BOARD OF WATER SUPPLY

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

February 17, 2016

Mr. Scott Glenn
Interim Director
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

Dear Mr. Glenn:

Subject: Draft Environmental Assessment for Hauula Well Replacement – TMK: 5-04-15: 030, Hauula Hawaii

The Honolulu Board of Water Supply has prepared the Draft Environmental Assessment (DEA) for the subject project and anticipates a Finding of No Significant Impact determination. Please publish notice of availability of the DEA for this project in the next available Environmental Notice.

We have enclosed a completed Office of Environmental Quality Control (OEQC) Publication Form, one (1) copy of the DEA, and a CD containing the word file of the OEQC Publication Form and searchable pdf file of the DEA.

If you have any questions, please contact Scot Muraoka at 748-5942.

Very truly yours,

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

Enclosures

cc: Matthew J. Alonzo (Shimabukuro, Endo & Yoshizaki, Inc.)

Office of Environmental Quality Control

FILE COPY

MAR 23 2016

AGENCY
PUBLICATION FORM

Project Name:	Hauula Well Replacement
Project Short Name:	(please use no more than five succinct words; count not to include document status, e.g., EA)
HRS §343-5 Trigger(s):	HRS §343-5 (a) (1), Propose the use of state or county lands; provided that the agency shall consider environmental factors and available alternatives in its feasibility or planning studies
Island(s):	Oahu
Judicial District(s):	Koolauloa
TMK(s):	5-04-15: 030
Permit(s)/Approval(s):	Permits that may be required: Well Construction Permit National Pollutant Discharge Elimination System (NPDES) Permit – Form F, Discharges of Treated Hydrotesting Effluent, and Form I, Treated Process Wastewater Associated with Well Drilling Activities. Community Noise Permit Potable Water Source Approval and Well Connection Authorization Street Usage Permit Construction Plans Approval
Proposing/Determining Agency:	Board of Water Supply City and County of Honolulu
Contact Name, Email, Telephone, Address	630 South Beretania Street Honolulu, Hawaii 96843 Mike Cubas mcubas@hbws.org (808) 748-5948
Consultant:	Shimabukuro, Endo & Yoshizaki, Inc.
Contact Name, Email, Telephone, Address	1126 12th Avenue, Room 309 Honolulu, Hawaii 96816 Howard K. Endo hendo@seyeng.com (808) 737-1875

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

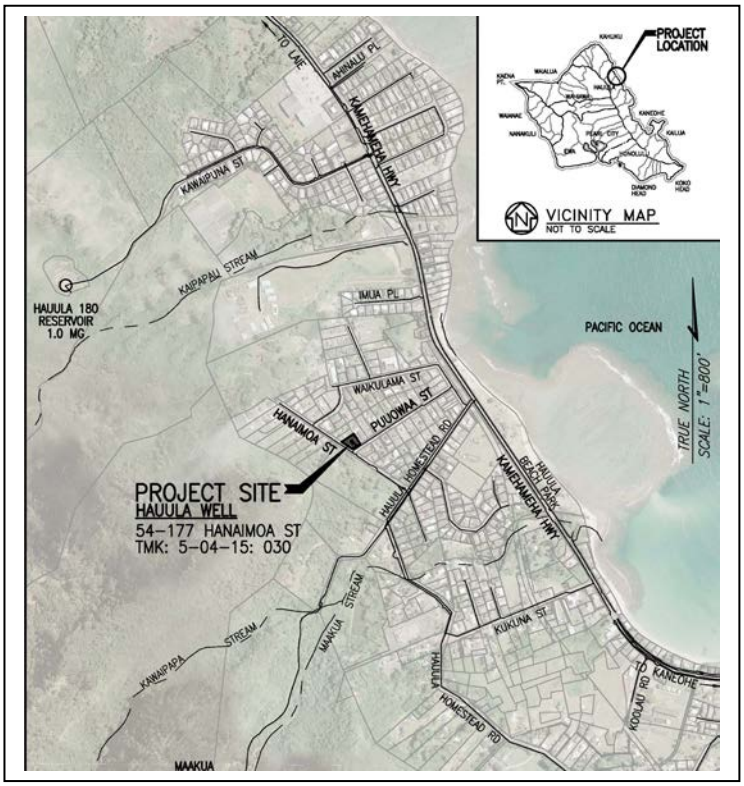
Determination	of its determination of acceptance or nonacceptance (pursuant to Section 11-200-23, HAR) of the FEIS; no comment period ensues upon publication in the Notice.
FEIS Statutory Acceptance	Timely statutory acceptance of the FEIS under Section 343-5(c), HRS, is not applicable to agency actions.
____ Supplemental EIS Determination	The accepting authority simultaneously transmits its notice to both the proposing agency and the OEQC that it has reviewed (pursuant to Section 11-200-27, HAR) the previously accepted FEIS and determines that a supplemental EIS is or is not required; no EA is required and no comment period ensues upon publication in the Notice.
____ Withdrawal	Identify the specific document(s) to withdraw and explain in the project summary section.
____ Other	Contact the OEQC if your action is not one of the above items.

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

The Honolulu Board of Water Supply (BWS) proposes to maintain the performance and sustain the reliability of the Windward 180 Water System serving the communities of Punaluu and Hauula. The only water supply well at the BWS Hauula Well Station was constructed in 1906 and is nearing its service life. The project will replace the existing well at the Hauula Well Station and connect it to the existing water supply system. After the replacement well is constructed, the existing well will be converted into a monitoring well to monitor the groundwater conditions and water quality of the aquifer. Direct impacts include: (1) fugitive dust, exhaust emissions, noise from construction equipment, and traffic due to the transportation of equipment and supplies to the site, and (2) visual obstruction of the drilling rig, equipment and construction vehicles that is expected only during the construction phase. The contractor will be required to follow standard procedures to mitigate the short term construction impacts, such as restricting working hours, sprinkling, and provide tuning and maintenance of equipment. No adverse long-term impacts are anticipated from this project.

HAUULA WELL REPLACEMENT
DRAFT ENVIRONMENTAL ASSESSMENT
HAUULA, OAHU, HAWAII

TAX MAP KEY: 5-04-15:030



This document is prepared pursuant to Chapter 343, HRS

Proposing Agency

City & County of Honolulu
Board of Water Supply
530 South Beretania Street
Honolulu, Hawaii 96843

Prepared By

Shimabukuro, Endo & Yoshizaki, Inc.
dba SEY Engineers
1126 12th Avenue, Room 309
Honolulu, Hawaii 96816

March 2016

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

APPENDICES

CHAPTER I

SUMMARY

1.1 GENERAL INFORMATION

The Honolulu Board of Water Supply (BWS) proposes to maintain the performance and sustain the reliability of the Windward 180 Water System serving the communities of Punaluu and Hauula. The only water supply well at the BWS Hauula Well Station (State Well No. 3655-01, former Well No. 394) was constructed in 1906 and is nearing the end of its service life. A replacement well must be constructed soon before structural failure occurs and the only water supply source in Hauula is lost. No increase in water supply production is proposed for the replacement well.

The project will replace the existing well at the Hauula Well Station and connect it to the existing water supply system. The Hauula Well Station is located approximately a quarter mile inland of Kamehameha Highway at the corner of Hanaimoa Street and Puuowaa Street. The address of the well station is 54-177 Hanaimoa Street. The existing Hauula Well is located in the middle of the 8,751 square-foot BWS property and the replacement well will be drilled approximately 25 to 30 feet from the existing well. After the replacement well is constructed, the existing well will be converted into a monitoring well to monitor the groundwater conditions and water quality of the aquifer.

The Hauula replacement well will be constructed in a similar manner to the existing Hauula well. The proposed well will consist of 12-inch solid casing from the ground surface to a depth of approximately 75 feet where caprock is expected to be encountered, followed by an open bore hole for another 180 feet to its terminal depth of approximately 255 feet where dike free basalt rock is expected to be encountered. Modifications to water line connections at the well station will be required to connect the replacement well to the water supply system.

The Draft Environmental Assessment (EA) has been prepared pursuant to Chapter 343, HRS. It describes the project and the affected environment, discusses proposed actions and potential environmental impacts, and proposes mitigation measures. After review of the Draft EA is completed by various governmental agencies, other interested organizations and individuals and following a formal 30-day comment period, the proposing and approving agency, the BWS, will prepare a Final EA. The BWS is anticipated to conclude that the project will have no significant impact on the environment and will result in a **Finding of No Significant Impact**.

1.2 ENVIRONMENTAL ASSESSMENT INFORMATION

Project Name:	Hauula Well Replacement
Applicant:	Board of Water Supply City & County of Honolulu 630 South Beretania Street Honolulu, Hawaii 96843 Contact: Mr. Scot Muraoka, Project Manager
Agency's Consultant:	Shimabukuro, Endo & Yoshizaki, Inc. 1126 12th Avenue, Room 309 Honolulu, Hawaii 96816 Contact: Howard K. Endo, Ph.D., P.E.
Approving Agency:	Board of Water Supply, City & County of Honolulu
Project Description:	Construct replacement water supply well and convert existing well to a monitoring well.
Project Location:	54-177 Hanaimoa Street, Hauula, Oahu, Hawaii
Existing Use:	The BWS owns, operates, and maintains the Hauula, Well (State Well No. 3655-01, former Well No. 394), which serves the Windward 180 Water System. Pumping at the site was suspended in November 2013 until ongoing renovations at the well station are completed.
Land Ownership:	City and County of Honolulu Board of Water Supply
Tax Map Keys:	Hauula Well Station: 5-4-015: 30 Adjacent Properties: 5-4-014: 03-06, and 5-4-015: 03, 26, 27, 30-35, 58, 59, and 69.
Land Area:	Hauula Well Station parcel is 8,751 square feet
Flood Insurance Rate Map:	15003C0135F - Zone D/X
State Land Use:	Urban
State Water Management Area:	Koolauloa

City Zoning District:	R-5 Residential
Special Designation Districts:	None
Special Management Area:	No
Anticipated Determination:	Finding of No Significant Impact (FONSI)
Parties Consulted:	See Appendix A for Agencies and Public Consultation

1.3 PRE-ASSESSMENT CONSULTATION

Prior to preparing the Draft Environmental Assessment (EA), the agencies, organizations, and utilities listed below from the master list provided by OEQC were consulted by letter on August 10, 2015. Also, residents of parcels adjoining the Hauula Well Station were consulted by letter on August 10, 2015. Substantive comments were received from parties marked below with an asterisk (*) and the comments were incorporated into the Draft EA as appropriate. Copies of substantive comments letters are included in Appendix A.

Federal Agencies

- U.S. Department of Army Corps of Engineers
- U.S. Department of the Interior Fish and Wildlife Service*

State of Hawaii Agencies

- Department of Business, Economic Development and Tourism
- Department of Education
- Department of Health (DOH), Environmental Planning Office*
- DOH, Office of Environmental Control*
- DOH, Safe Drinking Water Branch*
- Department of Land and Natural Resources (DLNR)*
- DLNR, State Historic Preservation Division*
- Department of Transportation
- Hauula Elementary School
- Office of Hawaii Affairs*
- Office of Planning, Land Use Commission*
- Representative Feki Pouha
- Senator Gil Riviere*

City and County of Honolulu Agencies

- Board of Water Supply (BWS)*
- Department of Design and Construction*
- Department of Environmental Services
- Department of Facility Maintenance*
- Department of Parks and Recreation*
- Department of Planning and Permitting (DPP)
- Department of Transportation Services (DTS)*
- Fire Department*
- Police Department*
- Councilman Ernest Y. Martin

Utility Companies

- Hawaii Gas*
- Hawaiian Electric Company, Inc.*
- Hawaiian Telcom*
- Oceanic Time Warner Cable*

Community Groups/Businesses/Individuals/Etc.

- Koolauloa Neighborhood Board No. 28
- Hauula Congregational Church
- Jehovah's Witnesses
- Seventh-Day Adventist Church
- Residents of Parcels Adjoining Hauula Well Station (21)
- Ms. Ruth A. K. Buttel*

1.4 APPROVALS, PERMITS, ETC.

There is no discretionary land use approvals required from the State or City such as a zone change, State land use district boundary amendment, or special designation districts use permit for the improvements proposed under this project.

