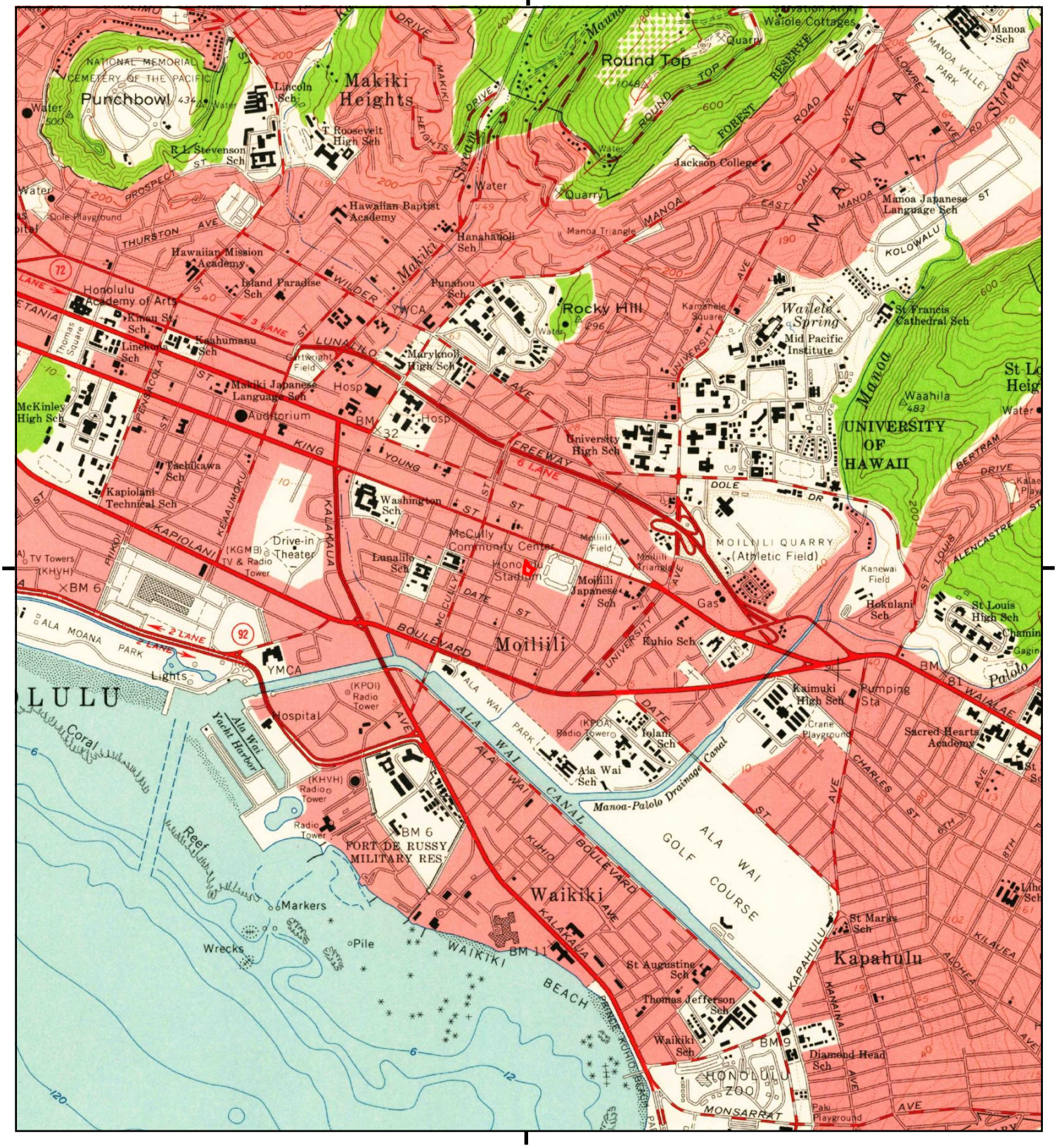
Historical Topo Map

1969


Punchbowl
Makiki Heights
Round Top
Rocky Hill
Quarry
Waiole Cottages
Manoa Sch
Lincoln Sch
T Roosevelt High Sch
R L Stevenson Sch
Hawaiian Baptist Academy
Hawaiian Mission Academy
Honolulu Academy of Arts
Island Paradise Sch
Hanahauoli Sch
Punahou Sch
Manoa Japanese Language Sch
Noelani Sch
St Francis Convent Sch
Mid Pacific Institute
Wailele Spring
Maryknoll High Sch
Makiki Japanese Language Sch
Auditorium
McKinley High Sch
Yachikawa Sch
Kapiolani Community College
Washington Sch
McCully Community Center
Lunalilo Sch
Moiliili Japanese Sch
Moiliili Quarry (Athletic Field)
University High Sch
UNIVERSITY OF HAWAII
Waahila
Kanewai Field
Hokulani Sch
St Louis High Sch
Palolo
Kuhio Sch
Kaimuki High Sch
Sacred Hearts Academy
Iolani Sch
Ala Wai Sch
Manoa-Palolo Drainage Canal
ALA WAI GOLF COURSE
Moiliili
Waikiki
Kapahulu
Ala Wai Yacht Harbor
FORT DE RUSSY MILITARY RES
Wrecks
WAIKIKI BEACH
St Augustine Sch
Thomas Jefferson Sch
St Marks Sch
Diamond Head Sch
HONOLULU ZOO
Shopping Center
YMCA
Radio Tower (KGMB)
Radio Tower (KPOI)
TV Towers (KHVH)
Dole Playground
Kaimuki Playground
Paki Playground
Kanaka Square
Thomas Square
Cartwright Field
Hosp
BM 4
BM 6
BM 9
BM 31
BM 32
Water
Lights
Coral
Red
Manoa Triangle
Moiliili Triangle
Moiliili Field
Honolulu Stadium
Manoa Valley Park
Manoa Stream
Makiki Stream
Manoa Cemetery
Nuuanu Pali Drive
Pali Highway
Kalakaua Ave
Kapiolani Blvd
Ala Moana Blvd
Ala Wai Canal
Kuhio Ave
Kapahulu Ave
Monsarrat Ave
Waialae Ave
Kilauea Ave
Alencastre St
Bertram Drive
Lowrey Ave
Manoa Road
Dole St
King St
Beretania St
Wilder Ave
Punchbowl St
Prospect St
Thurston Ave
Lunalilo St
Pensacola St
Keeaumoku St
Piikoi St
Date St
University Ave
Cartwright Rd
Kolowalu St
Oahu Ave
Forest Reserve Road
Round Top Drive
Makiki Heights Drive
Ala Moana Park
Ala Wai Park
Prince Kuhio Beach Park
Kaiolani Park
Kaimuki Playground
Kapiolani Park
Kaiolani Park
Kaimuki Playground
Kaimuki Playground
Kaimuki Playground

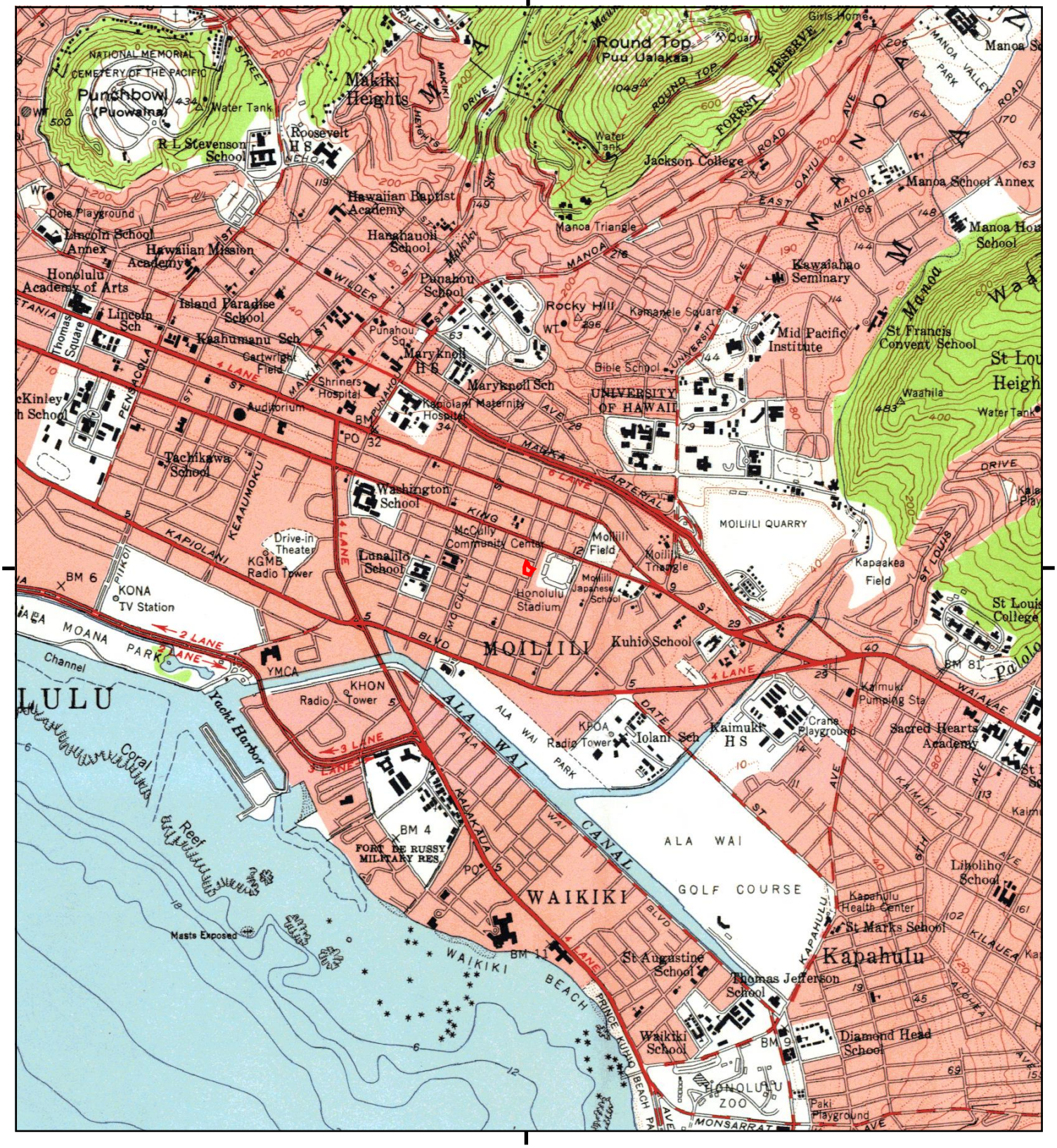
Historical Topo Map

1959


Punchbowl
NATIONAL MEMORIAL CEMETERY OF THE PACIFIC
Makiki Heights
Round Top
Waiole Cottages
Manoa Sch
Lincoln Sch
T Roosevelt High Sch
R L Stevenson Sch
Jackson College
Hawaiian Baptist Academy
Hanahanoli Sch
Manoa Japanese Language Sch
Hawaiian Mission Academy
Island Paradise Sch
Punahou Sch
Honolulu Academy of Arts
Rocky Hill
Wailele Spring
Mid Pacific Institute
St Francis Cathedral Sch
Kinau St Sch
Linekona Sch
Kaahumanu Sch
Maryknoll High Sch
Makiki Japanese Language Sch
Auditorium
Waahila
UNIVERSITY OF HAWAII
McKinley High Sch
University High Sch
Tachikawa Sch
Kapiolani Technical Sch
Washington Sch
McCully Community Center
Drive-in Theater
Lunalilo Sch
Honolulu Stadium
Moiliili Japanese Sch
MOILIILI QUARRY (Athletic Field)
Kanewai Field
Hokulani Sch
St Louis High Sch
Moiliili
Kuhio Sch
Kaimuki High Sch
Pumping Sta
Sacred Hearts Academy
Iolani Sch
Ala Wai Sch
Manoa-Palolo Drainage Canal
ALA WAI GOLF COURSE
Hospital
Ala Wai Yacht Harbor
FORT DE RUSSY MILITARY RES
Waikiki
Markers
Wrecks
Pile
WAIKIKI BEACH
St Augustine Sch
Thomas Jefferson Sch
Waikiki Sch
Kapahulu
St Marks Sch
Diamond Head Sch
HONOLULU ZOO
Paki Playground
Coral Reef
Lights
YMCA
Dole Playground
Thomas Square
Kamanele Square
Crane Playground
Manoa Triangle
Moiliili Triangle
Moiliili Field
Gas
Quarry
Water
Hosp
BM 6
BM 11
BM 9
BM 81
BM 32
(KGMB) TV & Radio Tower
(KHVH) Radio Tower
(KPOI) Radio Tower
(KPOA) Radio Tower
TV Towers (KHYH)
KING
KAPIOLANI
BOULEVARD
FREEWAY
6 LANE
2 LANE
3 LANE
DOLE
DR
UNIVERSITY
MANOA
PALOLO
WAIALAE
KALAKAUA
KAPAHULU
KILAUEA
ALOHEA
MONSARRAT
KOLOWALU
EAST
OAHU
ROAD
FOREST
RESERVE
ROUND
TOP
DRIVE
MAKIKI
HEIGHTS
PROSPECT
THURSTON
AVE
WILDER
LUNALILO
YOUNG
ST
PENSICOLA
KEAUMOKU
PIIKOI
DATE
McCULLY
BERTRAM
ALENCASTRE
LOUIS
CHARLES
MANOA VALLEY
PARK
LOWREY
Stream
Manoa
Paloto
Palolo
Kalaeo
Gagin
Chamin
Lihue Sch
Kalaeo Play
Waiola
Water
Quarry
Rocky Hill
Waahila
Kapahulu
Moiliili
Waikiki
Palolo
Manoa
Makiki
Round Top
Punchbowl
Kapiolani
Kaimuki
Kalihi

Historical Topo Map

1954



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

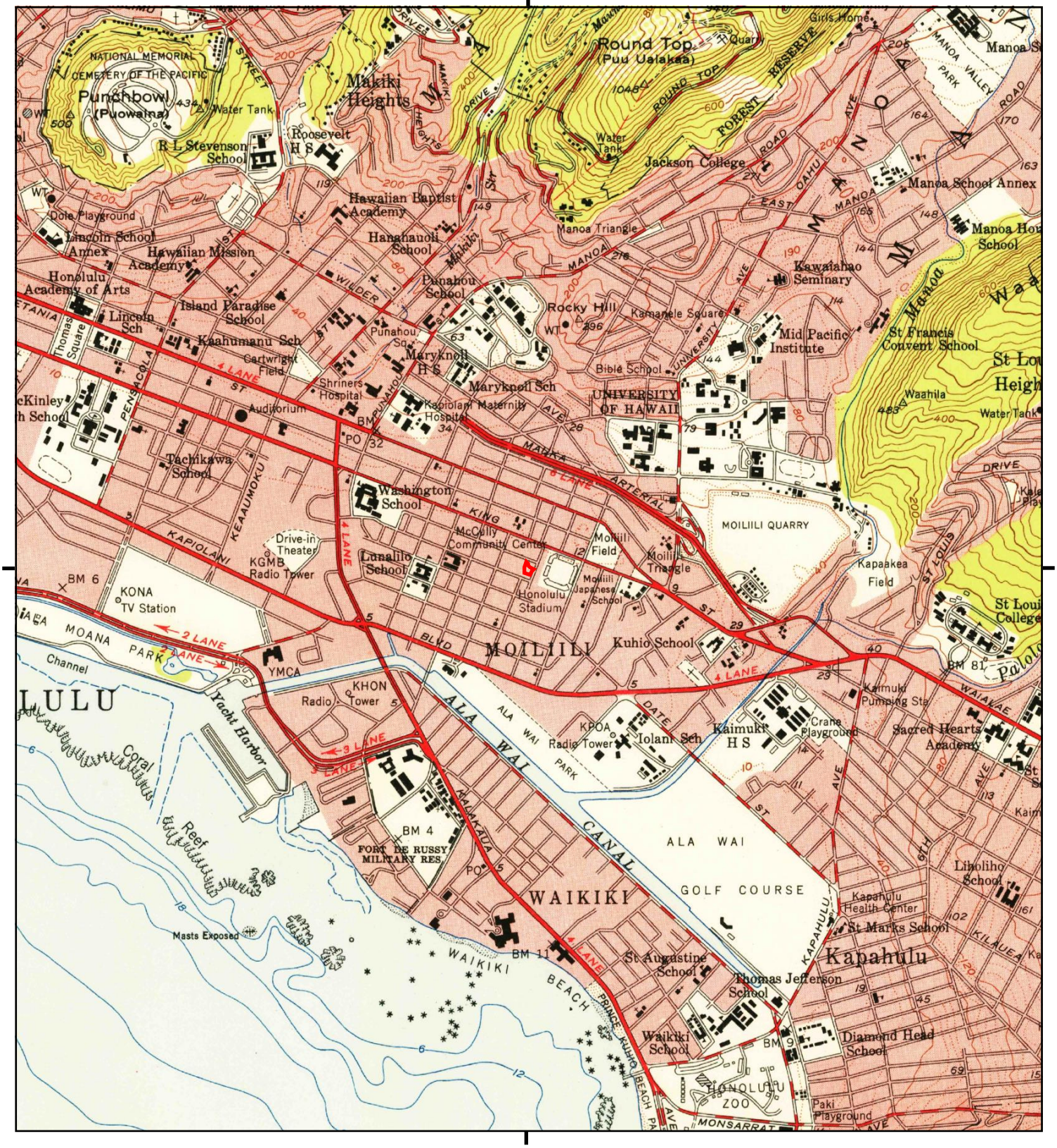
TP, HONOLULUVICINITYSOUTH, 1954, 7.5-minute

SITE NAME: 2139 Algaroba Street
ADDRESS: 2139 ALGAROBA ST
HONOLULU, HI 96826
CLIENT: Environmental Risk Analysis. LLC

N

Historical Topo Map

1953



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Honolulu, 1953, 7.5-minute

SITE NAME: 2139 Algaroba Street
ADDRESS: 2139 ALGAROBA ST
HONOLULU, HI 96826
CLIENT: Environmental Risk Analysis. LLC

N

Historical Topo Map

1928

This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, HONOLULU, 1928, 7.5-minute

SITE NAME: 2139 Algaroba Street
ADDRESS: 2139 ALGAROBA ST
HONOLULU, HI 96826
CLIENT: Environmental Risk Analysis. LLC

N

2139 Algaroba Street

2139 ALGAROBA ST

HONOLULU, HI 96826

Inquiry Number: 5544094.8

January 25, 2019

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

01/25/19

Site Name:

2139 Algaroba Street
2139 ALGAROBA ST
HONOLULU, HI 96826
EDR Inquiry # 5544094.8

Client Name:

Environmental Risk Analysis. LLC
905A Makahiki Way
HONOLULU, HI 96826
Contact: Vincent Yanagita

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	*Scale*	*Details*	*Source*
2006	1"=500'	Flight Date: July 18, 2006	USGS
1992	1"=500'	Flight Date: September 19, 1992	USGS
1985	1"=500'	Flight Date: April 29, 1985	USGS
1978	1"=500'	Flight Date: February 19, 1978	USGS
1975	1"=500'	Flight Date: July 15, 1975	USGS
1968	1"=500'	Flight Date: February 06, 1968	USGS

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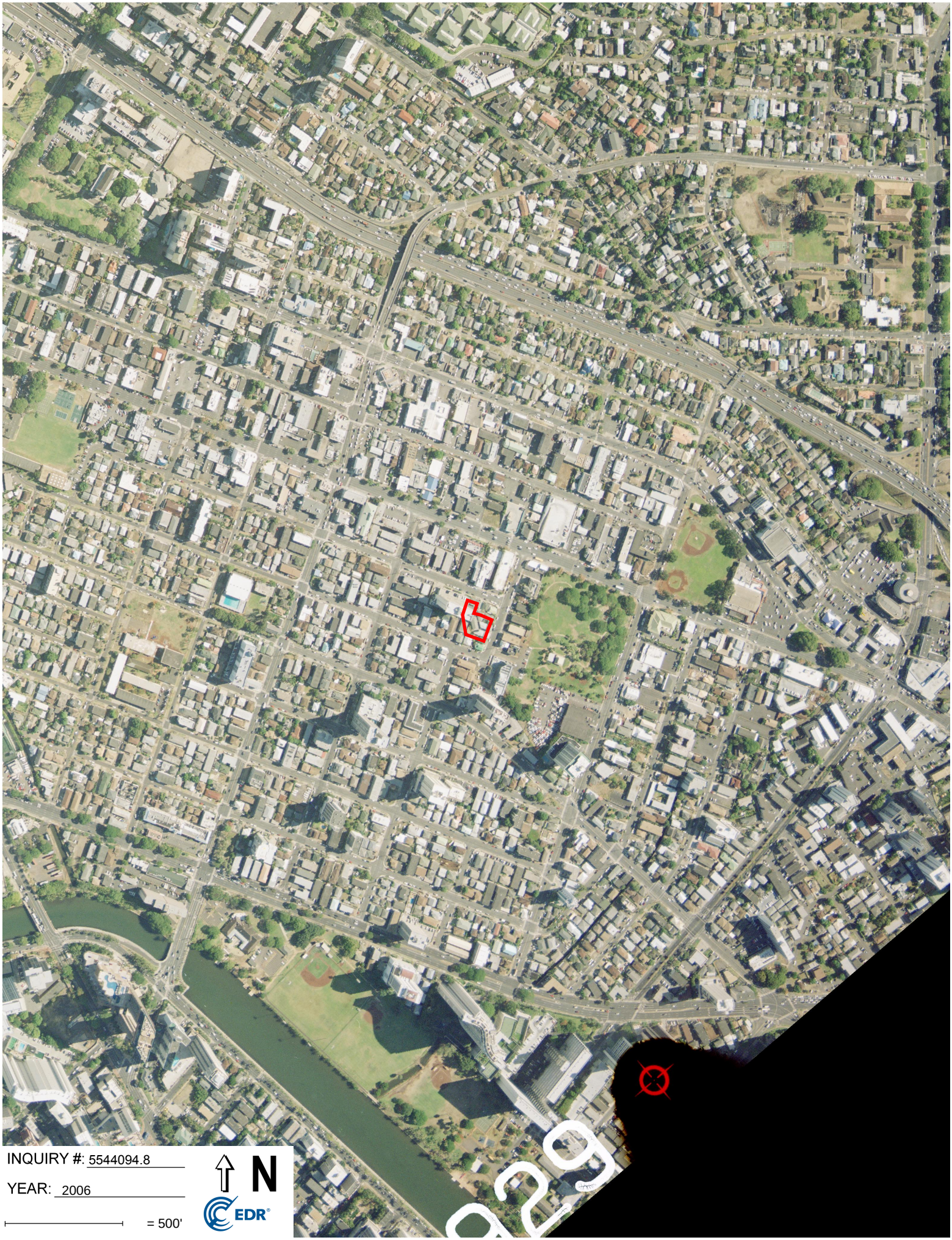


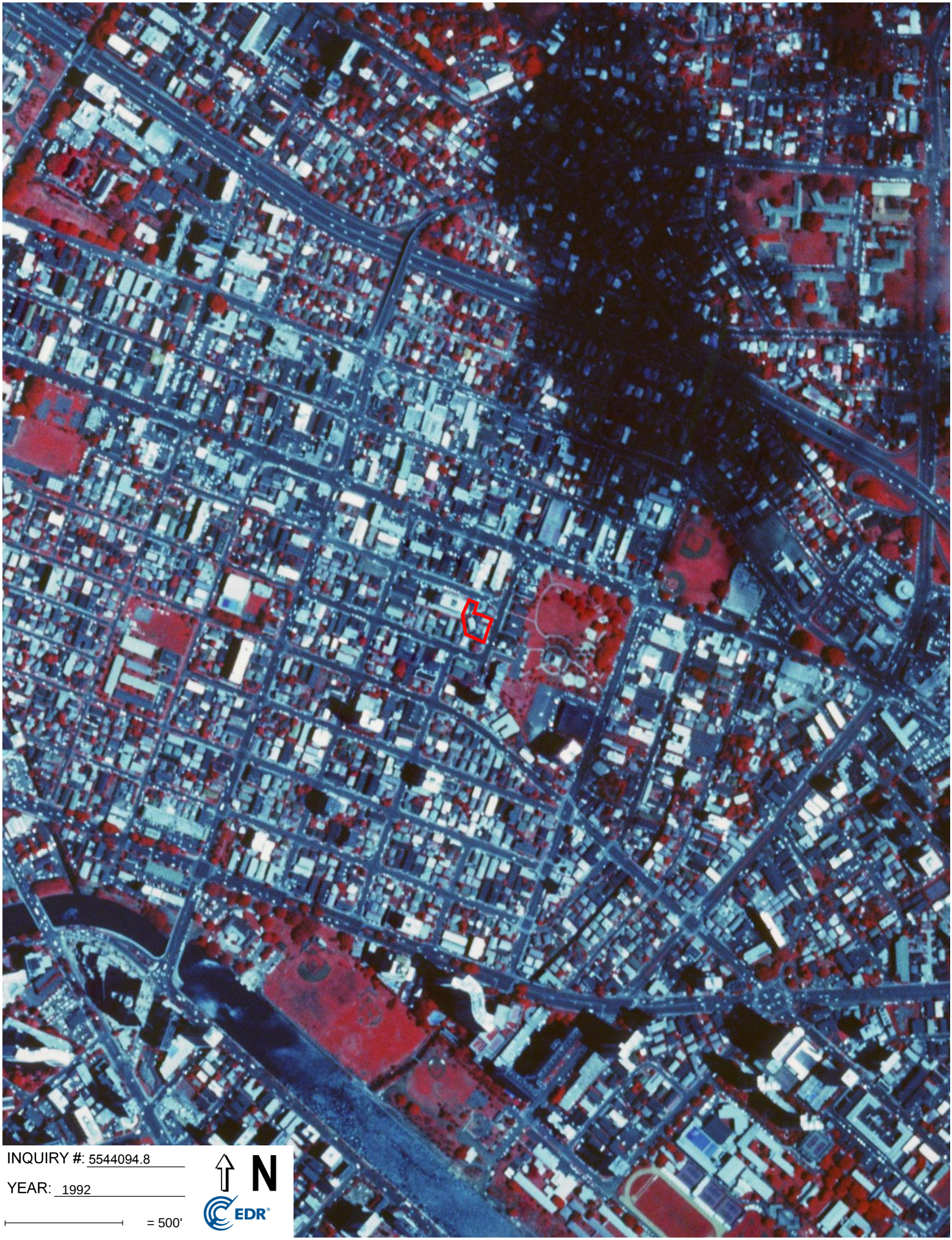
INQUIRY #: 5544094.8

YEAR: 2006

= 500'

N

EDR



INQUIRY #: 5544094.8

YEAR: 1992

= 500'

N

EDR

INQUIRY #: 5544094.8

YEAR: 1985

= 500'

N

EDR

INQUIRY #: 5544094.8

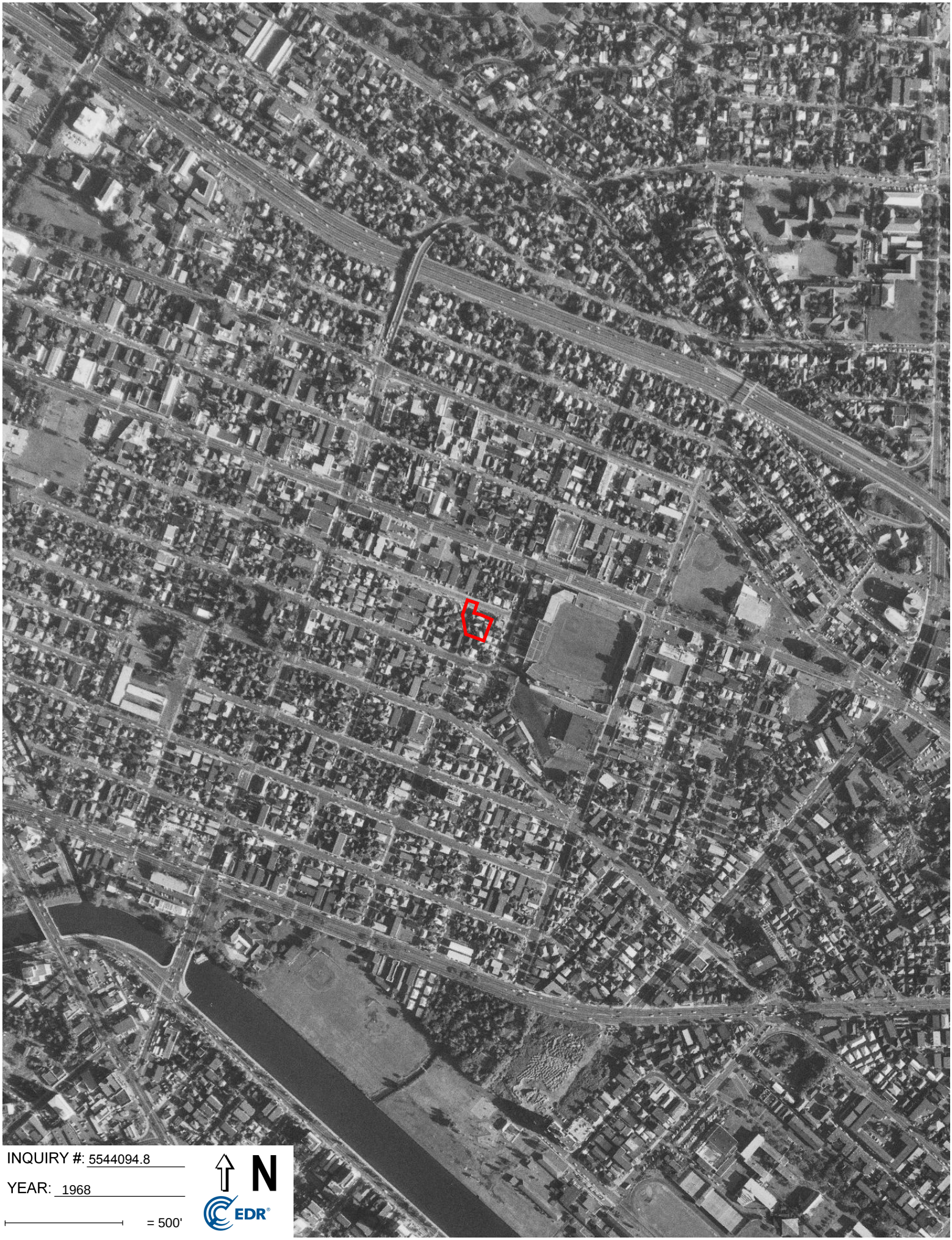
YEAR: 1978

= 500'

N

EDR

INQUIRY #: 5544094.8
YEAR: 1975
= 500'
N
EDR



INQUIRY #: 5544094.8

YEAR: 1968

= 500'

N

EDR

2139 Algaroba Street
2139 ALGAROBA ST
HONOLULU, HI 96826

Inquiry Number: 5544094.5
January 25, 2019

The EDR-City Directory Image Report

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

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Executive Summary

Findings

City Directory Images

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	Target Street	Cross Street	Source
2014	☑	☑	EDR Digital Archive
2010	☑	☑	EDR Digital Archive
2005	☑	☑	EDR Digital Archive
2000	☑	☑	EDR Digital Archive
1995	☑	☑	EDR Digital Archive
1992	☑	☑	EDR Digital Archive
1987	☑	☑	EDR Digital Archive
1982	☑	☑	EDR Digital Archive
1977	☑	☑	EDR Digital Archive

FINDINGS

TARGET PROPERTY STREET

2139 ALGAROBA ST
HONOLULU, HI 96826

Year	*CD Image*	*Source*
ALGAROBA ST		
2014	pg A2	EDR Digital Archive
2010	pg A7	EDR Digital Archive
2005	pg A12	EDR Digital Archive
2000	pg A16	EDR Digital Archive
1995	pg A19	EDR Digital Archive
1992	pg A23	EDR Digital Archive
1987	pg A25	EDR Digital Archive
1982	pg A27	EDR Digital Archive
1977	pg A29	EDR Digital Archive

FINDINGS

CROSS STREETS

Year	*CD Image*	*Source*

MAKAHIKI WAY

2014	pg. A5	EDR Digital Archive
2010	pg. A10	EDR Digital Archive
2005	pg. A14	EDR Digital Archive
2000	pg. A18	EDR Digital Archive
1995	pg. A21	EDR Digital Archive
1992	pg. A24	EDR Digital Archive
1987	pg. A26	EDR Digital Archive
1982	pg. A28	EDR Digital Archive
1977	pg. A30	EDR Digital Archive

City Directory Images

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

ALGAROBA ST 2014

2026	UNITED KOREAN ASSOCIATION HAWA
	WDM INC
2104	YOUNG & MARY FOODS CORPORATION
2105	LGCY LLC
2115	HIRASHIKI, CHARLES Y
	MITSUTANI, GARY I
	NAKAMA, MAURICE M
	SCHMULLING, KIT
	TAKAHAMA, BETSY M
2118	HONMA, KAREN T
	KALUNA, MAIRENGK
	MONTERO, JOCELA T
	SUE, TERRENCE D
	TAMAKI, ANPEI P
	USHIJIMA, BURT A
	YANAGAWA, WALLACE K
2121	ALAJAR, ROBIN M
	ARAI, NAOYA
	ARAKAKI, BOB Y
	ASATO, TAKEYO
	BABA, THOMAS K
	BOHAN, ROBERT K
	CHAPPELL, JIM
	CHARISMA INDUSTRIES INC
	CHOE, IL K
	CHUNG, CLEONE L
	CLARK, ROBERT C
	DANNY YIM CAPITAL LLC
	DOI, TERI L
	E K SILVA
	ELLIS, RITA R
	FERNANDES, JACOB K
	FONG RENTALS
	FONG, ERIC
	FUJIMOTO, RUSSELL H
	HABLE, MICHAEL W
	HAITSUKA, KENNETH I
	HAMADA, BETTY K
	HANA HOU BISTRO LLC
	HARRIS, RICHARD S
	HAYASHIDA, GORDON A
	HIRATA, STEPHEN T
	IJIRI, GLENN B
	IKEDA, BETTY K
	ISHITANI, GLENN T
	JEON, ANGELA
	KASHIWAMURA, MARK T
	KIM, ESTHER
	KIM, MARTIN Y
	KITAGAWA, GLEN Y

ALGAROBA ST 2014 (Cont'd)

2121	KUMARAN, ANJALI
	LEKHAC, THANH C
	LUM, HALFORD C
	MARK, SHANNON
	MIYASHIRO, GAYLE S
	MOON, SEUNG K
	NAGAHIRO, ARYNN R
	NAKAMURA, TERRY T
	NAKANO, JAMES A
	NAKAOKA, DAWN
	NOBE, SANAE
	NOIR PICTURES LLC
	OKIMURA, JORDAN B
	OUYE, KEITH H
	PIRES, VALERIE E
	PRESTIGE VALET SVC
	PUHA, CHANEL A
	REGO, ADAM L
	SADINO CREATIONS
	SAKAMOTO, ELVIN T
	SAKAUYE, TARA T
	SARGENT, WARWICK J
	SASANO, KEITH K
	SHAO, JING
	SHIMAMOTO, MARIANN T
	SHISHIDO, TOSHIO
	SILVA, CHERYL
	STOCKWELL, BOBBIE R
	SUMIDA, JERILYN K
	TAKAHASHI, DARYL Y
	TAKAHASHI, DENNIS I
	TAKATA, BARNEY S
	TAMASHIRO, CHAD I
	TAN, M
	TANAKA, HAROLD H
	TANAKA, SHUNSUKE
	TAWARA, MELVIN T
	TAYLOR, RAYMOND D
	TINGCANG, ROBBIE
	TOBIAS, DAVID A
	TORATANI, SUSUMU T
	UYENO, BETTY M
	WASENDORF, MARLENE R
	WATANABE, KATSUSHIGE
	YAHIKU, KAY H
	YAMACHIKA, LILLY Y
	YAMAGUCHI, HISAMI
2122	ANSARY TOMMY
	ANSURY, TOMMY
	OCRETO, CHAD R

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

ALGAROBA ST 2014 (Cont'd)

2132	IJIRI, GLENN B
	MAGAOAY, PEDRO S
	MATSUMOTO, HARUE
	MUKAI, MASATO
	SATO, STANLEY S
	SHIRAISHI, SAYUR I
	TAKAHASHI, JIM M
	TOGUCHI, KIYOSHI
	WONG, T F
2139	CROWLEY, MARK
	OPTIMIZED LTD LIABILITY CO
2141	EDEE ACADEMY
	FREIBERG, BRYAN D
	HOFFMAN, ROBERTA A
2142	HAWAII CONF OF 7TH DAY ADVENTI
	HONOLULU KOREAN CHURCH OR SEVE
21411	OCCUPANT UNKNOWN,

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

MAKAHIKI WAY 2014

846	HULATON, IWALANI S
	KAUAIHILO, KALANI K
	KINOSHITA, KELLY T
	TOKUMOTO, KAZUTLA
855	ABE, FRED Y
	BURKE, MAILE M
	CHANG, GARRET W
	CHUCK, JONATHAN V
	COORDINATED MGT SVCS INC
	GNS GLOBAL ENTERPRISE LLC
	HO, JULIE W
	HUI, PING K
	IWASAKI, WAYNE I
	KIM, NATHAN C
	KUNIMURA, TERUKO
	LACHANCE, GORDON
	LANGLIEB, BARRY G
	LAU, ALDRIC W
	LEMCOOL, KAYO M
	LUM, LILY Y
	MARUSHIGE, KAREN T
	MASAQUEL, CHRISTOPHER
	MURAKAMI, JAN K
	NAGANO, DARRYL Y
	NAKAMA, STEVEN M
	NAKAMURA, BERIN Y
	NARTE, JENAIA
	PERIS, LAWRENCE A
	RYOKO OKA PIANO STUDIO LLC
	SEE, PATTI C
	TAKAHASHI, HIDEYUKI M
	TOJO LLC
	TSUKAZAKI, USHIO
	UYEHARA, ROCKY S
	WATANABE, CARY C
	YOSHIMOTO, JANEL M
904	HAMAGUCHI, ALEC K
905	DRA ARCHITECTURE LLC
	SATORUS ART GALLERY LLC
	SUEDA AND ASSOCIATES INC
908	OKAWA, LEONARD M
909	GAZDAR, NASIR
	HANAI, BARBARA M
	HIRAMOTO, GREGORY A
	SMITH, VICKY
	URABE, SAYOKO
	YAMAMOTO, KAREN E
910	KOGA, RONALD K
	NAIPO, MAPUANA
	TANAKA, TSUNEO

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

MAKAHIKI WAY 2014 (Cont'd)

914	BAREN, KENNETH
	YIM, SHERILYN
	YUEN, JANE
915	KUBOTA, JAMES T
	NISHITA, FAITH M
	YAMADA, TOMOE
918	HARADA, PAUL H
919	FERNANDEZ, SEAN
	LIN, QI N
	TAKAMORI, LOUISE
922	OCCUPANT UNKNOWN,
927	DELONG, IGNACIO M
	PETERS, MATT
	TOKONAMI, ERI
931	ECH TECHNOLOGY INC
	ENTRANCE CONTROLS HAWAII INC
	TRS SYSTEM GROUP LLC
935	CORAL PACIFIC INC
	STATE FARM LIFE INSURANCE CO
	WAIKIKI HEALTH MAIN OFFIC

Target Street	Cross Street	Source
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ALGAROBA ST 2010

2022	KOSEKI LARRY K
2026	HI5 RECYCLING SERVICES LLC
2104	KIM MARY ANN
	YOUNG & MARY FOODS CORPORATION
2105	LGCY LLC
	TWINSTARS HAWAII LLC
2115	LI, YAO
	MITSUTANI, GARY I
	TAKAHAMA, BETSY M
2118	HONMA, KAREN T
	ICHISHITA, PAUL K
	KEALA CANOE FOUNDATION
	PHADUANGDET, MANIVONE
	USHIJIMA, BURT A
	YANAGAWA, WALLACE K
2121	ADVENTURES INTO HAWAII LLC
	AHSEE, ALTON J
	ALAJAR, ROBIN M
	ASATO, TAKEYO
	AUSTIN, REBECCA J
	BABA, THOMAS K
	BROADCAST VENTURES INC
	BUDDENHAGEN, CHRISTOPHER E
	CHAPPELL, PATRICIA E
	CHARISMA INDUSTRIES INC
	CHUNG, CLEONE L
	CLARK, ROBERT C
	E K SILVA
	EIDA, CHISATO
	FUJIMOTO, RUSSELL H
	GUSMAN, JANISE
	HAL LUM PHOTOGRAPHY
	HAMADA, BETTY K
	HAMMAN, GREGORY A
	HANA HOU BISTRO LLC
	HAYASHIDA, GORDON A
	HIGA, JAY A
	HUR BEN ILL MOO MD
	HUR, BEN I
	IJIRI, GLENN B
	ISHITANI, GLENN T
	JENSEN, MARK E
	JHUN, CLIFF
	JOHN, EDITH J
	KANDA, SEAN A
	KIM, MARTIN Y
	KITAGAWA, GLEN Y
	LAKSMANA, TEDJA
	LEKHAC, THANH C
	LUM, HALFORD C

ALGAROBA ST 2010 (Cont'd)

2121	MAHALOHA GROUP LLC
	MATSUSHIMA, TASUKU
	MILLER, CHRISTOPHER J
	MINA, KAORI
	MIYASHIRO, GAYLE S
	MOKEPUHA, CHANEL
	MOON, SEUNG K
	MORIWAKI, LANCE
	NAKAMURA, DELLA N
	NISHIDA, JOEY
	NOBE, YASUHIKO C
	NOIR PICTURES LLC
	OKIHIRO, DEAN T
	ONO, ANDREW S
	ONO, HIROSHI H
	PRESTIGE VALET SVC
	SADINO CREATIONS
	SAH, RAYMOND C
	SAKAMOTO, SUE S
	SARGENT, WARWICK J
	SHINOZAKI, TAKAKO
	SHISHIDO, TOSHIO
	SIERRA, DEAN M
	SILVA, ELAINE K
	SIU, KELLY C
	SRI CHINMOY CENTRE
	SUNADA, JARED R
	SUZUKI-KITAGAWA KATHY MITSUKO
	TAKAHASHI, DENNIS I
	TAKATA, BARNEY S
	TAKETA, JENNY
	TAKUSHI, RANDAL S
	TANAKA, HAROLD H
	TAYLOR, RAYMOND D
	TINGCANG, ROBBIE
	TORATANI, EDDIE R
	UEHARA, BETTY K
	UNE, BRANDON K
	UYENO, BETTY M
	WATANABE, KATSUSHIGE
	YAHIKU, KAY H
	YAMAGUCHI, HISAMI
	YAMASHITA, SADAKO
2122	ANSARY, HAMED
	CABANAPAN, ELSIE
	OCRETO, FERNANDO J
2132	IJIRI, FAITH Y
	MAGAOAY, PEDRO S
	MATSUMOTO, HARUE
	MUKAI, MASATO

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

ALGAROBA ST 2010 (Cont'd)

2132	SATO, STANLEY S
	SHIRAISHI, SAYUR I
	TAKAHASHI, JIM
	WONG, T F
2139	MARRIOTT, JOHN W
	MATHOW, APOLLONIA
2141	FURUSHO, JOANN
2142	HAWAII CONF OF 7TH DAY ADVENTI
	HONOLULU KOREAN CHURCH OR SEVE
2155	DONOVAN, DENNIS

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

MAKAHIKI WAY 2010

846	KAUAIHILO, KALANI K
	LOW, PATRICK W
	TOKUMOTO, KAZUTLA
855	ABE, FRED Y
	BURKE, MAILE
	CARR, KEVIN M
	CHUCK, JONATHAN V
	COORDINATED MGT SVCS INC
	EICHOR, RICK J
	EXPERT AUTO SALON LLC
	HO, JULIE W
	HUI, PING K
	ISHIHARA, SANDRA S
	IWASAKI, WAYNE I
	KIM, NATHAN C
	KOMIYA, YASUTAKE D
	LAGUNDINO, PRIMO
	LANGLIEB, BARRY G
	LUM, LILY Y
	MARUSHIGE, KAREN T
	MITSUYUKI, RONALD M
	MIYAMURA, CYRUS N
	MJR DESIGN INC
	MURAKAMI, JAN K
	NAGANO, DARRYL Y
	NAKAMA, KIMIE
	OKUDA, REIKO
	PERIS, LAWRENCE A
	SEE, PATTI C
	SHAIN, MARLEY A
	SHELBY, STEPHEN
	SUE, ALEXANDER W
	TAKAHASHI, HIDEYUKI
	TANIYAMA, CLAYTON K
	TCKG LLC
	TOJO LLC
	UYEHARA, ROCKY S
	WATANABE, CARY C
	YOSHIMOTO, JANEL M
	YOSHIMURA, DENNIS T
904	HAMAGUCHI, ALEC K
905	DRA ARCHITECTURE LLC
	HAKO-MED USA INC
	SATORUS ART GALLERY LLC
	SUEDA AND ASSOCIATES INC
908	OKAWA, LEONARD M
909	GAZDAR, NASIR
	HANAI, BARBARA M
	HIRAMOTO, ELLSWORTH I
	HIRAMOTO, MYRA E

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

MAKAHIKI WAY 2010 (Cont'd)

909	URABE, SAYOKO
910	KOGA, RONALD K
	TANAKA, TSUNEO
914	CATUBIG, ALEXANDER
	HOOD, AARON
	KALANI, TAMMY
	WUSHUER, AINIWAER
915	KUBOTA, JAMES T
918	HARADA, PAUL H
919	D RYUSAKI
	KAWABATA, JANET Y
	TAKABA, RICHARD R
	TAKAMORI, LOUISE
922	KUROSU, ROBERT Y
927	JHUN, MICHELLE
	WIECKING, A
931	ECH TECHNOLOGY INC
	ENTRANCE CONTROLS HAWAII INC
	TRS SYSTEM GROUP LLC
935	CORAL PACIFIC INC
	INTERNATIONAL INNOVATIONS INC
	KUPONO LEARNING CENTER INC
	SIMPLEX TIME RECORDER CO
	STATE FARM LIFE INSURANCE CO

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

ALGAROBA ST 2005

2022	KOSEKI LARRY K
2115	HIRASHIKI, KAY K
	KOBAYASHI, MANABU
	MITSUTANI, GARY I
	NAKAMA, MAURICE M
	TAKAHAMA, BETSY M
2118	HONMA, KAREN T
	KAMAAINA PROSTHETIC DENTAL LAB
	MONTERO, JOCELA T
	YANAGAWA, WALLACE K
2121	AHSEE, ALTON
	ALAJAR, ROBIN M
	ASATO, KENNETH T
	BALLOU, MASAKO
	BARRETT, SANDRA L
	BEUHLER, TERAUNO
	CHAN, CHRISTOPHER E
	CHUNG, SUN M
	CLARK, ROBERT C
	CUI, GENG
	E K SILVA
	FINEMAN, REBECCA
	FRANCISCO, M I
	FUJIMOTO, RUSSELL H
	FUNADA, LLOYD I
	GEORGE, BEAU
	HAMADA, BETTY K
	HAYASHIDA, GORDON A
	HENSON, JUSTIN S
	HIGA, NELSON M
	IKEDA, PATRICIA E
	ISHITANI, GLENN T
	JOHNSON, LAMONTE
	KIM, ANGELA Y
	KITAGAWA, GLEN Y
	KO, IN
	KOBAYASHI, ERIN
	KUROMOTO, TODD K
	KUSATSU, ANGELA
	LAKESMAN, TEDJA
	LEKHAC, THANH K
	MATSUMOTO, ALAN
	MATTOS, DARRELL W
	MCCULLY VILLA
	MCCULLY, VILLA
	MICHELSEN, DAVID J
	MIYASHIRO, GAYLE S
	MOCHIZUKI, K
	MOON, SEUNG K
	MUROMOTO, WAYNE M

ALGAROBA ST 2005 (Cont'd)

2121	MYERS, G
	NAKAMURA, DELLA N
	NISHIJIMA, OWEN T
	OHIRA, REGAN M
	OKIHIRO, DEAN T
	ONAGA, DAMON S
	SAH, RAYMOND C
	SHIMAMOTO, MARSHALL J
	SHIN, HYUN
	SHINOZAKI, TAKAKO
	SILVA, ELAINE K
	SOMA, KEIGO
	SUZUKI-KITAGAWA KATHY MITSUKO
	TAKAHASHI, DENNIS I
	TAKATA, BARNEY S
	TAKUSHI, RANDAL S
	TAYLOR, RAYMOND D
	THOMPSON, PETE K
	TINGCANG, ROBBIE
	TSAI, JUITIEN T
	UYENO, BETTY M
	WAIOLAMA, E
	WASEDA, TAKUJI
	WATANABE, KATSUSHIGE
	WONG, GREGOIRE E
	YAHIKU, KAY H
	YAMASHITA, SADAKO
	YASUDA, IRENE
2122	ANSARY, HAMED
	CABANAPAN, ELSIE
	IJIRI, GLENN B
	OCRETO, FERNANDO J
2132	AKIYOSHI, HANAKO
	IJIRI, FAITH Y
	MATSUMOTO, HARUE
	MUKAI, MASATO
	SATO, STANLEY S
	SHIRAISHI, SAYUR I
	TAKAHASHI, JAMES M
	WONG, T F
2139	KAWABATA, JANET
	MCGONAGLE, SEAN T
	OKURA, KIYOKO
	RIVERA, JOSE
2141	COOPER, MATTHEW
	JORDAN, SANDRA L
	ORNELLAS, RANDY
	PARDORLA, MARIA L
2155	DONOVAN, DENNIS

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

MAKAHIKI WAY 2005

846	KAUAIHILO, KALANI
	LOW, PATRICK W
	OIE, MATSUYO
	TANAKA, TSUNEO
	TOKUMOTO, KAZUTLA
855	ADACHI, MARK
	BRUCE, JANET D
	BURKE, MAILE
	CHUCK, JONATHAN V
	CORPUZ, LABRINA S
	CORREA, ERNEST G
	EXPERT AUTO SALON LLC
	FUJIWARA, TOD M
	GARCIA, THOMAS C
	HUI, PING K
	IKEI, LYNN N
	IWASAKI, WAYNE I
	JACK, S
	KANDA, MAURICE
	KIM, NATHAN C
	LANGLIEB, BARRY
	LUM, LILY M
	MIYASHIRO, ROSS
	MJR DESIGN INC
	MURAKAMI, JAN K
	NAGANO, DARRYL Y
	NAKAGAWA, CAROLYN H
	OKUDA, REIKO
	SHELBY, KATHILYN S
	TAKAHASHI, HIDEYUKI
	TAMANAHA, MYRON A
	TANIGUCHI, CHAD Y
	TANIYAMA, CLAYTON K
	TCKG LLC
	TOJO LLC
	UMANSAY, PANG
	UYEHARA, SHANE Y
	VANPUTTEN, KRYSTI L
	WAH, MARGARET K
	YAMAMOTO, KELVIN Y
	ZOU, X
904	HAMAGUCHI, ALEC K
905	BEDROCK WEST LLC
	BIBLE INSTITUTE OF HAWAII
	HAWAII WINTER BASEBALL INC
	SUEDA AND ASSOCIATES INC
909	HANAI, CLARENCE H
	TAKETA, KIYONO M
910	BURNETT, JUSTIN
	OCCUPANT UNKNOWN,

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

MAKAHIKI WAY 2005 (Cont'd)

914	CATUBIG, ALEXANDER
	GARCIA, ARIS
	REYES, CARLA N
	TAKAMASU, RIE
	TANG, NING
	YAMADA, JACK I
915	KUBOTA, JAMES T
	MAYEDA, NORA F
	NAKAMA, SEICHI
	TAKAHASHI, S
918	HARADA, PAUL H
919	HARAGA, IRENE M
	HAYASAKA, ERNEST W
	SUEDA, WAYNE N
	TAKABA, RICHARD R
	TOMITA, T
922	KUROSU, ROBERT Y
927	NAKAMOTO, RINJI
931	ENTRANCE CONTROLS HAWAII INC
	MAUI BIG FIVE LLC
935	CORAL PACIFIC INC
	KUPONO EDUCATIONAL SERVICES
	SIMPLEX TIME RECORDER CO

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

ALGAROBA ST 2000

2115	HIRAMOTO, E
	TAKAHAMA, BETSY
	USHIJIMA, UICHI
2118	HONMA, K T
	KAMAAINA PROSTHETIC DENTAL LAB
2121	AKEO, DALE
	ALAJAR, ROBIN
	ANDERSON, DAVID K
	ASADA, TOSH
	BARRETT, S L
	BROADCAST VENTURES INC
	CHAR, S
	CHEON, HAENG Y
	CHONG, JAMES
	COX, BRIAN
	DEBIASSE, S
	FUJIMOTO, R H
	FUJITA, Y
	FUKUMOTO, RICKEY K
	FUNADA, LON
	GEORGE, BEAU
	IKEDA, P E
	ISHITANI, GLENN
	JACKSON, ANGELA
	KIM, MARTIN Y
	KITAGAWA, GLEN
	LEKHAC, THANH C
	LOCHUN, HEI F
	MIYASHIRO, GAYLE
	MOON, SEUNG K
	MURATA, M
	MUROMOTO, WAYNE
	MYERS, G
	NAKAMURA, D
	POCHE, ELLEN
	RICCARDI, C L
	SCHWARTZ, KENNETH B
	SHIMAMOTO, M
	SHISHIDO, TOSHIO
	SILVA, PATRICK L
	SOROTEN, BRENDA
	SOUTHWARD, BLAINE
	TAKAHASHI, DENNIS I
	TAKATA, BARNEY
	TAKUSHI, RANDAL S
	TINGCANG, ROBBIE
	TORATANI, SUSUMU
	TOTH, JEANINE M
	UEHARA, N M
	UMEMOTO, LESLIE C

ALGAROBA ST 2000 (Cont'd)

2121	UYENO, B M
	VANDEVENDER, RAY A
	WI, SEA J
	YAMASHITA, S
	YASUDA, RAYMOND H
	YIM, YAN Y
2122	IJIRI, GLENN
	OCRETO, F J
	SAELIM, K
2127	OCCUPANT UNKNOWN,
2132	AKIYOSHI, JACK
	IJIRI, F Y
	MUKAI, MASATO
	NIIYAMA, S T
	TAKAO, SHIZUKA
	WONG, T F
2137	OCCUPANT UNKNOWN,
2139	KAWABATA, JANET
	MCGONAGLE, SEAN
2141	CATUBIG, A
	FRAMARIN, C G
	HOFFMAN, EVELYN
	OBRIEN, RENE
	RAY, LEAH M
2142	MS ELECTROLYSIS
	NARIS COSMETICS OF HAWAII INC
	OCCUPANT UNKNOWN,
2145	OCCUPANT UNKNOWN,

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

MAKAHIKI WAY 2000

846	KAMITA, RICKIE
855	BRUCE, JANET
	CHUCK, J
	CORPUZ, L S
	DEAI, ALAN F
	FUJIWARA, TOD
	HUI, PING K
	KIYOKAWA, KARL S
	MORINAGA, SHERA
	NAKAGAWA, CAROLYN H
	OKAZAKI, KRISTIE
	OMIYA, DEAN T
	REANO, HENRY K
	SAKODA, CHAD T
	TAKAHASHI, H
	THIGPEN, DAN I
	WEISS, MARK K
	WOO, CHUNG S
	YAMAMOTO, KELVIN Y
	YI, MIRI S
904	HAMAGUCHI, WILLIAM
905	HAWAII WINTER BASEBALL INC
	SUEDA & ASSOCIATES INC
908	OCCUPANT UNKNOWN,
909	HANAI, C
	SUEDA, WAYNE
914	BURNETT, PAUL D
	PUCHNICK, MARYANN
	YANG, RUNHUAI
915	KUBOTA, JAMES
	MAYEDA, N
	TAKAHASHI, S
	YAMADA, ELMER
918	HARADA, PAUL H
919	HARAGA, IRENE
	TAKABA, EDITH T
	TOMITA, T
922	KUROSU, ROBERT Y
931	ENTRANCE CONTROLS HAWAII INC
935	SIMPLEX TIME RECORDER CO

Target Street	Cross Street	Source
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ALGAROBA ST 1995

2115	DONOVAN, DENNIS
	HIRAMOTO, E
	HOSHIDE, ROY R
	KAWAMOTO, DEBRA
	SIOBAL, RAMSEY
	TAKAHAMA, GEORGE H
2118	HIRAMATSW, L
	HONMA, K T
	YAHIKU, ROBERT K
2121	ALAJAR, ROBIN
	ASADA, TOSH
	AUSTIN, REBECCA
	BARRETT, S L
	BEZIER GROUP INC
	CHOCK, M K
	CONCHING, TODD
	CUI, GENG
	DELROSARIO, JAIME
	EBERWEIN, G S
	EKERS, IAN
	FUJIMOTO, R H
	FUJITA, Y
	FUKUMOTO, RICKEY K
	GARDNER, CHUI T
	GEORGE, JOHN C
	GOMES, THERESE
	GOYA, RACHEL K
	HASEBE, VICTOR Y
	HUI, DOR
	IKEDA, P E
	INSTANT TERMINALLING AND
	ISHITANI, GLENN
	KAWASHIMA, R M
	KIM, C
	KIM, MARTIN Y
	KWOK, KAM C
	LEE, SANG
	LEKHAC, THANH C
	LILI, HAI C
	LUO, SUI Q
	MAEKAWA, REID
	MATSUMIYA, TROY
	MATSUSHITA, KOZO
	MCALISTER, JAMES
	MOON, SEUNG K
	MORISHIMA, KIYOKO
	MURAYAMA, KOHEI
	NAKAMURA, D
	NOBE, Y
	OKIHIRO, DEAN T

ALGAROBA ST 1995 (Cont'd)

2121	OSHIDA, I
	OYADOMARI, B D
	PANG, CHAI Y
	PEERENBOOM, RANDY
	POCHE, ELLEN
	RIAHI, JARJAN
	RIBOROZO, DANNY
	SADAOKA, ROBERT R
	SAKATA, RENEE
	SHIMAMOTO, M
	SHISHIDO, TOSHIO
	SILVA, PATRICK L
	SMITH, KENNETH C
	SOMA, KEIGO
	TAKAHASHI, DENNIS I
	TAKAHASHI, KOJI
	TAKATA, BARNEY
	TAKEUCHI, LOIS
	TORATANI, SUSUMU
	UEHARA, N M
	UYENO, BETTY M
	WAGNER, JON S
	WIEMER, CALLA
	WONG, GREGORY E
	WU, ANDY
	YAEGASHI, CHIKAKO
	YAMAMOTO, P
	YAMASHITA, S
	YASUDA, RAYMOND H
2122	ARAKAKI, MICHAEL
	IJIRI, GLENN
	SAELIM, XIANG
2132	AKIYOSHI, JACK
	IJIRI, F Y
	KAWAKAMI, KENNETH S
	MATSUMOTO, ISAMI
	NIIYAMA, S T
	OCRETO, F JR
	TAKAO, SHIZUKA
	WONG, T F
2139	KAWABATA, JANET
	MATSUMOTO, AKIRA
	OKURA, MOTOJI
2141	HOFFMAN, JOHN W JR
	HONG, JERRY
	MCELHINNEY, NIGEL
	NETTO, CRYSTAL
2142	NARIS COSMETICS OF HAWAII INC
2145	TANABE PLUMBING INC
	TANABE, GEORGE T

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

MAKAHIKI WAY 1995

846	NAGAHARA, Y A
	OIE, EDWIN M
	TOKUMOTO, KAZUMA
	UCHIMA, BARRY
855	ALM, RICHARD S
	ANDERS, KRISTEN
	ASAI, ALVIN
	CHING, CYRUS
	CHOE, SONG A
	CHUCK, J
	CHUNG HERB
	CONCILLA, GREGORY
	CORPUZ, L S
	DEAI, ALAN F
	FUJIOKA, JAMES K
	FUJIWARA, TOD
	HALL, JUDI
	HARKNESS, STEPHEN
	HISAYAMA, SHOKO
	HORITA, KENNETH A
	HORSWILL, RUFUS N
	KAWAHARA, Y
	KIYOKAWA, KARL S
	KRYGER, ROY M
	LAU, C
	LEAMAN, BARRY
	LEE, EUN S
	LOUI, KEVIN
	MIYATAKI, LEE M
	MORIMOTO, S
	NAKAGAWA, C H
	NAKAMA, K
	NAKATA, KAZUKO
	OMIYA, DEAN T
	PACHECO, JOE
	PIERSON, B
	REANO, HENRY K
	RENFRO, MARY
	TAKAHASHI, H
	UCHIDA, H
	WEISS, MARK K
	WEXLER, T
	WILLIAMS, BILLY
	WOO, TOO S
	YAMAMOTO, KELVIN Y
	YONEDA, JUN
904	HAMAGUCHI, WILLIAM
905	HAWAII WINTER BASEBALL INC
	OCCUPANT UNKNOWNN
	R E P MANAGEMENT INC

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

MAKAHIKI WAY 1995 (Cont'd)

905	SUEDA & ASSOCIATES INC
909	HANAI, C
	KOZA, MARILYN
	TAKETA, KIYONO
910	KUHLES, KRIS
914	COLOMA, R
	FARNSWORTH, T
	RATOKALAU, AISEA
	SAKAMOTO, MILDRED S
915	KUBOTA, JAMES
	MAYEDA, N
	NAKAMA, SEICHI
	TAKAHASHI, S
	YAMADA, ELMER
918	HARADA, PAUL H
919	FURUTA, KAZUO
	HARAGA, IRENE
	TAKABA, RICHARD I
	TOMITA, T
922	KUROSU, ROBERT Y
927	NAKAMOTO, RINGI
931	ENTRANCE CONTROLS HAWAII INC
935	SIMPLEX TIME RECORDER CO

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

ALGAROBA ST 1992

2022	S & M DRAPES
2121	ASADA, TOSH
	EBERWEIN, G S
	EBERWEIN, P
	FUJIMOTO, GAIL T
	FUJIMOTO, R H
	FUJITA, Y
	FUKUMOTO, RICKEY K
	GOYA, RACHEL K
	HANAOKA, SAKAYO
	IKEDA, P E
	INSTANT TERMINALLING AND
	KAMITE, DENNIS
	MATSUMIYA, TROY
	MCALISTER, JAMES
	MURAYAMA, KOHEI
	NOHARA, KAZUO
	PIPER, GREGORY
	SHIBAO, S A
	SHIMAMOTO, M
	SOLOMON, CURTIS
	SOMA, KEIGO
	TOM, D
	UEHARA, N M
	UYENO, B M
	WONG, CHUN
	WONG, GREGORY E
	YAEGASHI, CHIKAKO
2122	ARAKAKI, MICHAEL
	CHOY, C L
	IJIRI, GLENN
2132	AKIYOSHI, JACK
2139	MATSUMOTO, AKIRA
	OKURA, MOTOJI
	TSUJIUCHI, F G
2141	HOFFMAN, JOHN W JR
	MCELHINNEY, NIGEL
2142	NARIS COSMETICS OF HAWAII INC
2145	TANABE PLUMBING INC
	TANABE, GEORGE T

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

MAKAHIKI WAY 1992

846	NAGAHARA, Y A
	OIE, EDWIN M
	OSAKI, C H
855	CHEUNG, WESLEY H
	CHUCK, J
	CHUNG HERB
	DOWSON, L C
	FUCHIGAMI, HUGH
	HAND, ARTHUR
	KASUYA, M
	KIYOKAWA, KARL S
	LEE, D C
	NAKAGAWA, C H
	RADEL, JOHN
904	HAMAGUCHI, WILLIAM
905	MATSUMOTO TAKEO & ASSOCIATES
	R E P MANAGEMENT INC
	SUEDA & ASSOCIATES INC
	SURF SYSTEMS INC
909	PARADISE AIR & CONTROLS
910	KIM, SANG H
914	HAYAKAWA, K
	NEGRE, L
915	NAKAMA, SEICHI
	TAKAHASHI, S
	YAMADA, ELMER
918	HARADA, PAUL H
919	FURUTA, KAZUO
	HARAGA, IRENE
	TAKABA, RICHARD I
	TOMITA, T
922	KUROSU, ROBERT Y
927	NAKAMOTO, RINGI
931	ENTRANCE CONTROLS HAWAII INC
935	GUERREROS ELECTRIC CO INC
	SIMPLEX TIME RECORDER CO

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

ALGAROBA ST 1987

2138 HO RONALD N S & ASSOCIATES INC
2142 NARIS COSMETICS OF HAWAII INC
2145 TANABE PLUMBING INC

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

MAKAHIKI WAY 1987

905	HIRATA ERNEST K & ASSOCIATES
	MATSUMOTO TAKEO & ASSOCIATES
	WONG SUEDA & ASSOCIATES INC
915	YAMADA BROS GENERAL CONTRS*
935	GUERREROS ELECTRIC CO INC
	SIMPLEX INTL TIME EQUIPMENT*

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

ALGAROBA ST 1982

2142 CHEMI-PURE PRODUCTS LTD*
2145 TANABE PLUMBING INC

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

MAKAHIKI WAY 1982

905	HIRATA ERNEST K & ASSOCIATES*
	MATSUMOTO TAKEO & ASSOCIATES*
	WONG SUEDA & ASSOCIATES INC
915	YAMADA BROS GENERAL CONTRS*
935	GLOBAL INDUSTRY INC
	GUERREROS ELECTRIC CO INC
	SIMPLEX INTL TIME EQUIPMENT*

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

ALGAROBA ST 1977

2145 TANABE PLUMBING INC

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

MAKAHIKI WAY 1977

915 YAMADA BROS GENERAL CONTRS*
935 SIMPLEX INTERNATIONAL TIME EQP

2139 Algaroba Street
2139 ALGAROBA ST
HONOLULU, HI 96826

Inquiry Number: 5544094.2s
February 12, 2019

EDR Vapor Encroachment Screen

Prepared using EDR's Vapor Encroachment Worksheet

EDR® Environmental Data Resources Inc

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Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by EDR. The report was designed to assist parties seeking to meet the search requirements of the ASTM Standard Practice for Assessment of Vapor Encroachment into Structures on Property Involved in Real Estate Transactions (E 2600).

STANDARD ENVIRONMENTAL RECORDS	Default Area of Concern (Miles)*	property	1/10	> 1/10
Federal NPL site list	1.0	0	0	0
Federal Delisted NPL site list	1.0	0	0	0
Federal CERCLIS list	0.5	0	0	0
Federal CERCLIS NFRAP site list	0.5	0	0	0
Federal RCRA CORRACTS facilities list	1.0	0	0	0
Federal RCRA non-CORRACTS TSD facilities list	0.5	0	0	0
Federal RCRA generators list	0.25	0	0	0
Federal institutional controls / engineering controls registries	0.5	0	0	0
Federal ERNS list	0.001	0	0	-
State- and tribal - equivalent NPL	not searched	-	-	-
State- and tribal - equivalent CERCLIS	1.0	0	2	0
State and tribal landfill and/or solid waste disposal site lists	0.5	0	0	0
State and tribal leaking storage tank lists	0.5	0	2	4
State and tribal registered storage tank lists	0.25	0	2	4
State and tribal institutional control / engineering control registries	0.5	0	1	0
State and tribal voluntary cleanup sites	0.5	0	0	0
State and tribal Brownfields sites	0.5	0	0	0

ADDITIONAL ENVIRONMENTAL RECORDS				
Local Brownfield lists	0.5	0	0	0
Local Lists of Landfill / Solid Waste Disposal Sites	0.5	0	0	0
Local Lists of Hazardous waste / Contaminated Sites	0.001	0	0	-
Local Lists of Registered Storage Tanks	not searched	-	-	-
Local Land Records	0.001	0	0	-
Records of Emergency Release Reports	0.001	0	0	-
Other Ascertainable Records	1.0	0	1	2

EDR HIGH RISK HISTORICAL RECORDS				
EDR Exclusive Records	1.0	0	4	0
Exclusive Recovered Govt. Archives	0.001	0	0	-

EXECUTIVE SUMMARY

EDR RECOVERED GOVERNMENT ARCHIVES

EDR Exclusive Records	1.0	0	4	0
Exclusive Recovered Govt. Archives	0.001	0	0	-

*The Default Area of Concern may be adjusted by the environmental professional using experience and professional judgement. Each category may include several databases, and each database may have a different distance. A list of individual databases is provided at the back of this report.

EXECUTIVE SUMMARY

TARGET PROPERTY INFORMATION

ADDRESS

2139 ALGAROBA STREET
2139 ALGAROBA ST
HONOLULU, HI 96826

COORDINATES

Latitude (North):	21.292875 - 21° 17′ 34.351044″
Longitude (West):	157.828121 - 157° 49′ 41.25″
Elevation:	7 ft. above sea level

EXECUTIVE SUMMARY

SEARCH RESULTS

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Name	Address	Dist/Dir	Map ID	Page
MCCULLY UNION SERVICE #136 UST: UST Financial Assurance: Financial Assurance SHWS: SHWS LUST: LUST INST CONTROL: INST CONTROL ENG CONTROLS: ENG CONTROLS	2105 S KING ST	<1/10 NNW	▲ A4	10
TOM ISHII'S UNION SERVICE (CLOSED 04/1992) SHWS: SHWS	2114 S KING ST	<1/10 N	▲ B5	20
TOM ISHII'S UNION L-4462 UST: UST LUST: LUST	2114 S KING ST	<1/10 N	▲ B7	21
HIRONAKA SERVICE STATION UST: UST LUST: LUST	2105 S BERETANIA ST	1/10 - 1/3 N	▲ 8	22
PUNAHOU CENTRAL OFFICE UST: UST Financial Assurance: Financial Assurance LUST: LUST	2054 YOUNG ST	1/10 - 1/3 NNW	▲ E9	23
MCCULLY SHELL UST: UST Financial Assurance: Financial Assurance LUST: LUST	1115 MCCULLY ST	1/10 - 1/3 NNW	▲ E10	25
LINDSEY'S CHEVRON SERVICE UST: UST LUST: LUST	2404 S BERETANIA ST	1/10 - 1/3 ENE	▲ 11	26

ADDITIONAL ENVIRONMENTAL RECORDS

Name	Address	Dist/Dir	Map ID	Page
MCCULLY UNION SERVICE #136 UST: UST Financial Assurance: Financial Assurance SHWS: SHWS LUST: LUST INST CONTROL: INST CONTROL ENG CONTROLS: ENG CONTROLS	2105 S KING ST	<1/10 NNW	▲ A4	10
PUNAHOU CENTRAL OFFICE UST: UST Financial Assurance: Financial Assurance LUST: LUST	2054 YOUNG ST	1/10 - 1/3 NNW	▲ E9	23
MCCULLY SHELL	1115 MCCULLY ST	1/10 - 1/3 NNW	▲ E10	25

EXECUTIVE SUMMARY

Name	Address	Dist/Dir	Map ID	Page
UST: UST Financial Assurance: Financial Assurance LUST: LUST				

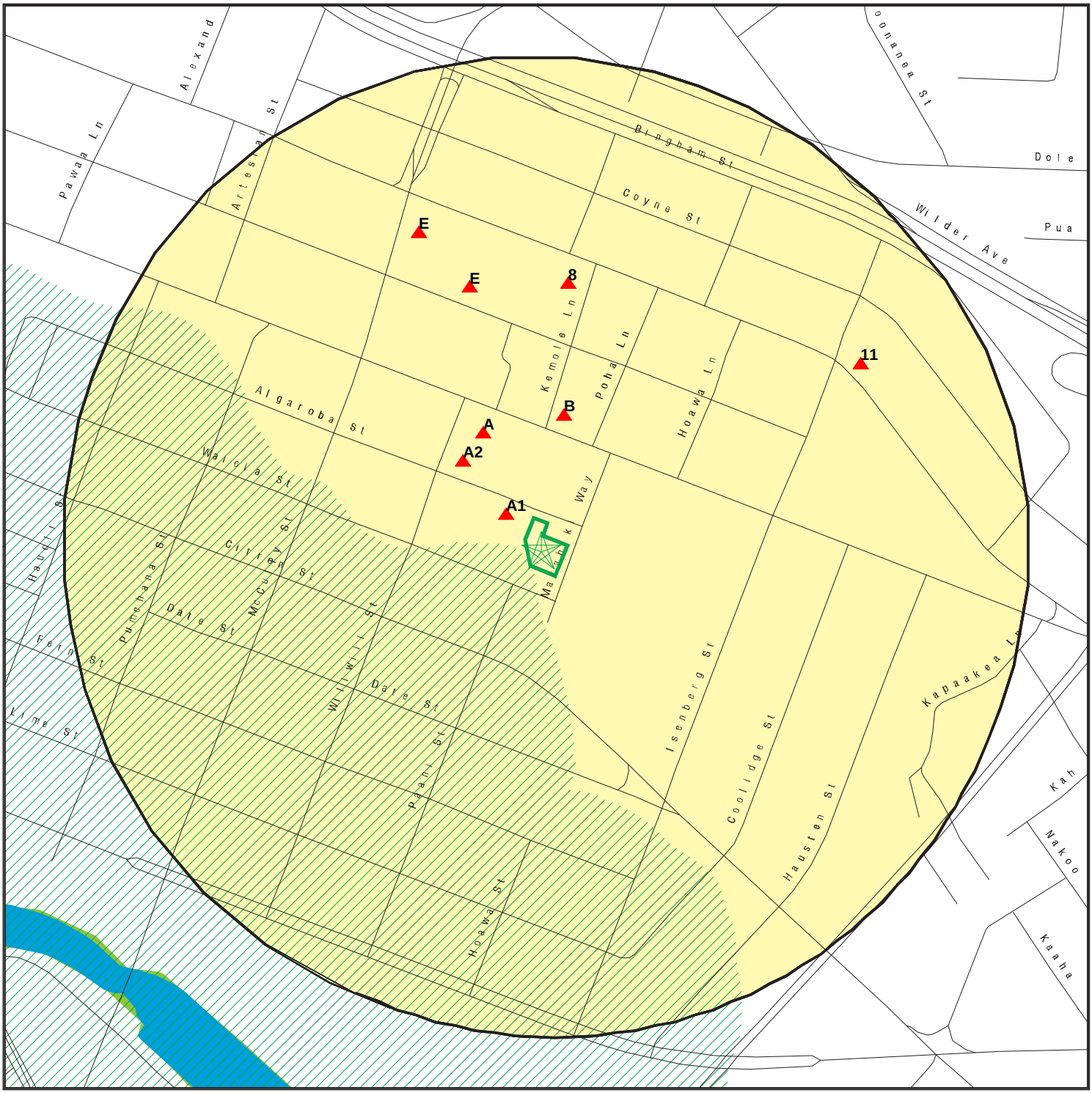
EDR HIGH RISK HISTORICAL RECORDS

Name	Address	Dist/Dir	Map ID	Page
PRESTIGE VALET SVC EDR Hist Cleaner: EDR Hist Cleaner	2121 ALGAROBA ST APT 1502	<1/10 NW	▲ A1	9
KIM MARY ANN EDR Hist Cleaner: EDR Hist Cleaner	2104 ALGAROBA ST APT D	<1/10 NW	▲ A2	9
MC CULLY SUPER SERVICES INC EDR Hist Auto: EDR Hist Auto	2105 S KING STREET	<1/10 NNW	▲ A3	9
ISHII ENTERPRISES INC EDR Hist Auto: EDR Hist Auto	2114 S KING	<1/10 N	▲ B6	21

EDR RECOVERED GOVERNMENT ARCHIVES

Name	Address	Dist/Dir	Map ID	Page
Not Reported				

PRIMARY MAP - 5544094.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 300 1/3 Miles

Indian Reservations BIA

100-year flood zone

500-year flood zone

National Wetland Inventory

State Wetlands

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 2139 Algaroba Street	CLIENT: Environmental Risk Analysis. LLC
ADDRESS: 2139 ALGAROBA ST	CONTACT: Vincent Yanagita
HONOLULU HI 96826	INQUIRY #: 5544094.2s
LAT/LONG: 21.292875 / 157.828121	DATE: January 25, 2019 12:11 pm

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SECONDARY MAP - 5544094.2S

E
8
11
A
B
Manoa Rd
Nehoa St
Dominis St
Makiki St
Punahou St
Wilder Ave
Pali Kakela Dr
McKinley St
Nuuanu Ave
Nancouvell Dr
Hunnewell St
Metcalf St
Bingham St
Coyne St
Dole St
Young St
Kinau St
S Beretania St
S King St
Kaheaumoku St
Kanoa St
Makaloa St
Ala Wai Blvd
Atkinson Dr
Kapiolani Blvd
Date St
Kuhio Ave
Kalakaua Ave
Lewers St
Kaiulani Ave
Waikiki Beach
Kapahulu Ave
Herbert St
Castle St
Winam Ave
Mokihana St
Olu St
Charles St
Kalia St
Lindsley St
Kaiolani Rd
Waialae Ave
Ena Rd
Hobron Ln
Holomoana St
Kalakaua Ave
Lewers St
Kuhio Ave
Ala Wai Blvd
Date St
Kapiolani Blvd
Waikiki Beach
Kaiulani Ave
Kapahulu Ave
Herbert St
Castle St
Winam Ave
Mokihana St
Olu St
Charles St
Kalia St
Lindsley St
Kaiolani Rd
Waialae Ave
King St
Kapiolani Blvd
Ala Wai Blvd
Atkinson Dr
Kanoa St
Makaloa St
Kanoa St
Kaheaumoku St
Kinau St
S Beretania St
S King St
Young St
Punahou St
Wilder Ave
Makiki St
Dominis St
Nehoa St
Manoa Rd
Pali Kakela Dr
McKinley St
Nuuanu Ave
Nancouvell Dr
Hunnewell St
Metcalf St
Bingham St
Coyne St
Dole St
Haunani Pl
Haunani St
Wailani St
Wailani Pl
Ala Wai Blvd
Kuhio Ave
Kalakaua Ave
Lewers St
Kapahulu Ave

LEGEND

FACILITY NAME **FACILITY ADDRESS, CITY, ST, ZIP**			EDR SITE ID NUMBER
◆ **MAP ID#**	Direction Distance Range Relative Elevation	(Distance feet / miles) Feet Above Sea Level	ASTM 2600 Record Sources found in this report. Each database searched has been assigned to one or more categories. For detailed information about categorization, see the section of the report Records Searched and Currency.

Worksheet:

Comments:
Comments may be added on the online Vapor Encroachment Worksheet.

DATABASE ACRONYM: Applicable categories (A hoverbox with database description).

PRESTIGE VALET SVC 2121 ALGAROBA ST APT 1502, HONOLULU, HI, 96826			1018748901
▲ A1	NW <1/10	(101 ft. / 0.019 mi.)	EDR Exclusive Records
	Equal Elevation	7 ft. Above Sea Level	

Worksheet:

EDR Hist Cleaner: EDR Exclusive Records

Year:	Name: / Type:
2006:	PRESTIGE VALET SVC / Laundry And Drycleaner Agents

KIM MARY ANN 2104 ALGAROBA ST APT D, HONOLULU, HI, 96826			1020019516
▲ A2	NW <1/10	(343 ft. / 0.065 mi.)	EDR Exclusive Records
	Equal Elevation	7 ft. Above Sea Level	

Worksheet:

EDR Hist Cleaner: EDR Exclusive Records

Year:	Name: / Type:
2009:	KIM MARY ANN / Drycleaning Plants, Except Rugs, NEC
2010:	KIM MARY ANN / Drycleaning Plants, Except Rugs, NEC
2011:	KIM MARY ANN / Drycleaning Plants, Except Rugs, NEC
2012:	KIM MARY ANN / Drycleaning Plants, Except Rugs, NEC

MC CULLY SUPER SERVICES INC 2105 S KING STREET, HONOLULU, HI, 96826	1020946768

▲ A3	NNW <1/10	(372 ft. / 0.071 mi.)	EDR Exclusive Records
	3 ft. Higher Elevation	10 ft. Above Sea Level	

Worksheet:

EDR Hist Auto: EDR Exclusive Records

Year:	Name: / Type:
1969:	SUGA SERVICE / Gasoline Service Stations
1970:	SUGA SERVICE / Gasoline Service Stations
1971:	SUGA SERVICE / Gasoline Service Stations
1972:	SUGA SERVICE / Gasoline Service Stations
1973:	SUGA SERVICE / Gasoline Service Stations
1974:	SUGA SERVICE / Gasoline Service Stations
1975:	SUGA SERVICE / Gasoline Service Stations
1976:	SUGA SERVICE / Gasoline Service Stations
1977:	SUGA SERVICE / Gasoline Service Stations
1986:	SUGA GARAGE SERVICE / Gasoline Service Stations
1987:	SUGA GARAGE SERVICE / Gasoline Service Stations
1988:	SUGA GARAGE SERVICE / Gasoline Service Stations
1989:	MC CULLY SUPER SERVICES INC / Gasoline Service Stations
1990:	MC CULLY SUPER SERVICES INC / Gasoline Service Stations
1990:	MOILIILI SERVICE STATION INC / Gasoline Service Stations
1991:	MC CULLY SUPER SERVICES INC / Gasoline Service Stations
1991:	MOILIILI SERVICE STATION INC / Gasoline Service Stations
1992:	MC CULLY SUPER SERVICES INC / Gasoline Service Stations
1993:	MC CULLY SUPER SERVICES INC / Gasoline Service Stations
1994:	MC CULLY SUPER SERVICES INC / Gasoline Service Stations
1995:	MC CULLY SUPER SERVICES INC / Gasoline Service Stations
1996:	MC CULLY SUPER SERVICES INC / Gasoline Service Stations
1997:	MC CULLY SUPER SERVICES INC / Gasoline Service Stations
2003:	ELITE AUTO SERVICE / General Automotive Repair Shops
2004:	MCCULLY UNION SERVICE / General Automotive Repair Shops
2005:	MCCULLY UNION SERVICE / General Automotive Repair Shops
2006:	MCCULLY UNION SERVICE / General Automotive Repair Shops
2007:	MCCULLY UNION SERVICE / General Automotive Repair Shops
2008:	MCCULLY UNION SERVICE / General Automotive Repair Shops

MCCULLY UNION SERVICE #136 2105 S KING ST, HONOLULU, HI, 96826			U001235168
▲ A4	NNW <1/10	(372 ft. / 0.071 mi.)	State- and tribal - equivalent CERCLIS State and tribal leaking storage tank lists State and tribal registered storage tank lists State and tribal institutional control / engineering control registries Other Ascertainable Records
	3 ft. Higher Elevation	10 ft. Above Sea Level	

Worksheet:

SHWS: State- and tribal - equivalent CERCLIS

MCCULLY UNION SERVICE #136, 2105 S KING ST, HONOLULU, HI 96826 (Continued)

Organization:	Not Reported
Supplemental Location:	Not Reported
Island:	Oahu
Environmental Interest:	Former ARCO AM/PM #82111
HID Number:	Not Reported
Facility Registry Identifier:	110010627660
Lead Agency:	HEER
Program:	State
Project Manager:	Eric Sadoyama
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Managed With Controls
Island:	Oahu
SDAR Environmental Interest Name:	Former ARCO AM/PM #82111
HID Number:	Not Reported
Facility Registry Identifier:	110010627660
Lead Agency:	HEER
Potential Hazard And Controls:	Hazard Managed With Controls
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: Petroleum in soil.
Nature of Residual Contamination:	benzo[a]pyrene in soil.
Use Restrictions:	Controls Required to Manage Contamination
Engineering Control:	Engineering Control Required
Description of Restrictions:	Not Reported
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued
Within Designated Areawide Contamination:	Not Reported
Site Closure Type:	No Further Action Letter - Restricted Use
Document Date:	08/24/2009
Document Number:	2009-538-ES
Document Subject:	Review of Hydraulic Hoist and Clarifier Removal Report, Nov 2002 by Walker Consultants, and Conditional No Further Action (NFA) Determination
Project Manager:	Eric Sadoyama
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

LUST: State and tribal leaking storage tank lists

Facility ID:	9-100341
Facility Status:	Site Cleanup Completed with EHE/EHMP
Facility Status Date:	04/10/2017
Release ID:	020038
Project Officer:	Shunsheng Fu

Facility ID:	9-100341
Facility Status:	Site Cleanup Completed with EHE/EHMP
Facility Status Date:	04/10/2017
Release ID:	940104
Project Officer:	Shunsheng Fu

UST: State and tribal registered storage tank lists

MCCULLY UNION SERVICE #136, 2105 S KING ST, HONOLULU, HI 96826 (Continued)

Facility ID:	9-100341
Owner:	Mid Pac Petroleum LLC
Owner Address:	1100 Alakea Street, 8th floor
Owner City,St,Zip:	Honolulu, 96826 96826
Latitude:	21.294320
Longitude:	-157.828890
Horizontal Reference Datum Name:	NAD27
Horizontal Collection Method Name:	GPS

Tank ID:	1
Date Installed:	04/21/2003
Tank Status:	**Currently In Use**
Date Closed:	Not Reported
Tank Capacity:	15000
Substance:	Gasohol

Tank ID:	2A
Date Installed:	04/21/2003
Tank Status:	**Currently In Use**
Date Closed:	Not Reported
Tank Capacity:	10000
Substance:	Gasoline

Tank ID:	2B
Date Installed:	04/21/2003
Tank Status:	**Currently In Use**
Date Closed:	Not Reported
Tank Capacity:	5000
Substance:	Gasohol

Tank ID:	R-2
Date Installed:	02/07/1983
Tank Status:	**Permanently Out of Use**
Date Closed:	07/19/2002
Tank Capacity:	10000
Substance:	Gasoline

Tank ID:	R-3
Date Installed:	02/07/1983
Tank Status:	**Permanently Out of Use**
Date Closed:	07/19/2002
Tank Capacity:	10000
Substance:	Gasoline

Tank ID:	R-4
Date Installed:	02/07/1983
Tank Status:	**Permanently Out of Use**
Date Closed:	07/19/2002
Tank Capacity:	10000
Substance:	Gasoline

MCCULLY UNION SERVICE #136, 2105 S KING ST, HONOLULU, HI 96826 (Continued)

Tank ID:	R-5
Date Installed:	02/07/1983
Tank Status:	**Permanently Out of Use**
Date Closed:	07/19/2002
Tank Capacity:	10000
Substance:	Gasoline

Tank ID:	R-A1
Date Installed:	01/01/1968
Tank Status:	**Permanently Out of Use**
Date Closed:	01/01/1983
Tank Capacity:	Not Reported
Substance:	Gasoline

Tank ID:	R-A2
Date Installed:	01/01/1968
Tank Status:	**Permanently Out of Use**
Date Closed:	01/01/1983
Tank Capacity:	Not Reported
Substance:	Gasoline

Tank ID:	R-A3
Date Installed:	01/01/1968
Tank Status:	**Permanently Out of Use**
Date Closed:	01/01/1983
Tank Capacity:	Not Reported
Substance:	Gasoline

Tank ID:	R-A4
Date Installed:	01/01/1968
Tank Status:	**Permanently Out of Use**
Date Closed:	01/01/1983
Tank Capacity:	Not Reported
Substance:	Diesel

Tank ID:	R-A5
Date Installed:	01/01/1968
Tank Status:	**Permanently Out of Use**
Date Closed:	01/01/1983
Tank Capacity:	Not Reported
Substance:	Used Oil

Tank ID:	R-I-1
Date Installed:	02/07/1983
Tank Status:	**Permanently Out of Use**
Date Closed:	07/16/2002
Tank Capacity:	550
Substance:	Used Oil

MCCULLY UNION SERVICE #136, 2105 S KING ST, HONOLULU, HI 96826 (Continued)

ENG CONTROLS: State and tribal institutional control / engineering control registries

Supplemental Location Text:	Not Reported
Zip Suffix:	Not Reported
Island:	Oahu
Potential Hazards And Controls:	Hazard Managed With Controls
Engineering Control:	Engineering Control Required

INST CONTROL: State and tribal institutional control / engineering control registries

Potential hazards and controls:	Hazard Managed With Controls
Supplemental Location:	Not Reported
Zip Suffix:	Not Reported
Island:	Oahu
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued

HI Financial Assurance: Other Ascertainable Records

Alt Facility ID:	9-100341
Tank Id:	R-4
Tank Status:	Permanently Out of Use
FRTYPE:	Other
Expiration Date:	Not Reported

Alt Facility ID:	9-100341
Tank Id:	R-2
Tank Status:	Permanently Out of Use
FRTYPE:	Other
Expiration Date:	Not Reported

Alt Facility ID:	9-100341
Tank Id:	R-3
Tank Status:	Permanently Out of Use
FRTYPE:	Not Reported
Expiration Date:	Not Reported

Alt Facility ID:	9-100341
Tank Id:	R-A3
Tank Status:	Permanently Out of Use
FRTYPE:	Other
Expiration Date:	Not Reported

Alt Facility ID:	9-100341
Tank Id:	R-A2
Tank Status:	Permanently Out of Use
FRTYPE:	Not Reported
Expiration Date:	Not Reported

Alt Facility ID:	9-100341
Tank Id:	R-3
Tank Status:	Permanently Out of Use
FRTYPE:	Other
Expiration Date:	Not Reported

MCCULLY UNION SERVICE #136, 2105 S KING ST, HONOLULU, HI 96826 (Continued)

Alt Facility ID:	9-100341
Tank Id:	R-A1
Tank Status:	Permanently Out of Use
FRTYPE:	Not Reported
Expiration Date:	Not Reported

Alt Facility ID:	9-100341
Tank Id:	R-A3
Tank Status:	Permanently Out of Use
FRTYPE:	Not Reported
Expiration Date:	Not Reported

Alt Facility ID:	9-100341
Tank Id:	R-5
Tank Status:	Permanently Out of Use
FRTYPE:	Not Reported
Expiration Date:	Not Reported

Alt Facility ID:	9-100341
Tank Id:	R-A2
Tank Status:	Permanently Out of Use
FRTYPE:	Other
Expiration Date:	Not Reported

Alt Facility ID:	9-100341
Tank Id:	R-5
Tank Status:	Permanently Out of Use
FRTYPE:	Other
Expiration Date:	Not Reported

Alt Facility ID:	9-100341
Tank Id:	R-A4
Tank Status:	Permanently Out of Use
FRTYPE:	Other
Expiration Date:	Not Reported

Alt Facility ID:	9-100341
Tank Id:	2A
Tank Status:	Currently In Use
FRTYPE:	Other
Expiration Date:	Not Reported

Alt Facility ID:	9-100341
Tank Id:	R-4
Tank Status:	Permanently Out of Use
FRTYPE:	Not Reported
Expiration Date:	Not Reported

Alt Facility ID:	9-100341
Tank Id:	2A
Tank Status:	Currently In Use
FRTYPE:	Not Reported
Expiration Date:	Not Reported

MCCULLY UNION SERVICE #136, 2105 S KING ST, HONOLULU, HI 96826 (Continued)

Alt Facility ID:	9-100341
Tank Id:	R-2
Tank Status:	Permanently Out of Use
FRTYPE:	Not Reported
Expiration Date:	Not Reported

Alt Facility ID:	9-100341
Tank Id:	2B
Tank Status:	Currently In Use
FRTYPE:	Other
Expiration Date:	Not Reported

Alt Facility ID:	9-100341
Tank Id:	R-A4
Tank Status:	Permanently Out of Use
FRTYPE:	Not Reported
Expiration Date:	Not Reported

Alt Facility ID:	9-100341
Tank Id:	1
Tank Status:	Currently In Use
FRTYPE:	Not Reported
Expiration Date:	Not Reported

Alt Facility ID:	9-100341
Tank Id:	2B
Tank Status:	Currently In Use
FRTYPE:	Not Reported
Expiration Date:	Not Reported

Alt Facility ID:	9-100341
Tank Id:	R-I-1
Tank Status:	Permanently Out of Use
FRTYPE:	Not Reported
Expiration Date:	Not Reported

Alt Facility ID:	9-100341
Tank Id:	R-A5
Tank Status:	Permanently Out of Use
FRTYPE:	Not Reported
Expiration Date:	Not Reported

Alt Facility ID:	9-100341
Tank Id:	R-A1
Tank Status:	Permanently Out of Use
FRTYPE:	Other
Expiration Date:	Not Reported

Alt Facility ID:	9-100341
Tank Id:	R-A5
Tank Status:	Permanently Out of Use
FRTYPE:	Other
Expiration Date:	Not Reported

MCCULLY UNION SERVICE #136, 2105 S KING ST, HONOLULU, HI 96826 (Continued)

Alt Facility ID:	9-100341
Tank Id:	1
Tank Status:	Currently In Use
FRTYPE:	Other
Expiration Date:	Not Reported

Alt Facility ID:	9-100341
Tank Id:	R-I-1
Tank Status:	Permanently Out of Use
FRTYPE:	Other
Expiration Date:	Not Reported

Alt Facility ID:	9-100341
Tank Id:	R-A2
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	03/31/2014

Alt Facility ID:	9-100341
Tank Id:	R-A3
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	03/31/2014

Alt Facility ID:	9-100341
Tank Id:	R-A5
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	03/31/2014

Alt Facility ID:	9-100341
Tank Id:	R-A4
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	03/31/2014

Alt Facility ID:	9-100341
Tank Id:	R-I-1
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	03/31/2014

Alt Facility ID:	9-100341
Tank Id:	R-2
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	03/31/2014

Alt Facility ID:	9-100341
Tank Id:	R-A1
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	03/31/2014

MCCULLY UNION SERVICE #136, 2105 S KING ST, HONOLULU, HI 96826 (Continued)