The following permits/approvals will likely be required for implementing the various improvements:

Federal Permits/Approvals

None

State of Hawaii Permits/Approvals

Well Construction Permit	DLNR, Commission on Water Resources Management

National Pollutant Discharge Elimination System Permit, General Permits, Form F Discharges of Treated Hydrotesting Effluent and Form I Treated Process Wastewater Associated with Well Drilling Activities	DOH, Clean Water Branch
Community Noise Control Permit	DOH, Indoor and Radiological Health Branch
Potable Water Source Approval and Well Connection Authorization	DOH, Safe Drinking Water Branch

City & County of Honolulu Permits/Approvals

Street Usage Permit	DTS
Construction Plan Approvals	DPP, BWS

CHAPTER 2

DESCRIPTION OF PROPOSED ACTION

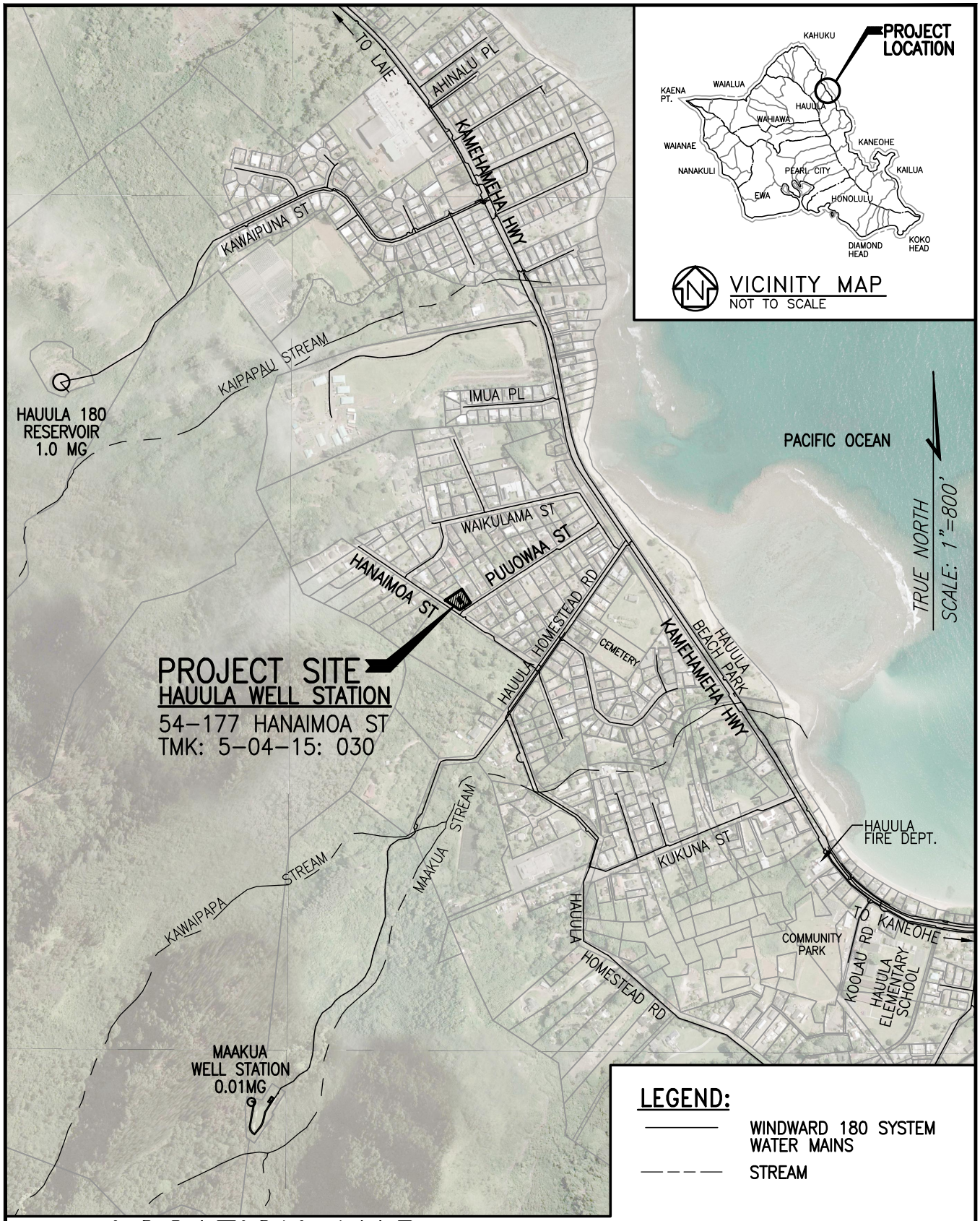
2.1 PROPOSED ACTION/TECHNICAL CHARACTERISTICS

The Honolulu Board of Water Supply proposes to replace the only water supply well at the Hauula Well Station. The Hauula Well (State Well No. 3655-01, former Well No. 394) was drilled in 1906 and is nearing the end of its service life. The replacement well is vital to maintaining the performance and sustaining the reliability of the water supply system in Hauula. No increase in water supply production is proposed for the replacement well.

The replacement of the Hauula Well will proceed in two phases. Phase 1 will drill, case, and test an exploratory well at the Hauula Well Station. The exploratory well will be drilled approximately 25 to 30 feet from the existing well and will be tested for yield, water quality, and aquifer properties. If the results show that source development is feasible, Phase 2 will convert the exploratory well into a production well. In this phase, a portion of the discharge piping from the existing well will be removed, and new piping and valves installed from the exploratory well to the downstream end of the removed piping to connect the replacement well to the existing water supply system. A concrete pad and protective cover will also be constructed at ground level directly above the well to protect the well from contamination from the surface. Upon construction of the replacement well, the existing well will be converted into a monitoring well to monitor the groundwater conditions and water quality in the aquifer.

The Hauula Well Station is located about a quarter mile northwest (inland) of the Hauula Beach Park at the corner of Hanaimoa Street and Puuowaa Street as shown on **Figure 2-1**. The address of the station is 54-177 Hanaimoa Street and its TMK parcel number is 5-4-015:30. The entrance to the well station is on Puuowaa Street and the existing well is located in the middle of the property. The site plan of the well station with proposed replacement well location is shown on **Figure 2-2**.

The Hauula Well is part of the BWS Windward 180 Water System serving the communities of Punaluu and Hauula. The regional map of the Hauula System is shown in **Figure 2-1** and a schematic diagram of the entire Punaluu-Hauula System is shown in **Figure 2-3**. The Punaluu-Hauula System consists of three reservoirs (Hauula 1.0 MG, Maakua 0.01 MG and Punaluu 0.5 MG) and three well stations (Punaluu Well 1, Maakua Well, and Hauula Well). In addition, the Kaluanui Line Booster pumps potable water from the 180 Water System to the Kahana 315 System.



LOCATION MAP

SCALE: 1"=800'

800' 0 800' 1600'

1"=800'

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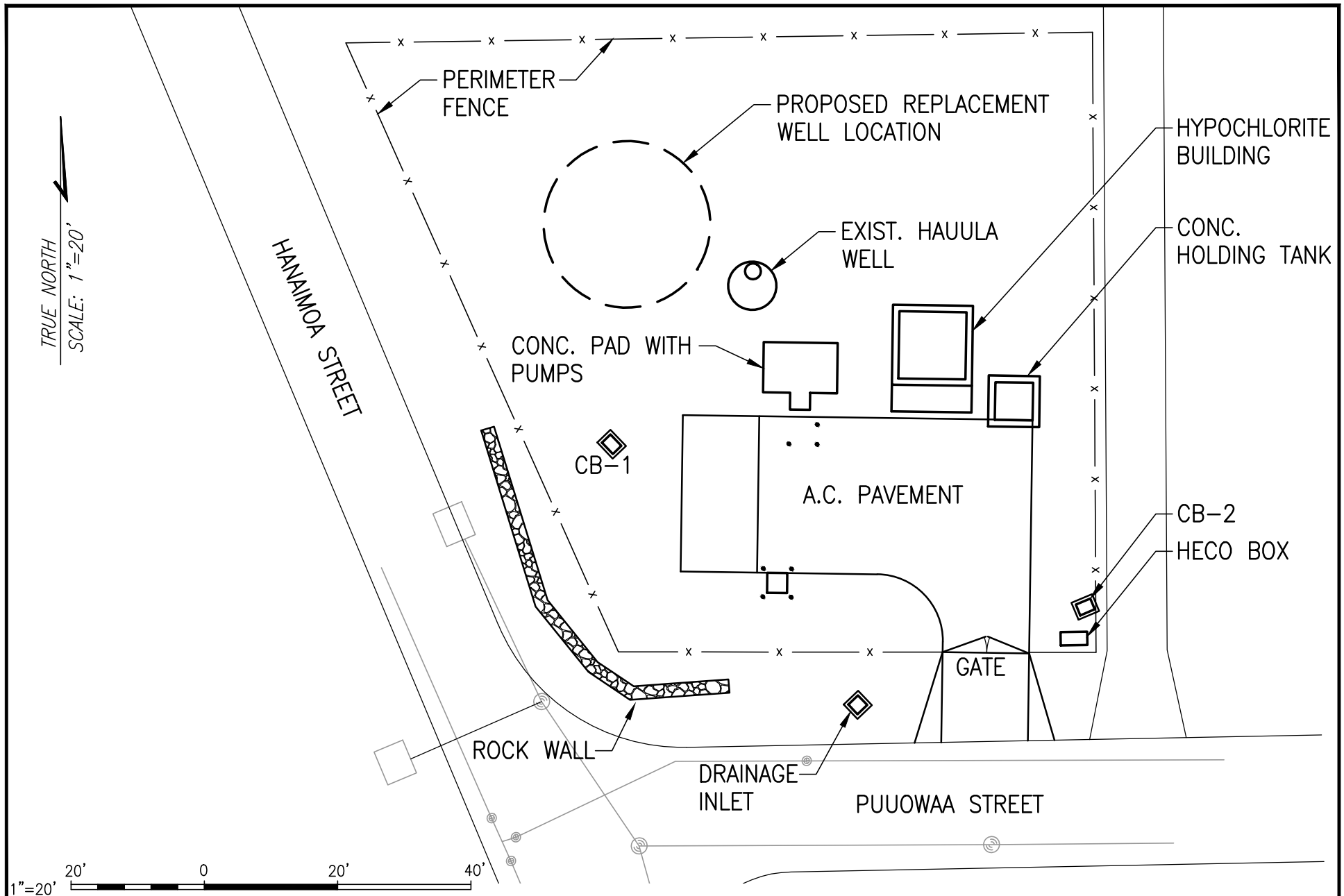
CITY & COUNTY OF HONOLULU