Alt Facility ID:	9-100341
Tank Id:	R-5
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	03/31/2014

Alt Facility ID:	9-100341
Tank Id:	2A
Tank Status:	Currently In Use
FRTYPE:	Insurance
Expiration Date:	03/31/2014

Alt Facility ID:	9-100341
Tank Id:	R-4
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	03/31/2014

Alt Facility ID:	9-100341
Tank Id:	2B
Tank Status:	Currently In Use
FRTYPE:	Insurance
Expiration Date:	03/31/2014

Alt Facility ID:	9-100341
Tank Id:	1
Tank Status:	Currently In Use
FRTYPE:	Insurance
Expiration Date:	03/31/2014

Alt Facility ID:	9-100341
Tank Id:	R-3
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	03/31/2014

Alt Facility ID:	9-100341
Tank Id:	R-A4
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	09/30/2017

Alt Facility ID:	9-100341
Tank Id:	R-I-1
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	09/30/2017

Alt Facility ID:	9-100341
Tank Id:	2A
Tank Status:	Currently In Use
FRTYPE:	Insurance
Expiration Date:	09/30/2017

MCCULLY UNION SERVICE #136, 2105 S KING ST, HONOLULU, HI 96826 (Continued)

Alt Facility ID:	9-100341
Tank Id:	R-A5
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	09/30/2017

Alt Facility ID:	9-100341
Tank Id:	2B
Tank Status:	Currently In Use
FRTYPE:	Insurance
Expiration Date:	09/30/2017

Alt Facility ID:	9-100341
Tank Id:	R-A1
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	09/30/2017

Alt Facility ID:	9-100341
Tank Id:	1
Tank Status:	Currently In Use
FRTYPE:	Insurance
Expiration Date:	09/30/2017

Alt Facility ID:	9-100341
Tank Id:	R-3
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	09/30/2017

Alt Facility ID:	9-100341
Tank Id:	R-A3
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	09/30/2017

Alt Facility ID:	9-100341
Tank Id:	R-4
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	09/30/2017

Alt Facility ID:	9-100341
Tank Id:	R-A2
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	09/30/2017

Alt Facility ID:	9-100341
Tank Id:	R-5
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	09/30/2017

MCCULLY UNION SERVICE #136, 2105 S KING ST, HONOLULU, HI 96826 (Continued)

Alt Facility ID:	9-100341
Tank Id:	R-2
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	09/30/2017

TOM ISHII'S UNION SERVICE (CLOSED 04/1992) 2114 S KING ST, HONOLULU, HI, 96826			S121406272
▲ B5	N <1/10	(401 ft. / 0.076 mi.)	State- and tribal - equivalent CERCLIS
	3 ft. Higher Elevation	10 ft. Above Sea Level	

Worksheet:

SHWS: State- and tribal - equivalent CERCLIS

Organization:	Not Reported
Supplemental Location:	Not Reported
Island:	Oahu
Environmental Interest:	Tom Ishiis Union Service
HID Number:	Not Reported
Facility Registry Identifier:	110014047931
Lead Agency:	HEER
Program:	State
Project Manager:	Steve Mow
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Island:	Oahu
SDAR Environmental Interest Name:	Tom Ishiis Union Service
HID Number:	Not Reported
Facility Registry Identifier:	110014047931
Lead Agency:	HEER
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: TPH.
Nature of Residual Contamination:	Not Reported
Use Restrictions:	No Hazard Present For Unrestricted Residential Use
Engineering Control:	Not Reported
Description of Restrictions:	Not Reported
Institutional Control:	Not Reported
Within Designated Areawide Contamination:	Not Reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	08/11/2016
Document Number:	2016-428-SPM
Document Subject:	No Further Action Determination
Project Manager:	Steve Mow
Contact Information:	(808) 586-4249 2385 Waimano Home Rd, Pearl City, HI 96782

ISHII ENTERPRISES INC 2114 S KING, HONOLULU, HI, 96814			1020615322
▲ B6	N <1/10	(401 ft. / 0.076 mi.)	EDR Exclusive Records
	3 ft. Higher Elevation	10 ft. Above Sea Level	

Worksheet:

EDR Hist Auto: EDR Exclusive Records

Year:	Name: / Type:
1969:	ISHII TOM T / Gasoline Service Stations
1970:	ISHII TOM T / Gasoline Service Stations
1971:	ISHII TOM T / Gasoline Service Stations
1972:	ISHII ENTERPRISES INC / Gasoline Service Stations
1973:	ISHII ENTERPRISES INC / Gasoline Service Stations
1974:	ISHII ENTERPRISES INC / Gasoline Service Stations
1975:	ISHII ENTERPRISES INC / Gasoline Service Stations
1976:	ISHII ENTERPRISES INC / Gasoline Service Stations
1977:	ISHII ENTERPRISES INC / Gasoline Service Stations
1978:	ISHII ENTERPRISES INC / Gasoline Service Stations
1979:	ISHII ENTERPRISES INC / Gasoline Service Stations
1980:	ISHII ENTERPRISES INC / Gasoline Service Stations
1982:	ISHII ENTERPRISES INC / Gasoline Service Stations
1983:	ISHII ENTERPRISES INC / Gasoline Service Stations
1988:	ISHII TOMS UNION SERVICE / Gasoline Service Stations
1989:	ISHII TOMS UNION SERVICE / Gasoline Service Stations
1990:	ISHIIS TOM UNION SERVICE / Gasoline Service Stations
1991:	ISHIIS TOM UNION SERVICE / Gasoline Service Stations
1992:	ISHIIS TOM UNION SERVICE / Gasoline Service Stations

TOM ISHII'S UNION L-4462 2114 S KING ST, HONOLULU, HI, 96826			U001235017
▲ B7	N <1/10	(401 ft. / 0.076 mi.)	State and tribal leaking storage tank lists State and tribal registered storage tank lists
	3 ft. Higher Elevation	10 ft. Above Sea Level	

Worksheet:

LUST: State and tribal leaking storage tank lists

Facility ID:	9-100042
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	07/24/2001
Release ID:	900023
Project Officer:	Shaobin Li

UST: State and tribal registered storage tank lists

Facility ID:	9-100042
Owner:	UNOCAL CORPORATION

TOM ISHII'S UNION L-4462, 2114 S KING ST, HONOLULU, HI 96826 (Continued)

Owner Address:	3915 Mission Avenue #7416
Owner City,St,Zip:	Honolulu, 96826 96826
Latitude:	21.294216
Longitude:	-157.827884
Horizontal Reference Datum Name:	NAD83
Horizontal Collection Method Name:	Address Matching

Tank ID:	R-1
Date Installed:	03/26/1958
Tank Status:	**Permanently Out of Use**
Date Closed:	11/30/1989
Tank Capacity:	4000
Substance:	Gasoline

Tank ID:	R-1-2
Date Installed:	03/26/1958
Tank Status:	**Permanently Out of Use**
Date Closed:	07/01/1992
Tank Capacity:	4000
Substance:	Gasoline

Tank ID:	R-2
Date Installed:	03/26/1958
Tank Status:	**Permanently Out of Use**
Date Closed:	07/01/1992
Tank Capacity:	5000
Substance:	Gasoline

Tank ID:	R-4
Date Installed:	03/26/1958
Tank Status:	**Permanently Out of Use**
Date Closed:	07/01/1992
Tank Capacity:	550
Substance:	Used Oil

HIRONAKA SERVICE STATION 2105 S BERETANIA ST, HONOLULU, HI, 96826			U003221653
▲ 8	N 1/10 - 1/3	(897 ft. / 0.17 mi.)	State and tribal leaking storage tank lists State and tribal registered storage tank lists
	6 ft. Higher Elevation	13 ft. Above Sea Level	

Worksheet:

LUST: State and tribal leaking storage tank lists

Facility ID:	9-101174
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	05/13/2005
Release ID:	000067
Project Officer:	Shaobin Li

HIRONAKA SERVICE STATION, 2105 S BERETANIA ST, HONOLULU, HI 96826 (Continued)

UST: State and tribal registered storage tank lists

Facility ID:	9-101174
Owner:	UNKNOWN AT THIS TIME
Owner Address:	UNK
Owner City,St,Zip:	Honolulu, 96826 96826
Latitude:	21.295771
Longitude:	-157.827786
Horizontal Reference Datum Name:	NAD83
Horizontal Collection Method Name:	Address Matching

Tank ID:	R-1
Date Installed:	04/04/1957
Tank Status:	**Permanently Out of Use**
Date Closed:	11/08/2000
Tank Capacity:	4000
Substance:	Gasoline

Tank ID:	R-2
Date Installed:	04/04/1957
Tank Status:	**Permanently Out of Use**
Date Closed:	11/08/2000
Tank Capacity:	5000
Substance:	Gasoline

Tank ID:	R-3
Date Installed:	04/04/1974
Tank Status:	**Permanently Out of Use**
Date Closed:	11/08/2000
Tank Capacity:	8000
Substance:	Gasoline

Tank ID:	R-4
Date Installed:	04/04/1970
Tank Status:	**Permanently Out of Use**
Date Closed:	11/10/2000
Tank Capacity:	550
Substance:	Used Oil

PUNAHOU CENTRAL OFFICE 2054 YOUNG ST, HONOLULU, HI, 96826			U001235197
▲ E9	NNW 1/10 - 1/3	(908 ft. / 0.172 mi.)	State and tribal leaking storage tank lists State and tribal registered storage tank lists Other Ascertainable Records
	5 ft. Higher Elevation	12 ft. Above Sea Level	

Worksheet:

LUST: State and tribal leaking storage tank lists

Facility ID:	9-100525

PUNAHOU CENTRAL OFFICE, 2054 YOUNG ST, HONOLULU, HI 96826 (Continued)

Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	10/29/1997
Release ID:	960080
Project Officer:	Eric Sadoyama

Facility ID:	9-100525
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	12/27/1994
Release ID:	920006
Project Officer:	Eric Sadoyama

UST: State and tribal registered storage tank lists

Facility ID:	9-100525
Owner:	Hawaiian Telcom
Owner Address:	1177 Bishop Street, Suite 20
Owner City,St,Zip:	Honolulu, 96826 96826
Latitude:	21.295458
Longitude:	-157.828920
Horizontal Reference Datum Name:	NAD83
Horizontal Collection Method Name:	GPS

Tank ID:	M-1
Date Installed:	11/01/1996
Tank Status:	**Currently In Use**
Date Closed:	Not Reported
Tank Capacity:	2500
Substance:	Diesel

Tank ID:	R-M-001
Date Installed:	05/07/1970
Tank Status:	**Permanently Out of Use**
Date Closed:	07/23/1996
Tank Capacity:	2500
Substance:	Diesel

HI Financial Assurance: Other Ascertainable Records

Alt Facility ID:	9-100525
Tank Id:	M-1
Tank Status:	Currently In Use
FRTYPE:	Insurance
Expiration Date:	05/02/2011

Alt Facility ID:	9-100525
Tank Id:	R-M-001
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	05/02/2011

Alt Facility ID:	9-100525
Tank Id:	M-1
Tank Status:	Currently In Use

PUNAHOU CENTRAL OFFICE, 2054 YOUNG ST, HONOLULU, HI 96826 (Continued)

FRTYPE:	Insurance
Expiration Date:	05/02/2018
Alt Facility ID:	9-100525
Tank Id:	R-M-001
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	05/02/2018

MCCULLY SHELL 1115 MCCULLY ST, HONOLULU, HI, 96826			U001235337
▲ E10	NNW 1/10 - 1/3	(1167 ft. / 0.221 mi.)	State and tribal leaking storage tank lists State and tribal registered storage tank lists Other Ascertainable Records
	6 ft. Higher Elevation	13 ft. Above Sea Level	

Worksheet:

LUST: State and tribal leaking storage tank lists

Facility ID:	9-101017
Facility Status:	Site Cleanup Completed with EHE
Facility Status Date:	10/23/2012
Release ID:	080031
Project Officer:	Shunsheng Fu

UST: State and tribal registered storage tank lists

Facility ID:	9-101017
Owner:	ALOHA PETROLEUM, LTD.
Owner Address:	1132 BISHOP STREET, SUITE 1700
Owner City,St,Zip:	Honolulu, 96826 96826
Latitude:	21.296352
Longitude:	-157.829281
Horizontal Reference Datum Name:	NAD83
Horizontal Collection Method Name:	GPS
Tank ID:	1
Date Installed:	04/18/1985
Tank Status:	**Currently In Use**
Date Closed:	Not Reported
Tank Capacity:	10000
Substance:	Gasohol
Tank ID:	2
Date Installed:	04/18/1985
Tank Status:	**Currently In Use**
Date Closed:	Not Reported
Tank Capacity:	10000
Substance:	Diesel
Tank ID:	3

MCCULLY SHELL, 1115 MCCULLY ST, HONOLULU, HI 96826 (Continued)

Date Installed:	04/18/1985
Tank Status:	**Currently In Use**
Date Closed:	Not Reported
Tank Capacity:	10000
Substance:	Gasohol

HI Financial Assurance: Other Ascertainable Records

Alt Facility ID:	9-101017
Tank Id:	2
Tank Status:	Currently In Use
FRTYPE:	Insurance
Expiration Date:	04/01/2015

Alt Facility ID:	9-101017
Tank Id:	3
Tank Status:	Currently In Use
FRTYPE:	Insurance
Expiration Date:	04/01/2015

Alt Facility ID:	9-101017
Tank Id:	1
Tank Status:	Currently In Use
FRTYPE:	Insurance
Expiration Date:	04/01/2015

LINDSEY'S CHEVRON SERVICE 2404 S BERETANIA ST, HONOLULU, HI, 96826			U003221659
▲ 11	ENE 1/10 - 1/3	(1310 ft. / 0.248 mi.)	State and tribal leaking storage tank lists State and tribal registered storage tank lists
	3 ft. Higher Elevation	10 ft. Above Sea Level	

Worksheet:

LUST: State and tribal leaking storage tank lists

Facility ID:	9-101230
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	06/22/1993
Release ID:	910050
Project Officer:	Rhonda Goyke

UST: State and tribal registered storage tank lists

Facility ID:	9-101230
Owner:	CHEVRON PRODUCTS COMPANY
Owner Address:	91-480 MALAKOLE ST.
Owner City,St,Zip:	Honolulu, 96826 96826
Latitude:	21.294948
Longitude:	-157.824663
Horizontal Reference Datum Name:	NAD83
Horizontal Collection Method Name:	Address Matching

LINDSEY'S CHEVRON SERVICE, 2404 S BERETANIA ST, HONOLULU, HI 96826 (Continued)

Tank ID:	R-1
Date Installed:	11/30/1984
Tank Status:	**Permanently Out of Use**
Date Closed:	Not Reported
Tank Capacity:	10000
Substance:	Gasoline

Tank ID:	R-2
Date Installed:	11/30/1984
Tank Status:	**Permanently Out of Use**
Date Closed:	Not Reported
Tank Capacity:	10000
Substance:	Gasoline

Tank ID:	R-3
Date Installed:	11/30/1984
Tank Status:	**Permanently Out of Use**
Date Closed:	Not Reported
Tank Capacity:	10000
Substance:	Gasoline

Tank ID:	R-4
Date Installed:	11/30/1984
Tank Status:	**Permanently Out of Use**
Date Closed:	Not Reported
Tank Capacity:	1000
Substance:	Used Oil

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
ENVIRONMENTAL RECORDS						
Federal NPL site list						
US	NPL	National Priority List	EPA	12/12/2018	12/28/2018	01/11/2019
US	Proposed NPL	Proposed National Priority List Sites	EPA	12/12/2018	12/28/2018	01/11/2019
US	NPL LIENS	Federal Superfund Liens	EPA	10/15/1991	02/02/1994	03/30/1994
Federal CERCLIS list						
US	SEMS	Superfund Enterprise Management System	EPA	12/12/2018	12/28/2018	01/11/2019
Federal RCRA CORRACTS facilities list						
US	CORRACTS	Corrective Action Report	EPA	03/01/2018	03/28/2018	06/22/2018
Federal RCRA TSD facilities list						
US	RCRA-TSDF	RCRA - Treatment, Storage and Disposal	Environmental Protection Agency	03/01/2018	03/28/2018	06/22/2018
Federal RCRA generators list						
US	RCRA-LQG	RCRA - Large Quantity Generators	Environmental Protection Agency	03/01/2018	03/28/2018	06/22/2018
US	RCRA-SQG	RCRA - Small Quantity Generators	Environmental Protection Agency	03/01/2018	03/28/2018	06/22/2018
US	RCRA-CESQG	RCRA - Conditionally Exempt Small Quantity Generators	Environmental Protection Agency	03/01/2018	03/28/2018	06/22/2018
Federal institutional controls / engineering controls registries						
US	LUCIS	Land Use Control Information System	Department of the Navy	10/17/2018	10/25/2018	12/07/2018
US	US ENG CONTROLS	Engineering Controls Sites List	Environmental Protection Agency	07/31/2018	08/28/2018	09/14/2018
US	US INST CONTROL	Sites with Institutional Controls	Environmental Protection Agency	07/31/2018	08/28/2018	09/14/2018
Federal ERNS list						
US	ERNS	Emergency Response Notification System	National Response Center, United States Coast	09/24/2018	09/25/2018	11/09/2018
State and tribal - equivalent CERCLIS						
HI	SHWS	Sites List	Department of Health	09/27/2018	11/19/2018	12/04/2018
State and tribal landfill / solid waste disposal						
HI	SWF/LF	Permitted Landfills in the State of Hawaii	Department of Health	09/17/2012	04/03/2013	05/10/2013
State and tribal leaking storage tank lists						
HI	LUST	Leaking Underground Storage Tank Database	Department of Health	08/31/2018	09/11/2018	10/10/2018
US	INDIAN LUST R10	Leaking Underground Storage Tanks on Indian Land	EPA Region 10	04/12/2018	05/18/2018	07/20/2018
US	INDIAN LUST R9	Leaking Underground Storage Tanks on Indian Land	Environmental Protection Agency	04/10/2018	05/18/2018	07/20/2018
US	INDIAN LUST R5	Leaking Underground Storage Tanks on Indian Land	EPA, Region 5	04/12/2018	05/18/2018	07/20/2018
US	INDIAN LUST R7	Leaking Underground Storage Tanks on Indian Land	EPA Region 7	04/24/2018	05/18/2018	07/20/2018
US	INDIAN LUST R6	Leaking Underground Storage Tanks on Indian Land	EPA Region 6	04/01/2018	05/18/2018	07/20/2018
US	INDIAN LUST R1	Leaking Underground Storage Tanks on Indian Land	EPA Region 1	04/13/2018	05/18/2018	07/20/2018
US	INDIAN LUST R4	Leaking Underground Storage Tanks on Indian Land	EPA Region 4	05/08/2018	05/18/2018	07/20/2018
US	INDIAN LUST R8	Leaking Underground Storage Tanks on Indian Land	EPA Region 8	04/25/2018	05/18/2018	07/20/2018

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
State and tribal registered storage tank lists						
HI	UST	Underground Storage Tank Database	Department of Health	08/31/2018	09/11/2018	10/10/2018
US	INDIAN UST R4	Underground Storage Tanks on Indian Land	EPA Region 4	05/08/2018	05/18/2018	07/20/2018
US	INDIAN UST R1	Underground Storage Tanks on Indian Land	EPA, Region 1	04/13/2018	05/18/2018	07/20/2018
US	INDIAN UST R6	Underground Storage Tanks on Indian Land	EPA Region 6	04/01/2018	05/18/2018	07/20/2018
US	INDIAN UST R7	Underground Storage Tanks on Indian Land	EPA Region 7	04/24/2018	05/18/2018	07/20/2018
US	INDIAN UST R8	Underground Storage Tanks on Indian Land	EPA Region 8	04/25/2018	05/18/2018	07/20/2018
US	INDIAN UST R5	Underground Storage Tanks on Indian Land	EPA Region 5	04/12/2018	05/18/2018	07/20/2018
US	INDIAN UST R10	Underground Storage Tanks on Indian Land	EPA Region 10	04/12/2018	05/18/2018	07/20/2018
US	INDIAN UST R9	Underground Storage Tanks on Indian Land	EPA Region 9	04/10/2018	05/18/2018	07/20/2018
US	FEMA UST	Underground Storage Tank Listing	FEMA	05/15/2017	05/30/2017	10/13/2017
State and tribal institutional control / engineering control registries						
HI	ENG CONTROLS	Engineering Control Sites	Department of Health	09/27/2018	11/19/2018	12/04/2018
HI	INST CONTROL	Sites with Institutional Controls	Department of Health	09/27/2018	11/19/2018	12/04/2018
State and tribal voluntary cleanup sites						
US	INDIAN VCP R1	Voluntary Cleanup Priority Listing	EPA, Region 1	07/27/2015	09/29/2015	02/18/2016
US	INDIAN VCP R7	Voluntary Cleanup Priority Lisitng	EPA, Region 7	03/20/2008	04/22/2008	05/19/2008
HI	VCP	Voluntary Response Program Sites	Department of Health	09/27/2018	11/19/2018	12/04/2018
State and tribal Brownfields sites						
HI	BROWNFIELDS	Brownfields Sites	Department of Health	09/27/2018	11/19/2018	12/04/2018
Other Records						
US	CONSENT	Superfund (CERCLA) Consent Decrees	Department of Justice, Consent Decree Library	09/30/2018	10/12/2018	12/07/2018
US	ROD	Records Of Decision	EPA	12/12/2018	12/28/2018	01/11/2019
US	LIENS 2	CERCLA Lien Information	Environmental Protection Agency	12/12/2018	12/28/2018	01/11/2019
US	DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations	EPA, Region 9	01/12/2009	05/07/2009	09/21/2009
US	SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing	Environmental Protection Agency	01/01/2017	02/03/2017	04/07/2017
US	PCB TRANSFORMER	PCB Transformer Registration Database	Environmental Protection Agency	05/24/2017	11/30/2017	12/15/2017
US	FUSRAP	Formerly Utilized Sites Remedial Action Program	Department of Energy	08/08/2017	09/11/2018	09/14/2018
US	EPA WATCH LIST	EPA WATCH LIST	Environmental Protection Agency	08/30/2013	03/21/2014	06/17/2014
US	US FIN ASSUR	Financial Assurance Information	Environmental Protection Agency	08/31/2018	09/25/2018	11/09/2018
US	US AIRS MINOR	Air Facility System Data	EPA	10/12/2016	10/26/2016	02/03/2017
US	LEAD SMELTER 2	Lead Smelter Sites	American Journal of Public Health	04/05/2001	10/27/2010	12/02/2010
US	LEAD SMELTER 1	Lead Smelter Sites	Environmental Protection Agency	12/12/2018	12/28/2018	01/11/2019
US	2020 COR ACTION	2020 Corrective Action Program List	Environmental Protection Agency	09/30/2017	05/08/2018	07/20/2018
US	US HIST CDL	National Clandestine Laboratory Register	Drug Enforcement Administration	09/21/2018	09/21/2018	11/09/2018
US	COAL ASH EPA	Coal Combustion Residues Surface Impoundments List	Environmental Protection Agency	07/01/2014	09/10/2014	10/20/2014
US	COAL ASH DOE	Steam-Electric Plant Operation Data	Department of Energy	12/31/2005	08/07/2009	10/22/2009
US	US AIRS (AFS)	Aerometric Information Retrieval System Facility Subsystem (	EPA	10/12/2016	10/26/2016	02/03/2017
US	Delisted NPL	National Priority List Deletions	EPA	12/12/2018	12/28/2018	01/11/2019
US	SEMS-ARCHIVE	Superfund Enterprise Management System Archive	EPA	12/13/2018	12/28/2018	01/11/2019
US	RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated	Environmental Protection Agency	03/01/2018	03/28/2018	06/22/2018
US	HMIRS	Hazardous Materials Information Reporting System	U.S. Department of Transportation	03/26/2018	03/27/2018	06/08/2018

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	DOT OPS	Incident and Accident Data	Department of Transporation, Office of Pipeli	10/01/2018	10/30/2018	01/18/2019
US	US CDL	Clandestine Drug Labs	Drug Enforcement Administration	09/21/2018	09/21/2018	11/09/2018
US	US BROWNFIELDS	A Listing of Brownfields Sites	Environmental Protection Agency	12/17/2018	12/18/2018	01/11/2019
US	DOD	Department of Defense Sites	USGS	12/31/2005	11/10/2006	01/11/2007
US	FEDLAND	Federal and Indian Lands	U.S. Geological Survey	12/31/2005	02/06/2006	01/11/2007
US	FUDS	Formerly Used Defense Sites	U.S. Army Corps of Engineers	01/31/2015	07/08/2015	10/13/2015
US	UMTRA	Uranium Mill Tailings Sites	Department of Energy	06/23/2017	10/11/2017	11/03/2017
US	ODI	Open Dump Inventory	Environmental Protection Agency	06/30/1985	08/09/2004	09/17/2004
US	US MINES	Mines Master Index File	Department of Labor, Mine Safety and Health A	08/01/2018	08/29/2018	10/05/2018
US	US MINES 2	Ferrous and Nonferrous Metal Mines Database Listing	USGS	12/05/2005	02/29/2008	04/18/2008
US	US MINES 3	Active Mines & Mineral Plants Database Listing	USGS	04/14/2011	06/08/2011	09/13/2011
US	PRP	Potentially Responsible Parties	EPA	08/13/2018	10/04/2018	11/09/2018
US	TRIS	Toxic Chemical Release Inventory System	EPA	12/31/2016	01/10/2018	01/12/2018
US	TSCA	Toxic Substances Control Act	EPA	12/31/2016	06/21/2017	01/05/2018
US	FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA/Office of Prevention, Pesticides and Toxi	04/09/2009	04/16/2009	05/11/2009
US	FTTS INSP	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA	04/09/2009	04/16/2009	05/11/2009
US	HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	HIST FTTS INSP	FIFRA/TSCA Tracking System Inspection & Enforcement Case Lis	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	SSTS	Section 7 Tracking Systems	EPA	12/31/2009	12/10/2010	02/25/2011
US	ICIS	Integrated Compliance Information System	Environmental Protection Agency	11/18/2016	11/23/2016	02/10/2017
US	PADS	PCB Activity Database System	EPA	09/14/2018	10/11/2018	12/07/2018
US	MLTS	Material Licensing Tracking System	Nuclear Regulatory Commission	08/30/2016	09/08/2016	10/21/2016
US	RADINFO	Radiation Information Database	Environmental Protection Agency	10/02/2018	10/03/2018	11/09/2018
US	FINDS	Facility Index System/Facility Registry System	EPA	11/15/2018	12/05/2018	01/11/2019
US	RAATS	RCRA Administrative Action Tracking System	EPA	04/17/1995	07/03/1995	08/07/1995
US	RMP	Risk Management Plans	Environmental Protection Agency	10/26/2018	11/06/2018	01/11/2019
US	BRS	Biennial Reporting System	EPA/NTIS	12/31/2015	02/22/2017	09/28/2017
US	PWS	Public Water System Data	EPA	12/17/2013	01/09/2014	10/15/2014
US	INDIAN RESERV	Indian Reservations	USGS	12/31/2014	07/14/2015	01/10/2017
US	INDIAN ODI	Report on the Status of Open Dumps on Indian Lands	Environmental Protection Agency	12/31/1998	12/03/2007	01/24/2008
HI	AIRS	List of Permitted Facilities	Department of Health	10/23/2018	10/24/2018	12/04/2018
HI	CDL	Clandestine Drug Lab Listing	Department of Health	08/04/2010	09/10/2010	10/22/2010
HI	DRYCLEANERS	Permitted Drycleaner Facility Listing	Department of Health	10/23/2018	10/24/2018	12/04/2018
HI	Financial Assurance	Financial Assurance Information Listing	Department of Health	09/19/2018	09/20/2018	10/10/2018
HI	LEAD	Lead Inspection Listing	Department of Health	09/24/2018	09/25/2018	10/10/2018
HI	SPILLS	Release Notifications	Department of Health	08/14/2018	08/21/2018	09/11/2018
HI	SPILLS 90	SPILLS90 data from FirstSearch	FirstSearch	03/10/2012	01/03/2013	02/11/2013
HI	UIC	Underground Injection Wells Listing	Department of Health	02/07/2013	02/12/2013	04/09/2013
US	UXO	Unexploded Ordnance Sites	Department of Defense	09/30/2017	06/19/2018	09/14/2018
US	DOCKET HWC	Hazardous Waste Compliance Docket Listing	Environmental Protection Agency	05/31/2018	07/26/2018	10/05/2018
US	ABANDONED MINES	Abandoned Mines	Department of Interior	09/10/2018	09/11/2018	09/14/2018
US	IHS OPEN DUMPS	Open Dumps on Indian Land	Department of Health & Human Serivces, Indian	04/01/2014	08/06/2014	01/29/2015
US	ECHO	Enforcement & Compliance History Information	Environmental Protection Agency	09/02/2018	09/05/2018	09/14/2018
US	FUELS PROGRAM	EPA Fuels Program Registered Listing	EPA	08/22/2018	08/22/2018	10/05/2018

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
HISTORICAL USE RECORDS						
US	EDR MGP	EDR Proprietary Manufactured Gas Plants	EDR, Inc.			
US	EDR Hist Auto	EDR Exclusive Historical Auto Stations	EDR, Inc.			
US	EDR Hist Cleaner	EDR Exclusive Historical Cleaners	EDR, Inc.			
HI	RGA HWS	Recovered Government Archive State Hazardous Waste Facilitie	Department of Health		07/01/2013	01/08/2014
HI	RGA LF	Recovered Government Archive Solid Waste Facilities List	Department of Health		07/01/2013	01/17/2014
HI	RGA LUST	Recovered Government Archive Leaking Underground Storage Tan	Department of Health		07/01/2013	01/03/2014

STREET AND ADDRESS INFORMATION

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Appendix **D**

BUREAU OF CONVEYANCE DOCUMENTATION

2-7-007-016

29,400 Bldg. 770,600 land

wood/single wall
concrete floor.

$799,400
(total)

utility shed
single-family
2 BED, 1BA.
open carport
uncicled porch w/rail

2-7-007-016 + 3000 sq ft.
residential

living space: 1,102 sq.ft.

university park Apartments HI LP

STATE OF HAWAII DEPARTMENT OF TAXATION
PROPERTY ASSESSMENT DIVISION
TAX MAPS BRANCH

FORM P-19 HISTORY SHEET

TAX MAPS BRANCH HISTORY SHEET

DATE:

LOCATION: McCully, Waikiki

TITLE: Lot 15-A LCAw 7713:39

Z	S	PLAT	PAR
2	7	07	16

NO.	GRANTOR, ETC.	AREA OF PARCEL	GRANTEE, ETC.
1	D: Toyo Harada Bk 388 pg 70 7/7/37 7/8/37	3,000¢	To: Kinichi Harada &wf Atsuko-J/T
2	D: Bk 17632 p639 SCT$00 1/31/84 2/1/84	do	To:Kinichi Harada &wf Atsuko-L/I
	DES		Paul H Harada - Rdm
3	R/S: Atsuko Harada died 5/22/85 per	do	To: Kinichi Harada-L/I
	R/P 4/16/86		Paul H Harada-Rdm
4.	Q/D: Kinichi Harada, aka James Kinichi	do	To: Paul H Harada(s)
	Harada Bk 19917 p691 SCT$00 9/30/86		
	10/3/86 DES		
	F/D: L/I - out		

NOTE: INFORMATION ON THIS SHEET IS SUBJECT TO CHANGE

1937 - Toyo Harada transferred parcel to Kinichi Harada & wife ATSUKO

1984 - there was a transfer to Kinichi Harada & wife ATSUKO

1996 - Kinichi Harada transfer to paul Harada

2-7-007-051
14,743 sq. ft.
Residential

WOODISINGLE WALL
Bldg 1) 2-family 4Bed/2BA. 968
Bldg 2) 2-family 2Bed/1BA. 968
Bldg 3) 2-family 4Bed/2BA 616
Bldg 4) 2-family 4Bed/2BA. 1114
3646

$ 2,572,200 land
$ 825,100 Bldg
$ 3,397,300 total

University Park Apartments HI LP

SOURCE: Record	LOC. & TITLE: Kapaakea		1954	DIV.
	Lots 13,15-B;& Lot 16 & por 17			2 7 07 51
BY: eto DATE: 2/12/54	DEED, ETC.: D E E D	TMB NO. 503		
BY: wd DATE: 3/3/54				

NO.	GRANTOR, ETC	AREA OF PARCEL	GRANTEE, ETC
1	D: Tadashi Seiki, Sadao Seiki	14,743 ø	To: Tadashi Seiki & wf
	Inst 169221 Bk 2792 p 111 Cons: $10. love		Violet Kikuno T/E 1/2
	RS: None 2/11/54 2/11/54		Sadao Seiki & wf
			Umeyo T/E 1/2
2	TMB 476'63 WD/pl 3/7/63		
	D: Bk 4452 p 130 Cons:$10 1/29/63 1/31/63	14,743 ø	Tadashi Seiki &wf
	DES		Violet Kikuno-T/E
3	TMB 1921'71-72 LN/en 10/14/71		
	A/S: Bk 7691 p 43 SCT$92.50 Amt:$185,000	do	do
	DP$45,000 Mo:$1,000 to 9/1/76; $1200 Mo bg		With: (Aaron M Chaney, Inc)A/S
	10/1/76 Int 7.5% 7/21/71 7/23/71 DES		
4	D: Bk 12063 p 315 SCT$00 2/24/77 3/11/77 DES	do	To: Aaron M Chaney Inc
5	A/S: Bk 12609 p 176 SCT$115 12/14/77	do	do
	12/15/77 DES Amt$230,000 Int:8% DP$40,000		With:(Walter S Yokoyama &wf
	Mo$1581.33		Jean T/C)A/S
6	A/A/S: Walter S Yokoyama Bk 13663 p 509	do	Owner(s) - No change
	SCT$00 3/8/79 5/4/79		With:(Jean K Yokoyama (s)A/S
7	A/A/S: Jean K Yokoyama Bk 15050 p 739	do	OWNER - NO CHANGE
	SCT$0 9/15/80 10/14/80		With: (Jean K Yokoyama, Trustee)
			A/S
8	A/A/S: Doc 1047007 C-189591 SCT$0	do	do
	9/15/80 12/17/80 (T.K. 2501-35; 2707-51)		
	KEYED ONLY (previously assigned)		
	CONTINUED		

NOTE: LAST AREA & GRANTEE FINAL DATA AS SHOWN ON TAX MAPS.

TERRITORY OF HAWAII TAX COMMISSIONER TAXATION MAPS BUREAU

1954 - Tadashi Seiki & Sadao Seiki to Tadashi Seiki & wife, Violet Kikuno
Sadao Seiki & wife
Umeyo

1963 parcel tranfer to Tadashi Seiki & wife
Violet Kikuno

1977 - a transfer to Aaron M. Chaney Inc.

H 5 9 5

2-7-007-051

STATE OF HAWAII DEPARTMENT OF TAXATION
PROPERTY ASSESSMENT DIVISION
TAX MAPS BRANCH

FORM P-19 HISTORY SHEET

TAX MAPS BRANCH HISTORY SHEET

DATE:		DIV. Z	S	PLAT	PAR
LOCATION: Kapaakea					
TITLE: Lots 13, 15-B & Lot 16 & por 17		2	7	07	51

NO.	page 2 GRANTOR, ETC.	AREA OF PARCEL	GRANTEE, ETC.
9	Amend/Extn/A/S: Aaron M Chaney, Inc	14,743Ø	Aaron M Chaney, Inc
	To: Jean K Yokoyama, Trustee Bk 16631		With: (Jean K Yokoyama,
	p 420 9/1/82 10/12/82 KEYED ONLY		Trustee) A/S
10	D: Bk 18775 p 278 SCT$00 7/11/85 7/12/85	do	To: Jean K Yokoyama Trustee
	DES		
11	D: Aaron M Chaney Inc To: Jean K Yokoyama	do	do
	Trustee Bk 19072 p281 SCT$00 (7/12/85)		
	7/11/85 11/12/85 DES		
	KEYED ONY (Previously Worked)		

NOTE: INFORMATION ON THIS SHEET IS SUBJECT TO CHANGE

1985 transfer to Jean K. Yokohama trustee

Appendix E

INTERVIEW DOCUMENTATION

Name: Mark D. Bratton
Company: University Park Apartments, LLC.
Relation to the Property: Owner
Date: January 25, 2019

Phase I Environmental Site Assessment Questionnaire

1. Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law? If yes, please elaborate. - NO

2. Are you aware of any Activity Use Limitations, such as engineering controls, land use restrictions or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law? If yes, please elaborate. - NO

3. Do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business? If yes, please elaborate. - NO

4. Does the purchase price being paid for this property reasonably reflect the fair market value of the property? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property? - YES

5. Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? If yes, please elaborate.

    a. Do you know the past uses of the property? – N/A

    b. Do you know of specific chemicals that are present or once were present at the property? – N/A

    c. Do you know of spills or other chemical releases that have taken place at the property? – N/A

    d. Do you know of any environmental cleanups that have taken place at the property? – N/A

    e. Are or were there any above or below ground storage tanks at the property? – NO

f. Are there any previous environmental site assessments (Phase I ESAs), environmental studies, hazardous materials surveys, etc. that have been performed for the property? – YES, ENVIRONMENTAL QUESTIONNAIRE FOR CENTRAL PACIFIC BANK

6. Are you aware of commonly known or reasonably ascertainable information about surrounding properties that would help the environmental professional to identify conditions indicative of releases or threatened releases? If yes, please elaborate. – NO

   a. Do you know the past uses of surrounding properties? – NO

   b. Do you know of specific chemicals that are present or once were present at surrounding properties? – NO

   c. Do you know of spills or other chemical releases that have taken place at surrounding properties? – NO

   d. Do you know of any environmental cleanups that have taken place at surrounding properties? – NO

   e. Are or were there any above or below ground storage tanks at surrounding properties? – NO

7. Based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of contamination at the property (i.e., distressed vegetation, staining of soil, discarded chemical/oil drums, chemical odors, etc.)? If yes, please elaborate. – NO

8. Current/Past Owners and Contact Information:

Name	Company	Contact Information
Andrew Chang	Continental Asset Management	Andrew Chang

9. Surrounding Properties - Current/Past Tenants and Contact Information:

Name	Company	Contact Information
N/A		

10. Additional Information/Comments: - NONE

Appendix F

SITE RECONNAISSANCE PHOTOGRAPHS

Photograph #1

Description of Photograph:

2139 Algaroba Street – facing Algaroba Street. Also pictured is one (1) transformer on the street in front of the Site.

Photograph Date:
02/12/2019

Photograph #2

Description of Photograph:

This is one (1) transformer located on Algaroba Street in front of the Site.

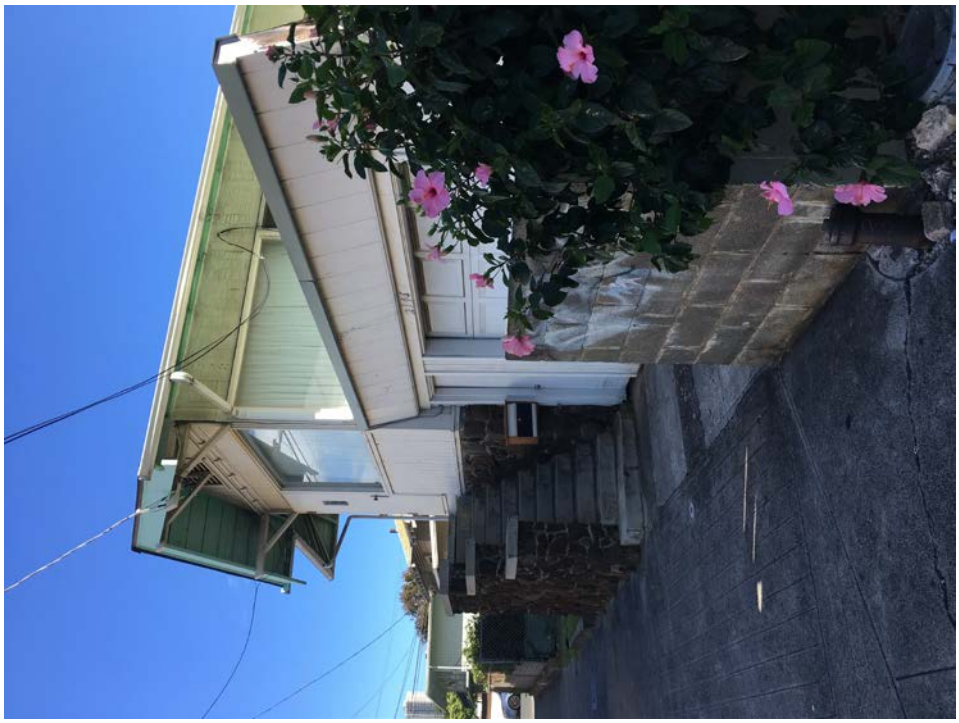
Photograph Date:
02/06/2019

Photograph #3

Description of Photograph:

McCully Villas located adjacent to the Site on the West. Building appears to be residential in nature.

Photograph Date:
02/12/2019



Photograph #4

Description of Photograph:

Residential dwelling adjacent to the Site on the east.

Photograph Date:
02/12/2019

Photograph #5

Description of Photograph:

Honolulu Korean Adventist Church located north of the Site across Algaroba Street.

Photograph Date:
02/12/2019

Photograph #6

Description of Photograph:

Vinyl flooring seen inside the dwellings on the Site. Potentially asbestos containing depending on year manufactured.

Photograph Date:
02/08/2019

Photograph #7

Description of Photograph:

Fluorescent lightbulbs and housing inside units on the Site. Depending on the year manufactured there is a possibility the lights may contain harmful PCB contaminants.

Photograph Date:
02/08/2019

Photograph #8

Description of Photograph:

Vinyl Cove found inside units on the Site. Depending on the year manufactured, there is a possibility the vinyl cove contains harmful asbestos contamination.

Photograph Date:
02/08/2019

Photograph #9

Description of Photograph:

Fuel containers found in the ground floor storage unit on the Site.

Photograph Date:
02/08/2019

Photograph #10

Description of Photograph:

Insecticide found in the ground floor storage unit located on the Site.

Photograph Date:
02/08/2019

Appendix J

Geotechnical Investigation

By Shinsato Engineering, Inc.

SHINSATO ENGINEERING, INC.
CONSULTING GEOTECHNICAL ENGINEERS

98-747 KUAHAO PLACE, SUITE E
PEARL CITY, HAWAII 96782
PHONE: (808) 487-7855
FAX: (808) 487-7854

June 29, 2020
Project No. 20-0055

Ho'okahua Moiliili, LP
c/o 3 Leaf Holdings
119 E. Weber Avenue
Stockton, California 95202

SUBJECT: Report
Soil Percolation / Infiltration Testing
Hale Makana O Moiliili Senior Apartment
2139 Algaroba Street
Honolulu, Hawaii 96826
TMK: (1) 2-7-007: 051

Gentlemen:

This report presents the results of the soil percolation testing that was performed at the subject site. on June 17 and 18, 2020.

1.0 PERCOLATION TESTING

Six (6) percolation tests were performed at the site to determine the rates of the underlying soils. The tests were performed in general accordance with the procedures detailed in the Hawaii Administrative Rules 11-62 Appendix C, Falling Head Test Procedure at the locations shown on the attached Plot Plan, Plate 2. In general, this included, drilling the hole to depth, cleaning the hole of loose/disturbed material, filling the bottom of the hole with clean gravel, then filling the hole with water to determine if a saturation period if required (generally for clayey soils). If so, the hole is pre-soaked for at least 4-hours. The test is performed by filling the hole with 6-inches of water then measuring the drop in water level with time.

2.0 ANALYSIS AND DETERMINATION OF THE SOIL PERCOLATION / INFILTRATION RATES

2.1 Subsurface Soil and Groundwater

Test borings were drilled at the site for a geotechnical investigation report. In general, the borings encountered very dense CORAL beneath the existing pavement areas at Borings 1, 3, 4 and 5, and at depths of 1 to 2 feet below the existing grade at Borings 2 and 6. The CORAL extended to 6.0 feet below grade and was followed by medium dense to dense, silty GRAVEL with sand to depths of 13.5 to 19.0 feet. Probing below these depths disclosed medium dense to very dense material to the final depths of the borings. Groundwater was encountered at approximately 5.3 to 7.1 feet below grade at the time of the field investigation.

2.2 Soil Infiltration Determination

From the field data, the soil percolation rate is calculated. The Porchet Method is then used to calculate the infiltration rate based on the results of the falling head percolation tests. The results of the tests are presented below.

TABLE 1.0 - RESULTS OF SOIL PERCOLATION / INFILTRATION

Percolation Test No.	Test Depth (inch)	Drop in Water Level	Percolation Rate (min./inch)	Infiltration Rate (inch/hour)	Soil Description
P-1	18	2.75"/10 min.	3.64	2.30	silty SAND
P-2	18	1"/10 min.	10.0	0.92	silty SAND
P-3	18	5.5"/10 min.	1.82	7.76	silty GRAVEL
P-4	18	1.44"/10 min.	6.94	1.38	silty GRAVEL with sand
P-5	18	6" in less than 1 min.	>0.17	>90	silty GRAVEL with sand, few cobbles
P-6	18	3.5"/10 min.	2.86	4.00	silty GRAVEL with sand

The locations of the tests are shown on the attached Plot Plan.

Should you have any questions or require any further information, please do not hesitate to contact us.

Very truly yours,

SHINSATO ENGINEERING, INC.

Lawrence S. Shinsato, P.E.
President

LSS:ls

LAWRENCE S. SHINSATO
LICENSED PROFESSIONAL ENGINEER
No. 4169-C
HAWAII, U.S.A.

This work was prepared by me
or under my supervision.
License Expires 04/30/22

Appendix K

Traffic Assessment for Hale Makana O Mo'ili'ili - FINAL

By Austin, Tsutsumi & Associates, Inc.

AUSTIN, TSUTSUMI & ASSOCIATES, INC. CIVIL ENGINEERS • SURVEYORS
CONTINUING THE ENGINEERING PRACTICE FOUNDED BY H. A. R. AUSTIN IN 1934

TERRANCE S. ARASHIRO, P.E.
ADRIENNE W.L.H. WONG, P.E., LEED AP
DEANNA M.R. HAYASHI, P.E.
PAUL K. ARITA, P.E.
ERIK S. KANESHIRO, L.P.L.S, LEED AP
MATT K. NAKAMOTO, P.E.
GARRETT K. TOKUOKA, P.E.

ADRIENNE W.L.H. WONG, P.E., LEED AP
Maui Branch Manager

#20-212

October 13, 2020

Ms. Patti Tancayo Barbee
Ho'okahua Mo'ili'ili, LP
1188 Bishop Street, Suite 907
Honolulu, Hawaii 96813

Dear Ms. Barbee:

Subject: Draft Final Traffic Assessment for Hale Makana O Mo'ili'ili
TMK: 2-07-07:16 & 2-07-07:51
Honolulu, Oahu, Hawaii

This report documents the findings of a traffic assessment conducted by Austin, Tsutsumi, and Associates, Inc. (ATA) to evaluate traffic impacts resulting from the development of Hale Makana O Mo'ili'ili (hereinafter referred to as the "Project"), located in Honolulu, Hawaii.

Project Description

The Project site is located on an approximately 17,750 square-foot parcel in Mo'ili'ili near the intersection of Algaroba Street and Makahiki Way. The site is currently occupied by eight (8) – two (2)-story multi-family apartments which collectively house a total of 26 apartment units, and one (1) single-family home. These units will be demolished and will be replaced by the Project, which is envisioned to be a six-story apartment building consisting of 105 affordable senior rental apartment units. The Project will be income and rent restricted, with units priced accordingly at the 30%, 50%, and 60% average median gross income levels. The current site plan proposes a 31-stall ground-level parking lot with one-way vehicular circulation provided via two (2) driveways from Makahiki Way. In addition, a loading stall is also proposed at the north side of the parking lot, near the access to the mail and elevator lobby. The main pedestrian entry is provided from Algaroba Street.

See Figure 1 for the Project location and Figure 2 for the Project site plan.

REPLY TO:
1871 WILI PA LOOP, SUITE A • WAILUKU, MAUI, HAWAII 96793
PHONE (808) 244-8044 • FAX (808) 242-9163
EMAIL : atamaui@atahawaii.com

OFFICES IN:
HONOLULU, HAWAII
WAILUKU, MAUI, HAWAII
HILO, HAWAII

HALE MAKANA O MO'ILI'ILI

AustinTsutsumi & ASSOCIATES, INC.
Engineers & Surveyors

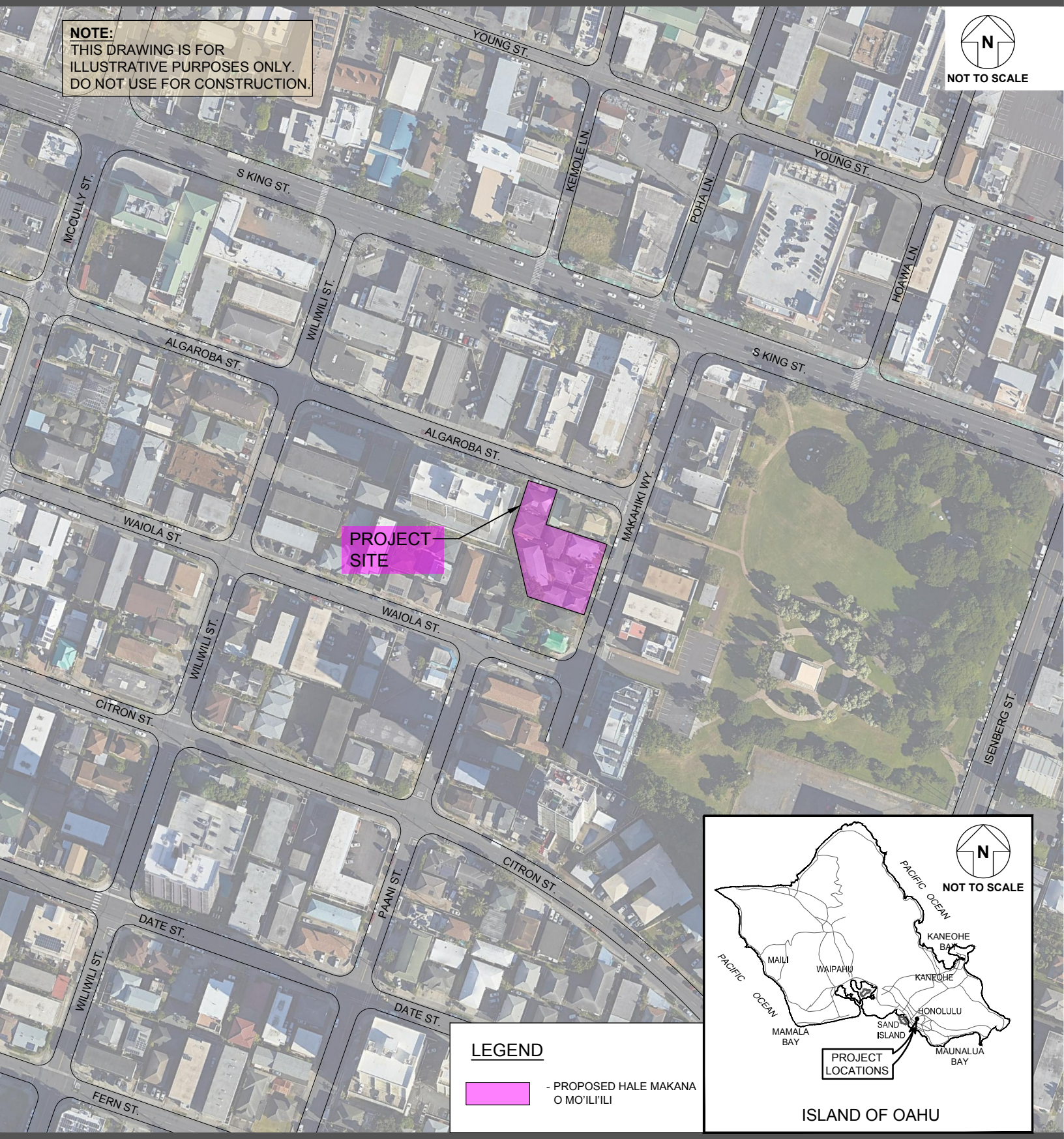


FIGURE 1

LOCATION MAP

HALE MAKANA O MOI'ILI'ILI

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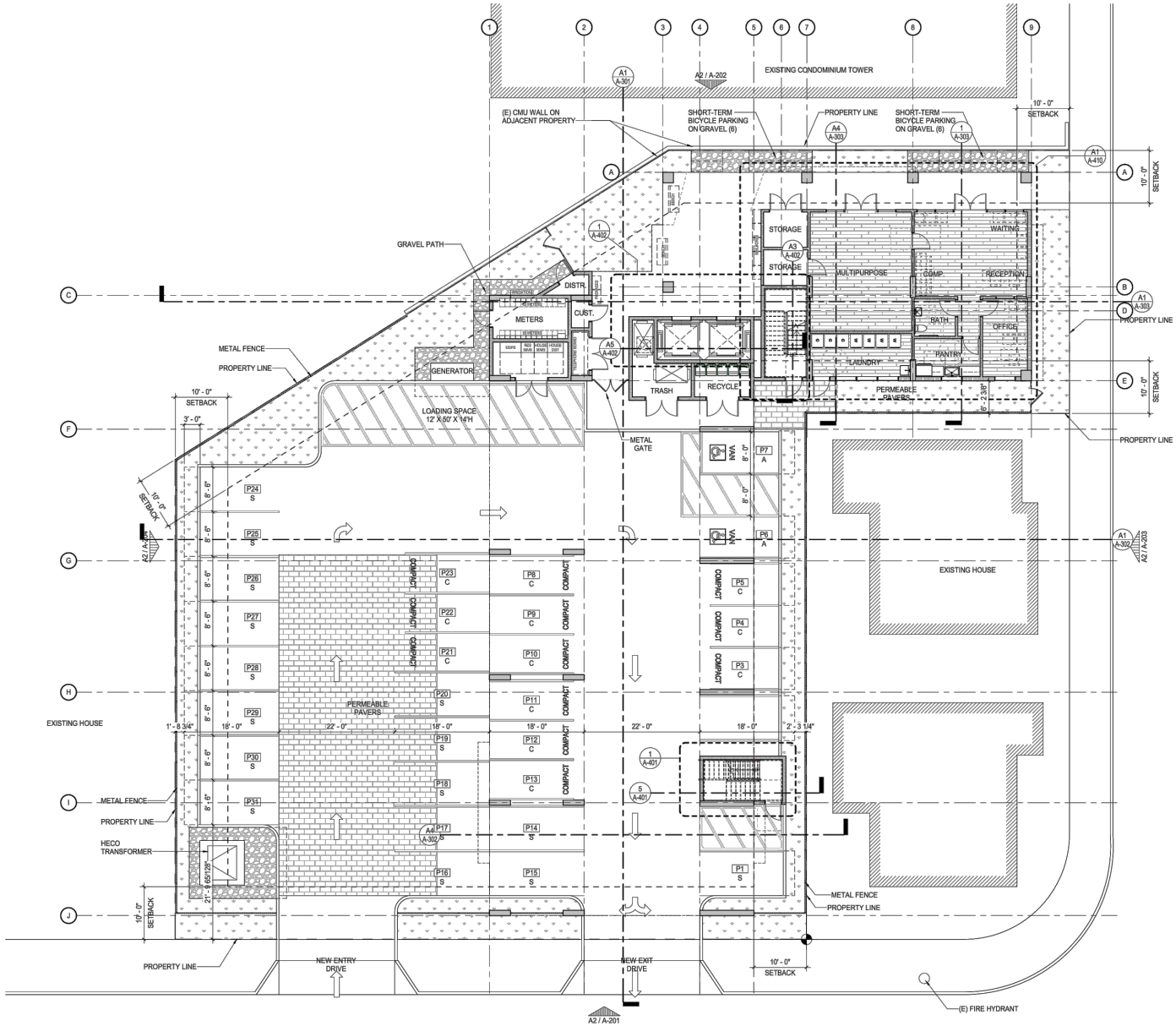

FIGURE 2

PROJECT SITE PLAN

Existing Conditions

The Project is located in the Moi'ili'ili neighborhood, among many other single-family and multi-family homes and apartments. The King Street cycle track and sidewalks provided throughout the Project vicinity encourage multimodal travel to the many commercial retail stores, parks, restaurants, and various small businesses in the neighborhood.

The following are brief descriptions of the existing roadways within the vicinity of the Project:

Makahiki Way is a north-south, two-way roadway which begins to the north at a T-intersection with South King Street and extends southward where it terminates to the south in a dead-end near Waiola Street. Street parking is allowed on both sides of Makahiki Way.

Algaroba Street is an east-west, two-way roadway that runs parallel to South King Street and Waiola Street and begins to the east at a T-intersection with Makahiki Way and extends westward until it transitions into Lokahi Street near Washington Middle School. In the vicinity of the Project, street parking is allowed on both sides of Algaroba Street.

Waiola Street is an east-west, two-way roadway that runs parallel to South King Street and Algaroba Street and begins to the east at its intersection with Makahiki Way and extends westward until it transitions into Philip Street at its intersection with Kuikahi Street. In the vicinity of the Project, street parking is allowed on both sides of Waiola Street.

South King Street is an east-west, one-way roadway that runs parallel to Algaraoba Street and Waiola Street in the vicinity of the Project and begins to the west in Downtown at its intersection with North King Street and Nuuanu Avenue and extends eastward until it transitions into Harding Avenue near the Market City Shopping Center.

Due to the prolonged disruptions to both residential and visitor traffic in the Hawaii region as a result of the impacts of the COVID-19 pandemic, collecting new traffic count data at this time would be atypical.

Study Scope

The focus of this traffic assessment will be on the trip generation potential of the Project to determine whether it meets the minimum trip generation criteria recommended by Institute of Transportation Engineers (ITE). The Manual of Transportation Engineering Studies, dated 2000, published by ITE states:

> *"…in lieu of other locally established thresholds, a traffic access/impact study should be conducted whenever a proposed development will generate 100 or more added (new) peak direction trips to or from the site during the adjacent roadway's peak hours or the development's peak hours."*

Ms. Patti Tancayo Barbee
Ho'okahua Mo'ili'ili, LP

October 13, 2020

Trip Generation

The Institute of Transportation Engineers (ITE) publishes the Trip Generation Manual, 10th Edition, which provides trip generation rates and equations based upon historical data from similar land uses. The trip generation for the Project was generated using ITE Code 252 for Senior Adult Housing – Attached, which generates approximately 40% less trips than other types of multifamily housing during the AM and PM peak hours.

As previously mentioned, the Project will take the place of eight (8) – two (2)-story apartment buildings, which collectively house a total of 26 apartment units, and one (1) single-family home. Trips were generated for the apartment units and single-family home using Trip Generation Manual, 10th Edition and these trips were subtracted from the trip generation for the Senior Adult Housing units to determine the net new external trips generated by the Project.

Table 1 shows the projected traffic generated by the proposed Project during the AM and PM peak hours of traffic.

Table 1: Project-Generated Trips

	ITE Code	Land Use	Quantity	IV	AM			PM		
					Enter	Exit	Total	Enter	Exit	Total
Existing	210	Single Family - Detached	1	DU	0	1	1	1	0	1
	220	Multifamily Housing (Low-Rise)	26	DU	3	11	14	11	7	18
	Total Existing				**3**	**12**	**15**	**12**	**7**	**19**
Project	252	Senior Adult Housing - Attached	105	DU	7	14	21	15	13	28
	Total Future				**7**	**14**	**21**	**15**	**13**	**28**
Net External Trips Generated by Project (Project - Existing)					**4**	**2**	**6**	**3**	**6**	**9**

Note:
IV = Independent Variable
DU = Dwelling Unit

As shown in Table 1, the proposed Project is anticipated to generate a total of 6(9) net new external trips during the AM(PM) peak hours. The projected AM and PM peak hour trips are anticipated to result in Project generated traffic well below the 100 new trip threshold that would require a traffic access/impact study per the ITE guidelines.

Conclusion

The Project is anticipated to generate 6(9) trips during the AM(PM) peak hours, which is well below the ITE minimum trip generation criteria of 100 new trips in the peak direction, and is not anticipated to have a significant impact on traffic operations within the vicinity of the Project.

Ms. Patti Tancayo Barbee
Ho'okahua Mo'ili'ili, LP

October 13, 2020

We appreciate the opportunity to prepare this Traffic Assessment for the Project. Should you require clarification, please contact me at (808) 533-3646.

Sincerely,

AUSTIN, TSUTSUMI & ASSOCIATES, INC.

By

CLAIRE FUKUOKA, P.E.
Project Manager

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Appendix L

US Census QuickFacts for Urban Honolulu CDP

www.census.gov/quickfacts

QuickFacts

Urban Honolulu CDP, Hawaii; United States

QuickFacts provides statistics for all states and counties, and for cities and towns with a ***population of 5,000 or more***.

Table

All Topics	Urban Honolulu CDP, Hawaii	United States
Population estimates, July 1, 2019, (V2019)	**345,064**	**328,239,523**
PEOPLE		
Population		
Population estimates, July 1, 2019, (V2019)	**345,064**	**328,239,523**
Population estimates base, April 1, 2010, (V2019)	337,721	308,758,105
Population, percent change - April 1, 2010 (estimates base) to July 1, 2019, (V2019)	2.2%	6.3%
Population, Census, April 1, 2010	337,256	308,745,538
Age and Sex		
Persons under 5 years, percent	△ 5.2%	△ 6.0%
Persons under 18 years, percent	△ 17.1%	△ 22.3%
Persons 65 years and over, percent	△ 19.7%	△ 16.5%
Female persons, percent	△ 50.2%	△ 50.8%
Race and Hispanic Origin		
White alone, percent	△ 17.5%	△ 76.3%
Black or African American alone, percent (a)	△ 1.9%	△ 13.4%
American Indian and Alaska Native alone, percent (a)	△ 0.1%	△ 1.3%
Asian alone, percent (a)	△ 53.3%	△ 5.9%
Native Hawaiian and Other Pacific Islander alone, percent (a)	△ 8.2%	△ 0.2%
Two or More Races, percent	△ 18.2%	△ 2.8%
Hispanic or Latino, percent (b)	△ 7.3%	△ 18.5%
White alone, not Hispanic or Latino, percent	△ 15.8%	△ 60.1%
Population Characteristics		
Veterans, 2014-2018	22,874	18,611,432
Foreign born persons, percent, 2014-2018	26.9%	13.5%
Housing		
Housing units, July 1, 2019, (V2019)	X	139,684,244
Owner-occupied housing unit rate, 2014-2018	44.4%	63.8%
Median value of owner-occupied housing units, 2014-2018	$652,200	$204,900
Median selected monthly owner costs -with a mortgage, 2014-2018	$2,521	$1,558
Median selected monthly owner costs -without a mortgage, 2014-2018	$648	$490
Median gross rent, 2014-2018	$1,465	$1,023
Building permits, 2019	X	1,386,048
Families & Living Arrangements		
Households, 2014-2018	128,814	119,730,128
Persons per household, 2014-2018	2.61	2.63
Living in same house 1 year ago, percent of persons age 1 year+, 2014-2018	84.7%	85.5%
Language other than English spoken at home, percent of persons age 5 years+, 2014-2018	36.8%	21.5%
Computer and Internet Use		
Households with a computer, percent, 2014-2018	87.7%	88.8%
Households with a broadband Internet subscription, percent, 2014-2018	81.4%	80.4%
Education		
High school graduate or higher, percent of persons age 25 years+, 2014-2018	88.8%	87.7%
Bachelor's degree or higher, percent of persons age 25 years+, 2014-2018	36.4%	31.5%
Health		
With a disability, under age 65 years, percent, 2014-2018	6.2%	8.6%
Persons without health insurance, under age 65 years, percent	△ 5.2%	△ 10.0%
Economy		
In civilian labor force, total, percent of population age 16 years+, 2014-2018	62.6%	62.9%
In civilian labor force, female, percent of population age 16 years+, 2014-2018	58.6%	58.2%
Total accommodation and food services sales, 2012 ($1,000) (c)	3,943,956	708,138,598

Total health care and social assistance receipts/revenue, 2012 ($1,000) (c)	4,534,947	2,040,441,203
Total manufacturers shipments, 2012 ($1,000) (c)	1,152,704	5,696,729,632
Total merchant wholesaler sales, 2012 ($1,000) (c)	5,712,767	5,208,023,478
Total retail sales, 2012 ($1,000) (c)	7,684,234	4,219,821,871
Total retail sales per capita, 2012 (c)	$22,234	$13,443
Transportation		
Mean travel time to work (minutes), workers age 16 years+, 2014-2018	23.5	26.6
Income & Poverty		
Median household income (in 2018 dollars), 2014-2018	$68,873	$60,293
Per capita income in past 12 months (in 2018 dollars), 2014-2018	$36,175	$32,621
Persons in poverty, percent	▲ 11.3%	▲ 11.8%

BUSINESSES

Businesses		
Total employer establishments, 2018	X	7,912,405
Total employment, 2018	X	130,881,471
Total annual payroll, 2018 ($1,000)	X	7,097,310,272
Total employment, percent change, 2017-2018	X	1.8%
Total nonemployer establishments, 2018	X	26,485,532
All firms, 2012	38,329	27,626,360
Men-owned firms, 2012	20,350	14,844,597
Women-owned firms, 2012	13,021	9,878,397
Minority-owned firms, 2012	28,092	7,952,386
Nonminority-owned firms, 2012	7,661	18,987,918
Veteran-owned firms, 2012	3,079	2,521,682
Nonveteran-owned firms, 2012	32,800	24,070,685

GEOGRAPHY

Geography		
Population per square mile, 2010	5,572.5	87.4
Land area in square miles, 2010	60.52	3,531,905.43
FIPS Code	1571550	1

About datasets used in this table

Value Notes

⚠ Estimates are not comparable to other geographic levels due to methodology differences that may exist between different data sources.

Some estimates presented here come from sample data, and thus have sampling errors that may render some apparent differences between geographies statistically indistinguishable. Click the Quick Info ⓘ icon to the row in TABLE view to learn about sampling error.

The vintage year (e.g., V2019) refers to the final year of the series (2010 thru 2019). *Different vintage years of estimates are not comparable.*

Fact Notes

- **(a)** Includes persons reporting only one race
- **(b)** Hispanics may be of any race, so also are included in applicable race categories
- **(c)** Economic Census - Puerto Rico data are not comparable to U.S. Economic Census data

Value Flags

- **-** Either no or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest or upper int open ended distribution.
- **D** Suppressed to avoid disclosure of confidential information
- **F** Fewer than 25 firms
- **FN** Footnote on this item in place of data
- **N** Data for this geographic area cannot be displayed because the number of sample cases is too small.
- **NA** Not available
- **S** Suppressed; does not meet publication standards
- **X** Not applicable
- **Z** Value greater than zero but less than half unit of measure shown

QuickFacts data are derived from: Population Estimates, American Community Survey, Census of Population and Housing, Current Population Survey, Small Area Health Insurance Estimates, Small Area Income and P Estimates, State and County Housing Unit Estimates, County Business Patterns, Nonemployer Statistics, Economic Census, Survey of Business Owners, Building Permits.

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Appendix M

Compatibility with State Plan

Chapter 226-5, HRS through Chapter 225-27, HRS

TABLE 1: COMPATIBILITY TO HAWAII STATE PLAN - HRS CH. 226

Part 1. Overall Theme, Goals, Objectives and Policies	**C**	**N/C**	**N/A**
Section 226-4 State Goals. In order to guarantee, for the present and future generations, those elements of choice and mobility that ensure that individuals and groups may approach their desired levels of self-reliance and self-determination, it shall be the goal of the State to achieve:			
1)A strong, viable economy, characterized by stability, diversity, and growth, which enables the fulfillment of the needs and expectations of Hawaii's present and future generations.	√		
2)A desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, that enhances the mental and physical well-being of the people	√		
3) Physical, social and economic well-being for individuals and families in Hawaii that nourish a sense of community responsibility of caring, and of participation in community life.	√		
Discussion: The Hale Makana O Mo'ili'ili is consistent with the State's goals to provide economic vitality, stability and growth for present and future generations.			
Section 226-5: Objective and policies for population **A) It shall be the objective in planning for the State's population to guide population growth to be consistent with the achievement of physical, economic, and social objectives contained in this chapter;** **B) To achieve the population objective, it shall be the policy of this State to:**			
3)Promote increase opportunities for Hawaii's people to pursue their socioeconomic aspirations through the islands.	√		
7)Plan the development and availability of land and water resrouces in a coordinated manner so as to provide for the desired levels of growth in each geographic area.	√		

Discussion: The Hale Makana O Mo'ili'ili will allow our kupuna to rent at affordable rents. This project will provide social and financial stability that will allow individual participants to pursue socio-economic aspirations. N/C to B) 1, 2, 4, 5, and 6.			
Section 226-6: Objectives policies for the economy in general. A) Planning for the State's economy in general shall be directed toward achievement of the following objectives:			
6)Strive to achieve a level of construction activity responsive to, and consistent with, state growth objectives.	√		
Discussion: The Hale Makana O Mo'ili'ili project strives to achieve a level of construction activity responsive to, and consistent with, state objectives. N/C to B) 1, 2. 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, and 16.			
Section 226-7: Objectives and policies for the economy – agriculture. *Discussion: The project is not located on, and will not affect, land classified for agricultural use. N/C to A) 1 – 3, and B) 1 -16*			
Section 226-8 Objectives and policies for the economy – visitor section. *Discussion: This project is not related to, and will not affect, the visitor industry. N/C to entire section.*			
Section 226-9 Objective and policies for the economy--federal expenditures. **A) Planning for the state's economy with regard to federal expenditures shall be directed towards achievement of the objective of a stable federal investment base as an integral component of Hawaii's economy.** **B) To achieve the federal expenditures objective.**			
Promote the development of federally supported activities in Hawaii that respect statewide economic concerns, are sensitive to community needs, and minimize adverse impacts on Hawaii's environment.	√		
Discussion: The project will be funded by Low-Income Housing Tax Credits. This federal tax program will have a positive impact on the State's economy and the community of Mo'ili'ili. N/C to A), B) 1, 2, 4-7.			
Section 226-10 Objective and policies for the econmy – potential growth activities. *Discussion: This project is not directly related to, and will not affect, the diversification of*			

Hawaii's economic base. N/C to entire section.			
Section 226-10.5 Objectives and polcies for the economy-information industry *Discussion: The project is not directly related to, and will not affect, the diversification of Hawaii's information industry. N/C to entire section.*			
Section 226-11 Objectives and policies for the physical environment--land based, shoreline, and marine resources.			
A) Planning for the State's physical environment with regard to land-based, shoreline and marine resources shall be directed towards achievement of the following objectives:			
1) Prudent use of Hawaii's land=based, shoreline, and marine resources.	√		
B) To achieve the land-based, shoreline, and marine resources objectives, it shall be the policy of this State to:			
1)Exercise an overall conservation ethic in the use of Hawaii's natural resources.	√		
2) Ensure compatibility between land-based and water-based activities and natural resources and ecological systems.	√		
3) Take into account the physical attributes of areas when planning and designing activities and facilities.	√		
4) Manage natural resources and environs to encourage their beneficial and multiple use without generating costly or irreparable environmental damage.	√		
7) Purse compatible relationships among activities, facilities and natural resources.	√		
Discussion: The project's EA includes a review of the project's potential impacts on Hawaii's natural resources. The project will not affect coastal, marine, or conservation areas. N/C to A) 2 and B)5, 8, and 9			
Section 226-12 Objective and policies for the physical environment-scenic, natural beauty and historic resources. A) Planning for the State's physical environment shall be directed towards achievement of the objective of enhancement of Hawaii's scenic assets, natural beauty, and multi-cultural/historical resources. B) To achieve the scenic, natural beauty, and historic resources objective, it shall be the policy of this state:			

1) Provide incentives to maintain and enhance historic, cultural, and scenic amenities.	√		
2) Promote the preservation of views and vistas to enhance the visual and esthetic enjoyment of mountains, ocean, scenic landscapes, and other natural features.	√		
Discussion: A Cultural Impact Assessment and Archaeological Assessment of the project site was conducted. No historic properties and no areas of known cultural importance on the site. N/C to B)1 and B)4.			
Section 226-13 Objectives and policies for the physical environment--land, air, and water quality. A) Planning for the State's physical environment with regard to land, air, and water quality shall be directed towards achievement of the following objectives:			
1) Maintenance and pursuit of improved quality in Hawaii's land, air, and water resources.	√		
B) To achieve the land, air, and water quality objectives, it shall be the policy of this State to:			
2) Promote the proper management of Hawaii's land and water resources.	√		
3) Promote the effective measures to achieve desired quality in Hawaii's surface.	√		
4) Encourage actions to maintain aural and air quality levels to enhance the health and well-being of Hawaii's people.	√		
5) Reduce the threat to life and property from erosion, flooding, tsunamis, hurricanes, earthquakes, volcanic eruptions, and other natural or man-induced hazards and disasters	√		
6) Encourage design and construction practices that enhance the physical qualities of Hawaii's communities.	√		
Discussion: The project's potential effects on land,air, and water quality were considered in the EA. Before construction begins, the site will be cleaned of harmful materials, such as lead, asbestos, and arsenic, contained in the current structures will be properly disposed of. Use of dust-screening barriers and watering of exposed soil will mitigate a potential decline in air quality during the construction period. Water quality will also not be affected. N/C to A) 2, B)1, 7, and 8.			

Section 226-14 Objective and policies for facility systems--in general **A) Planning for the State's facility systems, in general, shall be directed towards the achievement of the objective of water, transportation, waste disposal, and energy and telecommunication systems that support statewide social, economic, and physical objectives.** **B) To achieve the general facility systems objective, it shall be the policy of the state to:**			
1) Accommodate the needs of Hawaii's people through coordination of facility systems and capital Improvement priorities in consonance with State and County plans.	√		
2) Increase flexibility in the design and development of facilities systems to promote prudent use of resources and accommodate changing public demands and priorities.	√		
3) Ensure that required facility systems can be supported with resource capabilities and at the reasonable cost to the user.	√		
4) Pursue alternative methods of financing programs and projects and cost-saving techniques in the planning, construction, and maintenance of facilities system.	√		
Discussion: As part of the Environmental Assessment, Impacts of the project and water, transportation, water disposal, energy, and telecommunication systems were considered, and the public utility companies and agencies responsible for these systems were consulted. In general, the current capabilities of these two systems will be able to accommodate the development. In cases in which the current capacity is not sufficient, the project engineer will work with the agencies to improve the facilities.			
Section 226 - 15 objectives and policies for facility systems - - solid and liquid wastes. **A) Planning of the state's facility systems with regard to solid and liquid wastes shall be directed towards the achievement of the following objectives:**			
1) Maintenance of basic public health and sanitation standards relating to treatment and disposal of solid and liquid wastes.	√		
2) Provision of adequate sewage facilities for physical and economic activities that alleviate problems in housing, employment, mobility and other areas.	√		
B) To achieve solid and liquid wastes objectives, it shall be the policy of the state to:			
1) Promote reuse and recycle to reduce solid and liquid wastes and	√		

employ a conservation ethic.			
Discussion: The environmental assessment considered the Project's impact on solid and liquid Waste Systems, and the agencies responsible for these systems work consulted. the current capabilities of these systems will be able to accommodate the development. N/C to B)3			
Section 226 - 16 objectives and policies for facilities systems -- water **A) Planning of the state facility systems with regard to water she'll be directed towards achievement of the objective of the provision of water to adequately accommodate domestic, agricultural, commercial, industrial, recreational, and other needs within the resource capacities.** **B) To achieve the facility systems water objective, it shall be the policy of this state to:**			
Coordinate development of land use activities with existing and potential water supply.	√		
Discussion: Due to the relatively small scale of the development, Oahu current Supply would not be impacted by this project. N/C to B)2 - 6.			
Section 226 – 17 Objectives and policies for facility systems – transportation. *Discussion: Due to the relatively small scale of the development, transportation systems will not be affected. N/C to A)1-2 and B)1 – 13.*			
Section 226 - 18 objectives and policies for facility system - - energy.			
A) Planning for the state's facilities system with regard to energy directed to the cheapest of the following objectives, giving due consideration to all: Dependable, efficient, and economic Statewide Energy Systems			
1) capable of supporting the needs of the people;	√		
4)Reduction, avoidance, or sequestration of greenhouse gas emissions from energy Supply and use.	√		
B) To achieve the energy objectives, it shall be the policy of this state to ensure the provision of adequate, reasonably priced, and dependable energy services to accommodate demand.			
4)Promote all cost-effective conservation of power and fuel supply through measures including A) development of cost effective demand side management program, B) education, C) Adoption of energy efficient practices and technologies.	√		

8)Support actions that reduce, avoid, or sequester greenhouse gases in utility, transportation, and Industrial sector applications.	√		
Discussion: The capacity of the current Energy System is large enough to support the development. In addition to photovoltaic, thermal water heating systems and energy appliances will be installed. N/C to A) 1 and 4 and C)1-3 and 5-7.			
Section to 2 - 18.5 objectivism policies for the facility system - - telecommunications. **A) Planning for the state's telecommunications facility she'll be directed toward the achievement of dependable, efficient, and economical Statewide telecommunications systems capable of supporting the needs of the people.** **B) To achieve the Telecommunications objective, it shall be the policy of this state to ensure the provision of adequate, reasonably priced, and dependable telecommunications services to accommodate demand.** **C) To further achieve the Telecommunications objectives, it shall be the policy of the state to:**			
3)Promote efficient management and use of existing telecommunication systems and services	√		
Discussion: Existing telecommunication systems and services will not be affected by the project. N/C to 1-3 and 4.			
Section 226 - 19 objectives and policies for social cultural advancement housing. A) **Planning for the state social cultural advancement with regard to housing shall be directed toward achievement of the following objectives:**			
1) Greater opportunities for Hawaii's people to secure reasonably priced, safe, sanitary, and livable Homes, located in suitable environment that satisfactorily accommodate the needs and desires of families and individuals, through collaboration and cooperation between government and nonprofit and for-profit developers to ensure the more affordable housing is made available to very low, low, and moderate-income segments of the Hawaii population.	√		
2) the orderly development of residential areas sensitive to community needs and other than uses.	√		
B) To achieve the housing objectives, it shall be the policy of this state to:			
1) effectively accommodate the housing needs of Hawaii's people.	√		
2) Stimulate and promote feasible approaches that increase housing choices for low-income, moderate income, and got group households.	√		
3) Increase homeownership and Rental opportunities and choices in terms of quality, location, cost, density, style, and size of housing..	√		
4) Promote appropriate Improvement, rehabilitation, and			

maintenance of the existing housing units and residential areas.	√		
5) Promote design and location of housing developments taking into account the physical setting, accessibility to public facilities and services, and other concerns of existing communities and surrounding areas.	√		
6) Facilitate the use of available, vacant, developable, and underutilized Urban Land for housing.	√		
7) Foster a variety of Lifestyle traditional to Hawaii through the design and maintenance of neighborhoods that reflect the culture and values of the community.	√		
Discussion: The project will provide safe clean affordable housing to 104 low-income kupuna. N/C to A)3 to B)8.			
Section 226 - 20 Objectives and policies for social cultural advancement - - health.			
A) Planning for the State's Social cultural advancement with regard to help shall be directed toward achievement of the following objectives.	√		
2)Maintenance of sanitary and environmentally healthful conditions to Hawaii's communities.	√		
B) To achieve the health objectives, it shall be the policy of this state to:	√		
5)Provide programs, services, and activities that ensure environmentally healthful and sanitary conditions.	√		
Discussion: The project does not relate to healthcare or health education. The project does include a cleanup and proper disposal Building materials containing lead and Arsenic and asbestos which currently exists on the site. This will help to ensure the environmentally healthful and sanitary conditions of this project site. N/C to A)1 and B)1-4 and B)6.			
Section 226-21 Objective and policies for soci-cultural advancement—education. *Discussion: The project is not related to education. N/C to entire section.*			
Section 226 - 22 Objective and policies for social cultural advancement - - Social Services. **A) Planning for the state's social cultural advancement with regard to Social Services shall be directed towards the treatment of the objective of improved public and private social services and activities that enable individuals, families, and groups to become more self-reliant and confident to improve their well-being.** **B) To achieve the social services objective, it shall be the policy of the state to:**			

1) Assist individuals, especially those in need of attaining a minimally adequate standard of living in those confronted by social and economic hardship conditions, through social services and activities within the state's fiscal capacities.	√		
2) Promote correct coordination and integrative approaches among public and private agencies and programs to jointly address social programs that will enable individuals, families, and groups to deal effectively with social programs and to enhance their participation in society.	√		
Discussion: The overall goal of this project is to provide affordable housing to low-income kupuna. N/C to B)3 -6.			
Section to 226-23 Objective and policies for social cultural advancement - Leisure. **A) Planning for the state's social cultural advancement with the regard to Leisure shall be directed towards the achievement of the objective of the adequate provision of resources to accommodate diverse cultural, artistic, and recreational needs for present and future generations.** **B) To achieve the leisure objective, it shall be the policy of this State to:**			
1) Assure the availability of sufficient resources to provide for future cultural, artistic and recreational needs.	√		
Discussion: The project design includes 2400 resource center that can be utilized as a resource for the recreational, cultural , and artistic needs of project participants. Resource Center will provide leisure programs. N/C to B)2 -5 and B)7-10.			
Section 226-24 Objective and policies for socio-cultural advancement--individual rights and personal well-being. A) Planning for the State's socio-cultural advancement with regard to individual rights and personal well-being shall be directed towards achievement of the objective of increased opportunities and protection of individual rights to enable individuals to fulfill their socio-economic needs and aspirations. B) To achieve the individual rights and personal well-being objective, it shall be the policy of the State to:			
2) Uphold and protect the national and state constitutional rights of every individual.	√		
4)Ensure equal opportunities for individual participation in society.	√		
Discussion: This project is will increase the personal well-being of its participants by providing, safe, clean, affordable housing. The project directly addresses each particpant's right to life, liberty,and the pursuit of happiness. Other rights not directly related to the project will also be upheld and protected. N/C to B)1 and B)3.			

Section 226 -25 Objective and policies for soci-cultural advancement—cultural. *Discusion: This project is not related to cultural advancement. N/C to entire section*
Section 226 – 26 Objective and policies for socio-cultural advancement—public safety *Discussion: This project is not related to public safety. N/C to entire section*
Section 226- 27 Objective and policies for socio-cultural advancement—government *Discussion: This project is not related to government. N/C to entire section.*

Appendix N

Archaeological Literature Review - FINAL

By Pacific Consulting Services, Inc.

Archaeological Literature Review in Support of the Hale Makana O Moʻiliʻili Affordable Rental Housing Project, Waikīkī Ahupuaʻa, Honolulu District, Island of Oʻahu, Hawaiʻi

TMKs: (1) 2-7-007:016 and 2-7-007:051

Prepared for:
Hoʻokahua Moiliili, LP
1188 Bishop Street, Suite 907
Honolulu, HI 96813

October 2020

PACIFIC CONSULTING SERVICES, INC.

720 Iwilei Road, Suite 424, Honolulu Hawaii 96817

REPORT

Archaeological Literature Review in Support of the Hale Makana O Moʻiliʻili Affordable Rental Housing Project in Mōʻiliʻili, Waikīkī Ahupuaʻa, Honolulu District, Island of Oʻahu, Hawaiʻi

TMKs: (1) 2-7-007:016 and 2-7-007:051

By
Nicole I. Vernon, M.A.

Dennis Gosser, M.A.
Principal Investigator

Prepared For:
Hoʻokahua Moiliili, LP
1188 Bishop Street, Suite 907
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October 2020

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MANAGEMENT SUMMARY

Document Title:	Archaeological Literature Review in Support of the Hale Makana O Moʻiliʻili Affordable Rental Housing Project in Mōʻiliʻili, Waikīkī Ahupuaʻa, Honolulu District, Island of Oʻahu, Hawaiʻi
Date/Revised Date:	Draft: July 2020, revised October 2020
Archaeological Permit #:	SHPD Permit No. 20-29
Project Location:	2139 Algaroba Street and 918 Makahiki Way in Mōʻiliʻili, Waikīkī Ahupuaʻa, Honolulu District, Island of Oʻahu, Hawaiʻi
Project TMK:	(1) 2-7-007:016 and 2-7-007:051
Land Owner:	University Park Apartments LP
Project Proponents:	Hoʻokahua Development LLC
Project Tasks:	Archaeological Literature Review
Project Acreage:	.17 hectares (.42 acres)
Principal Investigator:	Dennis Gosser, M.A.
Regulatory Oversight:	Chapter 6E-7 and 6E-8, Hawaii Revised Statutes (HRS) and Hawaii Administrative Rules (HAR) Chapter 275
Project Background:	The project scope of work includes demolition of an existing single-family residence and a low-density apartment complex, and construction of a new apartment complex.
SIHP #:	No previously identified sites in the project area.
Findings:	Few archaeological investigations have been carried out near the project area. No human skeletal remains or human burials have been documented within a 500-meter radius. A single previously identified site, a historic trach deposit (SIHP 50-80-14-08210), is located 100 meters to the southeast. Traditional land use in the vicinity of the project area included wetland taro cultivation and habitation. The existing residences on the property were constructed in the 1920s and are potential historic properties.
Human Skeletal Remains:	None identified within the project area.
Recommendations:	It is recommended that no historic properties will be affected with the condition that archaeological monitoring be conducted with an SHPD-approved AMP and assessment and recordation is conducted for the existing structures over 50 years old.

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INTRODUCTION

Under contract to Hoʻokahua Moiliili, LP, Pacific Consulting Services, Inc. (PCSI) has prepared this Archaeological Literature Review (ALR) in support of the Hale Makana O Moʻiliʻili Affordable Rental Housing Project located at 2139 Algaroba Street and 918 Makahiki Way in Mōʻiliʻili, Waikīkī Ahupuaʻa, Honolulu District, Island of Oʻahu, Hawaiʻi. The project proponent is Hoʻokahua Development LLC, which is a partnership between the Hawaiian Community Development Board and 3 Leaf Holdings. The current land owner is University Park Apartments Hi, Lp. Funding for the project is being provided by Hawaii Housing Finance and Development Corporation. The extent of the proposed project is shown in Figure 1. The project scope of work includes the demolition of existing residences on the property and construction of a six-story (105-unit) affordable rental housing facility.

A historical, cultural, and archaeological background study was conducted in order to evaluate any potential effect on historic properties and to recommend mitigation of any adverse effect, if warranted. This work was carried out in accordance with Hawaii Revised Statutes (HRS) Chapter 6E, and Title 13 of the Hawaii Administrative Rules (HAR), Subtitle 13 (State Historic Preservation Division Rules), Chapter 275 (Rules Governing Procedures for Historic Preservation Review for Governmental Projects Covered Under Sections 6E-7 and 6E-8, HRS).

PROJECT AREA LOCATION AND DESCRIPTION

The proposed project is located at 2139 Algaroba Street and 918 Makahiki Way on a residential block, immediately west of Old Stadium Park. The total project area measures .17 hectares (ha) (.42 acres [ac]). Tax Map Key (TMK) parcels for the project area are (1) 2-7-007:016 and 2-7-007:051, which are shown in Figure 2. Hoʻokahua Development, LLC is planning to construct a six-story (105-unit) affordable rental housing facility with covered parking stalls and an onsite Community Resource Center. The planned development will replace a two-story (26 unit) multi-family apartment complex and one single-family residence. A site plan map for the new construction is shown in Figure 3 and project design plans are provided in Appendix A.

The existing structures in the project area are in poor, dilapidated condition and the property has been heavily disturbed. Proposed work will involve demolition of an existing single-family residence at 918 Makahiki Way and the adjacent low-density apartment complex at 2139 Algaroba Street, followed by construction of a new apartment complex and excavations for associated structures and utilities. Excavations are anticipated to disturb previously undisturbed soils.

ENVIRONMENTAL SETTING

Waikīkī Ahupuaʻa (a traditional Hawaiian land division) covers approximately 7,538 ha (18,627 acres [ac]) of the southeastern portion of Oʻahu Island. The land unit is bordered by Honolulu Ahupuaʻa on the west and Waimānalo Ahupuaʻa on the east, and extends south from the Koʻolau Mountain range to the coast. The project area is situated in the Mōʻiliʻili neighborhood, which is roughly bounded by the Ala Wai Canal, Dole Street, Mānoa Stream, and McCully Street; however, sometime the western boundary is placed at Isenberg Street, which places the project area in the McCully neighborhood. The project area is an urban area, with a mix of high-rise and low-rise buildings and single-family homes.

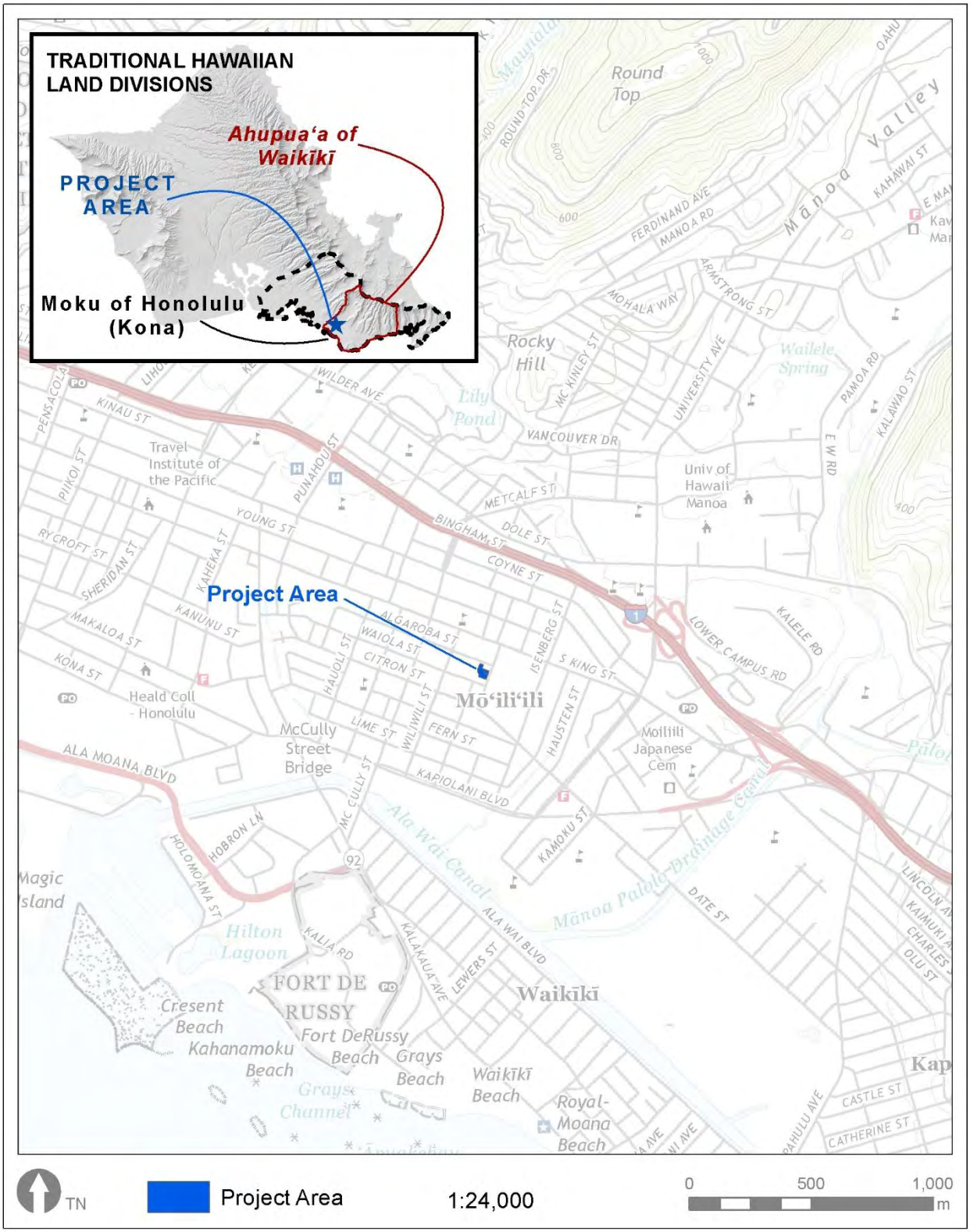


Figure 1. Project Area Shown on USGS 2017 Honolulu Topographical Quadrangle (USGS 2017).