Shimabukuro, Endo & Yoshizaki, Inc.
Civil & Structural Engineers

HAUULA WELL REPLACEMENT
ENVIRONMENTAL ASSESSMENT
HAUULA, OAHU, HAWAII

LOCATION & VICINITY MAPS & WINDWARD 180 SYSTEM

FIGURE 2-1



REFERENCE:
BOARD OF WATER SUPPLY, JOB 12-016
HAUULA WELLS RENOVATION, DWG. C-03

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CITY & COUNTY OF HONOLULU

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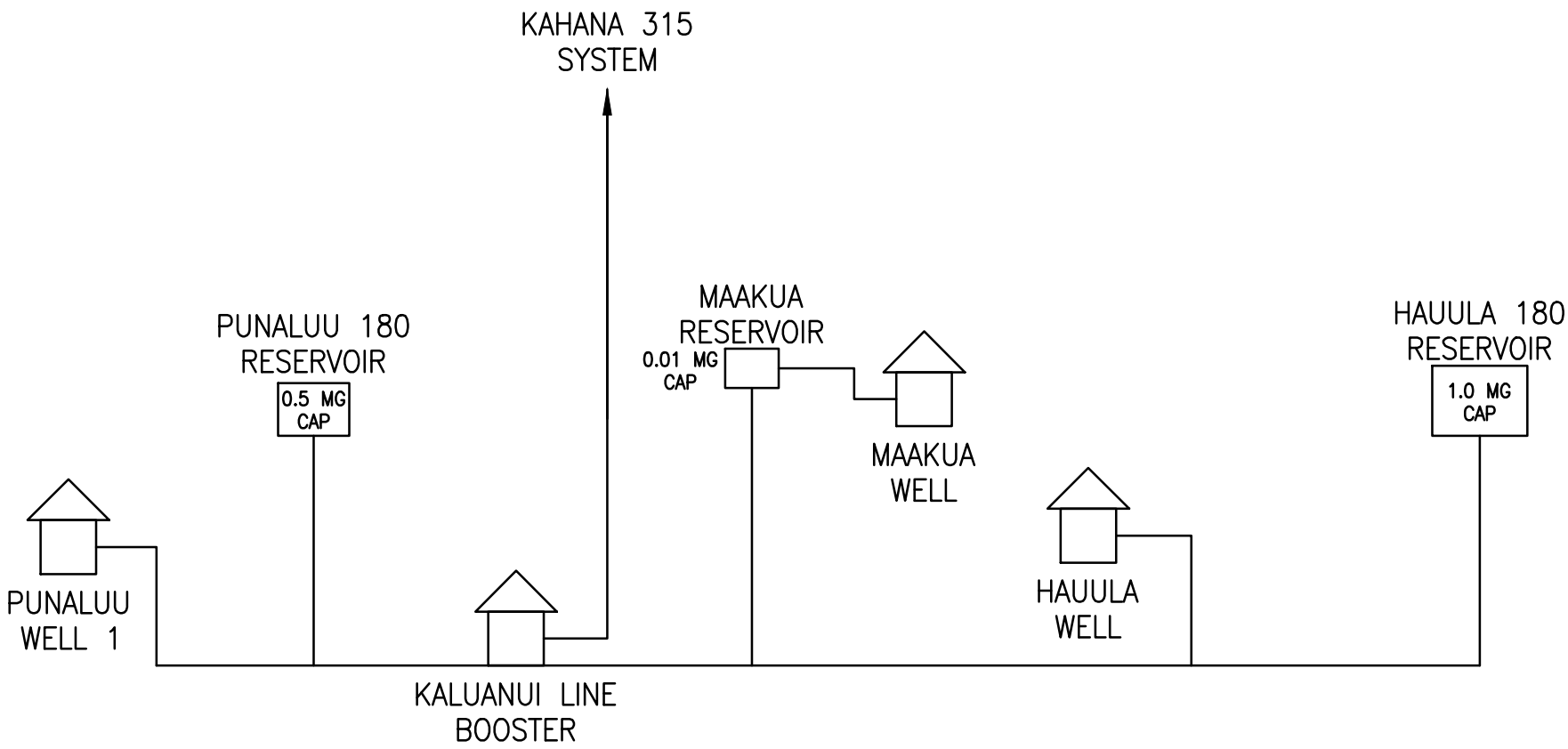
Civil & Structural Engineers

HAUULA WELL REPLACEMENT
ENVIRONMENTAL ASSESSMENT
HAUULA, OAHU, HAWAII

HAUULA WELL STATION SITE PLAN

FIGURE 2-2



REFERENCE:
BOARD OF WATER SUPPLY
WATER SYSTEM PLANNING SECTION
AND HYDROLOGY–GEOLOGY SECTION

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CITY & COUNTY OF HONOLULU

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Civil & Structural Engineers

HAUULA WELL REPLACEMENT
ENVIRONMENTAL ASSESSMENT
HAUULA, OAHU, HAWAII

WINDWARD 180 WATER SYSTEM SCHEMATIC

FIGURE
2–3

The Hauula replacement well will be constructed in a similar manner to the existing Hauula Well. The proposed well will consist of 12-inch solid casing from the ground surface to a depth of 75-feet, followed by an open bore hole for another 180 feet to its overall terminal depth of approximately 255 feet. See **Figure 2-4**. The Hauula replacement well will require modification of water line connections to the existing water supply system as discussed earlier.

2.2 PURPOSE OF AND NEED FOR ACTION

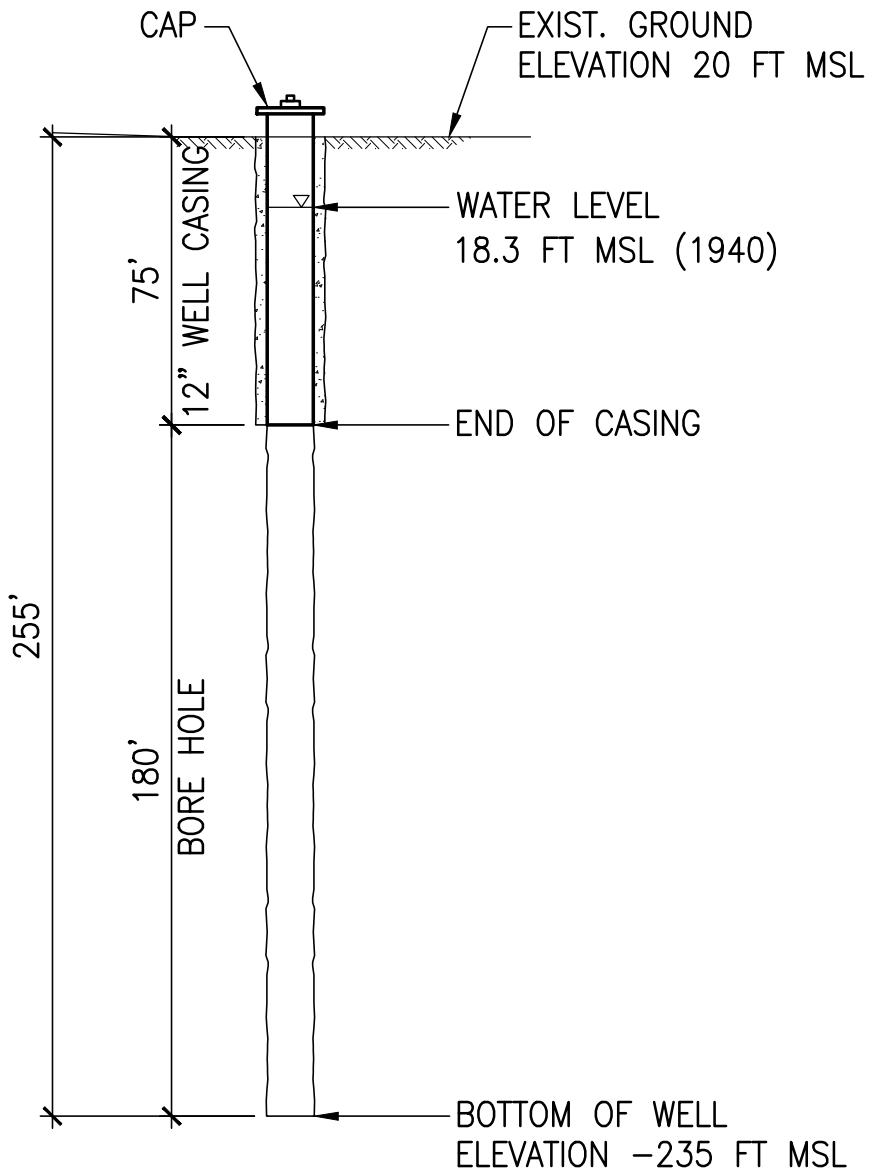
The purpose of the proposed action is to maintain the performance and sustain the reliability of the water supply system in Hauula. The existing Hauula Well was constructed in 1906 and is nearing the end of its service life. A replacement well is needed before structural failure of the existing well occurs due to its age.

2.3 SOCIO-ECONOMIC CHARACTERISTICS

Hauula is a rural residential community located on the windward coast of Oahu between Punaluu to its south and Laie to its north. The residential community mainly consists of single-family homes concentrated along the major coastal road, Kamehameha Highway. Economic activities include small scale agriculture, retail shops, and grocery stores serving both local residents and tourists. Hauula also has a fire station, an elementary school, a beach park, and a community park.

The Hauula replacement well is not anticipated to trigger a change to the existing resident population in Hauula. There are neither new residential units nor visitor housing units associated with this project. Therefore, the project should result in no in-migration of individuals to reside within Hauula and should have no impact on the existing resident population. The Hauula replacement well will neither change nor alter the character of the Hauula community or the character of the Windward district. The existing project site already exists and has similar above- and below-ground structures that were already present. Therefore, this project will not change existing uses in the surrounding area or having significant impact on surrounding urbanized land uses.

The Hauula replacement well will create construction jobs over the construction period typically consisting of laborers, tradesmen, equipment operators, supervisors, etc. These jobs will generate personal income for workers through paid wages. Direct construction jobs created will also stimulate indirect and induced employment with other industries on Oahu. Fiscal impacts associated with this project would primarily involve slightly additional tax revenue generated to the State. Tax revenue sources for State government will be composed primarily of general excise taxes (GET) on development costs and construction materials, and corporate income tax. In addition, GET taxes on indirect and induced income spent stimulated by the spending of income will also contribute new revenues to the State.



PREPARED FOR:			
BOARD OF WATER SUPPLY CITY & COUNTY OF HONOLULU	Shimabukuro, Endo & Yoshizaki, Inc. Civil & Structural Engineers	HAUULA WELL REPLACEMENT ENVIRONMENTAL ASSESSMENT HAUULA, OAHU, HAWAII SECTION OF PROPOSED EXPLORATORY HAUULA REPLACEMENT WELL	FIGURE 2−4

Since City revenues are primarily limited to property tax revenues, there will be minimal changes to the City revenues. The Hauula replacement well will contribute to property value; however, this increase is expected to be minimal. No changes to the property values or existing surrounding residences are anticipated from the construction of the proposed replacement well. The project will not generate any new in-migrant residents to Oahu. Thus, there will not be any effect on State and County operational expenditures for public services.

2.4 ENVIRONMENTAL CHARACTERISTICS

Temporary disruptions to the environment will occur due to the construction activities such as drilling of the proposed well. Traffic will be impacted during transportation of materials and equipment to the site. Operation of construction equipment will temporary affect dust, noise and exhaust emission levels. Construction activities will be performed during normal working hours between 8:30 a.m. and 3:30 p.m., Monday through Friday, unless otherwise permitted by the City and County of Honolulu. Environmental impacts caused by the project will be mitigated by complying with applicable City, State and Federal standards, guidelines and permit requirements. In addition, the Contractor will be required to employ safety measures to protect the public, especially children, from the construction activity and to properly secure construction areas during non-working hours.

2.5 PROJECT SCHEDULE AND FUNDING SOURCE

Construction of the exploratory well for Phase 1 is expected to begin in 2017 and last approximately 6 months or longer. The BWS has programed $350,000 for the exploratory well drilling and well testing in the fiscal year 2017. Pending acceptable yield and water quality results, Phase II of the project would convert the exploratory well into a production well and tie it into the existing facility's water system for distribution. The existing production well would also be converted to a monitor well. Phase II funds have not been budgeted until the exploratory well test results are deemed successful.

CHAPTER 3

DESCRIPTION OF THE AFFECTED ENVIRONMENT AND POTENTIAL IMPACTS AND MITIGATION MEASURES

3.1 PROJECT LOCATION

The only well at the BWS Hauula Well Station will be replaced after more than 110 years of service. The Hauula Well Station is located approximately a quarter mile inland of Kamehameha Highway at the corner of Hanaimoa Street and Puuowaa Street. See Location Map **Figure 2-1**. The address of the well station is 54-177 Hanaimoa Street. The existing Hauula Well is located in the middle of the property and the replacement well will be drilled approximately 25 to 30 feet from the existing well. After the replacement well is constructed, the existing well will be converted into a monitoring well.