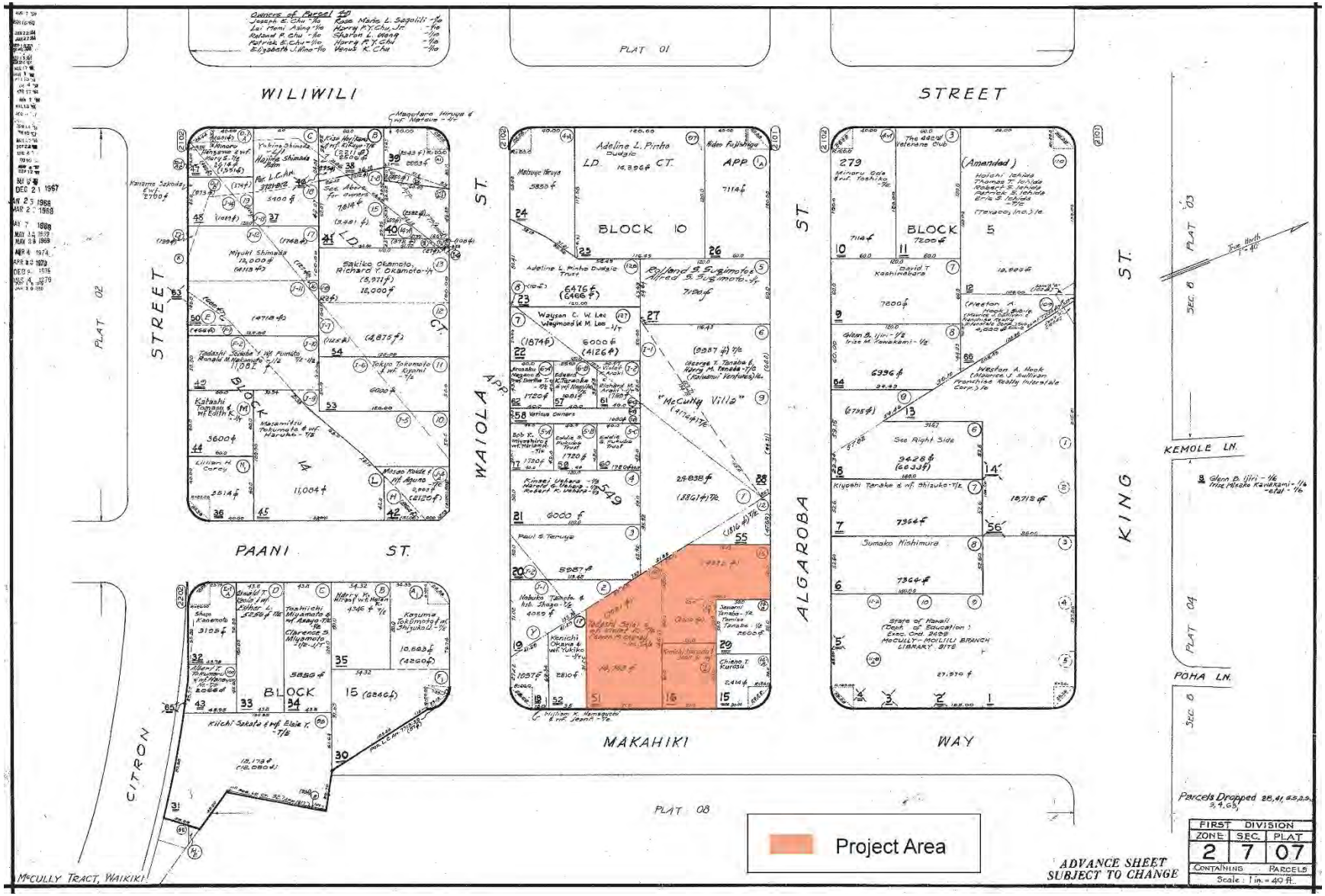


Figure 2. Plat Map Showing Project Area in TMK (1) 2-7-007:016 and 051 (Tax Maps Bureau 1932).

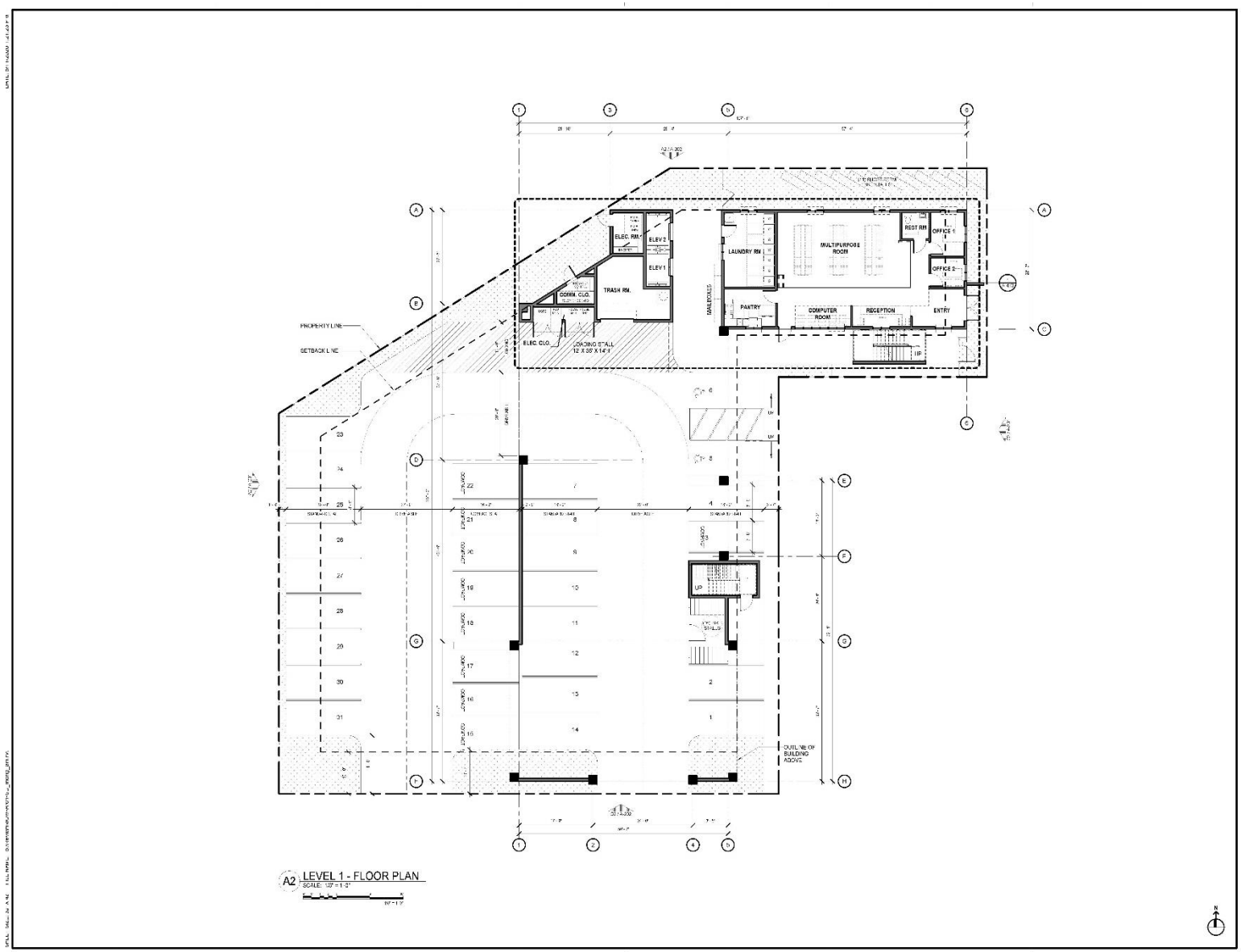


Figure 3. Site Plan for the Project Area.

TOPOGRAPHY AND SOILS

The project area is on level land at 2.0 meters (m) above mean sea level (amsl). Soils underlying the project area, shown in Figure 4, consist of Ewa silty clay loam with zero to two percent slopes (EmA). The Ewa series is found on alluvial fans and terraces. Ewa soils developed in alluvium derived from basic igneous (Foote et al. 1972:29–30).

RAINFALL, HYDROLOGY, AND VEGETATION

Mean annual rainfall in this portion of Oʻahu measures 765.9 millimeters (mm) (30.15 in) with most of the rainfall occurring between November and March (Giambelluca et al. 2013). Several streams once extended through plain from the mountains to the coast; much of the plain was formerly wetland. Today, channelized streams flow into the Ala Wai Canal south of the project area (see Figure 4).

The project area is in a residential neighborhood and the parcels are densely built. The sparse vegetation consists of small trees and shrubs. Historically, the McCully-Mōʻiliʻili area was used for *loʻi* (irrigated taro field) and rice cultivation (Coulter and Chun 1937:12, 21). In the early 20th century, it was filled as part of the Waikīkī Reclamation District.

HISTORICAL BACKGROUND

Archival background research and literature review examined maps, historical and archival documents, and previous archaeological studies in the vicinity of the project area. Relevant historical maps were georeferenced to determine where traditional Hawaiian or historic features may fall within the project area. The information obtained from these sources was synthesized to present data findings and to evaluate the potential for archaeological and cultural resources in the project area.

MOʻŌLELO AND WAHI PANA

The Hawaiian cultural landscape can be described through significant Hawaiian place names, or *wahi pana*, and *moʻōlelo*. *Moʻōlelo* may be myths, legends, proverbs, and events surrounding well-known individuals in Hawaiian history (Pukui and Elbert 1986:254). The project area is in or near the three *ʻili* of Keauhou, Kapaʻakea, and Wahinalo. The place name Kapaʻakea (sometimes written as Paʻakea), refers to the white reef limestone visible on the ground surface (Pukui et al. 1974:86). The place name Mōʻiliʻili was formerly Kamōʻiliʻili, which can be translated as “the pebble lizard” (Pukui et al. 1974:153). According to legend, Pele’s sister Hiʻiaka was on her way to Hawaiʻi Island with her companion Wahineomaʻo and a handsome Kauaʻi chief named Lohiau. A *moʻo* (supernatural lizard) of Mānoa Valley attacked them and using forks of lightning from her skirt, Hiʻiaka slayed the *moʻo*, cutting it into many pieces, like pebbles (Chun 2003). These pebble-like pieces were then transformed into a low hill, which is where Kūhio Elementary is today.

Northeast of the project area, a *heiau* (temple) and spring appear on a historical map dated 1883, which is shown in Figure 5. The *heiau* was likely Mauʻoki, which is suggested by the adjacent spring’s name “Mauoke” and the land labeled Mauoki on Hawaiʻi Register Map 1234 (Bishop 1883). Kamakau wrote of the importance of Mauʻoki Heiau in its association with Chief Kiha-a-Piʻilani: “Kiha-a-Piʻilani was taken by the kahuna and raised at the heiau of Mauʻoki at Kamōʻiliʻili. He was raised there until he was grown and taught to be a warrior and an orator; he was skilled in those professions” (Kamakau 1991:50). Thomas G. Thrum described the *heiau* as follows: “It is said to have been of traditional Menehune construction with stones brought one by one from Kawiwi, Waianae. It was a heiau of good size, walled on three sides and open to the west that stood at the foot of the slope dividing the Manoa and Palolo valleys, Kamoiliili” (Thrum

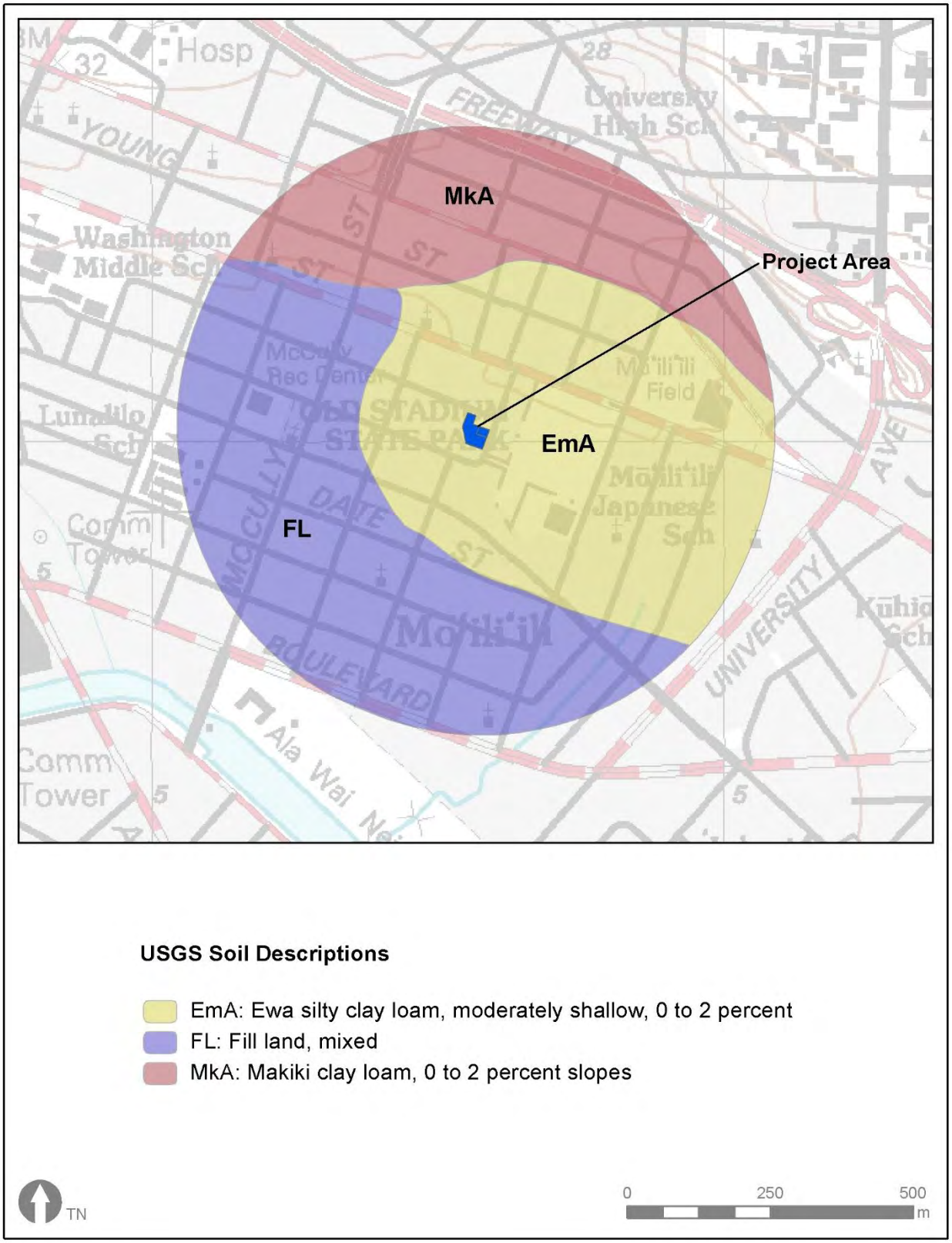


Figure 4. Soil Units in the Vicinity of the Project Area (Soil Survey Staff, NRCS, USDA 2020).

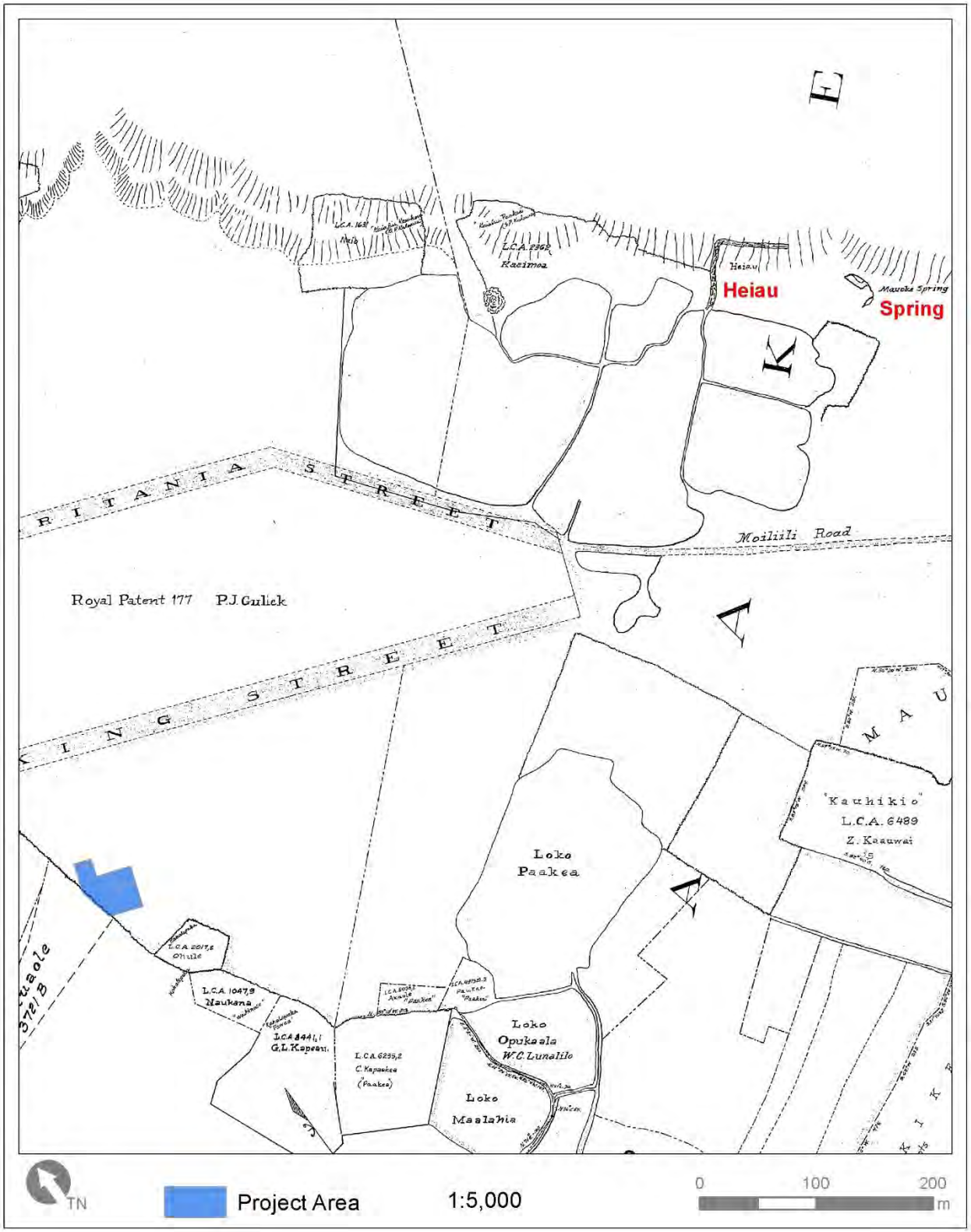


Figure 5. Historical Map of Kapaʻkea ʻIli Showing Heiau, a Spring, and Fishponds in Mōʻiliʻili (Bishop 1883).

1906b:56). Thrum also wrote that this was a “Heiau and luakini [sacrificial heiau]; erected according to tradition by Menehunes with stones from Kawiwi Waianae. Torn down about 1883 by the Minister of Interior for street work” (Thrum 1906a:44).

Regarding the *heiau* being razed in 1883, a newspaper article from 1882 appears to clarify this story. A reporter for the *Pacific Commercial* was told that stones from the *heiau* were being used to pave streets in the city and he set out to investigate around December of 1882. He happened upon the supervisor of road construction, a man by the name of Hart. Hart went with the reporter to the source of the road material, which was an “old wall,” and not the *heiau* in question. This material was being dumped “on or over the excavation on the upper corner of Alapai and Beretania streets,” and was being carried by rail that ran from “this point . . . out on one side of Beretania street to a point considerably beyond Punahou, and then curves to the left and runs to alongside of the long wall alluded to” (*Pacific Commercial Advertiser* 1882:8). Based on historical maps, it appears that the Moiliili Quarry (operated 1889–1949) may have existed in the same area as the *heiau*, which today is the site of University of Hawaii’s lower campus and the H-1 Freeway. The following description of the *heiau* from the reporter, which matches a map from 1883 by Bishop (1883; see Figure 5), does suggest that its disappearance would not have gone unnoticed.

> This relic of an ancient people is, like all time-worn monuments, weather-worn and broken; but the outlines of the structure are still plainly visible, and, in fact, the walls are still standing. These walls are some twenty feet in thickness. At the base, rise to average height of ten feet, where they are some eight feet wide. Commencing at the west side on the bank of a pond of brackish water the wall runs easterly about 200 feet, and then right angles say 300 feet. Here a wing wall built parallel with the first one spoken of runs back to the fish pond, completing three sides of a square which is bounded on the fourth by the pond. Within this enclosure, there are several smaller walls that divide the interior into three or four parts. From where the south wall joins the easterly one, another has been built running east for a short distance to a gate way or entrance. Beyond this entrance the wall is carried on a short distance further in an easterly direction and then forms a right angle and runs southerly over a slight hollow of about five hundred feet. This last mentioned wall stands in the same relation to the heiau, as a “curtain” wall thrown across a valley from one fort to another does to the fortresses themselves. Under the lee, as it were, of this curtain wall is a spring that tradition says was used by the high chiefs alone; and from the position of the curtain spoken of we are inclined to believe that it was built as a sort of break-wind, for those who bathed in the pool. The heiau is not one of the oldest type. . . Mauoki belongs to this last named class of temples; and still it is very ancient, and should be permitted to stand as one of the mementoes of the old Hawaiians [Pacific Commercial Advertiser 1882:8].

As for the spring labeled Mauoke in Figure 5, Hammatt and Shideler (2014:33) suggest that this may be Kumulae Spring, which was a legendary pool associated with the karst caves of Mōʻiliʻili. This spring appears in a legend of Kamapuaʻa, the Hawaiian pig god, who made a spring at Kānewai and a spring called Paʻakea (also called Kumulae or Hausten Spring) in Kamōʻiliʻili. The following is an account from Westervelt of Kamapuaʻa at Mōʻili'ili:

> At Kamo'ili'ili he saw two beautiful women coming from the stream which flows from Manoa Valley. He called to them, but when they saw his tattooed body and rough clothing made from pigskins they recognized him and fled. He pursued them, but they were counted as goddesses, having come from divine foreign families as well as Kamapua'a. They possessed miraculous powers and vanished when he was ready to place his hands upon them. They sank down into the earth. Kamapua' a changed himself into the form of a great hog and began to root up the stones and soil and break his way through the thick layer of petrified coral through which they had disappeared. He first followed the descent of the woman who had been nearest to him. Down he went through soil and stone after her, but suddenly a great flood of water burst upward through the coral almost drowning him. The

> goddess had stopped his pursuit by turning an underground stream into the entrance which he had made [Near the former site of Kamoiliili church, today's Kūhio Elementary School].
>
> After this narrow escape Kamapuaʻa rushed toward Manoa Valley to the place where he had seen the other beautiful woman disappear. Here also he rooted deep through earth and coral, and here again a new spring of living water was uncovered. He could do nothing against the flood, which threatened his life. The goddesses escaped and the two wells have supplied the people of Kamoʻiliʻili for many generations, bearing the name, "The wells, or fountains, of Kamapuaʻa" [Westervelt 1915:259–260].

TRADITIONAL HISTORY AND LAND USE

Waikīkī became the seat of royal power in the 1400s when Māʻilikūkahi moved his court to the south side of the island. According to Kamakau, "Upon Mailikukahi becoming king, he was taken early by the chiefs to reside at Waikiki, and that perhaps was the origin of the residence of chiefs at Waikiki, because Waialua was the place formerly of the residence of chiefs, as also Ewa" (Kamakau N.D. in McAllister 1933:74).

Kamakau notes that the chief Kalamakua, who reigned around the sixteenth century (based on Stokes' [1933] 20 year-count; Kelly 1989), was the first to build an extensive irrigation system of *loko* (fishpond) and *loʻi* (irrigated taro field) in Waikīkī: "a good chief. He was noted for cultivating, and it was he who constructed the large pond fields Keʻokea, Kūalulua, Kalāmanamana, and other *loʻi* in Waikiki. He traveled about his chiefdom with his chiefs and household companions to cultivate the land and gave the produce to the commoners, the makaʻāinana" (Kamakau 1991:45).

In 1780, the army of Maui chief Kahekili landed at Waikīkī "carpeting the beaches from Kaʻalawai (near Diamond Head) to Kawehewehe (next to the Halekulani Hotel)" (Kanahele 1995:79). According to Thrum (1925:109), he dedicated Papaʻenaʻena Heiau, formerly located in the vicinity of Diamond Head, following his victory. In 1794, Kahekili died and was succeeded by Kalanikupule. The next year, Kamehameha invaded Oʻahu at Waikīkī, possibly with 10,000 warriors. The army made their base on the sandy beaches from Waiʻalae to Diamond Head to Kālia, which is southwest of the project area (Kanahele 1995:87). The final battle ended at Nuʻuanu when Oʻahu warriors became trapped between Kamehameha's warriors and the *pali* (cliff) and chose to leap to their deaths (Tomonari-Tuggle and Blankfein 1998:13).

Kamehameha made his capital at Waikīkī and the area became the chiefly center of the south coast where the ruling chief and subordinate *aliʻi* (chiefly class) resided (Cordy 1996; Nāpōkā 1986; Tomonari-Tuggle 1994). Hawaiian historian John Papa ʻĪʻī (1959) describes Kamehameha's residence in Waikīkī:

> Kamehameha's houses were at Puaaliilii, makai of the old road, and extended as far as the west side of the sands of Apuakehau [vicinity of Moana Surfrider Hotel]. Within it was Helumoa [vicinity of Royal Hawaiian Hotel], where Kaahumanu went to while away the time. The king built a stone house there, enclosed by a fence; and Kamalo, Wawae, and their relatives were in charge of the royal residence. Kamalo and Wawae were the children of Luluka and Keaka, the childhood guardians of Kamehameha.
>
> This place has 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. Haalou, a makuahine of Kamehameha, lived there with her younger daughter Kekuapoi while en route from Hawaii to Kauai to consult Kapoukahi, a seer of Kauai, for means whereby Kamehameha would gain victory over Keoua Kuahuula [ʻĪʻī 1959:17].

Kamakau also wrote of Waikīkī as a home to chiefs:

> Waikīkī sits proudly in the calm of the Ka‘ao breeze… Waikīkī was a land beloved of the chiefs and there many of them lived from remote times to the time of board surfing could be indulged in there, and for this reason the chiefs liked the place very much. At Waikīkī are the surfs of Ka-lehua-wehe, ‘Aiwohi, Maihiwa, and Kapuna [Kamakau 1991:44].

Waikīkī is described as a richly productive area in accounts by early European explorers. In 1792, Captain George Vancouver of the H.M.S. Discovery arrived at “Whyteete” and noted the field systems:

> On the shores, the villages appeared numerous, large, and in good repair; and the surrounding country pleasingly interspersed with deep, though not extensive valleys; which, with the plains near the sea-side, presented a high degree of cultivation and fertility [Vancouver 1798:162].

> This opened to our view 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 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 [Vancouver 1798:163–164].

> In this excursion we found the land 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, some of which our sportsmen shot, and they were very fine eating. 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 plains, however, if we may judge from the labour bestowed on their cultivation, seem to afford the principal proportion of the different vegetable productions on which the inhabitants depend for the subsistence [Vancouver 1798:164].

Also aboard the H.M.S. Discovery was surgeon and naturalist Archibald Menzies. He echoed Vancouver’s description of a bountiful land:

> The verge of the shore was planted with a large grove of cocoanut palms, affording a delightful shade to the scattered habitations of the natives. Some of those near the beach were raised a few feet from the ground upon a kind of stage, so as to admit the surf to wash underneath them. We pursued a pleasing path back into the plantation, which was nearly level and very extensive, and laid out with great neatness into little fields planted with taro, yams, sweet potatoes and the cloth plant. These, in many cases, were divided by little banks on which grew the sugar cane and a species of Draecena without the aid of much cultivation, and the whole was watered in a most ingenious manner by dividing the general stream into little aqueducts leading in various directions so as to be able to supply the most distant fields at pleasure, and the soil seemed to repay the labor 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].

Several others followed Vancouver and Menzies in describing Waikīkī over the next few decades. Peter Corney wrote of Waikiki between 1813 and 1818:

> On rounding Diamond hill the village of Wyteetee (Waikiki) appears through large groves of cocoanut and bread-fruit trees; it has a most beautiful appearance, the land all round in the highest state of cultivation, and the hills covered with wood; a beautiful plain extending

> as far as the eye can reach. A reef of coral runs along the whole course of this shore, within a quarter of a mile of the beach, on which the sea breaks high; inside this reef there is a passage for canoes [Corney 1965:193].

Otto von Kotzebue commander of the Russian ship Rurick viewed Waikīkī from the sea in 1816. A map he produced of the southern coast of Oʻahu is shown in Figure 6. His description of the land follows:

> but you have scarcely sailed round the Yellow Diamond Hill, when you are surprised by the most beautiful landscape. Close to the shore you see verdant vallies adorned with palm and banana-trees, under which the habitations of the savages lie scattered; behind this, the land gradually rises, all the hills are covered with a smiling verdure, and bear the stamp of industry [von Kotzebue 1821:320].

Finally, the naturalist Andrew Bloxam was ashore from the H.M.S. Blonde in 1824–1825 when he noted the abundance of Waikīkī:

> I walked along shore towards the bay of Whyteete to see if I could procure any shells, but I found none worth picking up. The whole distance to the village of Whyteete is taken up with innumerable artificial fishponds extending a mile inland from the shore, in these the fish taken by nets in the sea are put, and though most of the ponds are fresh water, yet the fish seem to thrive and fatten. Most of these fish belong to the chiefs, and are caught as wanted. The ponds are several hundred in number and are the resort of wild ducks and other water fowl. I found it very difficult to get out of the labyrinth of paths which lead among them. Whyteete is about four miles east of Honoruru [Honolulu]. It is pleasantly situated and built along the shore among numerous groves of coconut and other trees, and in this respect far better than Honoruru, as scarcely any trees are to be found there [Bloxam 1925:35–36].

Traditional trails dating to the early nineteenth century were reported by Hawaiian Historian John Papa ʻĪʻī. In the Kona (Honolulu) District, a trail began from today's downtown Honolulu and followed the alignment of King Street and Waiʻalae Avenue. ʻĪʻī (1959:93–94) described this trail around 1820 as follows:

> the mauka trail that came from Ululani's place in Pawaa to Kapaakea, then up to Kamoiliili, and to Kapohakikeke, where it left the trail that went up to Palolo, and continued on to Mauumae, above Kaimuki where a pole later stood to serve as a mark for ships. From there it went down to, and along the upper side of, the taro paths of Waialae to join the other trails at the sand and go along Keahia and on to Maunalua, to the sea of Koko, to Makapuu, and so on [ʻĪʻī 1959:93–94].

POST-CONTACT HISTORY AND LAND USE

The period of political importance ended for Waikīkī in 1809, when Kamehameha moved his capital to Honolulu, which was more accessible to Western visitors (Tomonari-Tuggle and Blankfein 1998:13). Following this move, traditional agriculture in Waikīkī waned. Population in the area had drastically decreased due to economic changes and the devastation caused by Western diseases. The missionary Levi Chamberlain noted these changes when writing in 1828:

> 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].

Traditional land divisions of the fifteenth and sixteenth centuries persisted until the 1848 Mahele, which introduced private property into Hawaiian society (Kamakau 1991:54). During the Mahele, the Land Commission required the Hawaiian chiefs and *konohiki* (land agent for the *aliʻi*)

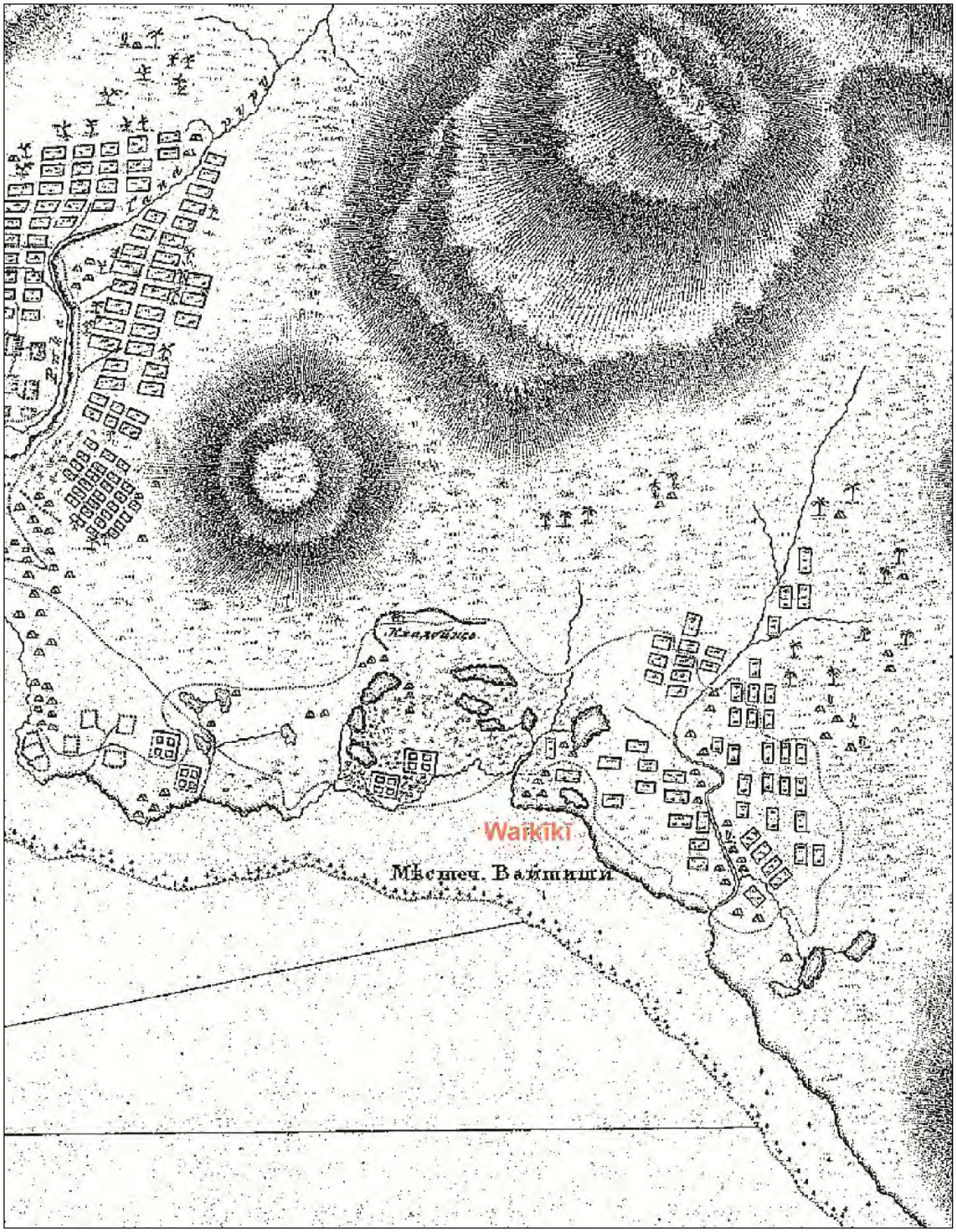


Figure 6. Portion of 1825 Map of Southern Coast of O‘ahu at Honolulu Showing Fishponds and *Lo‘i* at Waikīkī (von Kotzebue 1825).

to present their claims to the Land Commission. In return they were granted Land Commission Awards (LCAs) for the land quit-claimed to them by Kamehameha III. Land was divided into Crown Lands, Government Lands, and Konohiki Lands. The remaining unclaimed land was then sold publicly, "subject to the rights of the native tenants" (Chinen 1958:29).

In the case of land claims made for Konohiki lands, approval by the Land Commissioners was required before the award was made. If approved, then the awardee obtained a Royal Patent (RP) from the Minister of the Interior, which indicated that the government's interest in the land had been settled with a commutation fee. This fee was typically no more than one-third of the value of the unimproved land. This fee was paid either with cash, or, more commonly, the return of one-third of the awardee's lands (or total value of the lands awarded) (Hammatt 2013:A-3).

The Kuleana Act of 1850 allowed *hoaʻāina* (common people of the land, native tenants) to make claims to the Land Commission. The new western system of ownership resulted in many losing their land. Often claims would be made for discontiguous cultivated plots with varying crops, but only one parcel would be awarded.

The Crown Lands became Government Lands when the Hawaiian Government was overthrown in 1895, making them public domain for sale by fee simple (Hammatt 2013:A-5). Patents were the certificates issued for the sale of such lands. Beginning in 1900, when Hawaiʻi became a U.S. territory, the certificates were called Land Patents, or Land Patent Grants (Hammatt 2013:A-5).

Based on late 19th century maps, the project area was within the government land portions of Keauhou and Waihinalo ʻIli, as shown in Figure 7; the boundaries of the two *ʻili* are not shown on maps. Boundary Commission testimony states that Keauhou, was claimed both by the Government and the Estate of Ruth Keʻelikōlani. The *ʻili* of Kapaʻakea (or Paʻakea), deeded to Victoria Kamamalu in 1861 as LCA 7713, ʻĀpana 39, was also in the vicinity. Boundary Commission testimony disputing the Kapaʻakea ʻIli boundary suggests that Keauhou ʻIli was *mauka*, or inland, or Waihinalo ʻIli, but the descriptions varied. The following is testimony describing land containing the project area and some of the features are shown in Figures 7 and 8:

> Kamakania, sworn, states, I live at Kamoiiliili; I have lived there since 1847. I am nearly 60 years old. I know land of Paakea. I was a paneola [paniolo] on the Kula land in time of Kekuanaoa and Kamamalu. I came up to where land joined Punahou and down along Manoa road to Pawaa and drive animals toward Moiiliili, coming from Punahou. I went close to the Kuleana of Haumea [see Figure 7]; then down to stone wall makai of Judge McCully's house [McCully's house was on the north side or King Street; see Figures 7 and 8].
>
> [Kekuanaoa] told me about this land at time that he had dispute with Haumea; he started to build a wall from Metcalf's gate and stopped at Kaleihiapu [near today's Wilder Avenue and Dole Street]. Pahau was Konohiki; Keauhou was inside wall, where McCully's house is now. Haumea said Keauhou ran above. I don't know the boundaries of Waihinalu. I have heard of this land. Kekuanaoa was the only one that pointed out boundaries to me. . . . I heard Waihinalu was makai or outside of wall; the makai boundary went along stone wall to Opukaala Loko [see Figure 7], then along Loko Paakea on Waikiki side, runs on wall mauka near Loko, then runs up and over to Maulukikepa; then up to road; then mauka to Pohakuaumiumi, then to Kanewai; then along to Metcalf's gate; then to Punahou, but after Kekuanaoa had the dispute, he cut that part off and started from Metcalf's gate. I know ili of Halepaka; it is makai of wall excepting a kuleana inside the wall.
>
> Kuihonua, sworn, states . . . .Waihinalo was an Ili. Keauhou was a large land; Waihinalo only a small land. I don't know who owned Waihinalo or . . . was Konohiki. Haumea was Konohiki of Keauhou.

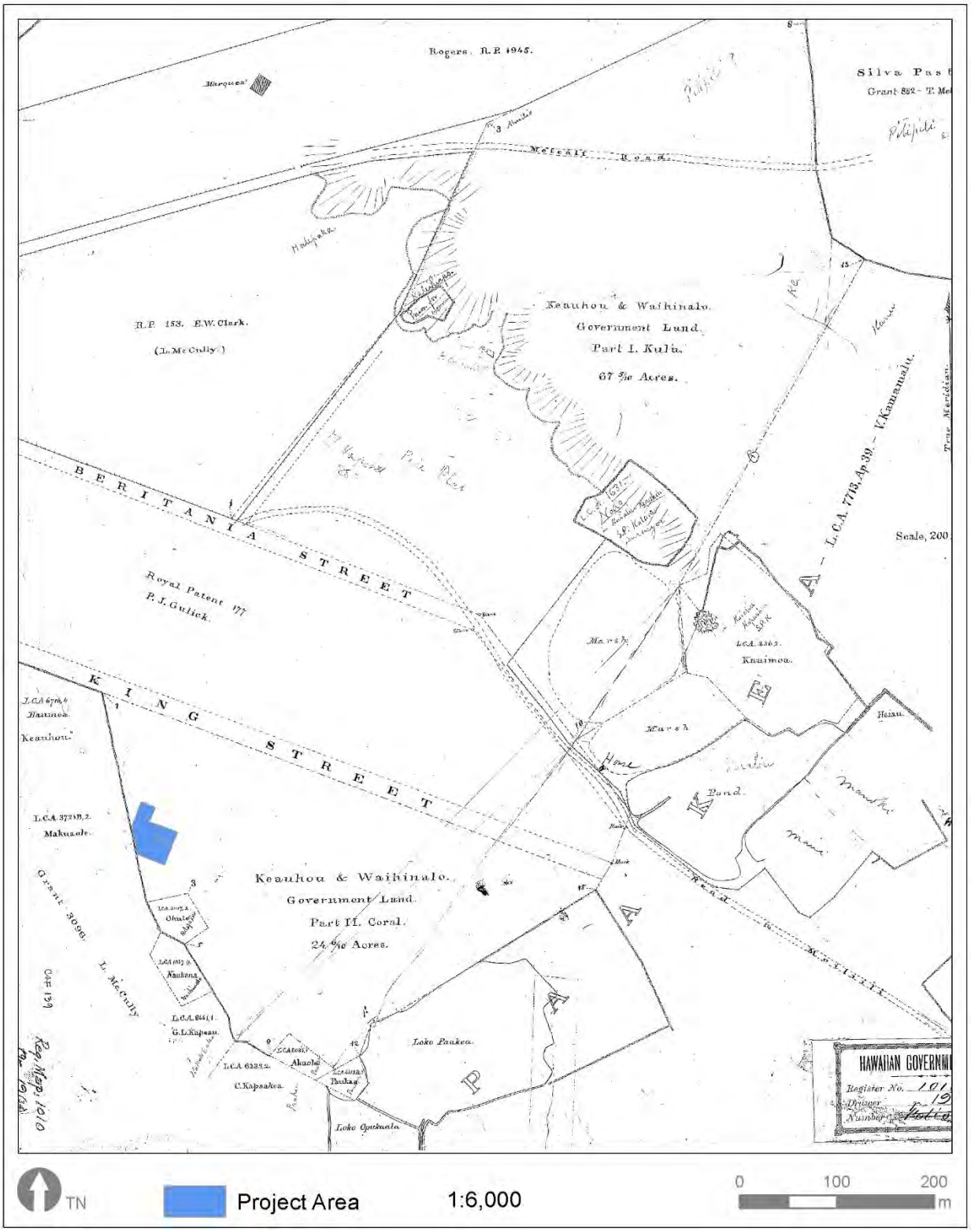


Figure 7. Portion of Historical Map of Waikīkī Showing LCAs Near the Project Area and Stone Wall on the West Border (Bishop 1881).

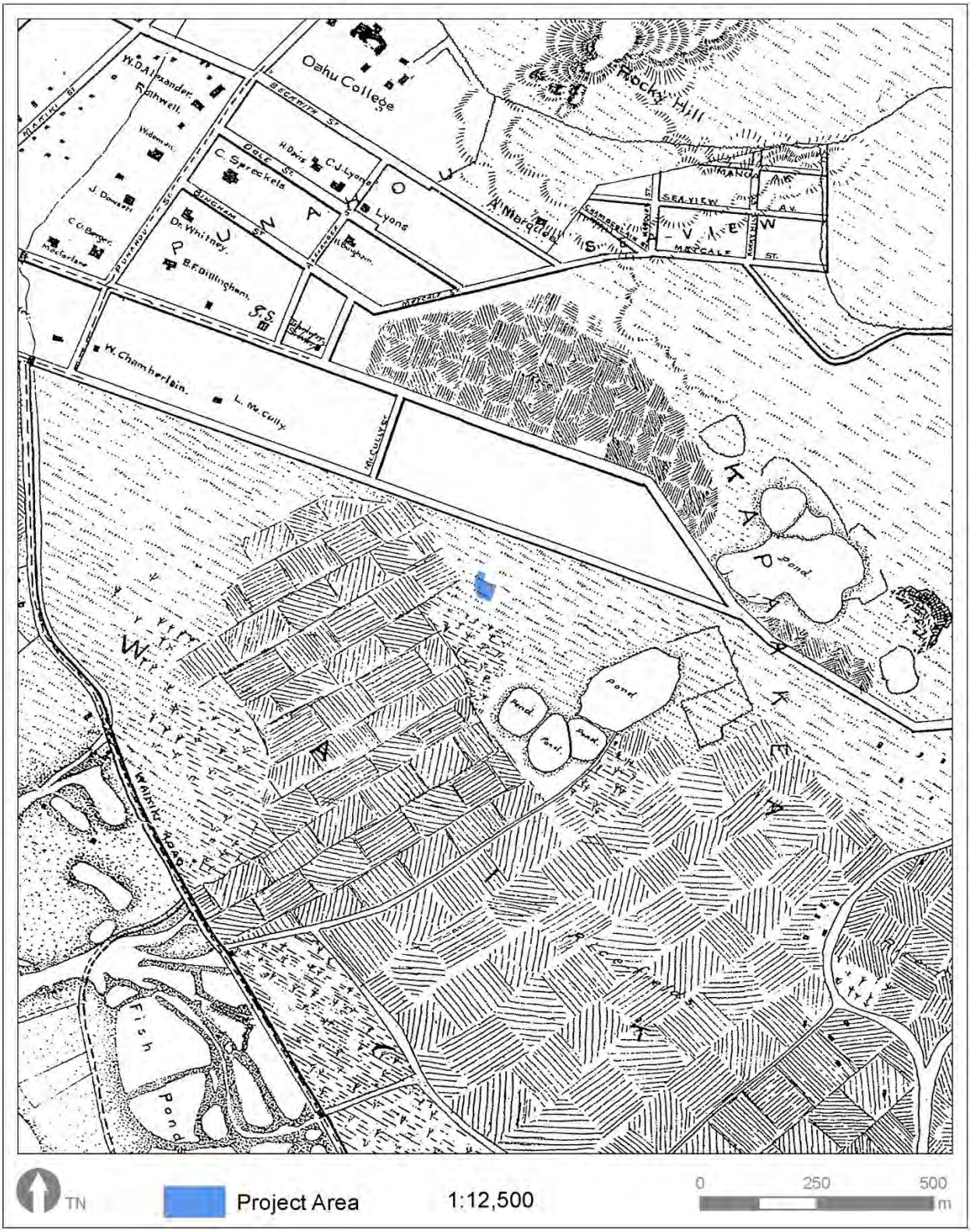


Figure 8. Portion of 1893 Map of Honolulu Showing the Project Area on the Edge of Rice Fields and Possibly Taro *Lo'i* (Wall 1893).

> Kahele, sworn, states, I am nearly 50 years of age, I think. I live at Kamoiiliili, have been there since 1853. I know Paakea also Keauhou. It belonged to Haumea. I know boundaries of Paakea; . . . . The land on this side is called Keauhou. Waihinalo is on both sides of old wall, most of it makai of wall [Boundary Commission 1896].

In the end judgement, it was decided that there was not enough evidence to determine the boundary between Keauhou and Waihinalo. Only the boundary of Kapaʻakea was resolved for the petition.

Two *moʻo ʻaina*, or portions of Keauhou ʻIli, were granted on the west side of the project area. LCA 6716, ʻApana 4, also referred to as LCA 4286B in Boundary Commission foreign testimony, was awarded to Haumea and contained two *puʻuone* (dune-banked ponds) called Kulekoloa. LCA 3721B, ʻApana 2, was awarded to Makuaole, which consisted of *kula* (dryland field) and *puʻuone*. To the south of the project area were two other LCAs. LCA 2017, ʻApana 2, was awarded to Ohule, which consisted of one *pahale* (house lot) in the *ʻili* of Halepaka (also cited as Kahalepaka and Kahalepaha), which was bordered on the north by the Alanui Aupuni (government road). LCA 10479 was awarded to Naukana, which consisted of a *pahale*, a *kalo* (taro) patch, or *loʻi*, and *kula* in the *ʻili* of Waihinalo.

To the east of the project area, Mōʻiliʻili was settled by Japanese families in the late 1800s. The Kihachi and Shika Kashiwabara family arrived in the 1893 and are said to have been the first. Their home was built on leased land, along with other rentals they erected to form a "camp." Over the following two decades, other families arrived and built "camps," and by the mid-1900s close to 90 percent of the population in Mōʻiliʻili was Japanese (Fung Associates, Inc. 2017:6). The Japanese Cemetery dates to as early as 1893 and is one of the largest Japanese Buddhist cemeteries in Hawaiʻi (Ruby 2005). Mōʻiliʻili was also known for a stone quarry that operated from the 1880s to the 1950s, which employed many in the area (Fung Associates, Inc. 2017:5).

During the 1880s, development intensified in Waikīkī and the area rapidly transformed. By the end of the 19th century many *loko* were filled and rice was planted in place of taro. A map from 1893 (see Figure 8) shows extensive rice fields and some taro planted. The productive wetlands came to be seen by some, particularly potential developers, as "deleterious to the public health in consequence of being low, and at times covered or partly covered by water, or of being situated between high and low water mark, or of being improperly drained, or incapable by reasonable expenditure of effectual drainage" (Pinkham 1906:3). This viewpoint would culminate in the dredging of the Ala Wai Canal and the filling of land that had a long history of productive wetland agriculture and aquaculture (Nakamura 1979).

The western border of the project area abutted Land Grant 3098, which comprised 118 acres granted by King Lunalilo to Hawaii Supreme Court Justice Lawrence McCully in 1873 (Fung Associates, Inc. 2017:7). McCully was leasing the land from the government before the grant. After McCully's death, the McCully Tract was planned, which extended roughly from Makahiki Way and the west border of the project area to Algaroba Street, to Kalakaua Avenue, and to what would later become Ala Wai Canal. Several street layouts were proposed over the years, the earliest of which can be seen on a 1901 map in Figure 9, followed by a development plan in 1919 for the Waikīkī Reclamation District, as shown in Figure 10.

When the parcels were first offered for sale by the McCully Land Company, the buyers were not allowed a deed to their land until their lot was filled (Fung Associates, Inc. 2017:8). This led to slow sales and the company was consequently purchased by the Guardian Trust Company in 1912, which was owned by Walter Dillingham and W. O. Smith. Still, development did not take off until the construction of the Ala Wai Canal (1921–1928), along with the Manoa-Palolo Canal (1935–1936) and Alanaio Canal (1929). It was then that the wetlands and inland fishponds, Loko Kapaʻakea, Loko Maalahia, and Loko Opukaala in the McCully-Mōʻiliʻili area, were filled.

Figure 9. Portion of Map Showing Proposed Street Layout for the McCully Tract and Adjoining Land (Monsarrat 1901).

Figure 10. Portion of Map of the Proposed Development of the Waikiki Reclamation District (Bigelow 1919).

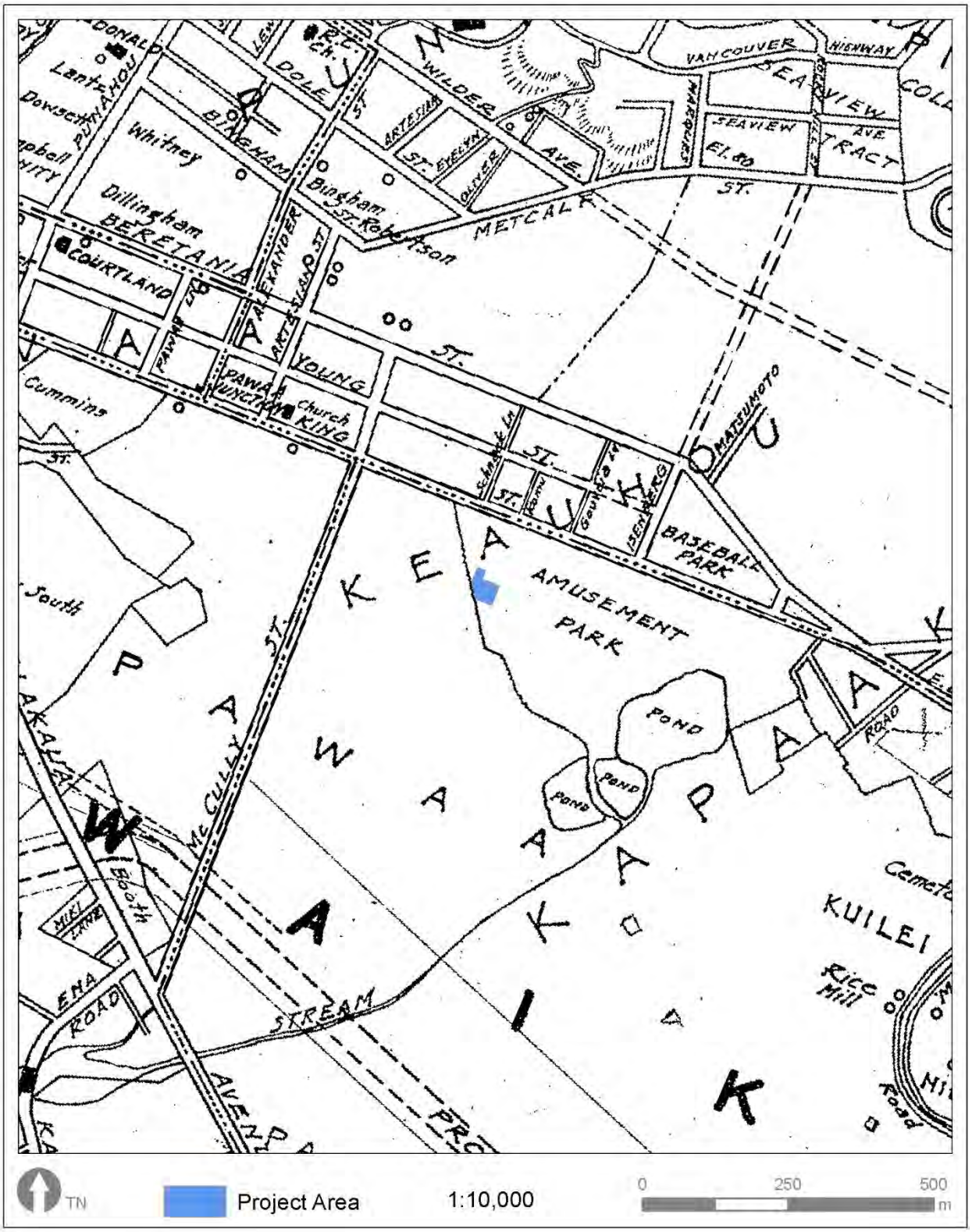
Though there was confusion in the late 19th century about the boundaries of Kapaʻakea ʻIli, Bishop Estate came to own the land that included the project area. Later maps indicate the project area was included in LCA 7713, ʻApana 39 to Victoria Kamamalu. After her death, the lands passed to her father; then to her half-sister Ruth Kaelekolani, followed by Bernice Pauahi Bishop in 1883. The land eventually became part of the Bishop Estate. Honolulu Rapid Transit and Land Company purchased the land from Bishop Estate in 1903, and in 1922, when the Honolulu Rapid Transit and Land Company separated its public utility and land, the property fell under the management of Kaauila Land Company (Fung Associates, Inc. 2017:7, 10). An early idea for the land, shown in Figure 11, was an amusement park. The architect Hart Wood drew up the plans in 1921 for a 90 acres amusement park, which he proposed at a Hawaii Territorial Senate committee hearing. Ultimately, the legislators chose not the fund the park (Hibbard et al. 2010:79).

In 1925, land filling started in the McCully area using coral dredged during the construction of the Ala Wai Canal (Stephenson 2008:54). This major undertaking, called the Waikīkī Land Reclamation Project, began in 1921 and was completed in 1928 (Nakamura 1979; Stephenson 2008:28). The reclamation project was bounded by Sheridan, South Beretania, and South King streets, Kapahulu Avenue, and the ocean (Stephenson 2008:46), and resulted in the draining and filling-in of the ponds and irrigated fields throughout Waikīkī. Burned rubbish was also used as a fill material. The city used the wetlands as free dump sites for incinerated rubbish without compensating land owners and justified the practice by arguing that filling the land increased its value (Department of Environmental Services 2015). According to Nakamura (1979), state laws were passed that forced property owners to pay for the filling of their land, a matter in which they had no choice (Nakamura 1979).

As can be seen in Figure 12, the McCully Tract was prioritized for filling, which is indicated be the unfinish streets to the east and west. A streetcar ran down McCully Street from King Street, making it the main thoroughfare. This was due to Walter Dillingham owning the Hawaiian Dredging Company and having interest in the Guardian Trust Company, which owned the land (Stephenson 2008:54).

The current project area falls within the tract originally known as the Stadium Tract, shown in Figure 13. In 1925 John Ashman Beaven, an American who settled in Hawaiʻi in 1910, purchased a 14-acre parcel from the Kaauila Land Trust, which included the current project area, coral flats, and duck ponds (Fung Associates, Inc. 2017:10). Beaven had been leasing Mōʻiliʻili Field to host sporting events and carnivals, but the venue became too small for increasing demand. Beaven organized Honolulu Stadium Ltd and planned to develop a new stadium on the purchased land with a 23,000-seating capacity. After the purchase, Honolulu Stadium Ltd sold 4.93 acres of its lands on the west side of the property to the Union Trust Company, who in turn developed the Stadium Tract (see Figure 13). The company sold the lots in 1926 to the Hawaiian Industrial Company, which was owned by Ushisuke Taira and Seiji Miwa, who in turn sold lots to individual owners (Fung Associates, Inc. 2017:12). By 1927, single and multi-family wood dwellings were constructed in the current project area.

A topographical map from 1933, shown in Figure 14, indicates the growth in urban development, including houses in the project area, which were built in 1927, though land to west appears to had not yet been filled. The ridged grid system seen in Figure 10 had been proposed in 1906 by Lucius Pinkham, chair of Department of Health, for new development in Waikīkī (Stephenson 2008:83). This street plan was never followed, a decision which may have been influenced by the local architect Charles Dickey's proposal that the Waikīkī street system follow a "garden city" development plan rather than the traditional "gridiron" (Stephenson 2008:100).



TN Project Area 1:10,000 0 250 500 m

Figure 11. Portion of Map Showing Project Area in Proposed Amusement Park (Monsarrat 1920).

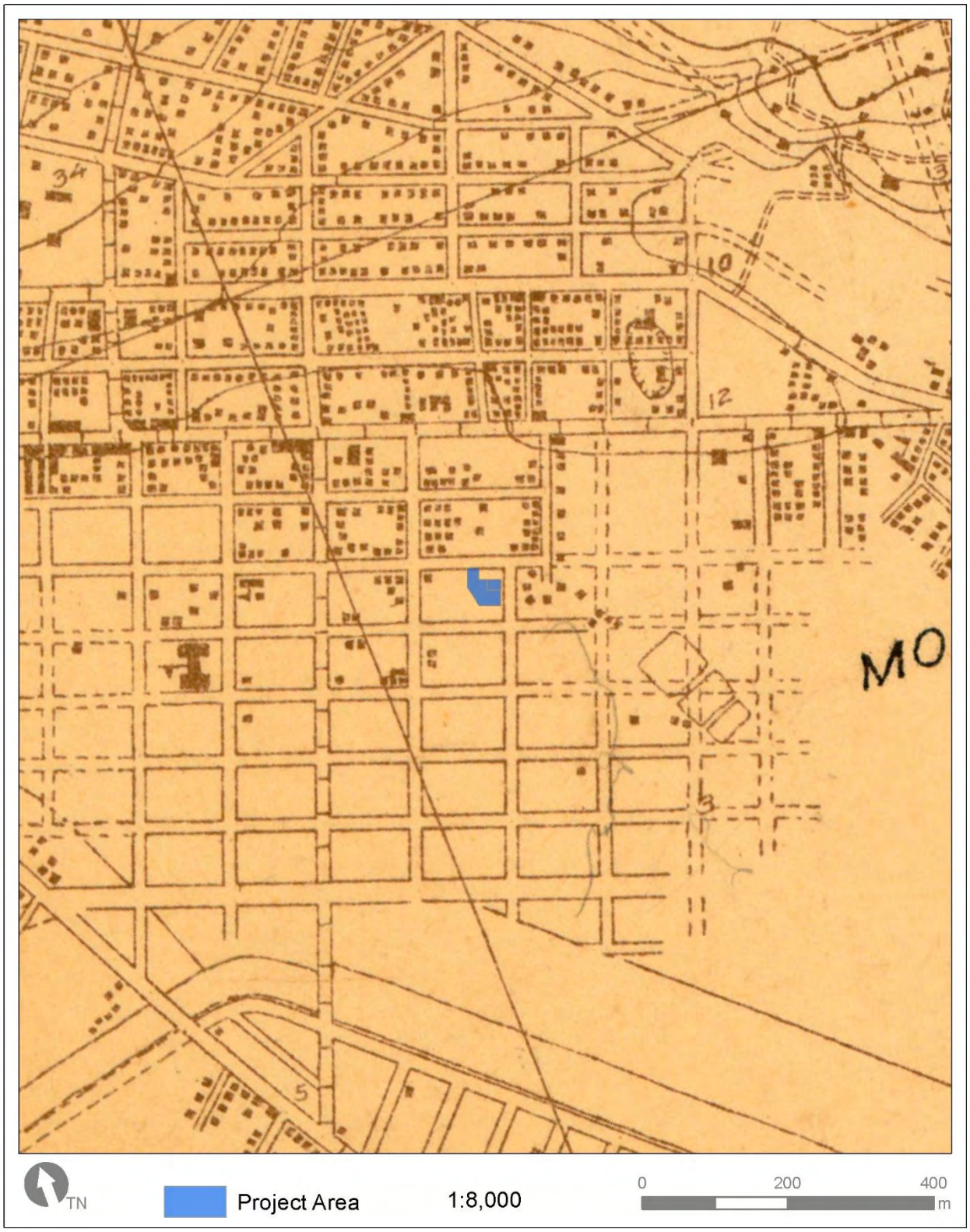


Figure 12. Portion of 1927 Map Showing Incomplete Street to the East and West of the Project Area (USGS 1927).

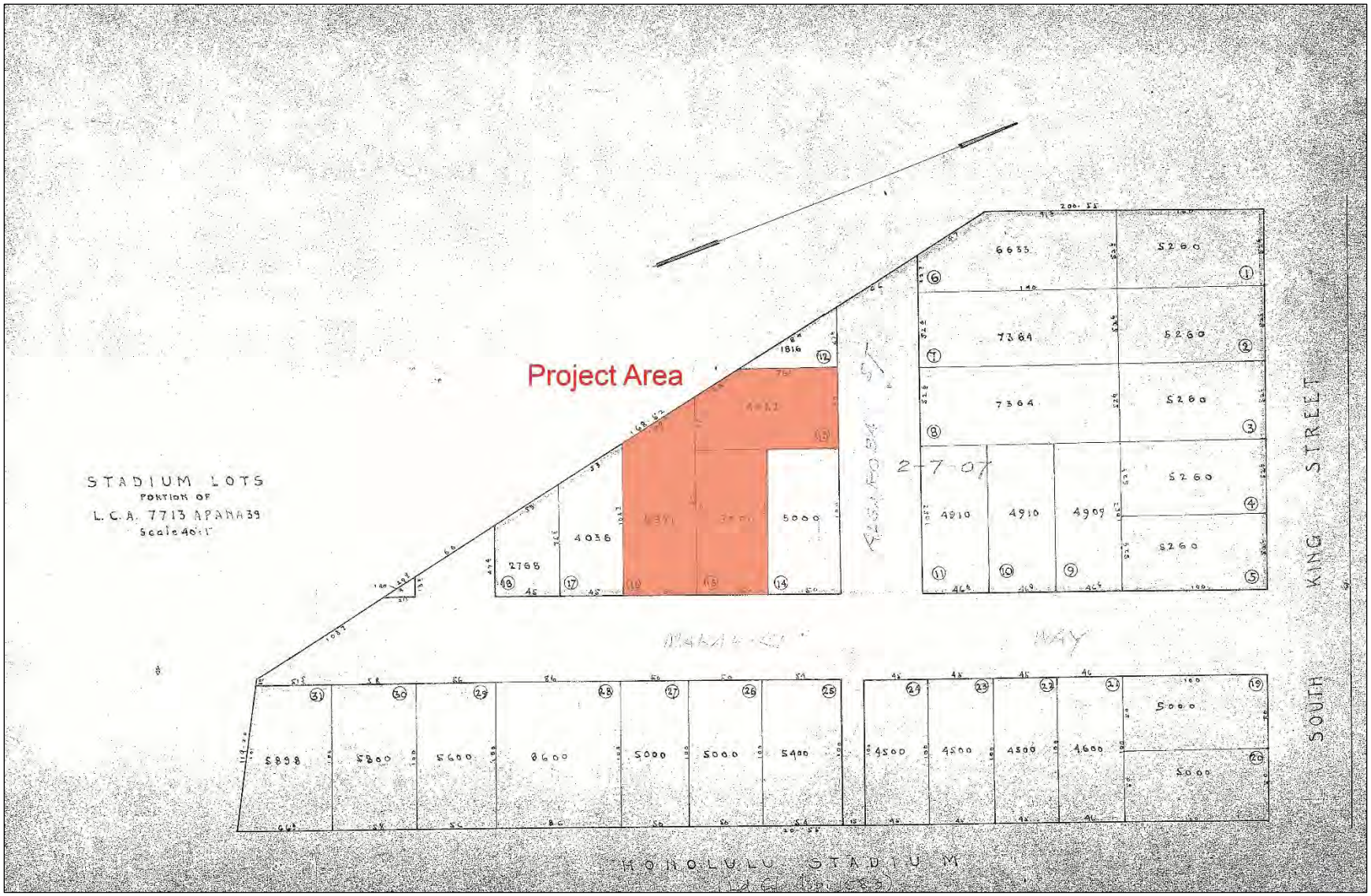


Figure 13. Map of Stadium Lots Showing the Current Project Area (Tax Maps Bureau ca 1927).

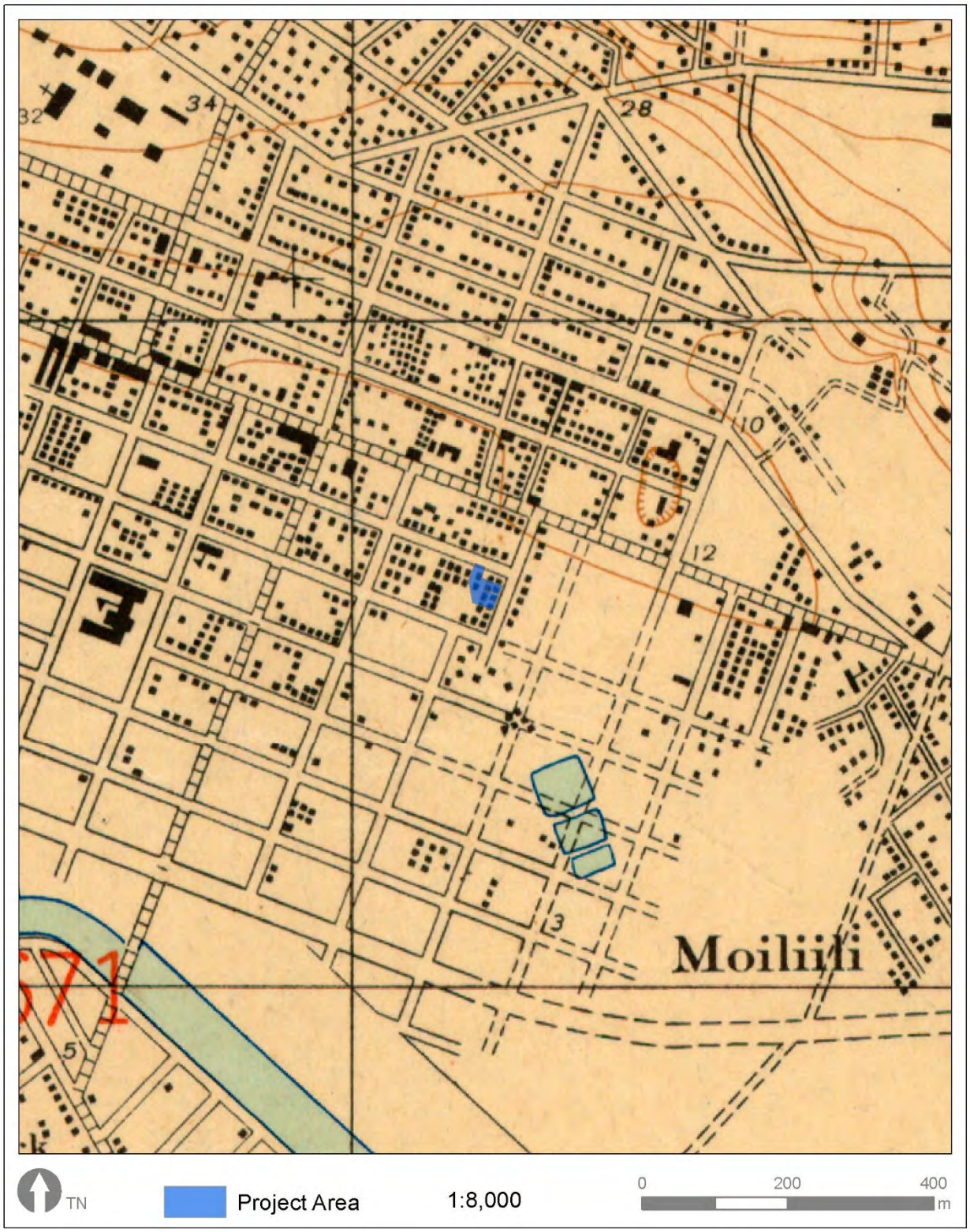


Figure 14. Portion of 1933 Map Showing Housing in the Project Area (USACOE 1933).

By 1953, the neighborhood streets around the project area were completed and the Honolulu Stadium was built immediately to the east, as shown in Figure 15. The stadium was razed in 1976 and the lot became Old Stadium Park in 1978.

PREVIOUS ARCHAEOLOGY

There is no record of a previous archaeological investigation in the project area. Modern archaeological investigations conducted in the surrounding area, which are listed in Table 1 and discussed below, have identified a single archaeological site, while the previously discussed Mauʻoki Heiau was once situated northeast of the project area. No human burials have been previously recorded with 500 meters of the project area. Figure 16 shows the locations of the previous investigations and identified historic properties. In 1994, Scientific Consultant Surveys, Inc., conducted an archaeological assessment of four parcels on Hausten Street (Chaffee and Spear 1994). No historic properties were identified the project area.

In 2007, Cultural Surveys Hawaiʻi prepared a literature review and conducted a field inspection for Kamehameha School's University Parcels and Varsity Theater Parcel (O'Hare et al. 2007). Three fishponds were determined to have been within the property prior to land filling.

Cultural Surveys Hawaiʻi and Mason Architects prepared reports in support of the Ala Wai Canal project (also known as the Ala Wai Watershed project). These included a three volume cultural resources and ethnographic study report (O'Hare et al. 2010) and a historic structures report (Mason Architects 2010). The APE reached from the upper portions of Makiki, Mānoa, and Pālolo valleys to the mouth of the Ala Wai Canal. A total of 46 cultural resources were identified within 100 meters of the APE, which included historic buildings and structures, archaeological sites/features, and historic and traditional cultural practices and places. No historic properties were identified near the current project area.

In 2017, Pacific Legacy Inc. conducted an archaeological inventory survey at a 1.9-acre property located at 820 Isenberg Street in Mōʻiliʻili (McIntosh and Cleghorn 2018). A total of 24 test trenches were excavated, which identified a single historic property. The historic property, designated SIHP 50-80-14-08210, is a historic dump site comprising natural limestone depressions filled in with silt soil deposits containing glass, ceramic, and metal artifacts dating between 1896 and the 1960s.

ANTICIPATED FINDS

Based on background research concerning past land use, reviewed historical maps, and results of previous archaeological studies in the vicinity, it is anticipated that the following historic properties may be found in subsurface proveniences within the study area:

1. Coral fill deposits from the 1920s Waikiki Reclamation Project
2. Evidence of traditional Hawaiian habitation
3. Soils associated with taro and rice agriculture
4. Wetland soils, possibly with elevated coral sand berms, under coral fills
5. Historic trash deposits associated with historic residences on the property

Soil survey data (see Figure 3) shows that the project area falls just east of filled land; however, historical maps indicate the project area was within the Waikiki Reclamation District (see Figure 10). The coral fill deposits associated with the Waikiki Reclamation Project, if present, can be used as a time marker for deposits above and below these coral fills.

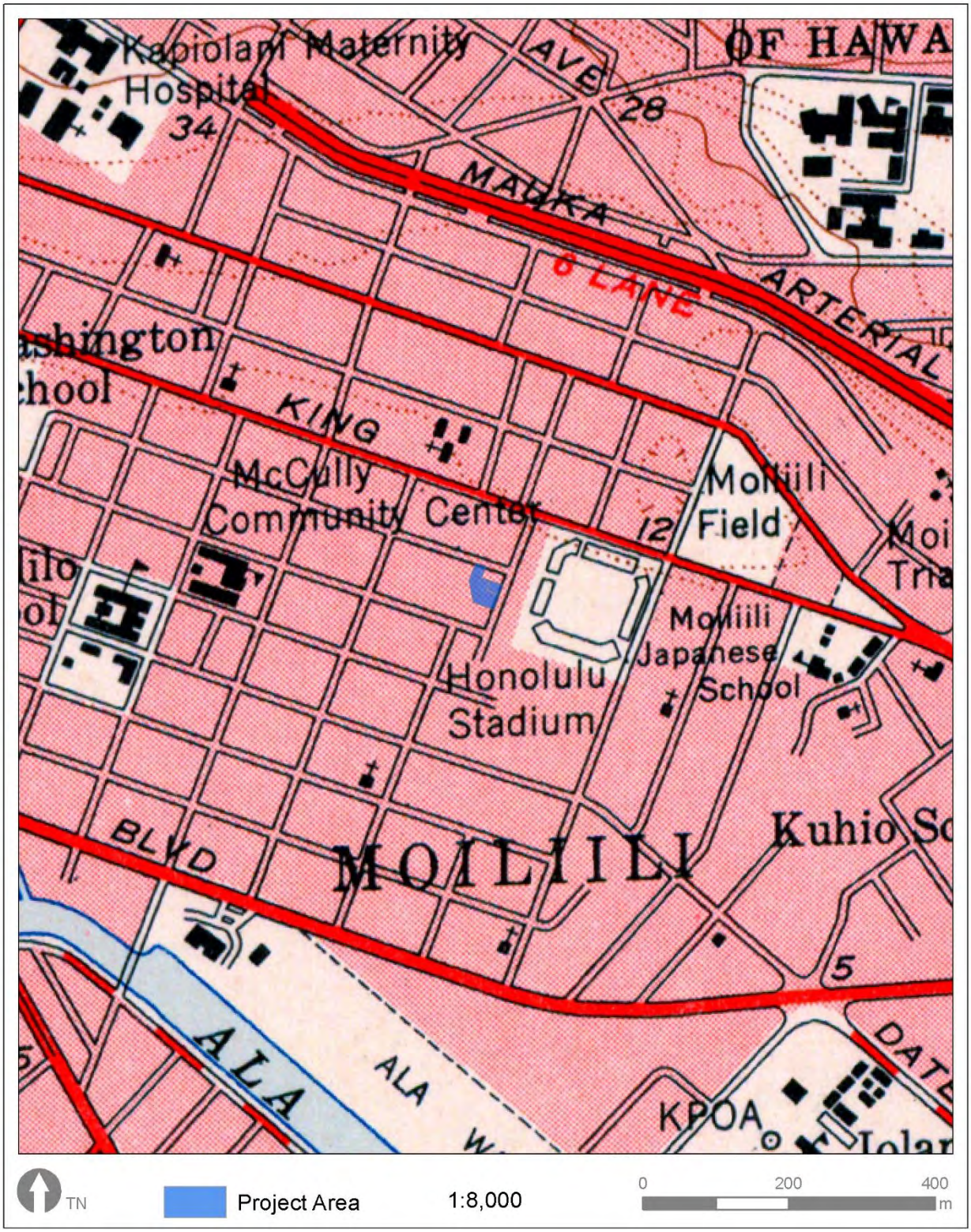


Figure 15. Portion of 1953 Map Showing Honolulu Stadium West of the Project Area (USGS 1953).

Table 1. List of Previous Archaeological Studies and Historic Properties Near the Project Area.

MAP NO.[1]	AUTHOR YEAR	TMK(S)	NATURE OF STUDY	SIHP[1] NO. 50-80-14-	RESULTS
-	McAllister 1933	Island-wide survey	Archaeological Survey	00062	Mauʻoki Heiau
1	Chaffee and Spear 1994	2-7-9:013, 014 2-7-010:008, 009/ Hausten Street	Archaeological Assessment	-	No significant cultural resources identified.
2	McIntosh and Cleghorn 2018	2-7-008:018 and 020/ 820 Isenberg Street	Archaeological Inventory Survey	08210	Historic dumpsite
3	O'Hare et al. 2007	2-8-006:001, 020, 023,025,032,036,038–43, 048, 052, 057, 058; 2-8-024:013,030–034; 2-8-025:047–054/ Kamehameha Schools University Parcels and Varsity Theater Parcel	Literature Review and Field Inspection	-	No significant cultural resources identified.
4	O'Hare et al. 2010	2-3, 2-4, 2-5, 2-6, 2-7, 2-8, 2-9, 3-1, 3-2, 3-3, and 3-4/ Ala Wai Watershed	Cultural Resources and Ethnographic Study	-	No historic properties identified near the current project area.

[1] SIHP (State Inventory of Historic Places)

[1] See Figure 15.

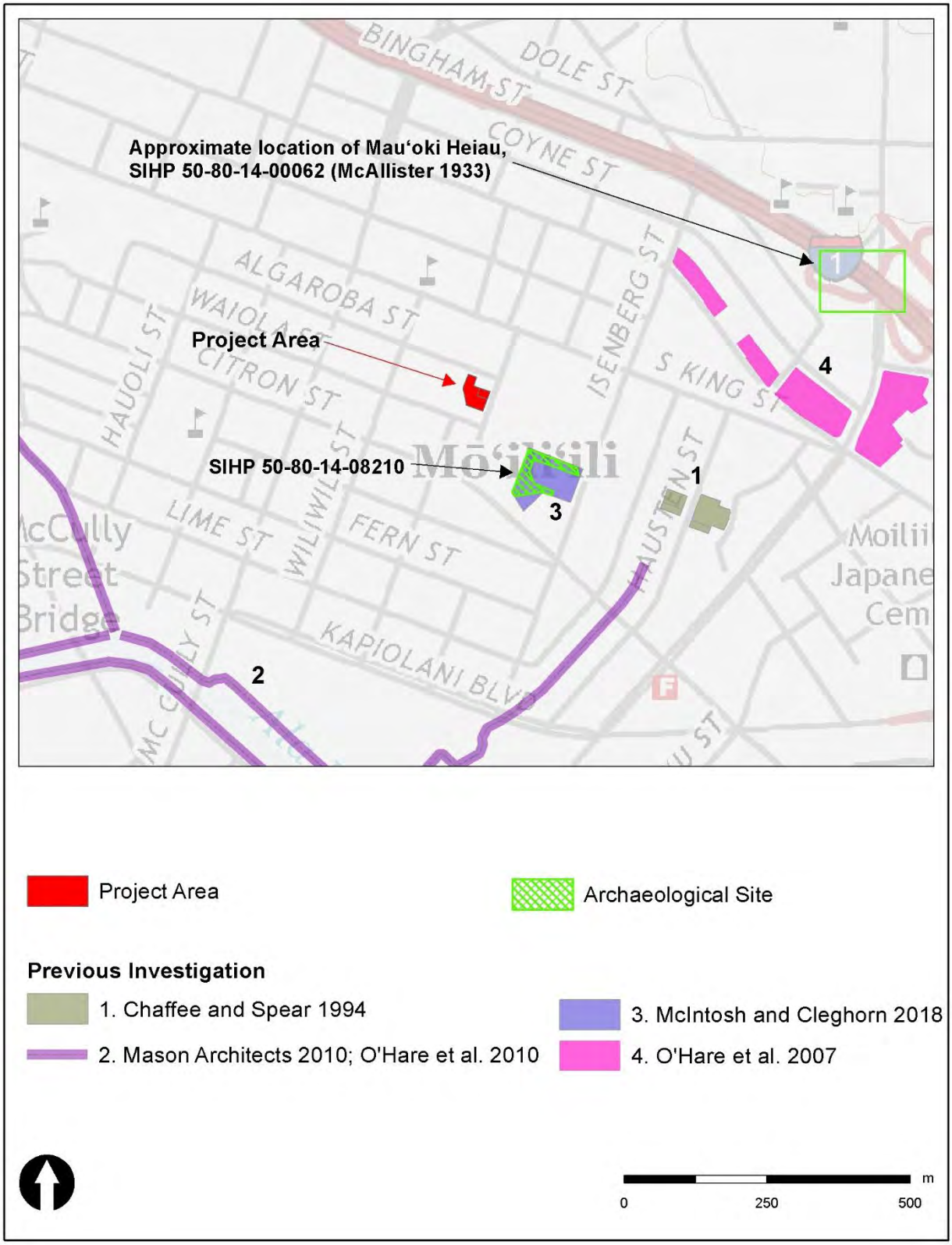


Figure 16. Previous Archaeological Investigations and Identified Historic Properties Near the Project Area.

Based on historical maps, taro *loʻi*, which were later used for rice agriculture, along with fishponds were located adjacent to the project area (see Figures 8). Additionally, LCAs indicate the presence of *puʻuone*, *loʻi*, *kula*, *pahale*, therefore, there is low to moderate potential for evidence of traditional Hawaiian habitation that may be extant below fill deposits; however, LCAs and historical maps do not indicate any specific land use in the project area boundary.

The residences at 2139 Algaroba Street and 918 Makahiki Way are over 50 years old, and therefore, are potential historic properties. 2139 Algaroba Street is a doglegged-shaped property containing low-density apartment complex built in 1928 (changes made in 1962). A street view of the property from Makahiki Way is shown in Figure 17 and from Algaroba Street in Figure 18. 918 Makahiki Way consists of a single-family, wooden, single wall construction built in 1927 (changes made in 1940). A street view of the property is shown in Figure 19. There is moderate to high potential for the presence of subsurface historic properties similar to SIHP 50-80-14-08210 (a historic period trach deposit), located 100 meters southeast of the project area. Historic period trash deposits associated with former occupation of the residences at 2139 Algaroba Street and 918 Makahiki Way may contain historic artifacts, such as glass, ceramic, and metal items.

SUMMARY AND ASSESSMENT

The proposed Hale Makana O Moʻiliʻili Affordable Rental Housing Project is located at 2139 Algaroba Street and 918 Makahiki Way in Mōʻiliʻili, Waikīkī Ahupuaʻa, Honolulu District, Island of Oʻahu, Hawaiʻi (TMKs: [1] 2-7-007:016 and 2-7-007:051) (see Figure 1). The project proponent is Hoʻokahua Development LLC and the land owner is University Park Apartments Hi, Lp. Funding for the project is being provided by Hawaii Housing Finance and Development Corporation. The project scope of work includes the demolition of existing residences on the property and construction of a six-story (105-unit) affordable rental housing facility. An archaeological literature review that addresses historical, cultural, and archaeological background was conducted in order to evaluate any potential effect on historic properties in the project area, and to recommend mitigation of any adverse effect, if warranted. This work was carried out in accordance with Hawaii Revised Statutes (HRS) Chapter 6E, and Title 13 of the Hawaii Administrative Rules (HAR), Subtitle 13 (State Historic Preservation Division Rules), Chapter 275 (*Rules Governing Procedures for Historic Preservation Review for Governmental Projects Covered Under Sections 6E-7 and 6E-8, HRS*).

Background research indicates that the project area fell within the Waikiki Reclamation District and may have been wetland. Historical land use in the area, which is known from 18th and 19th century maps and LCA descriptions, included taro *loʻi* and rice agriculture, *puʻuone*, *kula*, and *pahale*. Historic period construction began on the property in the 1920s when single and multi-family residences were built. The properties at 2139 Algaroba Street and 918 Makahiki Way are not listed on the Hawaiʻi or National Registers of Historic Places, nor have they been nominated.

RECOMMENDATIONS

It is currently unknown to what extent previous residential construction in the project area has disturbed subsurface soils, including to what depth fill deposits extend. Archaeological inventory survey has not previously been conducted on the property and the demolition work will extend beyond the existing dwellings' footprints. The recommended SHPD determination is no historic properties affected with a commitment for archaeological monitoring (under the guidance of an SHPD-approved Archaeological Monitoring Plan) to ascertain the subsurface conditions in

the project area and an architectural assessment and recordation for the existing structures on the properties that are over 50 years old.

Figure 17. Street View of 2139 Algaroba Street, TMK 2-7-007:051 (Google 2020a).

Figure 18. Street View of 2139 Algaroba Street from Makahiki Way, TMK 2-7-007:051 (Google 2020b).

Figure 19. Street View of 918 Makahiki Way, TMK 2-7-007:016 (Google 2020c).

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APPENDIX A

Design Plans

EAST ELEVATION

2139 ALGARROBA STREET

ALTERNATE DESIGN STUDY
MAY 2020

ahl.

SOUTH ELEVATION

2139 ALGARROBA STREET

ALTERNATE DESIGN STUDY
MAY 2020

ahl.

NORTH ELEVATION

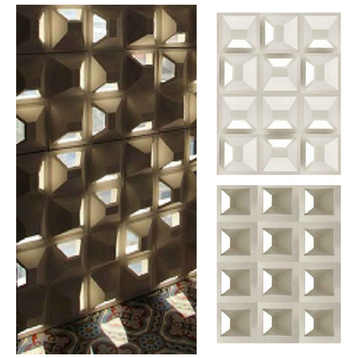
2139 ALGARROBA STREET

ALTERNATE DESIGN STUDY
MAY 2020

ahl.

FORMLINERS ON PRECAST CONCRETE PANELS
KAPA DESIGN CAN BE COMMISSIONED BY A LOCAL ARTIST PRACTITIONER

DECORATIVE BLOCKS PARTITIONS PROVIDE PRIVACY BUT TRANSMIT LIGHT AND AIR



ROOF TOP RESIDENTIAL LOUNGE

EXIT STAIR

DECORATIVE PATTERNS ON CONRETE

ART MURAL BY LOCAL ARTIST

FRONT YARD LANDSCAPING

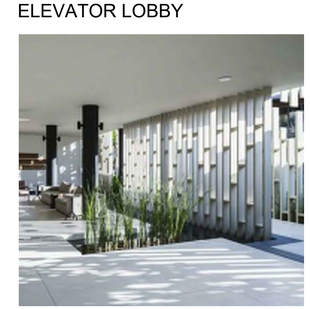
MAIN ENTRY (TO ADMIN OFFICE & RESOURCE CENTER)

RESIDENTIAL MAIL & ELEVATOR LOBBY

SURFACE PARKING

PARKING GATE

VEHICULAR ENTRY



STREET VIEW

2139 ALGARROBA STREET

ALTERNATE DESIGN STUDY
MAY 2020

ahl.

VIEW FROM MAKAHIKI

2139 ALGARROBA STREET

ALTERNATE DESIGN STUDY
MAY 2020

ahl.

VIEW FROM ALGAROBA

2139 ALGARROBA STREET

ALTERNATE DESIGN STUDY
MAY 2020

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STREET VIEW

2139 ALGARROBA STREET

ALTERNATE DESIGN STUDY
MAY 2020

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VIEW OF MAIN ENTRY

2139 ALGARROBA STREET

ALTERNATE DESIGN STUDY
MAY 2020

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VIEW OF PARKING & ELEVATOR LOBBY

2139 ALGARROBA STREET

ALTERNATE DESIGN STUDY
MAY 2020

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VIEW OF TYPICAL FLOOR CORRIDOR

2139 ALGARROBA STREET

ALTERNATE DESIGN STUDY
MAY 2020

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VIEW OF TYPICAL LIVING ROOM

2139 ALGARROBA STREET

ALTERNATE DESIGN STUDY
MAY 2020

ahl.

Appendix O

Public Safety Information for Site

By City and County of Honolulu, Dept. of Emergency Management

City & County of Honolulu
Department of Emergency Management

Public Safety Information

918 MAKAHIKI WAY

Tuesday, August 4, 2020 | 1:41:58 PM

O'ahu Tsunami Evacuation Zone Update Alert

The tsunami evacuation zone maps have been updated for O'ahu. These new maps were developed using updated scientific techniques and technology, and were produced in conjunction with County Public Safety Officials.
The maps in the phonebook for O'ahu are now obsolete!

In many instances the new data identifies locations with an increased tsunami hazard risk; review these new maps NOW and be prepared for the next tsunami.

For more information please go to http://www.honolulu.gov/dem or send inquiries to mailto:TsunamiReady@honolulu.gov

Public Safety Information

Tsunami Evacation Zone: OUTSIDE

Facilities in vicinity of (918 MAKAHIKI WAY):

Potential Hurricane Shelter: more>>
- Lunalilo ES — show route

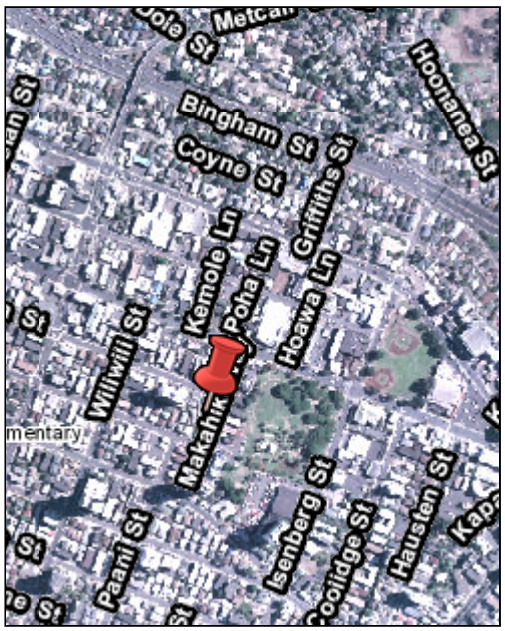
Tsunami Refuge Area:
- N/A

Hospital:
- Kapiolani Medical Center — show route

Fire Station:
- McCully — show route

Police Station:
- Alapai Police Headquarters — show route

Routes are dynamically generated. Local knowledge should supersede computer generated results. Always obey traffic signs and regulations.



Map Notes
Evacuation is recommended for all shaded areas in pink. For more information please see the Tsunami Information page.

Tsunami Evacuation Notes:

- Remain at least 100 feet away from inland waterways and marinas connected to the ocean due to wave surges and possible flooding.
- If possible, remove or deploy vessels to deep water (at least 200 fathoms).
- Structural steel or reinforced concrete buildings of six or more stories provide increased protection on or above the third floor.
- The evacuation zone is a guideline and should be considered the minimum safe evacuation distance.
- These maps do not consider the destructive effects of a locally generated tsunami. If you feel shaking, move inland immediately, well away from the evacuation zone.

You cannot prevent but you can prepare for a Tsunami. If you hear the Warning Sirens please turn on your radio or TV and listen for instructions.

Crime

Area Crime Report
Crime Map by Beat

HPD Traffic Live List

Information shown on these maps are derived from public records that are constantly undergoing change and do not replace a site survey, and is not warranted for content or accuracy.

Department of Emergency Management
650 S King Street
Honolulu, HI 96813
TsunamiReady@honolulu.gov

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Appendix P

Sewer Connection Application Approval

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET * HONOLULU, HAWAII 96813
Phone: (808) 768-8209 * Fax: (808) 768-4210

SEWER CONNECTION APPLICATION

APPLICATION NO.: **2019/SCA-0148** STATUS: **Approved**
DATE RECEIVED: **02/01/2019** IWDP APP. NO.:
PROJECT NAME: **2019/SCA-0148 Hale Makana O Mo'ili'ili**

$486,276.00
Estimated Wastewater System Facility Charge*

LOCATION:

Zone	Section	Plat	Parcel		
2	7	007	016	918 MAKAHIKI WAY Honolulu / Mak	3,000 Sq. Ft.
2	7	007	051	2139 ALGAROBA ST Honolulu / Ma	14,743 Sq. Ft.

SPECIFIC LOCATION: **2139 Algaroba Street**

APPLICANT: **Ho'okahua Development, LLC**
1188 Bishop Street #907
Honolulu, HI 96813

DEVELOPMENT TYPE: **Dwelling, Multi-family**
OTHER USES:
NON-RESIDENTIAL AREA: s.f.

SEWER CONNECTION WORK DESIRED:
APPROXIMATE DATE OF CONNECTION:

PROPOSED UNITS		EXISTING UNITS		UNITS TO BE DEMOLISHED	
No. of New Units:	**105**	No. of Existing Units:	**0**	No. of Units to be Demolished:	**0**
Studios:	**80**	Studios:		Studios:	
1-Bedroom:	**25**	1-Bedroom:		1-Bedroom:	
2-Bedroom:		2-Bedroom:		2-Bedroom:	
3-Bedroom:		3-Bedroom:		3-Bedroom:	
4-Bedroom:		4-Bedroom:		4-Bedroom:	
5-Bedroom:		5-Bedroom:		5-Bedroom:	
6-Bedroom:		6-Bedroom:		6-Bedroom:	

REMARKS

APPROVAL DATE: **02/04/2019**

EXPIRATION DATE: **02/03/2021**

Valid 2-years after approval date. Construction plans shall be completed and approved within this 2-year period. Construction shall commence within 1-year after approval of plans.
** Applicable WSFC shall be collected at the prevailing rate in accordance with ROH 1990, Chapter 14, Sections 14-10.3, 14-10.4, 14-10.5 and Appendix 14-D.*

REVIEWED BY: ***Keith Miyashiro***

Site Development Division, Wastewater Branch

ExternalID: **064617628-001** JobId: **64617628**

Appendix Q

Traffic Management Plan Hale Makana O Mo'ili'ili - ~~DRAFT~~ FINAL

By Austin, Tsutsumi & Associates, Inc.

AUSTIN, TSUTSUMI & ASSOCIATES, INC. CIVIL ENGINEERS • SURVEYORS
CONTINUING THE ENGINEERING PRACTICE FOUNDED BY H. A. R. AUSTIN IN 1934

TERRANCE S. ARASHIRO, P.E.
ADRIENNE W.L.H. WONG, P.E., LEED AP
DEANNA M.R. HAYASHI, P.E.
PAUL K. ARITA, P.E.
ERIK S. KANESHIRO, L.P.L.S., LEED AP
MATT K. NAKAMOTO, P.E.
GARRETT K. TOKUOKA, P.E.