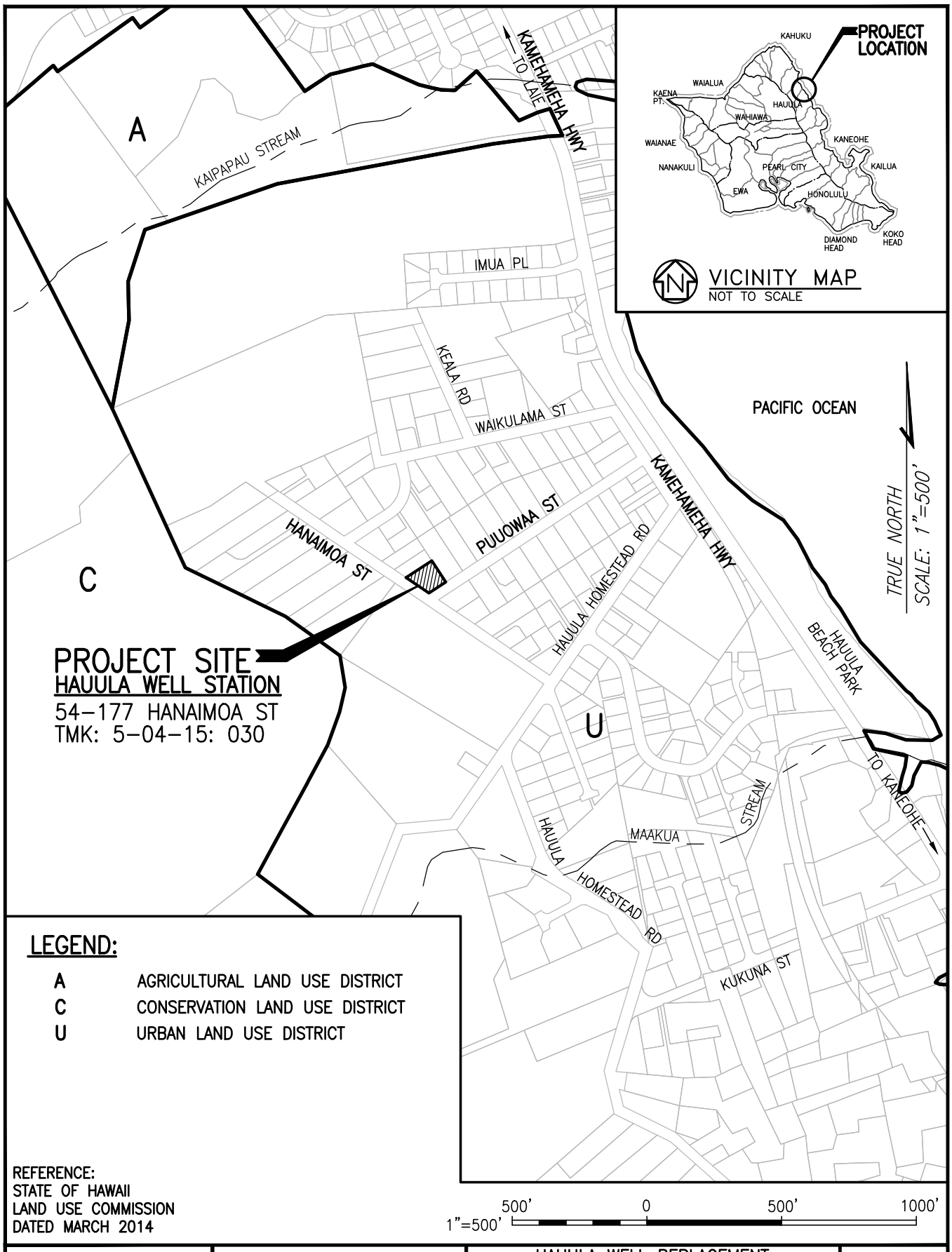
3.2 LAND OWNERSHIP

The Hauula Well Station is owned by the City and County of Honolulu Board of Water Supply and the lot is identified by Tax Map Key number 5-4-015:30. The trapezoidal-shaped lot is 8,751 square feet, with its longest side of 113.52 feet and its shortest side of 74.65 feet. There is no requisite for land acquisition for constructing the Hauula replacement well.

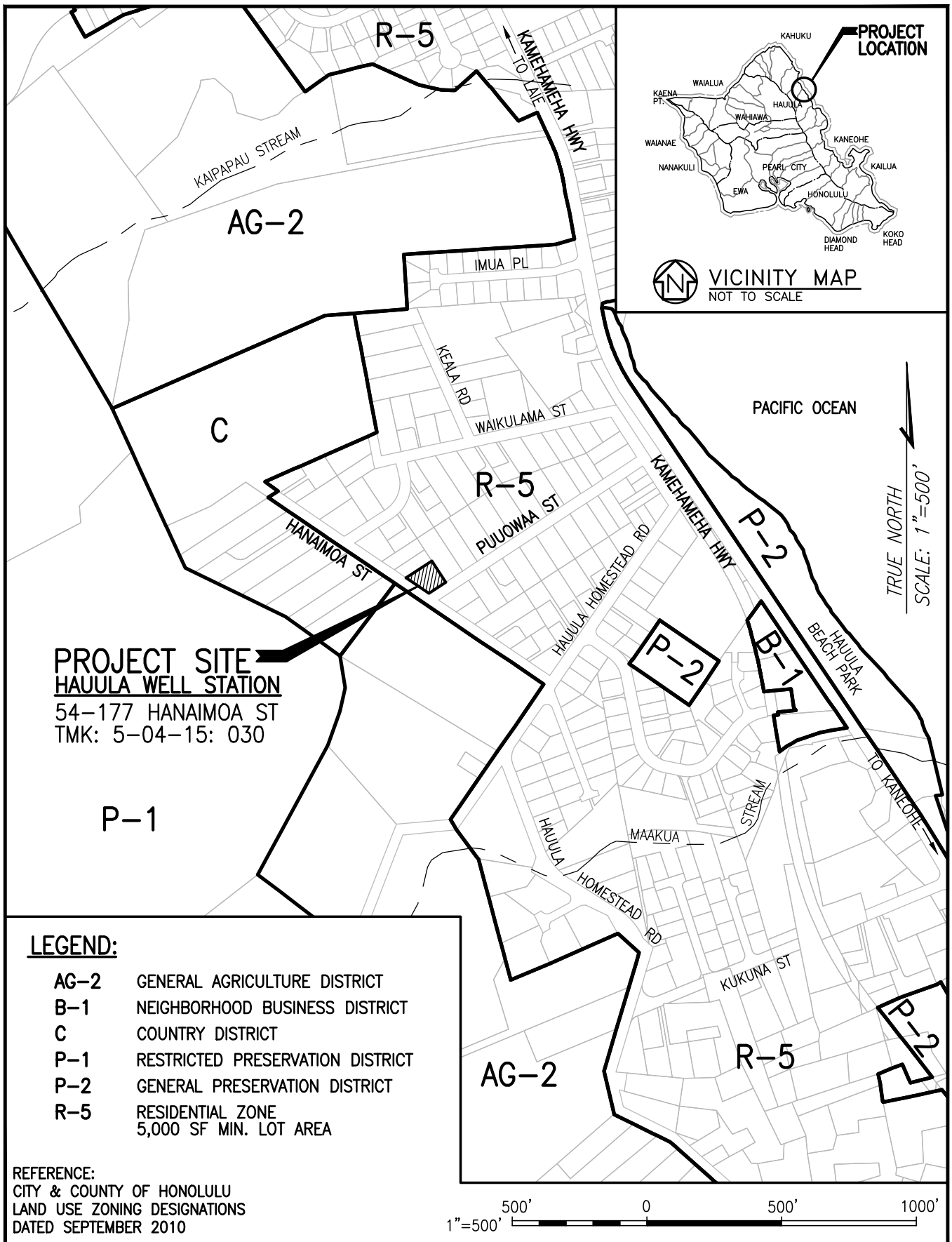
3.3 STATE AND COUNTY LAND USE DESIGNATION/DEVELOPMENT PLAN

The Hauula Well Station lot is zoned R-5 Residential Zone by the City and County of Honolulu and Urban by the State's Land Use District Boundary Map. See **Figures 3-1** and **3-2**. These designations are consistent with the intended use of the Hauula Well Station. Type A utility installation, including wells, are permitted in R-5 Zones and are considered to have minor impact on adjacent land uses according to Article 10 of the ROH Chapter 21. The Urban district designation permits any and all activities as allowed by the ordinances or regulations of the County within which the Urban District is defined. Urban designated zones on the island of Oahu are regulated by the ordinances and regulations of the City and County of Honolulu per LUC Administrative Rules, Chapter 15 Section 15-15-24, 2013. Thus, the replacement well is a permitted use at the Hauula Well Station based on State and County zoning.

The intended use of the Hauula Well Station is consistent with the City's Koolauloa Sustainable Communities Plan that was adopted in October 1999. This development plan presents a vision for future developments consisting of policies, guidelines, and conceptual schemes that will serve as a policy through the planning sunset of 2020. The Plan states that Hauula is identified as a stable community with no significant projected growth. The Hauula replacement well will help to sustain a stable community by maintaining a reliable water source to serve the community.



PREPARED FOR: BOARD OF WATER SUPPLY CITY & COUNTY OF HONOLULU	Shimabukuro, Endo & Yoshizaki, Inc. Civil & Structural Engineers	HAUULA WELL REPLACEMENT ENVIRONMENTAL ASSESSMENT HAUULA, OAHU, HAWAII STATE LAND USE ZONE MAP	FIGURE 3-1



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Civil & Structural Engineers

HAUULA WELL REPLACEMENT
ENVIRONMENTAL ASSESSMENT
HAUULA, OAHU, HAWAII

CITY ZONING MAP

FIGURE
3-2

3.4 SURROUNDING LAND USE

Hauula is bordered by residential communities that are relatively concentrated within a mile from the shoreline; Laie on the north and Punaluu on the south have similar zoning to Hauula. Areas west of the residential communities are zoned AG-2 for General Agriculture, C for Country and P-1 for Restricted Preservation which is consistent with the City's Koolauloa Sustainable Communities Plan. Hauula Elementary School is approximately 0.6 miles south of the Hauula Well Station.

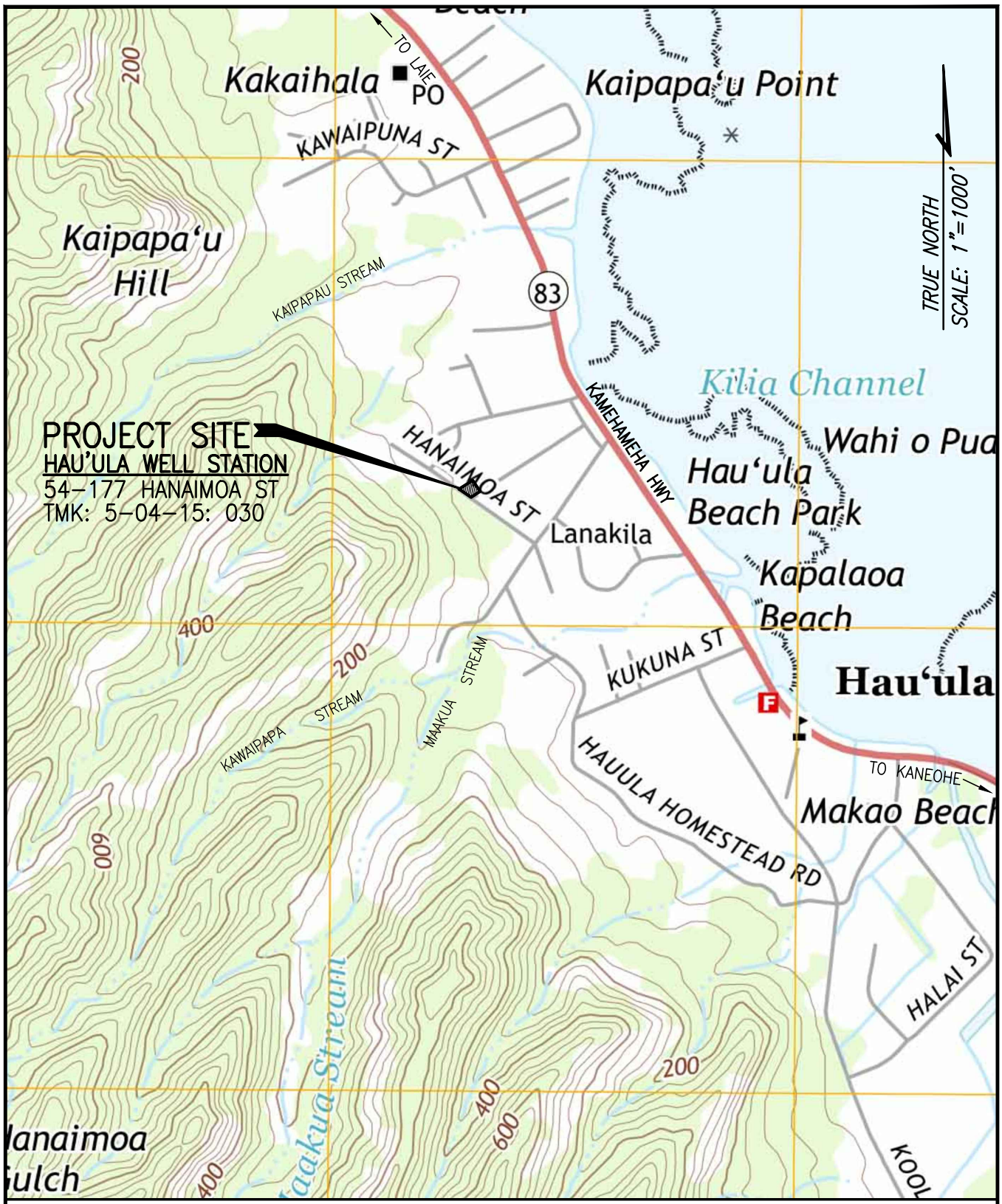
There will be no long-term interference with any existing land uses of surrounding properties by constructing the replacement well. During construction of the well, vehicular access to adjoining roadways and driveways may be temporarily disrupted by transportation of construction equipment, machinery or materials to the site. However, construction will be confined to the well station property. There will be no construction occurring on adjacent properties or on the roadways.