DRAFT FINAL TRAFFIC MANAGEMENT PLAN

Hale Makana O Mo'ili'ili

Honolulu, Oahu, Hawaii

1. INTRODUCTION

This Traffic Management Plan (TMP) proposes transportation management strategies to reduce and minimize the traffic impacts resulting from the proposed Hale Makana O Mo'ili'ili development (hereinafter referred to as the "Project") located in Honolulu, Oahu, Hawaii.

1.1 Project Description

The Project site is located on an approximately 17,750 square-foot parcel in Mo'ili'ili near the intersection of Algaroba Street and Makahiki Way. The site is currently occupied by eight (8) – two (2)-story multi-family apartments which collectively house a total of 26 apartment units, and one (1) single-family home. These units will be demolished and will be replaced by the Project, which is envisioned to be a six-story apartment building consisting of 105 affordable senior rental apartment units. The Project will be income and rent restricted, with units priced accordingly at the 30%, 50%, and 60% average median gross income levels. The current site plan proposes a 31-stall ground-level parking lot with one-way vehicular circulation provided via two (2) driveways from Makahiki Way. In addition, a loading stall is also proposed at the north side of the parking lot, near the access to the mail and elevator lobby. The main pedestrian entry is provided from Algaroba Street. The Project also plans to offer secured bicycle parking for its residents.

As described in the Traffic Assessment (TA) for the Project, trip generation for the Project was performed utilizing trip generation rates for Senior Affordable Housing, which generates approximately 40% less trips than other types of multifamily housing during the AM and PM peak hours.

See Figure 1 for the Project location and Figure 2 for the Project site plan.

1.2 Study Methodology

This study will address the following:

- Identify existing and planned improvements that will improve pedestrian, bicycle, and transit accessibility within the study area.

- Provide recommendations for roadway, intersection, or on-site improvements or other mitigation measures, as appropriate, to reduce delay and queuing that may result from traffic generated by the Project.
- Suggest Travel Demand Management (TDM) measures and other transportation management strategies to help reduce the vehicular traffic demand during the peak hours of traffic.
- Provide general Construction Management Plan (CMP) measures and discussions related to the Project construction.

HALE MAKANA O MO'ILI'ILI

AustinTsutsumi & ASSOCIATES, INC.
Engineers & Surveyors

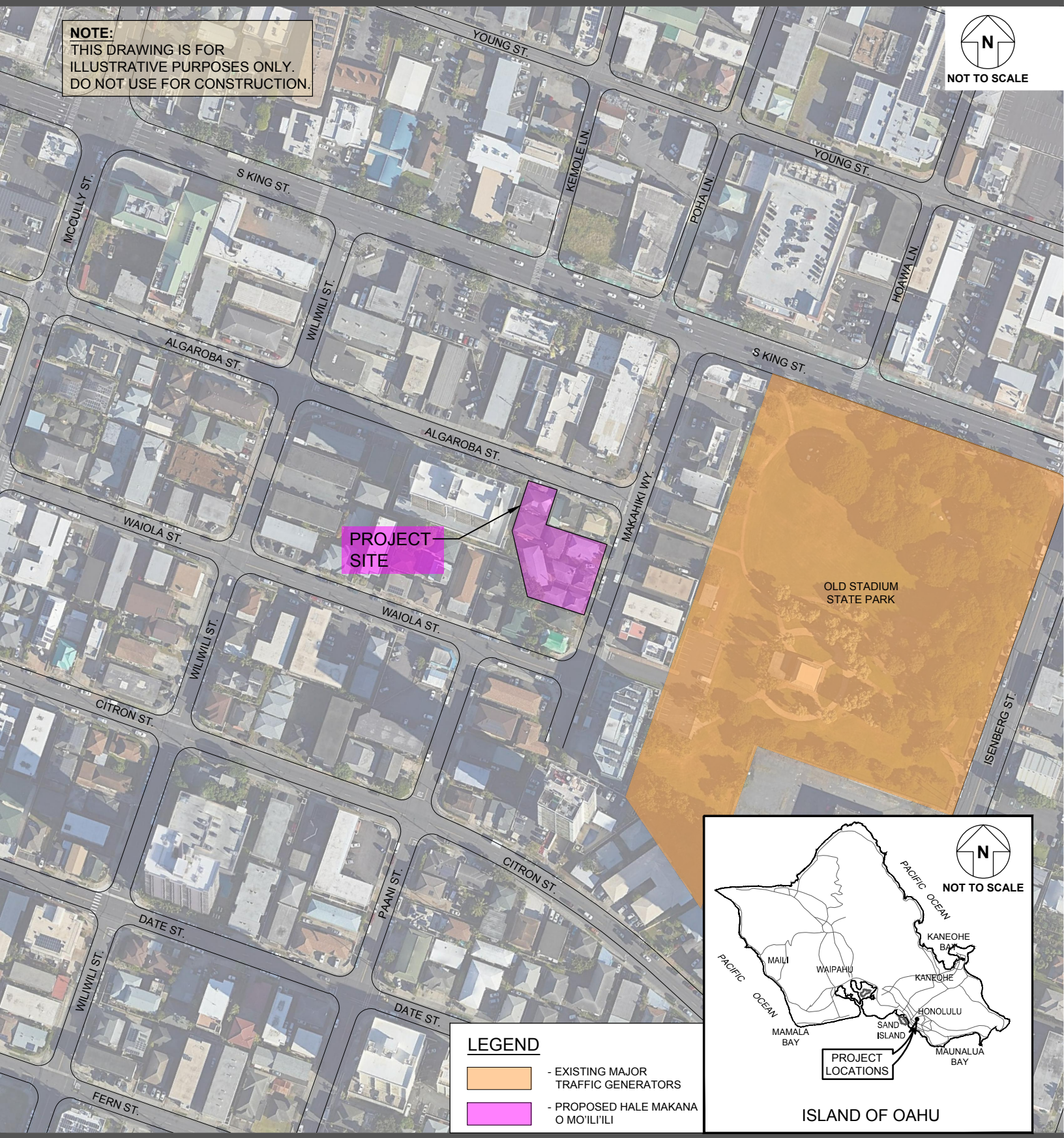


FIGURE 1.1

LOCATION MAP

HALE MAKANA O MOI'ILI'ILI

AustinTsutsumi & ASSOCIATES, INC.
Engineers & Surveyors

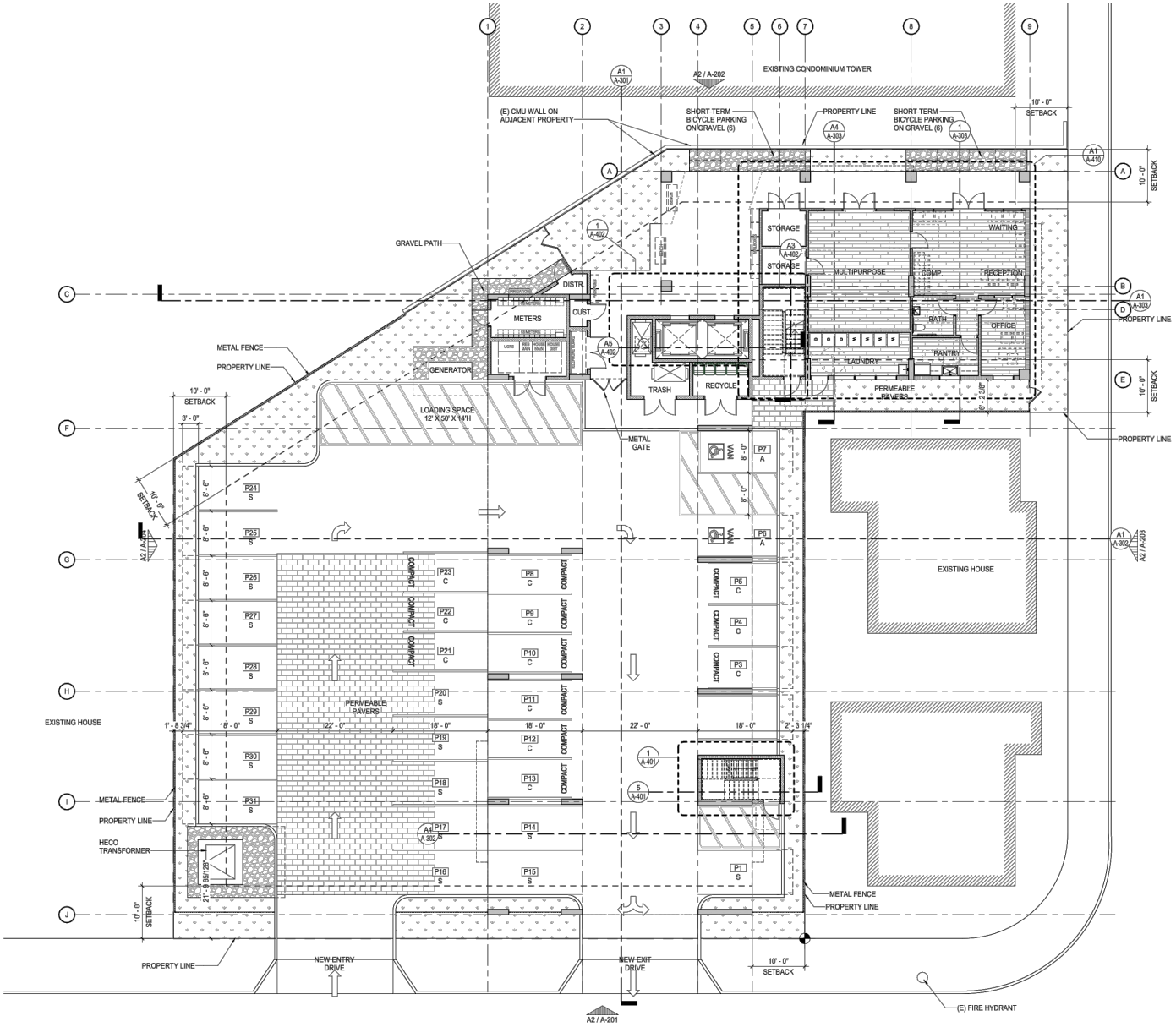


FIGURE 1.2

PROJECT SITE PLAN

2. EXISTING AND FUTURE CONDITIONS

2.1 Pedestrian Accessibility

Existing Conditions

In the vicinity of the Project, neighborhood blocks are approximately 350 to 550 feet in length, and sidewalks are generally continuous. There are existing sidewalks along the Project frontage on Algaroba Street and Makahiki Way. There are multiple unsignalized midblock crossings on King Street in the vicinity of the Project, with the nearest signalized crossing at the King Street and Isenberg Street intersection. Within the lower-speed, lower-volume residential area south of King Street, crosswalks are unmarked.

Future Conditions

The Project plans to retain all existing sidewalks for pedestrian access to and from the Project. There are no planned improvements to off-site sidewalks.

Pedestrian facilities in the study area are shown in Figure 2.1.

2.2 Bicycle Accessibility

Existing Conditions

According to the 2019 Oahu Bike Plan Update, the following facilities are provided in the vicinity of the Project:

- A protected cycle track along King Street between Alapai Street and Isenberg Street
- A shared roadway along Isenberg Street between King Street and Coyne Street
- A shared roadway along Young Street between Isenberg Street and Pensacola Street
- A bike lane along Beretania Street between University Avenue and Alapai Street
- A bike lane along McCully Street between Kalakaua Avenue and Beretania Street
- A bike lane along University Avenue between Hihiwai Street and Varsity Place
- A shared roadway along Coyne Street between Isenberg Street and Dole Street

Future Conditions

According to the 2019 Oahu Bike Plan Update, the following facilities are proposed:

- Connection between the existing bicycle lane along McCully Street and the existing bicycle lane along Metcalf Street
- A bike lane along Isenberg Street between Kapiolani Boulevard and the existing protected cycle track at King Street
- Extension of the existing King Street cycle track eastward to Kapiolani Boulevard
- A protected bike lane along University Avenue between Hihiwai Street and Maile Way

- A shared roadway along Citron Street from Kalakaua Avenue (via Kuikahi Street, Philip Street and Isenberg Street, where it continues as a bike lane until Menehune Lane)
- A bike lane along Date Street between Isenberg Street and University Avenue
- A shared roadway along Fern Street between Kalakaua Avenue and Isenberg Street
- A shared roadway along Hauoli Street between Kapiolani Boulevard and King Street
- A shared roadway along Pumehana Street between Kapiolani Boulevard and King Street

Several Biki (bikeshare) stations are also available in the vicinity of the Project.

Additionally, the Project site plan includes secured bicycle parking for residents to store their personal bicycles, which encourages bicycle ownership. The previously mentioned proposed bicycle facility expansion throughout the neighborhood and the close proximity of commercial retail, restaurants, parks, schools, and other destinations makes owning a bicycle instead of a personal vehicle an attractive option.

Figure 2.1 shows the existing and proposed bicycle facilities in the vicinity of the Project.

2.3 Transit Accessibility

Existing Conditions

Oahu Transit Services (OTS) operates TheBus with a fleet of 542 fixed-route buses and services most populated areas of the island. The cost of service is $2.75 for each 1-way ride, $5.50 for a 1-day pass, $70 for a monthly pass, and $770 for an annual pass[1].

Within ½ mile (approximately 10-minute walk) of the Project, there are many bus stops along Beretania Street, King Street, McCully Street, Citron Street, and Kapiolani Boulevard, which serve the following routes:

- Route A which provides service with limited stops between the Waipahu Town Center and the University of Hawaii, via Farrington Highway, Kamehameha Highway, the H-1 Freeway, Middle Street, King Street, Beretania Street, Kapiolani Boulevard and University Avenue.
- Route 1 and 1L which provide service between Hawaii Kai near Kaiser High School and the Kalihi Transit Center (Route 1) or Kamehameha Shopping Center (Route 1L) mainly via King Street, Beretania Street, Waialae Avenue, Kalanianaole Highway and Lunalilo Home Road. Route 1 connects multiple key destinations, including Kahala Mall, the Hawaii State Capitol, Honolulu City Hall, the Queens Medical Center, and the Kalihi Transit Center which allows for transfers to additional routes beyond the Honolulu area.
- Route 3 which provides service between Salt Lake and Kapiolani Community College, via the H-1 Freeway, Vineyard Avenue, King Street, Beretania Street, Kapiolani Boulevard, Date Street, and Kilauea Street. Route 3 also services the Kalihi Transit Center which allows for transfers to additional routes beyond the Honolulu area.

[1] Based on New Fare Information Effective: 6/1/2020.

- Route 4 which provides service between Pali Highway and Mo'ili'ili, with many stops throughout the Punchbowl area and Downtown Honolulu. Route 4 also services the Kalihi Transit Center which allows for transfers to additional routes beyond the Honolulu area.
- Route 6 which provides service throughout Manoa, Mo'ili'ili, Kakaako, Downtown, and Pacific Heights. Route 6 has stops near the University of Hawaii and the Ala Moana Center.
- Route 9 which provides service through Downtown Honolulu between Kapiolani Community College and the Pearl Harbor area mainly via Nimitz Highway, Dillingham Boulevard, and Kapiolani Boulevard. Route 9 connects many major key destinations, including Pearl Harbor, the Honolulu Airport, the Queen's Medical Center, the Hawaii Convention Center, Kapiolani Community College, as well as the Kalihi Transit Center and the Alapai Transit Center which allow for transfers to additional routes beyond the Honolulu area.

The Handi-Van serves an extension to TheBus, designed to serve riders that need additional assistance. Passengers pre-arrange drop-off and pick-up with the Handi-Van and share the vans with other riders. Daily service is generally available island-wide between 4:00 AM and 1:00 AM while 24-hour service is available in areas located within ¾ miles of Routes 2 and 40. The fare is $2.00 per one-way trip. The Handi-Van stops at the nearest curbside for both pick-ups and drop-offs.

Figure 2.2 shows the existing transit facilities in the vicinity of the Project.

Future Conditions

Changes to nearby bus stops or bus routes are not anticipated as a result of this project. However, one of the duties of the Project site manager will be to assist residents with finding Handi-Van and other services for travel, if needed, which also reduces the need for residents to own private vehicles.

2.4 Rideshare Service

Existing Conditions

Hui provides a 24/7 station-based car share service with stations in Honolulu, Moanalua, Aiea, Pearl City, and Ko Olina. However, the majority of the stations are located in the Honolulu Urban Core. Hui riders may reserve a vehicle at a nearby station through a mobile application and must return the vehicle to the same station when their trip/reservation time is complete. The cost of the service starts at $8.45 per hour or $92.95 per day and increases up to $13.95 per hour or $153.45 per day based on vehicle type. There are three (3) Hui Car Share Stations located within ½ -mile (approximately 10-minute walk) of the Project site.Figure 2.2 shows the existing rideshare facilities in the vicinity of the Project.

Future Conditions

Changes to Hui car share stations are not anticipated as a result of this Project.

2.5 Ride-hailing Service

Existing Conditions

"On demand" ride-hailing services like Uber and Lyft allow users to select a destination via a smartphone app and request a ride, and nearby drivers in their personal vehicles come to pick up the user. Trips can be scheduled in advance, and users have the option to "carpool" with other users who also request rides in the vicinity. Prices for trips vary by the travel time and distance to the destination and may experience "surge pricing" during busy hours.

Future Conditions

Changes to ride-hailing services are not anticipated as a result of this Project.

2.6 Mo'ili'ili Neighborhood

Existing Conditions

The Mo'ili'ili neighborhood is a grid-like network consisting of a mix of single-family homes, multi-family apartments, commercial retail stores, parks, restaurants, and various small businesses. Sidewalks are available along the majority of roadways in the neighborhood, and there are a number of bicycle routes and transit stops throughout the neighborhood for longer trips.

Future Conditions

The Mo'ili'ili neighborhood is largely built-out, with no significant changes to the neighborhood planned. Some infill growth and redevelopment is anticipated but will retain the character of the existing Mo'ili'ili neighborhood.

2.7 Roadway System

Existing Conditions

Makahiki Way is a north-south, two-way roadway which begins to the north at a T-intersection with South King Street and extends southward where it terminates to the south in a dead-end near Waiola Street. Street parking is allowed on both sides of Makahiki Way.

Algaroba Street is an east-west, two-way roadway that runs parallel to South King Street and Waiola Street and begins to the east at a T-intersection with Makahiki Way and extends westward until it transitions into Lokahi Street near Washington Middle School. In the vicinity of the Project, street parking is allowed on both sides of Algaroba Street.

Waiola Street is an east-west, two-way roadway that runs parallel to South King Street and Algaroba Street and begins to the east at its intersection with Makahiki Way and extends westward until it transitions into Philip Street at its intersection with Kuikahi Street. In the vicinity of the Project, street parking is allowed on both sides of Waiola Street.

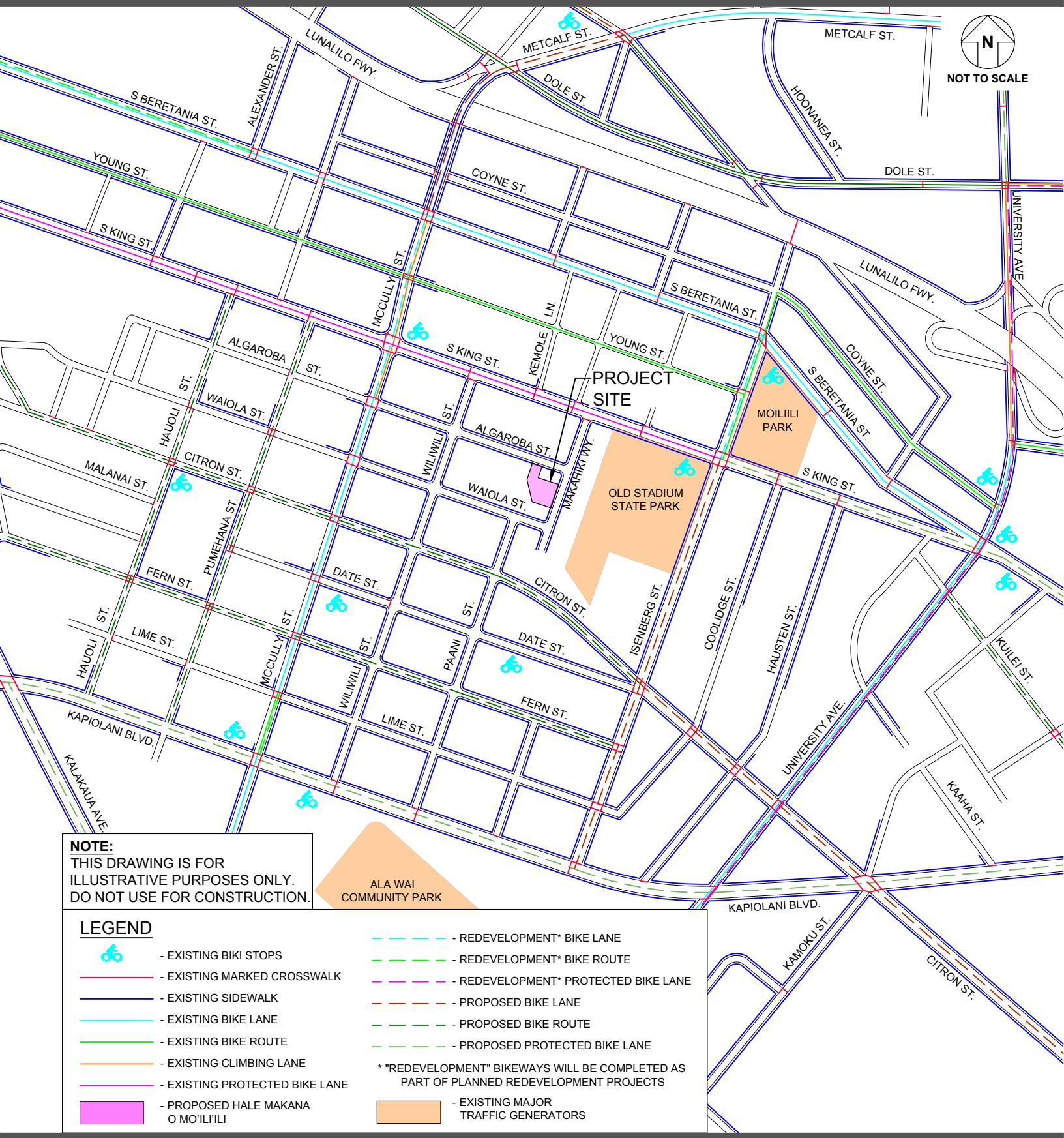
South King Street is an east-west, one-way roadway that runs parallel to Algaraoba Street and Waiola Street in the vicinity of the Project and begins to the west in Downtown at its intersection with North King Street and Nuuanu Avenue and extends eastward until it transitions into Harding Avenue near the Market City Shopping Center.

Future Conditions

Changes to geometry or lane assignments to any of the streets in the area are not anticipated as a result of the Project.

HALE MAKANA O MO'ILI'ILI

AustinTsutsumi & ASSOCIATES, INC.
Engineers & Surveyors



NOTE:
THIS DRAWING IS FOR ILLUSTRATIVE PURPOSES ONLY. DO NOT USE FOR CONSTRUCTION.

LEGEND

- EXISTING BIKI STOPS
- EXISTING MARKED CROSSWALK
- EXISTING SIDEWALK
- EXISTING BIKE LANE
- EXISTING BIKE ROUTE
- EXISTING CLIMBING LANE
- EXISTING PROTECTED BIKE LANE
- PROPOSED HALE MAKANA O MO'ILI'ILI
- REDEVELOPMENT* BIKE LANE
- REDEVELOPMENT* BIKE ROUTE
- REDEVELOPMENT* PROTECTED BIKE LANE
- PROPOSED BIKE LANE
- PROPOSED BIKE ROUTE
- PROPOSED PROTECTED BIKE LANE

* "REDEVELOPMENT" BIKEWAYS WILL BE COMPLETED AS PART OF PLANNED REDEVELOPMENT PROJECTS

- EXISTING MAJOR TRAFFIC GENERATORS

FIGURE 2.1

EXISTING PEDESTRIAN AND BICYCLE FACILITIES

HALE MAKANA O MO'ILI'ILI

AustinTsutsumi & ASSOCIATES, INC.
Engineers & Surveyors

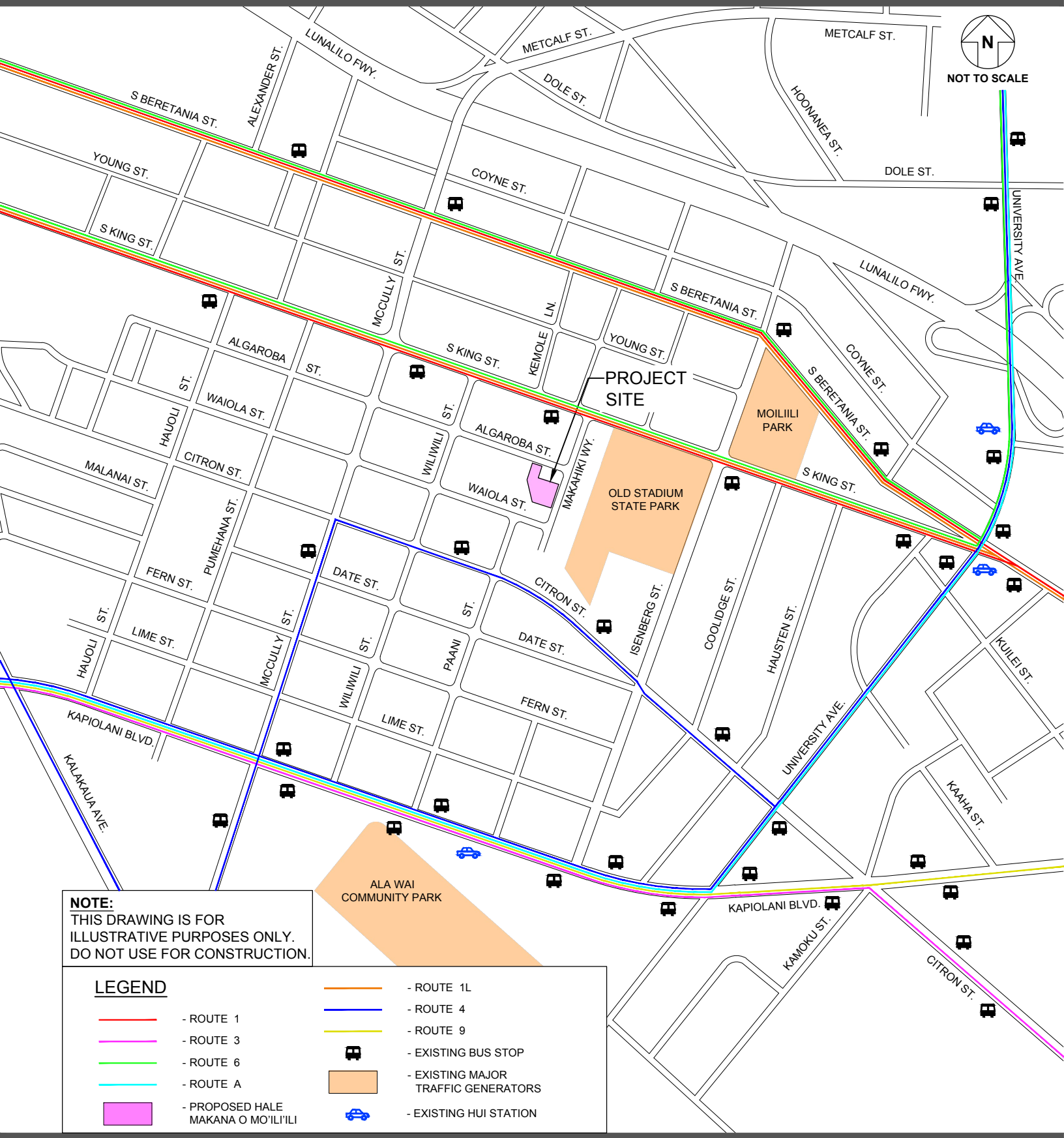


FIGURE 2.2

EXISTING TRANSIT FACILITIES

3. PROJECT RECOMMENDATIONS

3.1 Project Site Plan Recommendations

Project Access

Vehicle access will be provided by two (2) driveways along Makahiki Way, and the main pedestrian access will be provided via Algaroba Street. It is recommended that sidewalks fronting the Project be continuous and well maintained, especially at the pedestrian access along Algaroba Street.

Loading Area

The Project site plan shows one (1) large loading stall on the north side of the parking lot. This loading stall is anticipated to be 12'x35', which is more than adequate for passenger cars and small trucks. However, since there is only one loading stall, the following actions are recommended:

- **Establish a traffic management plan for move-in day** – Due to the limited loading and parking areas on the Project site, residents should have a scheduled move-in time slot.

- **Set a time limit for loading** – Due to the limited loading and parking areas on the Project site, a time limit should be set to ensure that residents or visitors do not use the loading stall as a parking stall.

Parking Area

The Project plans to offer 31 stalls in the ground level parking lot, which includes two (2) handicap stalls.

Additional parking for residents and visitors is generally available within the surrounding neighborhood streets, if necessary. However, the abundance of multimodal transportation in the Project area provides residents with multiple convenient options for transit, making it feasible for residents to forgo car ownership.

The following actions for the parking area are recommended:

- **Reserve one (1) stall for the on-site resident manager** – The on-site resident manager should be provided with a reserved stall, if necessary.
- **Clearly mark stalls for residents of the building** – The stalls should be clearly designated for residents of the Project only. Public parking is not allowed.

Management

- **The on-site manager and/or security guard should regularly monitor the loading and parking areas** – The parking lot should occasionally be monitored to identify vehicles that are wrongfully parking for extended periods of time (e.g. non-residents parking in the lot).
- **The on-site manager should coordinate all deliveries** – The on-site manager should develop and maintain a schedule to coordinate general building deliveries and individual

resident's deliveries (e.g. large furniture items) to prevent multiple vehicles from using the loading zone at any given time.

3.2 Traffic Demand Management Strategies

As previously mentioned, the Project will provide an on-site secured bicycle rack for residents' convenience and to encourage bicycle ownership and multimodal transportation, rather than residents needing to own a private vehicle. Additionally, the on-site manager will assist residents with transportation and Handi-Van services as needed to further reduce the need for residents to own private vehicles.

Additional Traffic Demand Measures that can be considered are listed below:

Transportation Allowance Program

Based on a report, *Mitigating Traffic Congestion – The Role of Demand-Side Strategies*, by the Association for Commuter Transportation, in partnership with the Federal Highway Administration (FHWA), transportation management programs that focused on information or promotion alone exhibited no measurable decrease in automobile trips. In contrast, programs that implemented financial incentives and/or other enhanced alternatives realized average reductions between 15-25 percent. Therefore, it is recommended that the Developer consider a transportation allowance program that provides incentives to residents who use alternative modes of transportation, such as a shared-cost transportation benefit program, where the Developer shares a portion of expenses for TheBus or rideshare services for residents.

Unbundled Parking

By unbundling parking stalls from residential units, the Project disincentivizes car ownership and encourages alternate modes of transportation.

Education and Information

- Provide maps with major destinations including walking, biking, and bus route.
- Provide bicycle safety classes and/or educational pamphlets that encourage multimodal transportation, information packets about commuting to work and the surrounding bike networks, and trip planning services.

Rideshare/Carpooling Programs

- Establish a rideshare program to encourage carpooling for commuter trips.

4. CONSTRUCTION MANAGEMENT

The following are general construction management recommendations. Actual recommendations for the Project site should be determined at a later date once construction plans for the Project are finalized. A Construction Management Plan (CMP) should be completed at that time.

4.1 Staging Area

Construction vehicle staging on adjacent roadways (e.g. Algaroba Street and Makahiki Way) is not allowed. All deliveries to the Project site should be coordinated and scheduled by the Contractor to ensure that delivery vehicles can be staged within the limits of the Project. Any oversized deliveries that cannot be accommodated within the Project site should be coordinated with City and County of Honolulu (C&C) and nearby land owners to identify feasible off-site staging areas.

4.2 Construction Traffic

It is recommended that construction-related vehicles avoid weekday ingress and egress to the job site during peak periods if possible due to potential for increased congestion. Based on data previously collected[2] at intersections in the vicinity of the study area, the AM peak hour of traffic occurs between 7:30 AM and 8:30 AM and the PM peak hour of traffic occurs between 5:00 PM and 6:00 PM.

Construction workers are expected to arrive and leave the Project site before the peak hours of traffic. Heavy vehicle traffic to and from the Project site will be contingent on the scheduled work activities. It is recommended that any required heavy vehicles enter and exit the site during non-peak hours of traffic as well.

4.3 Parking

In order to reduce construction impacts of the Project on the surrounding area, it is recommended that the developer and/or contractor work with nearby parking lot/garage owners to identify potential parking stalls for workers throughout construction. If workers must park on neighborhood streets, residents in the area should be notified before construction begins.

4.4 Preliminary Recommendations

- Avoid construction-related vehicular ingress or egress during the weekday morning and afternoon peak hours of traffic, if possible, which occurs at 7:30 AM to 8:30 AM and 5:00 PM to 6:00 PM, respectively.
- Coordinate deliveries to ensure adequate space is available to stage vehicles on site. For oversized deliveries that cannot be accommodated within the Project site, coordinate with C&C and nearby land owners to identify feasible off-site staging areas.
- Identify potential parking lots/garages for workers and/or encourage carpooling to the Project site from an off-site location. If workers will be parking on neighborhood streets, notify residents before construction begins.

[2] Due to impacts from COVID-19, manual turning movement counts were not collected for the Project. The peak hours were determined by previous turning movement data that was collected on November 16, 2017.

5. CONCLUSION

The Project site is located on an approximately 17,750 square-foot parcel in Mo'ili'ili near the intersection of Algaroba Street and Makahiki Way. The site is currently occupied by eight (8) – two (2)-story multi-family apartments which collectively house a total of 26 apartment units, and one (1) single-family home. These units will be demolished and will be replaced by the Project, which is envisioned to be a six-story apartment building consisting of 105 affordable senior rental apartment units. The Project will be income and rent restricted, with units priced accordingly at the 30%, 50%, and 60% average median gross income levels. The current site plan proposes a 31-stall ground-level parking lot with vehicular access provided via two (2) driveways from Makahiki Way. In addition, a loading stall is also proposed at the north side of the parking lot, near the access to the mail and elevator lobby. The main pedestrian entry is provided from Algaroba Street. The Project also plans to offer secured bicycle parking for its residents.

5.1 Existing and Future Conditions

5.1.1 Pedestrian Accessibility

In the vicinity of the Project, neighborhood blocks are approximately 350 to 550 feet in length, and sidewalks are generally continuous. Marked crosswalks are available at mid-block crossings across King Street, and crossings in the lower-volume, lower-speed residential area are unmarked. There are no planned Project-related improvements to off-site sidewalks.

5.1.2 Bicycle Accessibility

The Project is located near several bike routes, including the protected King Street cycle track. Several Biki (bikeshare) stations are available in the vicinity of the Project. According to the 2019 Oahu Bike Plan update, there are several more planned bike routes in the area, though funding has not yet been allocated for these projects and its timeline for implementation is uncertain. The Project plans to add secured bike parking for its residents to encourage bike ownership.

5.1.3 Transit Accessibility

There are several bus stops in the vicinity of the Project which provides service to many major transit routes, including Route A, 1 and 1L, Route 3, 4, 5, 6, and 9.

Changes to nearby bus stops or bus routes are not anticipated as a result of this project.

5.1.4 Rideshare Service

There are several Hui carshare stations in the vicinity of the Project which provides the option for users to reserve one of the Hui cars at a set rate per hour or per day.

Changes to Hui carshare stations are not anticipated as a result of this project.

5.1.5 Ride-hailing Service

"On demand" ride-hailing services like Uber and Lyft allow users to select a destination via a smartphone app and request a ride, and nearby drivers in their personal vehicles come to pick up the user.

Changes to Ride-hailing services are not anticipated as a result of this project.

5.1.6 Mo'ili'ili Neighborhood

The Mo'ili'ili neighborhood is largely built-out, with no significant changes to the neighborhood planned. Some infill growth and redevelopment is anticipated but will retain the character of the existing Mo'ili'ili neighborhood.

5.1.7 Roadway System

There are no changes to lane geometry or lane assignments anticipated as a result of the Project.

5.2 Project Recommendations

5.2.1 Project Site Plan Recommendations

The following actions for the proposed Project site plan are recommended:

Loading Area

- Establish a traffic management plan for move-in day.
- Set a time limit for loading.

Parking Area

- Reserve one (1) stall for the on-site resident manager.
- Clearly mark stalls for residents of the building.

Management

- The on-site manager and/or security guard should regularly monitor the loading and parking areas.
- The on-site manager should coordinate all deliveries.

5.2.2 Transportation Demand Management Strategies

The following TDM strategies may be considered:

- Transportation Allowance Program
- Unbundled Parking
- Rideshare/Carpooling Programs
- Education and Information

5.3 Construction Management

The following are preliminary recommendations to reduce the impacts resulting from the Project's construction-related activity:

- Avoid construction-related vehicular ingress or egress during the weekday morning and afternoon peak hours of traffic, if possible, which occur at 7:30 AM to 8:30 AM and 5:00 PM to 6:00 PM, respectively.
- Coordinate deliveries to ensure adequate space is available to stage vehicles on site. For oversized deliveries that cannot be accommodated within the Project site, coordinate with C&C and nearby land owners to identify feasible off-site staging areas.
- Identify potential parking lots/garages for workers and/or encourage carpooling to the Project site from an off-site location. If workers will be parking on neighborhood streets, notify residents before construction begins.

6. REFERENCES

1. The Association for Commuter Transportation in partnership with U.S. Department of Transportation - Federal Highway Administration, Mitigating Traffic Congestion: The Role of Demand-Side Strategies, October 2004.

2. City & County of Honolulu Department of Transportation Services, Oahu Bike Plan: 2019 Update, December 2019.

3. Institute of Transportation Engineers, Trip Generation, 10th Edition, 2017.

Appendix R

Comments & Responses to the Draft Environmental Assessment

Gmail

Patti Barbee <pattibarbee@gmail.com>

DOH Clean Air Branch Comments on Draft EA for Hale Makana O Mo'ili'ili

1 message

Cab General <Cab.General@doh.hawaii.gov> Tue, Sep 8, 2020 at 8:54 AM
To: "Takahashi, Janice N" <janice.n.takahashi@hawaii.gov>
Cc: "pattibarbee@gmail.com" <pattibarbee@gmail.com>, "6kali9@gmail.com" <6kali9@gmail.com>

Aloha

Thank you for the opportunity to provide comments on the subject project.

Please see our standard comments at:

https://health.hawaii.gov/cab/files/2019/04/Standard-Comments-Clean-Air-Branch-2019.pdf

Please let me know if you have any questions.

Barry Ching

Clean Air Branch

Hawaii Department of Health

(808) 586-4200

Standard Comments for Land Use Reviews
Clean Air Branch
Hawaii State Department of Health

If your proposed project:

Requires an Air Pollution Control Permit

You must obtain an air pollution control permit from the Clean Air Branch and comply with all applicable conditions and requirements. If you do not know if you need an air pollution control permit, please contact the Permitting Section of the Clean Air Branch.

s

Includes construction or demolition activities that involve asbestos

You must contact the Asbestos Abatement Office in the Indoor and Radiological Health Branch.

Has the potential to generate fugitive dust

You must control the generation of all airborne, visible fugitive dust. Note that construction activities that occur near to existing residences, business, public areas and major thoroughfares exacerbate potential dust concerns. It is recommended that a dust control management plan be developed which identifies and mitigates all activities that may generate airborne, visible fugitive dust. The plan, which does *not* require Department of Health approval, should help you recognize and minimize potential airborne, visible fugitive dust problems.

Construction activities must comply with the provisions of Hawaii Administrative Rules, §11-60.1-33 on Fugitive Dust. In addition, for cases involving mixed land use, we strongly recommend that buffer zones be established, wherever possible, in order to alleviate potential nuisance complaints.

You should provide reasonable measures to control airborne, visible fugitive dust from the road areas and during the various phases of construction. These measures include, but are not limited to, the following:

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

If you have questions about fugitive dust, please contact the Enforcement Section of the Clean Air Branch

Clean Air Branch (808) 586-4200 cab@doh.hawaii.gov	Indoor Radiological Health Branch (808) 586-4700

April 1, 2019

HAWAIIAN
COMMUNITY DEVELOPMENT

1188 Bishop Street Suite 907
Honolulu, Hawaii 96813
Phone: (808) 529-0404
Fax: (808) 440-7206

October 8, 2020

Barry Ching
Clean Air Branch
Department of Health
State of Hawaii

Subject: Response to Comments on the Draft Environmental Assessment (DEA) for Hale Makana O Moʻiliʻili (HMoM) Affordable Housing Project, Moʻiliʻili, Oʻahu, TMK: 2-07-07:16 & 2-07-07:51

Dear Mr. Ching,

Thank you for your comments, dated September 8th, 2020, to the DEA for the HMoM Affordable Housing Project. We have addressed your comments as described below:

1. Air Pollution Control Permit: The project does not require an Air Pollution Control Permit because it will not construct, modify, or operate a stationary air pollution source or air pollution control equipment.
2. Construction or demolition activities that involve asbestos: Some of the existing structures on site were determined to be constructed between 1927 and 1973. Based on the date of structures there is the potential for lead, asbestos, and arsenic containing materials to be present at the Site. A hazardous materials survey will be performed prior to demolition activities. If asbestos is found, we will follow all State rules and regulations in removal, handling, and disposal during the demolition of the existing structures.
3. Potential to generate fugitive dust: Best Management Practices (BMP) to control dust during construction will be followed. Dust fences will be used to keep the dust on-site, and watering will minimize dust. All construction activities will comply with regulations for fugitive dust control under HAR Section 11-60.1-33 that require reasonable precautions to prohibit visible fugitive dust beyond the property line.

Mahalo for taking the time to review and respond to the DEA for the much-needed project. Please call me at 808-529-0404.

Sincerely,

Patti Barbee

Appendix S

McCully-Moiliili Neighborhood Board No. 08 - Board Meeting Agenda and Minutes

February 6, 2020 and March 5, 2020

McCULLY/MO'ILI'ILI NEIGHBORHOOD BOARD NO. 8

c/o NEIGHBORHOOD COMMISSION • 925 DILLINGHAM BOULEVARD SUITE 160 • HONOLULU, HAWAII, 96817
TELEPHONE: (808) 768-3710 • FAX: (808) 768-3711 • INTERNET: http://www.honolulu.gov/nco

McCully – Mo'ili'ili Neighborhood Board No. 8
Regular Meeting Agenda
THURSDAY, FEBRUARY 6, 2020, 6:30 p.m.
Washington Middle School Cafeteria
1633 South King Street

RULES OF PARTICIPATION: Anyone wishing to speak, please raise your hand. After recognition, address your comments to the Chair. Comments must relate to the pending agenda item. By Board rules, audience and board members can have up to two (2) turns to speak on a topic. Those speaking should be concise and limit comments to one (1) minute per turn. Those giving reports should limit their reports to three (3) minutes. Please silence all electronic devices.
NOTES: This board may take action on any agenda item. As required by the State Sunshine Law (Chapter 92, HRS), specific issues not listed on this agenda cannot be voted on, unless properly added to the agenda by 2/3 vote.

1. **CALL TO ORDER.** At 6:30 p.m. by Chair Tim Streitz
   Neighborhood Assistant – Lindon Valenciano: l.valenciano@honolulu.gov

2. **PUBLIC SAFETY & COMMUNITY LIAISONS.** Questions in private or in writing to these officials before or after they speak would be greatly appreciated to save time.
   - **a. Honolulu Fire Department** – Station 29 McCully-Mo'ili'ili
   - **b. Honolulu Police Department** – Districts 1 & 7
     - i. Crime at 728 and 733 Coolidge Street and 729 Isenberg Street vacant buildings
   - **c. Board of Water Supply** – Oryn Nakamura: onakamura@hbws.org
   - **d. Governors Representative** – Andrew Garrett: andrew.t.garrett@hawaii.gov
   - **e. Mayor's Representative** – Carolee Kubo: ckubo1@honolulu.gov
   - **f. University of Hawaii-Manoa** – Elmer Kaai: elmerk@hawaii.edu

3. **RESIDENT/COMMUNITY COMMENTS** (no presentations). For brief mention of items of concern or comment that are not on the agenda. Note that questions for the Public Safety & Community Liaisons should have been addressed in the section above.

4. **ELECTED OFFICIALS**
   City
   - **a. Councilmember Ann Kobayashi** (District 5): akobayashi@honolulu.gov

   State
   - **b. Representative Scott Nishimoto** (District 21): repnishimoto@capitol.hawaii.gov
   - **c. Representative Dale Kobayashi** (District 23): repdkobayashi@capitol.hawaii.gov
   - **d. Representative Della Au Belatti** (District 24): repbelatti@capitol.hawaii.gov
   - **e. Representative Scott Saiki** (District 26): repsaiki@capitol.hawaii.gov
   - **f. Senator Les Ihara** (District 10): senihara@capitol.hawaii.gov
   - **g. Senator Brian Taniguchi** (District 11): sentaniguchi@capitol.hawaii.gov
   - **h. Senator Sharon Moriwaki** (District 12): senmoriwaki@capitol.hawaii.gov

   Federal
   - **i. Congressman Ed Case** (District 1)
     Staff – Asami Kobayashi: asami.kobayashi@mail.house.gov
   - **j. Senator Brian Schatz**
     Staff and high school interns

5. **PRESENTATIONS.** By Board rules, five (5) minutes each.
   - **a.** Census 2020 Overview; Census Bureau
   - **b.** Kalo Place Mini Park Dog Park Installation and Humane Society Update; Hawaiian Humane Society
   - **c.** Affordable Elderly Rental Housing Project at 2139 Algaroba Street; Ho'okahua Development

6. **NEW BUSINESS** (Discussion/Action)
   - **a.** McCully Street unsignalized crosswalks evaluation; letter from Department of Transportation Services

7. **APPROVAL OF MINUTES.** December 5, 2019, regular meeting. Please submit written corrections beforehand in the interest of time. Draft minutes are published at www.honolulu.gov/nco/boards. Contact the NCO for official/approved minutes.