3.5 TOPOGRAPHY AND GEOLOGY

The Hauula Well Station is located near the inland margin of a 1,200-foot wide coastal plain. The topography rapidly transitions from the flat coastal plain to the steep mountainous terrain of the Koolau Range just inland of the well station. The regional topography near the well station is shown in **Figure 3-3** (2013 USGS Hauula Quadrangle Map). Ground slopes in the coastal plain generally range between 0 to 5 percent and slope from the west to east towards the coast. Ground slopes increase dramatically to over 50 percent in the mountains of the Koolau Range to the west of the well station.

Ground slopes vary throughout the well station because of its location near the base of the Koolau Range. Ground slopes in the lower half of the station range between 2 to 10 percent with a minimum elevation of 17 feet above mean sea level at the southeast corner of the property. In the upper half of the station, ground slopes steepen and range between 10 to 20 percent. The maximum elevation is approximately 32 feet above mean sea level at the northwest corner of the property. The recorded elevation of the existing Hauula Well is 20 feet above mean sea level.

The Hauula Well Station is located just below the east flank of the Koolau Range. The basement geologic formation is the Koolau volcanic series, a typical primitive Hawaiian basalt composed on a'a and pahoehoe lavas. Thin overlapping layers of lava flows with dips between 5 to 10 degrees issuing from dikes along the Koolau rift zone formed the basement formation. The rift zone runs parallel the crest of the Koolau Range in Hauula with the edge of the dike zone more than half a mile inland of the Hauula Well as shown in **Figure 3-4**. The dike-free Koolau basalts beneath the Hauula Well are highly permeable and form the primary aquifers on Oahu.



REFERENCE:
USGS HAUULA QUADRANAGLE TOPOGRAPHIC MAP BACKGROUND,
U.S. GEOLOGICAL SURVEY, 2013

1"=1000' 1000' 0 1000' 2000'

PREPARED FOR:		HAUULA WELL REPLACEMENT ENVIRONMENTAL ASSESSMENT	FIGURE
BOARD OF WATER SUPPLY CITY & COUNTY OF HONOLULU	Shimabukuro, Endo & Yoshizaki, Inc. Civil & Structural Engineers	HAUULA, OAHU, HAWAII USGS HAUULA TOPOGRAPHIC QUADRANGLE MAP	3-3

REFERENCE:
VARIOUS USGS QUADRANGLE TOPOGRPHIC MAP BACKGROUNDS:
HALEIWA, HAUULA, KAHANA, KAHUKU AND WAIMEA,
U.S. GEOLOGICAL SURVEY 1992 AND 1998

TRUE NORTH
SCALE: 1"=6000'

KAHUKU REGION

KOOLAULOA BASAL AQUIFER

LAIE REGION

HAUULA REGION

PUNALUU REGION

DIKE ZONE (MARGINAL)

PROJECT SITE
HAUULA WELL STATION
54-177 HANAIMOA ST
TMK: 5-04-15: 030

LEGEND:

APPROXIMATE AQUIFER BOUNDARY

APPROXIMATE BOUNDARY OF DIKE ZONE

6000' 0 6000' 12000'
1"=6000'

PREPARED FOR:
BOARD OF WATER SUPPLY
CITY & COUNTY OF HONOLULU

Shimabukuro, Endo & Yoshizaki, Inc.
Civil & Structural Engineers

HAUULA WELL REPLACEMENT
ENVIRONMENTAL ASSESSMENT
HAUULA, OAHU, HAWAII
KOOLAULOA AQUIFER
WITH PARTITIONED FOUR REGIONS

FIGURE
3-4

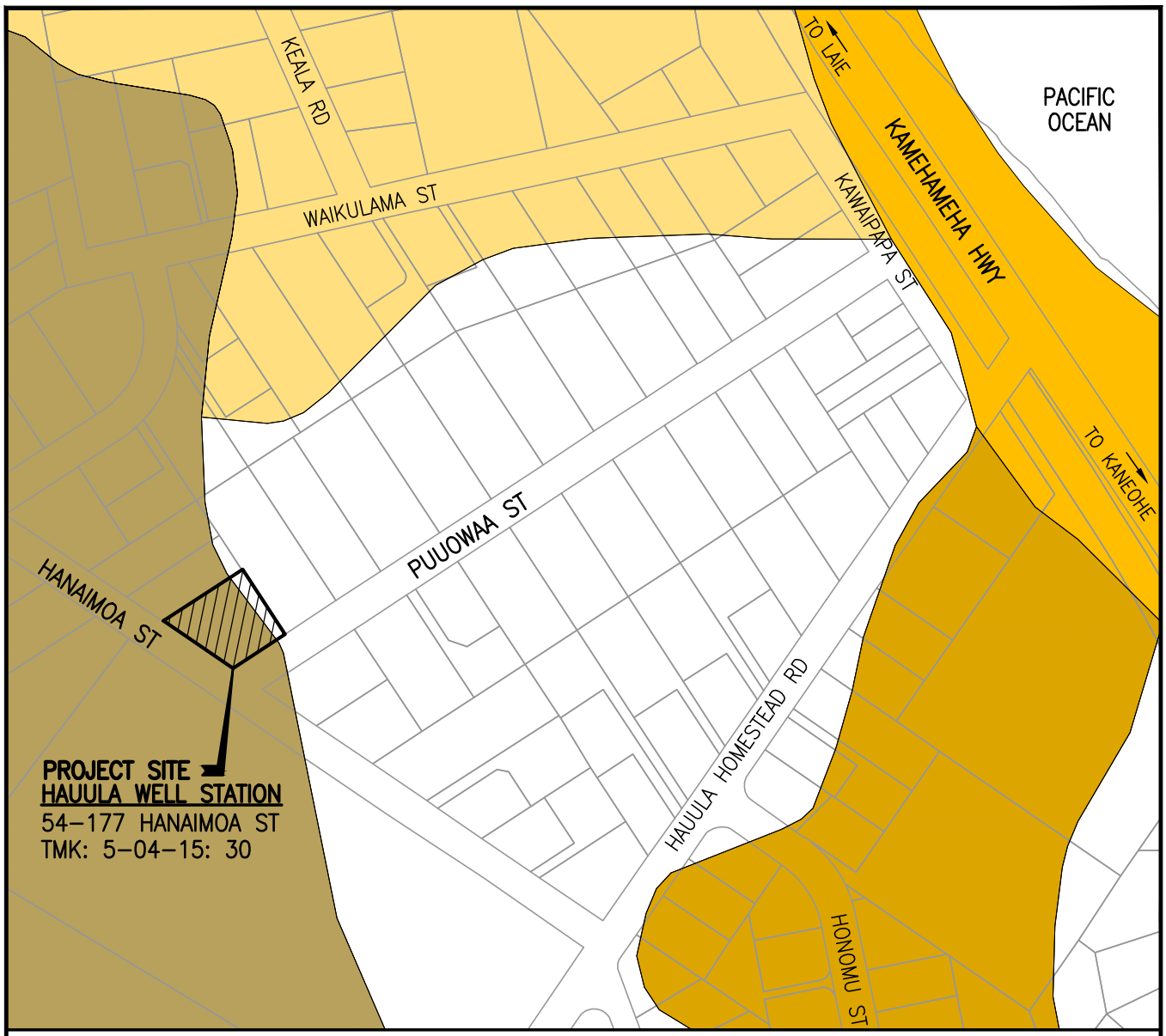
A sedimentary wedge called caprock covers the Koolau basalt below a ground elevation of approximately 30 feet above mean sea level in Hauula. The wedge consists of a mixture of terrestrial and marine sediments that form a continuous cap along the coast from Punaluu to Hauula, and beyond to Kahuku. The caprock is poorly permeable and effectively confines groundwater flowing in the Koolau basalts below it and prevents groundwater in the Koolau basalts from freely discharging at the coast. The mean depth of the caprock at the coast in Hauula is approximately 140 below sea level and the base of the caprock slopes upward inland at a slope of approximately 2.5 percent. The projected base of the caprock below the Hauula Well Station is estimated to be between 60 to 80 feet below sea level. The caprock extends into the sea for several miles as a shallow platform.

The replacement well is not expected to cause an adverse impact to the geology and topography. The borehole will be confined to a 12 to 16-inch diameter hole drilled to a depth of approximately 255 feet below ground. The top 75 feet of the well drilled through the caprock will consist of 12-inch solid casing and the lower 180 feet drilled through the dike free Koolau basalts will consist of an open hole. The immediate area around the well site will be cleared and graded, but the extent of grading will no cause a major change to the topography at the well station.

3.6 SOILS

Two types of soils typical of alluvium and colluvium derived from basalt debris accumulating at the base of the Koolau Range reside in the project area with Waialua Stony Silty Clay (WIB) covering for most of the area and Kawaihapai Stony Clay Loam (KlaA) covering the remaining lower area. See **Figure 3-5**. According to the Soil Survey of Island of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii (U.S. Department of Agriculture Soil Conservation Services, 1972) WIB soils are found on slopes varying between 3 to 8 percent and are moderately well-drained soils on alluvial fans. The WIB soil was derived from weathered volcanic rock. Storm runoff on WIB soils is slow with slight erosion potential. The KlaA soils can be primarily found along the coastal plains on slopes varying between 0 to 2 percent and are well-drained. Similar to WIB soil, KlaA soil was derived from weathered volcanic rock but in humid conditions at higher elevations. It was also eventually transported down to the alluvial fan. The KlaA soil is very stony which hindered workability during agricultural activities.

Large excavation and grading are not anticipated for the project and therefore land disturbing activities will have minor impacts. Construction of the exploratory well will be limited to the BWS property and will consist of drilling a 12 to 16 inch diameter borehole for a depth of approximately 255 feet with grading confined to the immediate area surrounding the well. Best Management Practices to mitigate erosion and pollution caused by discharge from the drilled well will be implemented. The replacement well will be capped until permanent water connections can be made to the BWS water supply system.



LEGEND:

	JaC	JAUCAS SAND, 0 TO 15 PERCENT SLOPES
	KIA	KAWAIHAPAI CLAY LOAM, 0 TO 2 PERCENT SLOPES
	KIaA	KAWAIHAPAI STONY CLAY LOAM, 0 TO 2 PERCENT SLOPES
	LoB	LOLEKAA SILTY CLAY, 3 TO 8 PERCENT SLOPES
	WIB	WAIALUA STONY SILTY CLAY, 3 TO 8 PERCENT SLOPES

TRUE NORTH

SCALE: 1"=200'

REFERENCE:
SOIL SURVEY STAFF. NATURAL RESOURCES CONSERVATION SERVICES, UNITED STATES DEPT. OF AGRICULTURE. WEB SOIL SURVEY, http://websoilsurvey.nrcs.usda.gov/ [09/2015].

1"=200' 200' 0 200' 400'

PREPARED FOR:
BOARD OF WATER SUPPLY
CITY & COUNTY OF HONOLULU

Shimabukuro, Endo & Yoshizaki, Inc.
Civil & Structural Engineers

HAUULA WELL REPLACEMENT
ENVIRONMENTAL ASSESSMENT
HAUULA, OAHU, HAWAII

SOIL CLASSIFICATION MAP

FIGURE 3-5

3.7 WATER RESOURCES AND HYDROLOGY

The Hauula Well resides in the Koolauloa Aquifer of the Windward Hydrologic Unit as designated by the Commission on Water Resources Management (CWRM). See **Figure 3-4**. The Koolauloa Aquifer extends for approximately 12 miles from Punaluu Valley in the southeast to Kahuku in the northwest with terminal point at Kawela Bay. The aquifer is continuous with groundwater generally flowing towards the northwest, but for hydrologic analysis the aquifer has been partitioned into regions in many studies. The four regions designated by Mink, 1982 are shown in **Figure 3-4**. The Hauula well is located in the Hauula Region which extends from Kaluanui to Aakakii Gulch.