8. **BOARD REPORTS**
   - **a.** Treasurer report, subject to audit
   - **b.** Special Affairs Committee
     - i. Committee business and next meeting
     - ii. Designation of chair
   - **c.** Member reports of attendance at public meetings

9. **HOUSEKEEPING & ANNOUNCEMENTS**
   - **a.** Pertinent material arriving after the agenda deadline
   - **b.** Public hearing notice regarding liquor license for DSM Food & Spirits/Study Hall Sports Bar & Grill (1019 University Ave.); 4:00 p.m. Thursday, February 13, 2020, at 711 Kapiolani Boulevard, Suite 600.
   - **c.** Legislative Town Hall with neighborhood elected officials; 5:30 p.m., Wednesday, February 19, 2020, at Washington Middle School cafeteria
   - **d.** Reoccurring:
     - i. **ʻOlelo Broadcasts** of the McCully-Mo'ili'ili Neighborhood Board meetings are on Channel 49 on the following schedule: 3rd Friday of the month at 9:00 p.m., and the 2nd and 4th Sunday at 3:00 p.m. (video archive at www.honolulu.gov/cms-nco-menu/site-nco-sitearticles/1657-board-meeting-video-archive)
     - ii. Bulky item pick-up by appointment only. To schedule an appointment, go to opala.org or call 768-3200.
     - iii. Reporting neighborhood issues: www.honolulu.gov/csd/concern or via Honolulu 311 App

10. **NEXT REGULAR MEETING:** Thursday, March 5, 2020, at 6:30 p.m. in Washington Middle School cafeteria.
    - **a.** Regular meeting schedule: 1st Thursday of each month at 6:30 p.m. in Washington Middle School cafeteria. See info below to receive meeting agendas and minutes.
    - **b.** To schedule an agenda presentation, or if interested in serving on a committee (open to non-board members), contact Chair Tim Streitz at tstreitz.nb8@gmail.com

11. **ADJOURNMENT**

A mailing list is maintained for interested persons and agencies to receive this board's agenda and minutes via www.honolulu.gov/esub/email-subscribe-nco. Additions, corrections, and deletions may be directed to the NCO (see top of letterhead); or contact Neighborhood Assistant Lindon Valenciano at l.valenciano@honolulu.gov.

All written testimony must be received in the NCO 48 hours prior to the meeting. If within 48 hours, written and/or oral testimony may be submitted directly to the board at the meeting. If submitting written testimony, please note the board and agenda item(s) your testimony concerns. Submit to the NCO by mail or fax (see top of letterhead); email: nbtestimony@honolulu.gov; or internet: www.honolulu.gov/nco/nco-testimony-form.

If you require special assistance, auxiliary aid and/or service to participate in this event (i.e., sign language interpreter, interpreter for language other than English, or wheelchair accessibility), please contact the NCO at (808) 768-3710, or email your request to nco@honolulu.gov, at least three (3) business days prior to the meeting.

McCULLY/MOʻILIʻILI NEIGHBORHOOD BOARD NO. 8
c/o NEIGHBORHOOD COMMISSION • 925 DILLINGHAM BOULVEARD • SUITE 160 • HONOLULU, HAWAII, 96817
• TEL: (808) 768-3710 • FAX: (808) 768-3711 • INTERNET: http://www.honolulu.gov/nco

DRAFT REGULAR MEETING MINUTES
THURSDAY, FEBRUARY 6, 2020
WASHINGTON MIDDLE SCHOOL CAFETERIA

CALL TO ORDER: Chair Tim Streitz called the meeting to order at 6:33 p.m. Quorum **WAS established with nine (9) members present.** Note: this 13-member board requires seven (7) members to establish a quorum and to take official board action.

Board Members Present: David Barber, Bert Fujishige, Cyrus Johnasen, Samuel Kippen, Matt Prellberg, Paul Robotti, Tim Streitz, Clifton Takamura, and Kenneth David Peck.

Board Members Absent: Relley Araceley, Laurel Galway, Trevor Lee, and Emmanuel Zibakalam.

Guests: Captain Stan Kimura (Honolulu Fire Department); Sergeant A. Romero, Lieutenant Taro Nakamura, and Sergeant Malina (Honolulu Police Department); Andrew Garrett (Governor Ige's Office); Carolee Kubo (Mayor Kirk Caldwell's representative); Elmer Kaai (University of Hawaii at Manoa), Steve Uyeno (Councilmember Ann Kobayashi's Office); Emma Bulgan, Gerry Failano (Representative Scott Nishimoto's Office); Shari Nishijima (Representative Della Au Belatti's Office); Senator Les Ihara Jr.; Tom Heinrich (Senator Brian Taniguchi's Office); Senator Sharon Moriwaki; Kathy Bryant, Euijin Song, (Senator Brian Schatz Office); Jesus Arriola (Census Bureau); Anna Neubauer (Hawaiian Humane Society); John Whalen, Kali Watson (Hookahua Development); Dave Watase , Franklin Chung, Mr. Toba, Raymond Siu, Alison Riggs (Residents); and Lindon Valenciano (Neighborhood Assistant). Note that illegible names were not included.

PUBLIC SAFETY & COMMUNITY LIASONS
Honolulu Fire Department (HFD): Captain Stan Kimura reported the following:

- January 2020 Statistics: There were four (4) structure fires, five (5) nuisance fires, one (1) cooking fire, 11 activated alarms (no fire), 21 medical emergencies, and two (2) motor vehicle crash/collisions.
- Safety Tip: Candle safety tips were provided.

Questions, comments, and concerns:

1. Young Street Fire: Chair Streitz inquired about the fire on Young Street.
2. Flameless Candles: Barber reiterated the usefulness of flameless candles.

Honolulu Police Department (HPD) - District 1: Sergeant Romero reported the following:

- January 2020 Crime Statistics: There were four (4) motor vehicle thefts, four (4) burglaries, five (5) thefts, 11 unauthorized entries of vehicles (UEMV), five (5) assaults, and two (2) sex assaults. There were 490 total calls for service.
- Safety Tip: Robbery prevention tips were provided.

Questions, comments, and concerns: Appreciation: Chair Streitz noted that HPD services are appreciated, especially with recent events.

HPD - District 7: Sergeant Malina reported the following:

- January 2020: There were 12 motor vehicle thefts, seven (7) burglaries, 32 thefts, and 10 UEMVs. There were 5,932 total calls for service.
- Safety Tip: Pet-friendly shelter locations were provided.
- Fire: Nakamura reported that the Young Street fire involved a cluttered storage shed.

Questions, comments, and concerns followed:

1. Security Watch: Takamura expressed his appreciation for HPD. He inquired and Lieutenant Nakamura responded that neighborhood security watch is the most important thing a community can do.
2. Coffee with A Cop: Chair Streitz inquired and Lieutenant Nakamura responded that they had one last week.
3. Homeless Outreach and Navigation for Unsheltered People (HONU): Chair Streitz inquired about the City's plan to have HONU in the area in March 2020. Kubo noted that she has information in her report.
4. Coolidge Street: A resident inquired and Kubo noted having information regarding the Kamehameha School Bishop Estate properties on Coolidge Street.

Board of Water Supply: No representative present; no report given.

Governor David Ige's Representative: Andrew Garrett distributed handouts and reported the following:

- Newsletter Highlights: Garrett highlighted the newsletter including the joint economic package.
- Coronavirus: Garrett reported that the Department of Health (DOH) is working with the Centers for Disease Control and Prevention (CDC) for Coronavirus prevention. He reported that there are no cases of the Coronavirus in Hawaii and protocols are in place. For more information visit www.CDC.gov/ncov or www.health.hawaii.gov.

Questions, comments, and concerns:

1. Different Strain from Flu: Takamura inquired and Garrett responded that he is not a public health official, however his understanding is that the Coronavirus is a different strain from the flu every year.
2. Minimum Wage Inrease: A resident stated that businesses will shut down if the minimum wage increases, noting that the general excise tax and the cost of living is already high.
3. Ala Wai Canal Dredging: Chair Streitz inquired and Garrett responded that he will look into the Ala Wai Canal Dredging timeline.

Mayor Kirk Caldwell's Representative: Carolee Kubo, Director of Human Resources (HR), presented the following:

- Abandoned Vehicles: An abandoned vehicle request was submitted.
- Parking: The Department of Planning and Permitting (DPP) has submitted amended off-street parking and loading regulations to the City Council. More information can be found on the City's website.
- Ala Wai Pedestrian Bridge: The next Ala Wai pedestrian bridge Ala Pono project community meeting will be in mid-2020. Community concerns and stakeholder recommendations for personal safety will be incorporated. 64% of those surveyed preferred a bridge, with 71% in the vicinity of University Avenue.
- Squatters: The vacant Coolidge Street properties have been fenced and HPD now has written permission to remove trespassers. HPD has done multiple checks for squatters which led to arrests. HPD will continue to monitor the area.
- Illegal Activities: In January 2020, District 7 officers did not observe any bike recycling violations. They did issue one (1) citation for having a prohibited structure in the park. They will continue to make checks and take appropriate action when violations are observed. The Narcotics/Vice Division is investigating this complaint in collaboration with District 7 patrol and Crime Reduction Unit personnel. Appropriate law enforcement action will be taken if warranted.
- HONU: Discussions are ongoing for the next HONU location. Any grass which may be affected as a result of HONU equipment will be replanted. The HONU site in Waipahu has not shown to repel park users, with most visitors commenting on the improvements and safe feeling surrounding the site. HONU has proven to reduce the number of unsheltered individuals.
- Bike Rack: The Department of Transportation Services (DTS) is evaluating a bike rack at Kalo Place Mini Park.
- Steel Plates: Wailua Plumbing is installing new lines for Hawaii Gas. A street usage permit was issued on Young Street from Punahou Street to Isenberg Street. They do have a valid trenching permit from the DPP. On January 14, 2020, loose steel plates were apparently fixed, as it is much quieter now.

Questions, comments, and concerns followed:

1. HONU: Robotti inquired and Kubo responded that the Board will be notified before HONU comes here.
2. Traffic Signal Study: Prellberg requested that the traffic lights on Young Street at McCully and Punahou Streets be studied because it changes too fast, making it dangerous.
3. Bowl-o-Drome Master Plan: Takamura inquired and Chair Streitz noted an upcoming presentation for the Bowl-o-Drome with the Department of Hawaiian Home Lands (DHHL).
4. Ala Wai Pedestrian Bridge: Fujishige inquired and Kubo responded that there will be a mid-2020 meeting.
5. Bike Share Lanes: Fujishige requested that the bike share lanes on Young Street be removed because it slows down traffic, adding that it seems excessive with bike lanes on Beretania and King Streets.
6. Old Stadium Park: A resident noted corresponding with Kubo regarding abandoned vehicles. He requested that a dangerous pole at the circle area in Old Stadium Park be removed and the water faucet be repaired.
7. Homeless: A resident noted that money is wasted on sweeps and HONU because institutions and housing is the solution. Kubo responded that HONU has placed over 100 people in housing and that it takes time.
8. Water Fountains: A resident noted that the water fountains along the Ala Wai bike path were removed.

University of Hawai'i (UH) at Manoa: Elmer Kaai distributed a handout and reported the following:

- UH Vision: UH is being transformed into a student-centered, pedestrian-friendly campus and is replacing Kuykendall and Snyder Halls.
- Security Report: There were a couple robberies over the holidays, including an indecent exposure earlier.

Questions, comments, and concerns followed:

1. Repurpose Buildings: Johnasen inquired and Kaai responded that updating and repurposing buildings is part of their long range development plan.
2. Overdue: Fujishige noted that student-centered projects are long overdue and that UH should make sure that these projects are coordinated with State Legislature.
3. Growth: Takamura commended UH for their growth and ability to help students sleeping in their cars.
4. Events: Chair Streitz inquired and Kaai responded that there are no big events as the semester just started.

RESIDENT/COMMUNITY COMMENTS

Ala Wai and Ala Moana Update: Resident Dave Watase noted that Protect Our Ala Wai Watershed is hosting Aloha the Ala Wai event at Ala Wai Community Park on February 16, 2020. He also mentioned that the Board of Land and Natural Resources (BLNR) will not be converting the 125 stalls into paid parking at Ala Wai Small Boat Harbor. Watase noted that the US Army Corps of Engineers (USACE) reported that their modeling shows that basins do not work and Manoa still floods, so they are removing two (2) basins and looking at alternative solutions. He also mentioned Resolution 20-21, regarding Ala Moana Beach Park improvements and the amendments to remove the playground, dog park, and parallel parking.

Topgolf Presentation: Resident Chung mentioned that Topgolf Hawaii will be presenting at Diamond Head Neighborhood Board meeting on February 13, 2020, to give the community an update. He added that Danielle Tucker's Golf Club Radio Show discusses Topgolf and the future of Ala Wai Golf Course.

Topgolf Impact: Resident Karin Lynn commended Watase and noted that civic involvement makes a difference. She provided testimony regarding Topgolf, noting that this project has a much greater impact than anyone realizes with the noise and light pollution until late night, including 17-story high fences affecting the visual impact. She recommended that other effected neighborhoods take a good look at this issue.

ELECTED OFFICIALS

Councilmember Ann Kobayashi: Steve Uyeno distributed a newsletter and reported the following:

- Town Hall: Councilmember Kobayashi will be attending the Community Town Hall Meeting at Washington Middle School on February 19, 2020, from 5:30 p.m. to 7:30 p.m.
- Traffic Study: They have submitted a request to study the Young Street traffic lights.

Representative Scott Nishimoto: Gerry Failano distributed a newsletter and reported the following: Upcoming Events: Representative Nishimoto will be attending the Community Town Hall Meeting on February 19, 2020. A Free Tax Clinic will be April 15, 2020, from 9:00 a.m. to 2:30 p.m. at the State Capitol.

Representative Dale Kobayashi: No representative was present; no report was given.

Representative Della Au Belatti: Shari Nishijima distributed a newsletter and reported the following: Criminal Justice: The newsletter contains a legislative update and a list of upcoming events.

Representative Scott Saiki: No representative was present; no report was given.

Senator Les Ihara: Senator Ihara reported the following:

- Kupuna Bills: There is movement with Alzheimer's and dementia understanding and awareness because they are being abused and exploited. He also introduced a bill on age restriction to prevent senior citizen discrimination by notifying businesses about the right to privacy provision.
- Package: Representative Au Belatti's handout summarized well the joint economic package.

Questions, comments, and concerns followed: Youth Engagement: Kippen noted that the Board is trying to create a subcommittee for youth issues to be engaged and noted Senate Bill (SB) 4 which would lower the voting age to 16. Senator Ihara responded that they are trying to instill the youth to be model citizens with the assistance of bills and programs such as student journalists and SB 3159 on civic education.

Senator Brian Taniguchi: Tom Heinrich distributed a newsletter and reported the following:

- Joint Economic Package: The newsletter contains a lot of information about the joint economic package with the House, Senate, and Governor, which consists of House Bills (HB) 2541-2544 and SB 3101-3104. The 2nd lateral deadline is February 13, 2020.
- Town Hall: Senator Taniguchi will attend the Legislative Town Hall Meeting on February 22, 2020, at Noelani Elementary School Library.
- Storm Water Utility: There is an Oahu storm water utility study for funds to manage storm water and the infrastructure. There are a series of upcoming meetings to discuss the study.
- Community Emergency Response Team (CERT): Free CERT training is available at Manoa Japanese Language School.

Senator Sharon Moriwaki: Senator Moriwaki distributed her newsletter and reported the following:

- Legislative Bills: There is a package of 10 bills that support kupuna from the Kupuna Caucus, including stringent physical and financial abuse laws to prevent attacks on seniors. The Kupuna Caregivers program helps seniors receive care to age in their own homes. There are also bills to mitigate noise of motor vehicles by raising the penalty and requiring electric mopeds by 2022.
- Homeless: The Isenberg shelter has 76 beds, and 40 people in the park have been transferred and served in the shelter. Senator Moriwaki will be holding a community chat on February 29, 2020, to discuss homelessness in the neighborhood.

Questions, comments, and concerns followed:

1. Aloha Homes: Fijushige inquired and Senator Moriwaki responded that the Aloha Homes bill is moving along with a Singapore-based model for those who are resident first time homeowners.
2. Mopeds: Barber inquired and Senator Moriwaki responded that they hope electric mopeds will be mandated by 2020.
3. Kupuna Services: A resident inquired and Senator Moriwaki responded that there are two (2) programs for kupuna care statewide and the Kupuna Caregivers program is for those who work to be a caregiver to their own kupuna. The resident noted that parks should be used for elderly programs and Senator Moriwaki responded that there are a number of elderly exercise programs in place.
4. Homeless: They are developing work opportunity programs for the homeless.

Congressman Ed Case: No representative was present; no report was given.

Senator Brian Schatz: Kathy Bryant noted Schatz's Seniors, a youth intern program for a hands-on experience. The interns introduced themselves and shared some of the services that Senator Schatz's office offers, such as internships, youth summit, and leadership for future military leaders to name a few. For more information call the Washington DC office at 202-224-3934 or the Honolulu office at 808- 523-2064, or visit www.schatz.senate.gov.

Questions, comments, and concerns followed:

1. Issues: Takamura inquired and Bryant responded that their office is open to anyone to meet the staff.
2. Youth Subcommittee: Kippen commended the youth in being engaged at such a young age and he invited them to get involved with the Board through a possible committee on youth issues, which could look into lowing the voting age for neighborhood boards.

PRESENTATION

Census 2020: Jesus Arriola reported that the Census is taken every 10 years. Federal funding is distributed to localities based on population. The Census process begins in March 2020 with reminders for taking the survey in April 2020, adding that info can be submitted beginning March 12, 2020. Information collected is private and cannot be shared.

Questions, comments, and concerns followed: Census Participation: Kippen inquired and Arriola responded that you can share the information with friends or visit www.2020census.gov. Kippen noted partnering with other neighborhood boards for those unable to access a computer and Arriola responded that the Census Bureau reaches out through mail and phone.

Robotti departed the meeting at 8:16 p.m.; eight (8) members present.

Kalo Place Mini Park Dog Park Installation and Humane Society Update: Anna Neubauer, Hawaiian Humane Society President and Chief Executive Officer (CEO) gave a Kalo Place Mini Park Dog Park update. The Hawaiian Humane Society is changing as a new organization and invited the public to tour the facility.

Questions, comments, and concerns followed: Bike Rack: Chair Streitz requested for a bike rack at Kalo Park because it is a great resource for the community and he hopes that people will utilize the park.

Affordable Elderly Rental Housing Project at 2139 Algaroba Street: John Whalen of Hookahua Development noted partnering with Hawaiian Community Development Board (HCDB) and 3 Leaf Holdings to provide financing and analysis. Whalen presented their plans for a five (5)-story affordable elderly rental housing project above ground floor parking at 2139 Algaroba Street, which includes affordable housing rates maintained for 50-60 years. He illustrated what the project entailed and reported that the timeline begins with completion of the environmental assessment in May 2020, approvals in September 2020, relocation of tenants in January 2021, and construction from March 2021 to June 2022.

Questions, comments, and concerns followed:

1. Project Information: Fujishige inquired and Watson, HCDB Director, responded that you can find information on this project at www.hawndev.org, adding that they are committed to providing affordable housing.
2. Construction: A resident inquired and Watson responded that they are constructing a new building.
3. Similar Projects: Chair Streitz inquired if a study was done on the demand in the neighborhood because of similar senior housing projects and Watson responded that this project has restrictions as a way to be affordable.
4. Costs: Barber inquired and Watson responded that units run for $600 at their lowest compared to $2,200.

McCully Street Unsignaled Crosswalk Evaluation: Chair Streitz read a letter from DTS that reaffirmed removing the marked crosswalk and suggested walking down to a signaled walk, adding that it is legal to still cross if cautious.

APPROVAL OF MINUTES
December 5, 2019, Regular Meeting: There were no corrections.

The Board approved the December 5, 2019, meeting minutes by UNANIMOUS CONSENT.

BOARD REPORTS
Treasurer's Report: The remaining balance was $435.15.

HOUSEKEEPING & ANNOUNCEMENTS

- Public hearing notice regarding liquor license for DSM Food & Spirits/Study Hall Sports Bar & Grill (1019 University Ave.); 4:00 p.m. February 13, 2020, at 711 Kapiolani Boulevard, Suite 600.
- Legislative Town Hall with neighborhood elected officials; 5:30 p.m., February 19, 2020, at Washington Middle School cafeteria
- Reoccurring:
    - ʻOlelo Broadcasts of Board meetings are on Channel 49 on the following schedule: 3rd Friday of the month at 9:00 p.m., and the 2nd and 4th Sunday at 3:00 p.m. (video archive at www.honolulu.gov/cms-nco-menu/site-nco-sitearticles/1657-board-meeting-video-archive)
    - Bulky item pick-up by appointment only at opala.org or call 768-3200.
    - Reporting neighborhood issues: www.honolulu.gov/csd/concern or via Honolulu 311 App.

NEXT REGULAR MEETING:

- The next regular meeting will be Thursday, March 5, 2020, at 6:30 p.m. in the Washington Middle School cafeteria.
- To schedule an agenda presentation, or if interested in serving on a committee (open to non-board members), contact Chair Streitz at tstreitz.nb8@gmail.com.

ADJOURNMENT: The meeting adjourned at 8:40 p.m.

Submitted By: Lindon Valenciano, Neighborhood Assistant
Reviewed By: Jackson Coley, Public Relations
Reviewed By: Samuel Kippen, Secretary
Reviewed and Finalized By: Tim Streitz, Chair

McCULLY/MO'ILI'ILI NEIGHBORHOOD BOARD NO. 8

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MCCULLY – MO'ILI'ILI NEIGHBORHOOD BOARD NO. 8
REGULAR MEETING AGENDA
THURSDAY, MARCH 5, 2020, 6:30 p.m.
Washington Middle School Cafeteria
1633 South King Street

RULES OF PARTICIPATION: Anyone wishing to speak, please raise your hand. After recognition, address your comments to the Chair. Comments must relate to the pending agenda item. By Board rules, audience and board members can have up to two (2) turns to speak on a topic. Those speaking should be concise and limit comments to one (1) minute per turn. Those giving reports should limit their reports to three (3) minutes. Please silence all electronic devices.
NOTES: This board may take action on any agenda item. As required by the State Sunshine Law (Chapter 92, HRS), specific issues not listed on this agenda cannot be voted on, unless properly added to the agenda by 2/3 vote.

1. **CALL TO ORDER.** At 6:30 p.m. by Chair Tim Streitz
   Neighborhood Assistant – Lindon Valenciano: l.valenciano@honolulu.gov

2. **PUBLIC SAFETY LIAISONS**
   - **a. Honolulu Fire Department** – Station 29 McCully-Mo'ili'ili
   - **b. Honolulu Police Department** (District boundaries: Kalakaua Avenue, S. King Street, Hauoli Street, and Kapiolani Boulevard)
     - i. District 1: Central Honolulu (west of Hauoli Street)
     - ii. District 7: East Honolulu (east of Hauoli Street)

3. **THREE (3) ABSENCES LETTER.** Consider whether to remove member and declare seat vacant; Sec. 2-14-106, Neighborhood Plan.
   - **a.** Relley Araceley (at-large member). Recorded absences: Thursday, August 1, 2019; Thursday, November 7, 2019; and Thursday, February 6, 2020.
   - **b.** Laurel Galway (at-large member). Recorded absences: Thursday, October 3, 2019; Thursday, November 7, 2019; and Thursday, February 6, 2020.

4. **PRESENTATIONS.** By Board rules, five (5) minutes each.
   - **a.** Property development update on Isenberg and Coolidge Streets; Department of Hawaiian Home Lands
   - **b.** McCully-Moiliili Library renovation and closure; Hawaii State Library
   - **c.** Old Stadium Park mural; Blue Zones Project Hawaii

5. **GOVERNMENT ADMINISTRATION LIAISONS**
   - **a. University of Hawaii-Manoa** – Elmer Kaii: elmerk@hawaii.edu
   - **b. Governors Representative** – Andrew Garrett: andrew.t.garrett@hawaii.gov
   - **c. Board of Water Supply** – Oryn Nakamura: onakamura@hbws.org
   - **d. Mayor's Representative** – Carolee Kubo: ckubo1@honolulu.gov

6. **ELECTED OFFICIALS**
   City
   - **a. Councilmember Ann Kobayashi** (District 5): akobayashi@honolulu.gov

   State
   - **b. Representative Scott Nishimoto** (District 21): repnishimoto@capitol.hawaii.gov
   - **c. Representative Dale Kobayashi** (District 23): repdkobayashi@capitol.hawaii.gov
   - **d. Representative Della Au Belatti** (District 24): repbelatti@capitol.hawaii.gov
   - **e. Representative Scott Saiki** (District 26): repsaiki@capitol.hawaii.gov
   - **f. Senator Les Ihara** (District 10): senihara@capitol.hawaii.gov
   - **g. Senator Brian Taniguchi** (District 11): sentaniguchi@capitol.hawaii.gov
   - **h. Senator Sharon Moriwaki** (District 12): senmoriwaki@capitol.hawaii.gov

   Federal
   - **i. Congressman Ed Case** (District 1)
     Staff – Asami Kobayashi: asami.kobayashi@mail.house.gov

7. **RESIDENT/COMMUNITY COMMENTS** (no presentations). For brief mention of items of concern or comment that are not on the agenda.

8. **NEW BUSINESS** (Discussion/Action)
   - **a.** Affordable elderly rental housing project at 2139 Algaroba Street follow up

9. **APPROVAL OF MINUTES.** Thursday, February 6, 2020, regular meeting. Please submit written corrections beforehand in the interest of time. Draft minutes are published at www.honolulu.gov/nco/boards. Contact the Neighborhood Commission Office (NCO) for official/approved minutes.

10. **BOARD REPORTS**
    - **a.** Treasurer report, subject to audit
    - **b.** Special Affairs Committee
      - i. Committee business and next meeting
      - ii. Designation of chair
    - **c.** Member reports of attendance at public meetings

11. **HOUSEKEEPING & ANNOUNCEMENTS**
    - **a.** Pertinent material arriving after the agenda deadline
    - **b.** Reoccurring:
      - i. **'Olelo Broadcasts** of the McCully-Mo'ili'ili Neighborhood Board meetings are on Channel 49 on the following schedule: 3rd Friday of the month at 9:00 p.m., and the 2nd and 4th Sunday at 3:00 p.m. (video archive at www.honolulu.gov/cms-nco-menu/site-nco-sitearticles/1657-board-meeting-video-archive)
      - ii. Bulky item pick-up by appointment only. To schedule an appointment, go to opala.org or call 768-3200.
      - iii. Reporting neighborhood issues: www.honolulu.gov/csd/concern or via Honolulu 311 App

12. **NEXT REGULAR MEETING:** Thursday, April 2, 2020, at 6:30 p.m. in Washington Middle School cafeteria.
    - **a.** Regular meeting schedule: 1st Thursday of each month at 6:30 p.m. in Washington Middle School cafeteria. See info below to receive meeting agendas and minutes.
    - **b.** To schedule an agenda presentation, or if interested in serving on a committee (open to non-board members), contact Chair Tim Streitz at tstreitz.nb8@gmail.com

13. **ADJOURNMENT**

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DRAFT REGULAR MEETING MINUTES
THURSDAY, MARCH 5, 2020
WASHINGTON MIDDLE SCHOOL CAFETERIA

CALL TO ORDER: Chair Tim Streitz called the meeting to order at 6:32 p.m. Quorum **WAS NOT established with six (6) members present.** Note: this 13-member board requires seven (7) members to establish a quorum and to take official board action.

Board Members Present: Relley Araceley (arrived at 6:46 p.m.), Bert Fujishige, Trevor Lee, Matt Prellberg, Paul Robotti, Tim Streitz, Clifton Takamura (arrived at 6:34 p.m.), Kenneth David Peck, and Emmanuel Zibakalam (arrived at 6:46 p.m.).

Board Members Absent: David Barber, Cyrus Johnasen, and Samuel Kippen,

Guests: Firefighter Peter Hashimoto (Honolulu Fire Department); Lieutenant Christopher Lowell, Sergeant C. Murphy, Lieutenant Taro Nakamura, Sergeant O'Neil (Honolulu Police Department); Andrew Garrett (Governor Ige's Office); Oryn Nakamura (Board of Water Supply); Carolee Kubo (Mayor Kirk Caldwell's representative); Elmer Kaai (University of Hawaii at Manoa), Councilmember Ann Kobayashi; Emma Bulgan, Gerry Failano (Representative Scott Nishimoto's Office); Representative Dale Kobayashi; Shari Nishijima (Representative Della Au Belatti's Office); Senator Les Ihara Jr.; Tom Heinrich (Senator Brian Taniguchi's Office); Senator Sharon Moriwaki, Kaley Vatalaro (Senator Sharon Moriwaki's Office); John Whalen, Kali Watson (Hookahua Development); Cedric Duarte, Darrell Ing (Department of Hawaiian Homelands); Stacey Aldrich (Hawaii State Public Libraries); Carl Takamura (American Association of Retired Persons/Blue Zones Project Hawaii); Dave Watase , Franklin Chung, Mr. Toba, Laura Ruby, Mallory Fujitani, Stacie Kaneshige, Debra Vaulile, Alan Ibrao, Raymond Sia, McKenzie Tynanes, Dylan Armstrong, Pat Barbele, Keegan Flaherty, Carter Lai, Chris Flaherty, Joel Tomyl, Kate Paine (Residents); and Lindon Valenciano (Neighborhood Assistant). Note that illegible names were not included.

PUBLIC SAFETY & COMMUNITY LIASONS
Honolulu Fire Department (HFD): Firefighter Peter Hashimoto reported the following:

- February 2020 Statistics: There were 2 structure fires, 1 wildland/brushfire, 9 nuisance fires, 1 cooking fire, 8 activated alarms (no fire), 60 medical emergencies, and 1 motor vehicle crash/collisions.
- Safety Tip: Home fire sprinkler tips were provided.

Honolulu Police Department (HPD) - District 1: Sergeant Murphy reported the following:

- February 2020 Crime Statistics: There was 1 motor vehicle theft, 8 thefts, 3 unauthorized entries of vehicles (UEMV), 7 assaults, 1 sex assault, and 3 drugs. There were 435 total calls for service.

Takamura arrived at 6:34 p.m.; seven (7) members present. Quorum was established.

Questions, comments, and concerns: Traffic: Resident Debra Vaulile suggested restricting left turns out of Iolani School to mitigate traffic. Lieutenant Nakamura, District 7, noted to call 911 or use the Honolulu 311 app to report violations, adding that officers stationed there are on special duty. Chair Streitz noted that it could be a different department's concern.

HPD - District 7: Lieutenant Lowell reported the following:

- February 2020: There were 7 motor vehicle thefts, 4 burglaries, 34 thefts, and 14 UEMVs. There were 5,892 total calls for service.
- Safety Tip: Disaster preparedness tips for seniors were provided.
- Homeless Outreach and Navigation for Unsheltered People (HONU): Chair Streitz noted that Sergeant O'Neil is the subject expert on HONU in place of Captain Mike Lambert. Sergeant O'Neil reported that HONU has been set up in Old Stadium Park since March 3, 2020, and provided statistics, noting that there are some people on site awaiting housing transfer.

Questions, comments, and concerns followed: HONU Questions: Takamura inquired if there were any complaints about a woman pandering for money. Resident Joel Tomyl visited HONU and was impressed on the intentions and procedures to minimize impact to the neighbors. Fujishige inquired and Sergeant O'Neil defined "inquiries" as

people who sought services and "intake" as people who end up staying on site, adding that they have a three (3) to five (5) mile enforcement radius. Chair Streitz hoped HONU will help the neighborhood and inquired about new staff positions discussed in the budget to help HONU. Prellberg noted that donations help make it a success.

Araceley arrived at 6:46 p.m.; eight (8) members present.
Prellberg arrived at 6:46 p.m.; nine (9) members present.

THREE (3) ABSENCE LETTER: Chair Streitz reported that Galway has submitted her resignation so there will be a vacancy to fill in the next meeting. Araceley reported that the reasons he missed meetings was due to a sickness in November 2019 and working late in the office in February 2020.

Chair Streitz inquired and there was no motion to declare the seat vacant. Araceley remains on the Board.

PRESENTATIONS:
Property Development Update On Isenberg And Coolidge Streets: Cedric Duerte and Darrel Ing, Department of Hawaiian Home Lands (DHHL) noted they are announcing the developer for Bowl-o-Drome soon and they are taking custody of the Coolidge Street properties from Kamehameha Schools Bishop Estate (KSBE). The same safety protocols with 24-hour security will be in place. Plans are to rehabilitate the existing units in the short term and build a high rise in the long term.

Questions, comments, and concerns followed:
1. Developers: Takamura inquired and Duerte provided project specifications including an update in summer. It is the developer's responsibility to tear down the Bowl-o-Drome building to mitigate asbestos.
2. Revenues: Zibakalam inquired and Duerte replied that it will be affordable rentals for trust beneficiaries.
3. Coolidge: Resident Kate Paine inquired and Duerte responded that 733 Coolidge Street was acquired, noting that it spans three (3) parcels. Resident Paine mentioned an underground waterway and that a core sample is needed for a high rise. Duerte noted that they are being transparent and they have options.
4. Timeline: Chair Streitz inquired and Duerte responded that he will return to update the Board when more information is available.

McCully-Moiliili Library Renovation: Stacey Aldrich, Hawaii State Public Library System (HSPLS), reported that the McCully-Moiliili library is over 50 years old and undergoing overdue renovations, including to its roof. The roughly $2 million project will take around 18 months and the library's last day is March 21, 2020, with fencing going up on April 20, 2020.

Questions, comments, and concerns followed:
1. Bus Stop: Resident Tomyl inquired and Aldrich responded that they are not addressing any impacts to the bus stop in front of the library.
2. Homeless: Chair Streitz inquired and Aldrich responded that they will be monitoring for homeless activity and will address accordingly.
3. Collections: Chair Streitz inquired and Aldrich responded that the collections will be available at other libraries.

Old Stadium Park Mural: Carl Takamura of the American Association of Retired Persons (AARP) and representing the Blue Zones Project Hawaii reported that a mural will begin on April 15 to 17, 2020, in hopes that the park will be revitalized and deter homeless, while providing a visual story of neighborhood history.

Questions, comments, and concerns followed: Playground: Board Takamura suggested and Takamura responded that they are donating a fit block for exercise because a playground already exists. Plaque: Chair Streitz recommended a dedicated section or plaque to interpret the mural.

University of Hawai'i (UH) at Manoa: Elmer Kaai distributed a handout and reported the following:
- UH Vision: Kaai provided information about the new UH vision and summarized the project, including a new traffic management center and six (6) story parking structure, which is funded with federal grants.
- Safety Report and Events: Kaai provided public safety reports and upcoming events.

Governor David Ige's Representative: Andrew Garrett distributed handouts and reported the following:

- Newsletter: Garrett highlighted the newsletter and provided a COVID-19 update, noting that there are no cases. The Department of Health (DOH) is preparing with State and City partners. The Governor and Mayor have issued emergency proclamations to allow for emergency relief. Prevention tips were provided and more information is available at www.CDC.gov/ncov or www.health.hawaii.gov.
- Ala Wai Dredging Project: Work has begun and more information is at www.dlnreng.hawaii.gov.

Questions, comments, and concerns: Strain: Takamura inquired and Garrett responded that COVID-19 is not an influenza strain but rather a new Coronavirus strain, noting that he is not a medical professional.

Board of Water Supply (BWS): Oryn Nakamura reported the following:

- Main Breaks: 30-inch ductile iron at 2052 Young Street on February 12, 2020.
- 13th Annual Mauka to Makai Environmental Expo: In celebration of Earth Month, BWS will have a booth at the 13th Annual Mauka to Makai Environmental Expo on April 4, 2020, from 9:00 a.m. to 2:00 p.m. at the Waikiki Aquarium. The public event is free and promotes the importance to keep Hawaii clean and free of pollution. Free parking and shuttles will be available at Jefferson Elementary School starting at 8:45 a.m. The event is presented by the Department of Facility Maintenance (DFM), DOH, and the Waikiki Aquarium. The BWS also offers facility tours, xeriscape workshops, and guest speakers. For more information, email contactus@hbws.org, call 748-5041, or visit www.boardofwatersupply.com.
- WaterSmart Web Portal: BWS recently partnered with WaterSmart Software to offer a digital portal so customers can access information about their household water use. To make an account, visit www.honolulu.watersmart.com then enter your BWS billing account number and email address. The portal allows residents to access their water consumption data, compare their water usage to similar sized households, access customized recommendations to save water and money, and sign up for leak alerts.

Questions, comments, and concerns: Break: Chair Streitz inquired and Nakamura replied that small breaks, such as a recent one on Wiliwili Street, are not reported to the Board.

Mayor Kirk Caldwell's Representative: Carolee Kubo reported the following:

- 2020 Census: Information was provided about the Census process that determines federal funding and congressional representation by state.
- Young Street Traffic Lights: The Department of Transportation Services (DTS) checked the traffic signals and found them working properly. Traffic lights are coordinated for the main roadway (in this case McCully Street and Punahou Street). There was a water main break at McCully and Young Street, and DTS modified the signal timing to keep traffic moving. The timing and traffic has returned to normal.
- Bike Lane: DTS reported that bicycles are allowed on all roadways, except freeways. Having shared lane markings on Young Street alert drivers to the possible presence of bicyclists. Some bicyclists prefer Young Street for various reasons, and there are many destinations on Young Street. Drivers should slow down and pass bicyclists when it is safe to do so. As such, DTS will not remove the sharrows on Young Street at this time.
- Old Stadium Park Pole: The Department of Parks and Recreation (DPR) submitted work request #2020-905 to the DFM on February 13, 2020, to have the courtyard light pole replaced. The Neighborhood Assistant (NA) noted contacting resident Tomyl and has passed it to DPR and DFM.
- Ala Wai Bike Path Water Fountains: Repairs to the water fountains have been completed.
- Abandoned Vehicles: HPD does not tow vehicles and depends on the Department of Customer Services Abandoned/Derelict Vehicle (AV) office to tow vehicles. The AV office provided the following updates: vehicles with license plates RNE 491, RDC 658, and PGC 643 were scheduled to be towed, TCA 642 was moved, and PDX 531 was towed.

Questions, comments, and concerns followed:

1. Signal Timing: Prellberg noted that his concern about the Young Street traffic lights was not about traffic back-up, it was about the appropriate timing when intersection lights change to green because cars are running the red light.
2. Pedestrian Safety: Resident Laura Ruby suggested rubberized strips at Ala Wai and Kuhio Elementary School to mitigate speeding. She noted a petition opposing the pedestrian bridge over the Ala Wai, or a low profile at minimum.
3. 2020 Census: Takamura inquired and Kubo clarified the Census process.

4. No Parking: Chair Streitz requested no parking on Lime Street Ewa bound to allow right turns onto McCully Street when there is traffic.

ELECTED OFFICIALS
Councilmember Ann Kobayashi: Councilmember Kobayashi distributed a newsletter and reported the following:

- HONU: Councilmember Kobayashi recommended visiting HONU because it was a success in Waipahu.
- Housing: There will be a lot more developments coming before the Council for affordable housing.
- Ala Wai: The Ala Wai Flood Mitigation Project is progressing and near an agreement between stakeholders.

Questions, comments, and concerns followed:

1. Affordable Housing: Robotti inquired and Councilmember Kobayashi responded that 140% area median income (AMI) is a guideline for affordable housing and there is a need for more affordable housing.
2. Park Usage: Prellberg suggested that they work with DPR and the Department of Land and Natural Resources (DLNR) to engage the community about HONU and to utilize the park afterwards.
3. Prices: Takamura noted that prices are not coming down and rent control is needed. Councilmember Kobayashi responded that in order to keep prices affordable they need to keep construction costs down.
4. Kakaako: Fujishige noted and Councilmember Kobayashi agreed that the lack of transparency and accountability of the Kakaako condominium developments is not desirable.
5. Affordable Housing: Resident Dylan Armstrong urged City Council and the Mayor to push for affordable housing at 60% AMI because the current guideline is not truly affordable to most residents.

Representative Dale Kobayashi: Representative Kobayashi distributed his newsletter and reported the following: Newsletter: The joint economic package has passed the House and includes a $13 minimum wage, affordable housing, universal healthcare, and loosened regulations among others.

Questions, comments, and concerns followed: Insurance: Takamura inquired and Representative Kobayashi responded that COVID-19 should not affect health insurance.

Senator Les Ihara: Senator Ihara reported the following: Legislation: On March 3, 2020, many bills were passed to cross over. There is no legislation that allows the Governor to use Certificates of Participation for the Ala Wai Flood Mitigation Project because of the lawsuit and need for an environmental impact statement.

Senator Sharon Moriwaki: Senator Moriwaki distributed her newsletter and reported the following:

- Bill Updates: Many bills are progressing including for affordable housing, rent supplements, kupuna, and caregiver programs.
- Chat Session: The recent community chat was a success with many in attendance and HONU seems hopeful.
- 442nd: The 442nd Club House on Wiliwili Street is under renovation.

Questions, comments, and concerns followed:

1. Pedestrian Safety: Robotti inquired and Senator Moriwaki replied that they want motorized vehicles such as electric scooters and electric skate boards off sidewalks and in the shoulder lane.
2. 442nd: Takamura suggested dedicating a federal building to honor the 442nd World War II veterans.
3. Motorized: Zibakalam inquired about Senate Concurrent Resoltion No. 68 and Senator Moriwaki responded that it was just was introduced and she can look into sharing the bike lane instead of shoulder.
4. Chat: Chair Streitz commended Senator Moriwaki for organizing the community chat session and Senator Moriwaki noted related resources in her report. She also noted a meeting regarding trash collection noise.

Aracelley departed at 8:05 p.m.; eight (8) members present.

Representative Scott Nishimoto: Gerry Failano distributed a newsletter and reported the following: Events: February 28, 2020, was the decking deadline; March 5, 2020, is first crossover; April 18, 2020, from 9:00 a.m. to 2:30 p.m. is a free tax clinic at the Capitol.

Representative Della Au Belatti: Shari Nishijima distributed a newsletter and reported the following: Newsletter: Bill updates like mental health bills and a list of upcoming events was provided.

Representative Scott Saiki: No representative was present; no report was given.

Senator Brian Taniguchi: Tom Heinrich distributed a newsletter and reported the following:

- Newsletter: The newsletter provides meeting dates and bill updates, such the joint economic package and no-vote on SB3173 to establish separate school facilities.
- COVID-19: Council on Revenues next projection is on March 11, 2020, with forecast going down a fair amount because of COVID-19. HR54 was passed for the House Select Committee on economy regarding COVID-19 concerns because of cancellations and postponements.
- Art in the Capitol: Art event at the Capitol on April 3, 2020, from 4:30 p.m. to 7:00 p.m.
- Joint Meeting: Heinrich suggested coordinating joint meetings for planning issues at UH and housing.

Congressman Ed Case: Asami Kobayashi distributed a newsletter and reported the following:

- Mobile Office: Kobayashi provided the mobile office schedule at State libraries.
- Quarterly Report: The quarterly report illustrates legislative accomplishments and office activity, such as the Jones Act, shipping monopoly, cost of living increase, invasive species, and the safe skies act, regarding helicopter safety and noise regulation.
- 2020 Census: The 2020 Census is coming up and the Census is hiring workers.

Questions, comments, and concerns followed:

1. Base Access: Robotti commended Congressman Case for base access for veterans.
2. Border: Zibakalam thanked Congressman Case for invasive species work. He inquired and Kobayashi responded that Congressman Case supports a wall, but not across the whole border.
3. Jones Act: Fujishige commended the efforts regarding the Jones Act because it is not the first time they tried to modify it and he inquired why the Hawaii Congressional team is undecided about the Jones Act.
4. Overstay: Resident Ruby noted that people overstaying their time needs to be addressed. She inquired and Kobayashi responded that she can get the voting record percentage for the Chair.

RESIDENT/COMMUNITY COMMENTS

Ala Wai and Ala Moana Update: Resident Dave Watase reported the U.S. Army Corps of Engineer (USACE) meeting schedule, including the Diamond Head Neighborhood Board meeting on March 12, 2020. USACE will hold a large audience meeting to engage the community. Modeling shows that basins do not work and Manoa still floods, so they are looking at alternative solutions. He also commented on Resolution 20-21, regarding Ala Moana Beach Park improvements and amendments to remove the playground, dog park, and parallel parking.

Moiliili Summer Festival: A resident from Kalaimoku Group noted the Moiliili Summer Festival will be on July 3, 2020. However, they will monitor the COVID-19 situation.

733 Coolidge Street: A KSBE representative reported that they are actively evaluating the property.

PRESENTATION

Affordable Elderly Rental Housing Project at 2139 Algaroba Street Follow-Up: John Whalen of Hookahua Development provided an update regarding Hale Makana O Moiliili, the elderly rental housing project, and distributed materials to illustrate models and prices. Chair Streitz noted the Board may wish to express an opinion on this project.

Questions, comments, and concerns followed: Parking: Zibakalam inquired and Wayland responded that they have a reduction for parking because they do not expect seniors to drive.

Zibakalam moved and Prellberg seconded to support continuation of Hale Makana O Moiliili, the affordable elderly rental project. The motion was ADOPTED by VOICE VOTE, 7-0-1 (AYE: Fujishige, Lee, Peck, Prellberg, Robotti, Streitz, Zibakalam; **NAY:** none; **ABSTAIN:** Takamura**).**

Zibakalam departed the meeting at 8:32 p.m.; seven (7) members present.

APPROVAL OF MINUTES

February 6, 2020 Regular Meeting:

The Board approved the February 6, 2020, meeting minutes by UNANIMOUS CONSENT.

BOARD REPORTS
Treasurer's Report: The remaining balance was $435.15.

Special Affairs Committee: **Chair Streitz appointed Peck as the Special Affairs Committee chair.** Peck noted that he is excited for collaboration with UH. Chair Streitz noted to seek Peck for topics that need extra time.

Attendance At Public Meetings: Oahu Metropolitan Planning Organization (OMPO) Citizen Advisory Committee (CAC): Prellberg attended the CAC meeting. OMPO's study policy board is meeting on March 31, 2020, about extending the tow away zone time from 3:15 p.m. to 6:30 p.m. for more traffic relief.

HOUSEKEEPING & ANNOUNCEMENTS

- Chair Streitz is trying to coordinate tours for HONU and suggested establishing a Permitted Interaction Group (PIG) at future meeting to provide updates on HONU.
- Reoccurring:
  - ʻOlelo Broadcasts of Board meetings are on Channel 49 on the following schedule: 3rd Friday of the month at 9:00 p.m., and the 2nd and 4th Sunday at 3:00 p.m. (video archive at www.honolulu.gov/cms-nco-menu/site-nco-sitearticles/1657-board-meeting-video-archive)
  - Bulky item pick-up by appointment only at opala.org or call 768-3200.
  - Reporting neighborhood issues: www.honolulu.gov/csd/concern or via Honolulu 311 App.

NEXT REGULAR MEETING:

- The next regular meeting will be Thursday, April 2, 2020, at 6:30 p.m. in the Washington Middle School cafeteria.
- To schedule an agenda presentation, or if interested in serving on a committee (open to non-board members), contact Chair Streitz at tstreitz.nb8@gmail.com.

ADJOURNMENT: The meeting adjourned at 8:39 p.m.

Submitted By: Lindon Valenciano, Neighborhood Assistant
Reviewed By: Jackson Coley, Public Relations Assitant
Reviewed and Finalized By: Tim Streitz, Chair