Fresh groundwater in the Koolauloa Aquifer is impounded by dikes in the Koolau rift zone and floats on top of seawater between the Koolau rift zone and the coast. The Koolau rift zone is shown in **Figure 3-4** and is a marginal dike zone north of Punaluu to Kahuku in which the density of dikes is less than 100 per mile. The Hauula Well resides in the portion of the fresh groundwater aquifer that floats on top of seawater, commonly referred to as basal water in Hawaii

Groundwater flow in the basal portion of the Koolauloa Aquifer is controlled by the caprock and both confined and unconfined groundwater conditions occur. Confined conditions exist from the coast to a ground elevation that matches the groundwater head. The groundwater head measured at the Hauula Well in 1940 was 18.3 feet above mean sea level and measurements of groundwater heads at the Hauula Deep Monitor (State Well 3755-01) located at the Hauula 180 Reservoir (see **Figure 2-1**) ranged between 16.9 to 18.1 feet above mean sea level for the last 5 years. Thus, confined groundwater conditions can be expected below an ground elevation of about 15 to 18 feet above mean sea level in Hauula. The aquifer is unconfined from this point inland to the dike zone.

The sustainable yield of the Koolauloa Aquifer as established by CWRM is 36 million gallons per day (mgd). The BWS in 1982 estimated the sustainable yield for the Koolauloa Aquifer to range between 30 to 35 mgd. Upon review of the BWS Study (Mink, 1982), the State Department of Land and Natural Resources (DLNR) in a 1982 memorandum accepted the sustainable yield as 35 mgd, close to the present day estimate of 36 mgd. Furthermore, the DLNR recommended the partition of sustainable yield between the regions as follows: Kahuku 15 mgd, Laie 6 mgd, Hauula 6 mgd, and Punaluu 8 mgd. Since the present sustainable yield does not vary significantly from its 1982 value, the sustainable yield for the Hauula Region can be estimated to be approximately 6 mgd. The Hauula Well has a permitted water use from the CWRM to withdraw 0.18 mgd from the Koolauloa Aquifer. Note that the allocation of water use will not be changed by the replacement well.

The water quality of the groundwater pumped from the Hauula Well is expected to be good. **Table 3-1** presents the water quality data for the well when it was placed into service by the BWS in 1940. The Hauula Well has been a reliable source of good quality water to the BWS for many years.

Table 3-1

Results of Water Quality Analysis for the Hauula Well in 1940

Parameter			Value
Regional head, feet			18.3
Specific conductance, micromhos @ 25°C			258
pH value			7.90
Turbidity			0
Color			0.5
In Parts Per Million			
Silica			34
Calcium			10.6
Magnesium			7.6
Sodium			25.2
Potassium			1.2
Bicarbonate			70
Sulfate			4.9
Chloride			36
Fluoride			0.05
Nitrate			0.5
Phosphate			0.15
Iron	)	(	0.02
Manganese	)	(	0.02
Copper	)	(	0.02
Lead	) Less than	(	0.02
Arsenic	)	(	0.02
Chromium[a]	)	(	0.02
Total dissolved solids			190
Alkalinity			57.5
Total hardness			57.5

Groundwater conditions and water quality are expected to remain the same with the replacement well because the yield from the replacement well will remain the same as the existing well. The existing well will be converted to a monitoring well after construction of the replacement well.

3.8 CLIMATE AND AIR QUALITY

The climate at Hauula located on the Windward side of Oahu can be characterized by the persistence of trade winds, morning and late afternoon showers, sunny near the coast, and sunny with cloud cover near the Koolau Range. The trade winds prevail throughout the year with varying frequency. Periodic Kona winds from the south direction cast a haze of volcanic ash over the island that is usually only temporary until the trade winds return. According to the Geography Department of the University of Hawaii Climate of Hawaii, trade wind speeds generally range between 5 and 10 miles per hours. Temperatures in Hauula are equable from day to day, ranging between 70°F and 80°F, with an annual average of 74°F. The hotter months of summer occurs from May to September, which coincides with the driest part of the year. The annual rainfall in Hauula is approximately 70 inches with a monthly average slightly below 6 inches.

Air quality is generally good due to the effects of the trade winds and lack of stationary sources of pollutants. During periods of light winds, “hot spots” with air pollutants exceeding short-term standards could occur where traffic congestion occurs or near factory plants. Such locations do not exist near the project site.

Exhaust from construction equipment and machinery would be generated during construction of the replacement well. Fugitive dust will be generated during construction activities as well as during the transport of construction material and equipment to the site. Impacts due to exhaust emissions can be minimized by keeping all equipment properly tuned and maintained, as well as by minimizing unnecessary idle time. The contractor is required to comply with Hawaii Administrative Rules (HAR) Title 11, DOH Chapter 60.1 Air Pollution Control which contains restrictions on visible emissions from motor vehicles and fugitive dust generators. To reduce fugitive dust emissions, exposed surfaces should be kept watered whenever feasible.

With the necessary measures put into place to address equipment and machinery exhaust, as well as dust control, the climate and air quality of Hauula will not be adversely impacted by this project.

3.9 SURFACE WATER, FLOOD HAZARD AND DRAINAGE

Two streams are located within a third of a mile of the Hauula Well Station as shown in **Figure 2-1**: Maakua Stream located approximately 1,200 feet to the south and Kaipapau Stream located approximately 1,600 feet to the north. Both streams are perennial in their upper reaches in the Koolau rift zone and losing streams in their lower reaches where most of their perennial flow is lost to infiltration. Dike water levels along Maakua Stream are near ground surface at upper elevations, measured as about 600 to 800 feet in 1962 (Takasaki and Valenciano, 1969). Below the lower elevation (600 feet in 1962), stream flow is lost to infiltration and Maakua Stream eventually goes dry. Similarly, Kaipapau Stream is perennial at upper elevations

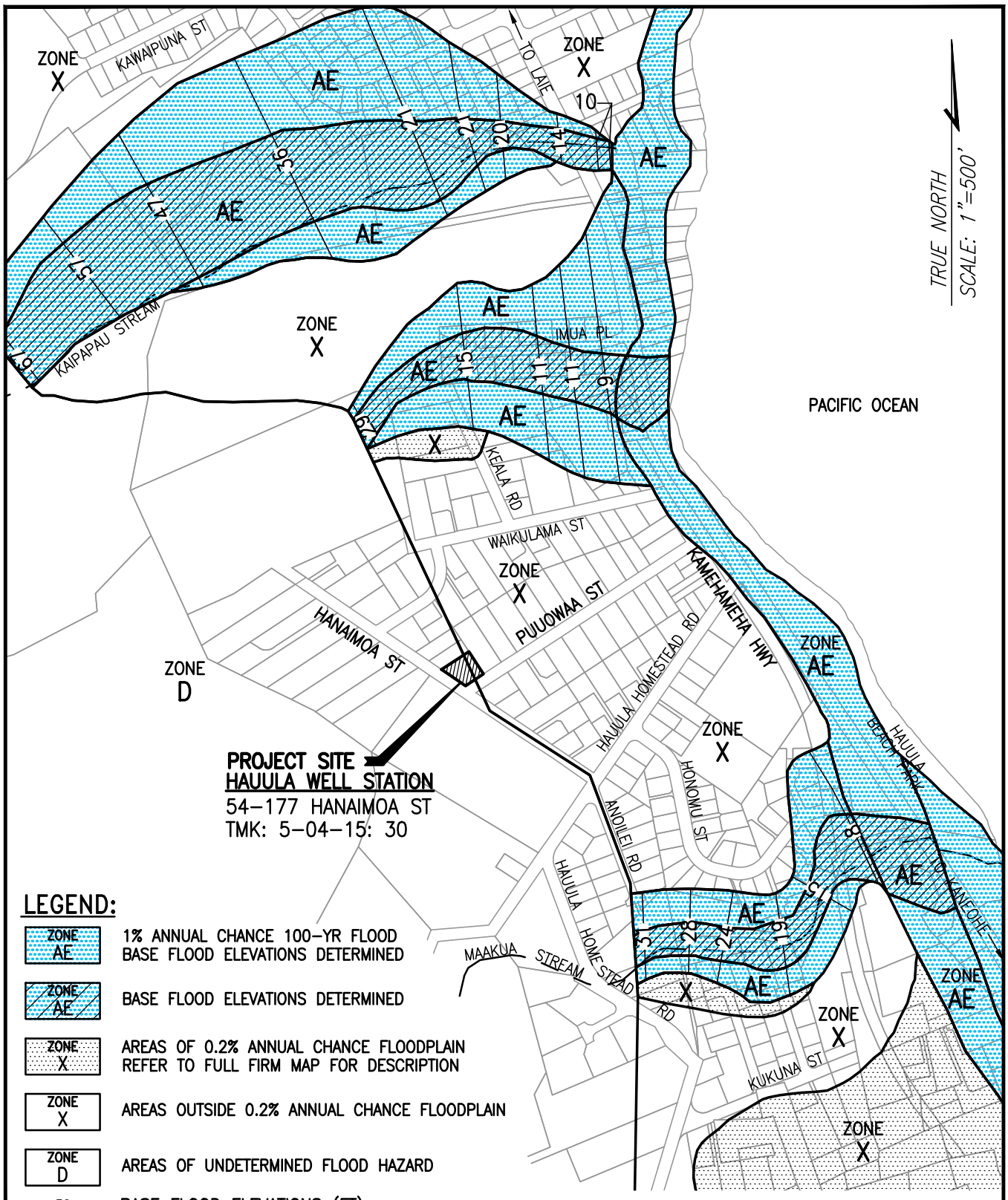
(about 700 feet in 1962), and is a losing stream at lower elevations. The flow measured in both streams at an elevation of 800 feet in 1962 ranged between 0.20 and 0.25 mgd. The flow in both streams should not change with the replacement well because yield from the replacement well will be similar to the existing well.

The project site is in Zone D (areas in which flood hazards are undetermined, but possible) and Zone X (areas determined to be outside the 0.2% annual chance floodplain) on the Flood Insurance Rate Map (FIRM) panel 135 dated September 30, 2004. See Flood Map **Figure 3-6**. The FIRM shows that flooding at the project site is expected to be a rare event because of its location at the inland, higher end of the residential subdivision.

The discharges of storm water into the City storm drainage system associated with hydrotesting effluent and treated process wastewater from well drilling activities will comply with the requirements of the National Pollutant Discharge Elimination System (NPDES) General Permits, as needed. Notices of Intent for NPDES permits will be submitted to the State Department of Health Clean Water Branch at least 30 days prior to any discharge occurrence. During construction, the contractor will also adhere to requirements of the City's Grading, and Soil Erosion and Sediment Control Ordinance. Desilting fences and other erosion control measures shall be used by the contractor to contain sediment and prevent it from entering the City drainage system.

3.10 FLORA, FAUNA AND SIGNIFICANT HABITATS

The Hauula replacement well is located in a residential area and vegetated with common weeds and grasses found on Oahu, with no trees or shrubs. The urban residential environment is not a suitable habitat for threatened, endangered, or candidate fauna species. According to the Department of the Interior, Fish and Wildlife Service (FWS), there is no federally designated critical habitat within the immediate vicinity of the project area. However, the FWS did note that federal data indicate a federally endangered Hawaiian hoary bat *(Lasiurus cinereus semotus)* may forage and roost in the vicinity of the project area. Therefore, to minimize impacts to the endangered Hawaiian hoary bat, woody plants within or in the vicinity of the project site greater than 15 feet tall should not be disturbed, removed, or trimmed during the bat birthing and pup rearing season between June 1 and September 15. As mentioned earlier, no trees or shrubs exist at the Hauula Well Station that could be habitat for the Hawaiian hoary bat. Consequently, the well replacement project is not expected to have an adverse impact on botanical resources or any native wildlife species or their habitat.



PREPARED FOR:		HAUULA WELL REPLACEMENT ENVIRONMENTAL ASSESSMENT HAUULA, OAHU, HAWAII	FIGURE
BOARD OF WATER SUPPLY CITY & COUNTY OF HONOLULU	Shimabukuro, Endo & Yoshizaki, Inc. Civil & Structural Engineers	FLOOD MAP	3-6

3.11 ARCHAEOLOGICAL, HISTORICAL AND CULTURAL SITES

The well station lot has been disturbed many times by prior land disturbing activities that have included grading, leveling, and constructing/renovating structures. According to the State Historic Preservation Division (SHPD), records show that no archaeological historic properties have been identified within the project area. (September 4, 2015, SHPD). In addition, the City's Sustainable Communities Plan provides general areas of historical and cultural significance in the Koolauloa region but the project area is not within these areas. Consequently, the Hauula Well Replacement project is not expected to have an adverse impact on archaeological, historical, and cultural sites. In an unlikely event that subsurface historic resources should be encountered during construction, construction work will cease and the SHPD will be contacted.

3.12 UTILITIES

Both above ground and buried existing utilities installation should not be adversely affected by the proposed work. The only utility work to occur will be connecting the replacement well to the existing water supply system with new piping. The Hauula Well Station is currently undergoing a renovation project where structures, utilities and appurtenances are being repaired and replaced. The existing well will remain in place during the renovation project.

Coordination with all utilities (electrical, water, sewer, telephone, cable TV and gas) will be performed during the engineering design phase. Construction plans will be submitted to the City and utility companies for review.

During the construction phase, the Contractor will be required to verify utility locations, protect utilities during construction and coordinate any temporary displacement required for convenience during construction so as to ensure no interruption of utility services. In addition, fire apparatus access will be maintained throughout the construction site for the duration of the project. The Contractor will also be required to notify the Fire Communication Center (phone 523-4411) should there be any interruptions in the existing fire hydrant system during construction.

3.13 NOISE

The operation of construction equipment such as trucks and a drilling rig will raise ambient noise levels in the vicinity of the project. Noise from the equipment has been measured at levels ranging from 70 to 90 dBA (at 50 feet). Noise impacts may have direct and indirect effects on the residential units adjacent to the Hauula Well Station. Construction equipment and on-site vehicles or devices requiring an exhaust of gas or air will be equipped with mufflers.

In residential areas, the allowable noise level is 55 dBA at the property line during the day (7:00 a.m. to 10:00 p.m.) and 45 dBA at night (10:00 p.m. to 7:00 a.m.).

Since noise levels will exceed the allowable levels for more than 10 percent of the time within any twenty-minute period, a Community Noise Permit will be required for construction activities from DOH in accordance with the HAR Title 11 DOH Chapter 46 Community Noise Control. Required permit conditions for construction activities which the Contractor must comply with include the following:

1. No permit shall allow any construction activities creating excessive noise when measured at or beyond the property line of the construction site for the hours before 7:00 a.m. and after 6:00 p.m. on weekdays.

2. No permit shall allow construction activities creating excessive noise when measures at or beyond the property line of the construction site for the hours before 9:00 a.m. and after 6:00 p.m. on Saturdays.

3. No permit shall allow construction activities which exceed the allowable noise levels on Sundays and holidays.

The above conditions shall be enforced and violators penalized by the Director of DOH. Nighttime work will not be permitted for the project.

3.14 TRAFFIC

Construction of the Hauula replacement well will be primarily focused within the property address. However, traffic on and adjacent to the project site will be impacted on a short term basis by transportation of construction equipment and supplies to the project site. Construction vehicles will add to the traffic on the roadways during these short periods.

Should construction equipment park on streets adjacent to the project site, the contractor shall obtain a Street Usage Permit from the Department of Transportation Services (DTS). Traffic management will be practiced during the construction phase by the contractor to minimize disruptions and inconveniences to the residents and the public as needed.

Continuous access to and from all driveways and public streets shall be maintained. All walkways and intersections shall be maintained in passable condition for pedestrian traffic. On-street parking of construction equipment will be limited, especially on Hanaimoa Street and Puuowaa Street. Appropriate signs and barriers will be required for parked vehicles, as needed. Night-time work will not be allowed.

The contractor will be required to coordinate work with the Koolauloa Neighborhood Board 28. At least two weeks prior to commencement of construction, the contractor will notify all affected residents adjacent to the project site, State Department of Transportation, Neighborhood Board 28, emergency services (fire, police, and ambulance), the general public, DPP, and DTS of the following: nature of the work, construction schedule, of lane and street closures or detours, suggested alternate

routes, the expected length of time of inconveniences, of any restrictions which may be imposed to complete the work and the contractor's phone number to be called to report traffic concerns.

3.15 VISUAL IMPACTS

As mentioned in the City's Koolauloa Sustainable Communities Plan, the mauka and makai views in Hauula are encouraged to be preserved and enhanced. The Hauula replacement well will be constructed underground and no structures are expected to be built above ground to obstruct visual views. There should be no adverse impacts to visual views caused by the replacement well.

CHAPTER 4

SUMMARY OF POTENTIAL IMPACTS AND PROPOSED MITIGATION MEASURES

4.1 SHORT TERM IMPACTS

The drilling and testing of the exploratory well in Phase 1 is scheduled to begin in 2017, take approximately 6 months to complete, and should be finished in 2018. Phase 2 will commence should the testing in the exploratory phase show that the construction of a water supply well is feasible. As such, no schedule has been established for Phase 2. The following sections describe the short term potential impacts anticipated during construction in Phases 1 and 2.

4.1.1 Land Use

The project will have minimal effect on existing and proposed land use since all construction will be confined within the BWS Hauula Well Station property. There is no acquisition of land required to construct the Hauula replacement well and the project is consistent with State and County zoning for the property.

4.1.2 Air Pollution

During construction, fugitive dust and exhaust emissions from construction equipment may degrade the air quality in the project vicinity. The contractor will be required to minimize dust within the project and surrounding areas by using mitigative measures such as water sprinkling whenever feasible and limiting the area being worked on at any one time. The work shall be in conformance with HAR Title 11 DOH Chapter 60.1 Air Pollution Control. The contractor will also be required to provide proper tuning and maintenance of all construction equipment and vehicles to minimize pollutants from exhaust emissions.

4.1.3 Flora, Fauna and Significant Habitats

The Hauula Replacement Well project is located in a residential community and will have no effect on flora, fauna and significant habitats since no endangered or threatened plant or animal species are known to exist at the project site. The project site is fully developed and is covered with common weeds and grasses with no trees. Any existing plants, grassed areas and surface improvements damaged by construction will be restored by the contractor to original or better condition.

4.1.4 Archaeological, Historical or Cultural Sites

Significant archaeological, historical or cultural sites including human burials are not known to exist at the project site. The site has undergone a few land disturbing construction activities in the past to renovate and improve facilities at the well

station. The Hauula Replacement Well project will have no adverse impact on significant archaeological, historical or cultural sites. However, should cultural remains be found, the construction work will cease and the SHPD will be contacted at 692-8015.

4.1.5 Utilities

Utility services for water, gas, sewer, electric, telephone, and cable TV should not be disrupted during construction activities. A short shutdown within the Hauula Well Station will occur during connection of the new replacement well to the existing water supply system. However, water service to Hauula will not be interrupted during this period as water can also be supplied to the community from the Hauula 180 Reservoir and the Maakua Well. The contractor will maintain the services of all existing utilities during construction.

4.1.6 Noise

Periodic noise from construction equipment such as the drill rig and trucks will impact residents near the project vicinity and should not impact the nearby Hauula Elementary School. Noise impacts will be mitigated during construction by requiring the contractor to consult with the Neighborhood Board No. 28 to set up a construction schedule which will minimize noise impacts to residents. Current techniques and methods of sound attenuation and abatement shall be used such as noise reducing mufflers to reduce noise impacts. The contractor will obtain a Community Noise Control permit from the DOH and observe and comply with HAR Title 11, DOH Chapter 46 regarding noise control to protect the public from the effects of noise from construction activities. Restrictions on noise levels and operational hours of the noisiest equipment will minimize the impacts on the adjoining community. Conditions of the Noise Permit shall be enforced and violators penalized by the Director of DOH. Nighttime work is not anticipated for the project.

4.1.7 Traffic

Disruption to traffic will only occur during transportation of equipment and supplies to the site as all construction will be performed within the BWS property. The project site is located at the inland end of the residential community and is not expected to adversely impact normal traffic to require mitigation.

4.2 LONG TERM IMPACTS

The long term impacts of the project are positive. The following sections describe the long term potential impacts anticipated from the construction of the Hauula replacement well.

4.2.1 Socio-Economic

The construction costs associated with the well replacement project will provide a positive economic impact on the construction industry. The replacement of the only water supply source in Hauula is vital to sustaining the performance of the Windward 180 Water System. In addition, the conversion of the existing well into a monitoring well will assist the BWS in preserving water quality and yield of the Koolauloa Aquifer. The improvement to the Windward 180 Water System performance and reliability in meeting domestic and fire protection needs in Hauula and Punaluu will be the primary long-term socio-economic impact of this project with the replacement well. The secondary long-term socio-economic impact will be the preservation of the water quality and yield of the Koolauloa Aquifer with the monitoring well.

4.2.2 Water Resources and Hydrology Impacts

The groundwater conditions and water quality in the Koolauloa Aquifer are expected to remain the same with the replacement well. The replacement well will be constructed similar to the existing well and located about 25 to 30 feet from the existing well. Consequently, the replacement well will be withdrawing groundwater from essentially the same depths and location as the existing well. In addition, the yield of the replacement well will remain the same as the existing well so its overall influence on the aquifer should not change. Groundwater conditions and water quality in the aquifer should be maintained by the replacement well.

4.2.3 Visual Impacts

The drill rig, equipment and construction vehicles may be observed by residents passing the site during construction. However, this duration is expected to be limited to construction and the location should only affect the inland margin of the residential community. Once construction is complete a concrete pad on ground surface constructed to protect the well from surface contamination will be the only visual evidence of the well.

CHAPTER 5
ALTERNATIVES TO PROPOSED ACTION

5.1 PROPOSED ACTION

The proposed action is to replace the only water supply well at the BWS Hauula Well Station. The Hauula Well (State Well No. 3655-01, former Well No. 394) was drilled in 1906 and is nearing the end of its service life. The loss of the existing well to structural deterioration or failure would result in the BWS having no water supply source in Hauula. The replacement well is needed for the BWS to continue to provide Hauula with a dependable water supply source. In addition, the BWS has strategically distributed water supply sources in the Windward District such that the loss of a source in Hauula would impart unnecessary stress to the aquifer at other well locations. Thus, the replacement well will be a vital component of the Windward 180 Water System serving Hauula and Punaluu.

5.2 ALTERNATIVES TO THE PROPOSED ACTION

5.2.1 No Action

The “no action” alternative would result in no construction of the replacement well and continuing to rely on a 110 year old well to supply potable water to the communities of Hauula and Punaluu. Considering the age of the existing well, structural failure to the well may occur at any time resulting in an interruption and/or degradation in water service to these communities until a new source is developed.

The BWS is mandated by law in Revised Ordinances of Honolulu (ROH), Chapter 30, Water Management, Article 2, Oahu Water Management Plan, 1990, amended 2010, and the Koolau Loa Watershed Management Plan, 2009 to meet the public water needs for the City and County of Honolulu, including Hauula. The project will satisfy ROH, Chapter 30, Article 2, by sustaining the performance and maintaining the reliability of the Windward 180 Water System serving Hauula and Punaluu. The “no action” alternative of not replacing the deteriorated well would deter the BWS from fulfilling their commitment of providing a reliable water supply system in Hauula and Punaluu.

5.2.2 Delayed Action

The “delayed action” would construct the replacement well at a later date. The delay of the project would only postpone and not avoid the environmental impacts and the need for project expenditures. In addition, the risk continues to increase of losing the sole source of water supply in Hauula during the delay. Considering the age of the existing well and imminent danger of a structural failure, the “delayed action” is not a viable option for the BWS in order to provide a reliable water supply system in Hauula and Punaluu.

5.2.3 Alternative Sites

The Hauula replacement well will be drilled approximately 25 to 30 feet from the existing well in the BWS Hauula Well Station property. No land acquisition, zoning permits, and additional environmental studies will be required to construct the replacement well. In addition, the existing Hauula well has been a reliable source of good water quality and yield to the BWS for many years so testing of the replacement well is expected to conclude the same results. Constructing a well elsewhere in Hauula may involve land purchases, zoning permits, environmental studies, site development, and uncertain groundwater/geologic conditions and water quality. The “alternative sites” option was rejected from further consideration because of the potential costs of land purchases, possibility of acquiring zoning permits, cost associated with developing a new site, testing of a new site with uncertain groundwater/geologic conditions and water quality, and the additional project time needed to perform environmental studies, acquire permits, test the well, and develop the site.

CHAPTER 6
DETERMINATION, FINDINGS AND JUSTIFICATION

6.1 DETERMINATION

This Draft Environmental Assessment is part of the environmental review process to meet the requirements of Chapter 343, HRS. After completing a pre-assessment of the potential environmental effects of the proposed project and consulting with governmental agencies and interested parties, the proposing agency does not anticipate any significant impacts on the environment. A **Finding of No Significant Impact** is expected to be determined for the project with the reasons supporting this determination discussed below.

6.2 FINDINGS AND JUSTIFICATION

The following sections address the analysis of the proposed action on the significance criteria as required by State of Hawaii Office of Environmental Quality Control:

6.2.1 The proposed action will not involve an irrevocable commitment to loss or destruction of any natural or cultural resource including native Hawaiian cultural resources, beliefs or practices. The project site is located within the BWS Hauula Well Station in the urban residential community of Hauula. The BWS property has been substantially altered from its natural condition throughout the years by improvements and renovations. According to the State Historic Preservation Division (SHPD), no significant historic properties have been identified within the BWS well station lot. However, should archaeologically significant features be uncovered, construction will be halted and immediate archaeological consultation will be sought with SHPD in accordance with applicable regulations.

6.2.2 The proposed action does not curtail the range of beneficial uses of the environment. The proposed project is consistent with the City's General Plan, Development Plan, and Zoning Maps, and will follow the Board of Water Supply's design standards. The well replacement project will not curtail beneficial uses of the environment in the area. The proposed project will be constructed below ground and will be compatible with the uses of the surrounding area.

6.2.3 The proposed action does not conflict with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS, and any revisions thereof and amendments thereto, court decisions or executive orders. The proposed project is consistent with the State's Land Use Plan for areas designated Urban and all applicable State policies, goals, and guidelines. No long-term environmental conflicts are foreseen.

6.2.4 The proposed action will not substantially affect the economic or social welfare of the community or State. The economy will be affected by short-term, construction related activities with the cash infusion of approximately $500,000 during construction. Upon completion of the project, the economic situation should return to the pre-existing condition.

6.2.5 The proposed action will not substantially affect public health. Construction of the replacement well and connection to the existing water supply system will upgrade and provide a safe and reliable water supply for the Windward 180 Water Supply System in Hauula and Punaluu. The existing well was drilled in 1906 and has reached its life expectancy and will be replaced before serious problems occur. The proposed action will improve water system performance and reliability in meeting present and future domestic and fire protection needs of the community and will improve public health. The short-term negative impacts associated with construction activities such as noise, dust, and exhaust emissions will be mitigated by measures included in the project plans and specifications.

6.2.6 The proposed action does not involve substantial secondary impacts such as population changes or effects on public facilities. The replacement well will sustain the present population of the area in conformance with the existing development plans of the City and County of Honolulu. Population, traffic, and public facilities should remain stable with the replacement well.

6.2.7 The proposed action does not involve a substantial degradation of environmental quality. The topography in a small localized area at the well station will be negatively impacted on the short-term by drilling and plumbing activities. However, no construction will be performed outside of the BWS property. The drill rig, equipment and construction vehicles may be observed by residents passing the site during construction. However, this duration is expected to be less than a year and the location should only affect the inland margin of the residential community. Once construction is complete a concrete pad on ground surface constructed to protect the well from surface contamination will be the only visual evidence of the well. Temporary impacts will be mitigated by restoration measures included in the project plans and specifications.

6.2.8 The proposed action is individually limited and cumulatively does not have a considerable effect upon the environment or involve a commitment for larger actions. The proposed action, either individually or cumulatively, will have very little effect on the existing street and adjacent lots or will not involve any commitment for larger actions.

6.2.9 The proposed action does not substantially affect rare, threatened or endangered species, or its habitats. There are no known rare, threatened, or endangered species or habitat associated with the project site.

6.2.10 The proposed action does not detrimentally affect the air or water quality or ambient noise levels. Short term impacts on air and water quality, as well as noise may occur during the construction period, but will be mitigated by normal construction practices and will be regulated by City and State rules, regulations and permit requirements and by project plans, specifications and City inspectors.

6.2.11 The proposed action does not affect nor is likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters. The project site is in Zone D (areas in which flood hazards are undetermined, but possible) and Zone X (areas determined to be outside the 0.2% annual chance floodplain) on the Flood Insurance Rate Map (FIRM) panel 135 dated September 30, 2004. Adverse flooding at the project site is not expected because of its flood hazard rating and its location at the inland, back end of the residential subdivision. The project is not located in a tsunami zone, beach, erosion-prone area, geologically hazardous land or estuary. It is also not expected to have any significant adverse impacts on fresh or coastal waters.

6.2.12 The proposed action does not affect scenic vistas and viewplanes identified in City or State plans or studies. The replacement well will be installed below the ground surface at the BWS Hauula Well Station and will be hidden from public view.

6.12.13 The proposed action will not require substantial energy consumption. Energy will be consumed to construct the replacement well since energy consuming construction equipment such as a drill rig and trucks, etc., will be used for the project. Substantial energy will not be consumed.

When the project is constructed, energy consumption will be the same as presently consumed.

6.3 FEDERAL CROSS-CUTTING AUTHORITIES

The following sections address the impacts of the proposed action on other Federal cross-cutting authorities as required by Hawaii DWSRF program requirements:

6.3.1 Archaeological and Historic Preservation Act of 1974, Pub. L. 86-523, as amended (16 USC 461)

The project site is located in an urban residential area that is fully developed with no known archaeological features at the site. The State Historic Preservation Division (SHPD) of the Department of Land and Natural Resources has also indicated that no historic properties have been identified at the project site.

6.3.2 Clean Air Act, Pub. L. 84-159, as amended (42 USC 7401)

Air quality at the project site is good. The site is in an air quality attainment area as defined by the State Department of Health in its EPA-approved Air Quality program.

Drilling of a well will be required for the project. It is anticipated that a drill rig and trucks will be used to drill the well and connect the well to the existing water supply system. Emissions from the equipment will slightly degrade air quality for the short period of time they are in operation. However, all applicable emission and ambient air quality standards will continue to be met. Consequently, no adverse health effects from this source are anticipated. Depending upon meteorological conditions during the construction period, it is possible that odor from the exhaust may be noticeable in nearby homes.

Normal operation of the water supply well will not increase the production of air emissions from the project site, will not alter airflow in the vicinity, and will have no effect on the area's micro-climate. The electrical power consumed in the operation of the pump will remain the same (and therefore, fuel consumption and gaseous emissions) by the Hawaiian Electric Company.

6.3.3 Coastal Barrier Resources Act, Pub. L. 97-348 (16 USC 3501)

This Act does not apply to the State of Hawaii.

6.3.4 Coastal Zone Management Act, Pub. L. 92-583, as amended (16 USC 1451)

The proposed replacement well project is located a third of a mile inland from the coastline and is not within the City's Special Management Area. It does not involve the placement, erection, or removal of materials near the coastline. The type and scale of the activities involved typically does not have the potential to significantly affect coastal resources. It is consistent with the Hawaii Coastal Zone Management (CZM) Program objectives that are relevant to a project of this sort.

A copy of this Draft EA is being sent to the Office of Coastal Zone Management at the State Department of Business, Economic Development, and Tourism. The Department's response is expected to confirm the consistence of the project with the Hawaii CZM Program.

6.3.5 Endangered Species Act, Pub. L. 93-205, as amended (16 USC 1531)

The Endangered Species Act provides broad protection for species of fish, wildlife, and plants that are listed as threatened or endangered in the U.S. or elsewhere. The Act outlines procedures for federal agencies to follow when taking actions that may jeopardize listed species and contains exceptions and exemptions.

There are no known rare, threatened, or endangered species of fish, wildlife, and plants on or immediately around the site of the well construction project. Copies of the Draft EA will be provided to the U.S. Fish and Wildlife Service and to the State Department of Land and Natural Resources (DLNR) for review and comment. The DLNR Aquatic Resources Division will provide comments to the Draft EA, which will be presented with the responses in the Final EA.

6.3.6 Environmental Justice, Executive Order 12898

The project site is located in a residential community in Windward Oahu zoned for urban residential use. There are no areas along the project site with concentrations of minority population and low-income population. Thus, the project will not have disproportionally high and adverse human health or environmental effects on minority populations and low-income populations.

6.3.7 Floodplain Management, Executive Order 11988 as amended by Executive Order 12148

Based on the latest available (September, 2004) Flood Insurance Rate Map, the project site is in Zone D (areas in which flood hazards are undetermined, but possible) and Zone X (areas determined to be outside the 0.2% annual chance floodplain). The project is compliant with applicable regulations and guidance relating to flood plain management.

6.3.8 Protection of Wetlands, Executive Order 11990

There are no wetlands on or near the project site. Neither are there food resources on the site that are important to wildlife that use wetlands elsewhere on Oahu. Copies of the Draft EA will be sent to the administrator of the Pacific Island Eco-Region, U.S. Fish and Wildlife Service, and to the State Department of Land and Natural Resources Aquatic Resources

Division to ensure adequate consideration of this topic in the environmental review for this project.

6.3.9 Farmland Protection Policy Act, Pub. L. 97-98 (7 USC 4201)

Farmland Protection Policy Act (FPPA) stated purposes are to minimize the extent to which Federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses and to assure that Federal programs are administered in a manner that, to the extent practicable, will be compatible with State, unit of local government, and private programs and policies to protect farmland.

The proposed replacement well will be constructed at the BWS Hauula Well Station in an urban area and not in farmland. Consequently, the project is in compliance with the FPPA.

6.3.10 Fish and Wildlife Coordination Act, Pub. L. 85-624, as amended (16 USC 661)

The Fish and Wildlife Coordination Act, as amended, authorizes consultation with the U.S. Fish and Wildlife Service and the fish and wildlife agencies of the State for the purpose of "preventing loss of and damage to wildlife resources" by the project. No native fish or wildlife species or their habitats are known to exist at the project site.

The project will result in replacement of the water supply well underground in the BWS property with connection to the existing water supply system and will not result in impacts on fish or wildlife resources. The U.S. Fish and Wildlife Service and the Department of Land and Natural Resources will be asked to comment on the Draft EA. Their comments and BWS responses will be presented in the Final EA.

6.3.11 National Historic Preservation Act of 1966, Pub. L. 89-665, as amended (16 USC 470)

No significant historic properties have been identified within the BWS Hauula Well Station according to State Historic Preservation Division. However, should archaeologically significant features be uncovered, construction will be halted and immediate archaeological consultation will be sought with SHPD.

6.3.12 Safe Drinking Water Act, Pub. L. 93-523, as amended (40 CFR Part 149 Subpart A)

The Safe Drinking Water Act (SDWA) is the principal federal law that ensures the quality of Americans' drinking water. SDWA requires that all public water systems meet stringent water quality standards. The proposed replacement well will be drilled in the Koolauloa Aquifer as identified by the DLNR Commission on Water

Resources Management. The water quality of this aquifer at the well site will be tested during the exploratory phase of the project for compliance with the Safe Drinking Water Act.

6.3.13 Wild and Scenic Rivers Act, Pub. L. 90-542, as amended (16 USC 1271)

The purpose of this Act is to preserve certain selected rivers of the Nation which with their immediate environments possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, in free-flowing condition, and that they and their immediate environments be protected for the benefit and enjoyment of present and future generation.

Both Maakua Stream and Kaipapau Stream are not listed on the Nationwide River Inventory by the U.S. National Park Service. This inventory contains rivers in the U.S. that are believed to possess at least one outstandingly remarkable natural or cultural values deemed to be more than local or regional significance.

CHAPTER 7
APPROVALS, PERMITS, ETC.

The following approvals, permits, and agreements will be required prior to the construction of the exploratory well in Phase 1.

7.1 FEDERAL GOVERNMENT

The construction work will not involve discharge of dredged or fill material below the ordinary high water mark of any stream. Thus, a Department of the Army (DA) Permit and authorization under the DA Corps of Engineers General or Nationwide Permit is not anticipated for the project.

7.2 STATE OF HAWAII

A Community Noise Control Permit will be required from the DOH Indoor and Radiological Health Branch for construction activities of the project. Other State permits required include:

National Pollutant Discharge Elimination System (NPDES) General Permit, Form I – Treated Process Wastewater Associated with Well Drilling Activities and General Permit Form F – Discharges of Treated Hydrotesting Effluent from the DOH Clean Water Branch,

Well Construction Permit from the Department of Land and Natural Resources, Commission on Water Resources Management, and

Potable Water Source Approval and Well Connection Authorization from DOH Safe Drinking Water Branch.

7.3 CITY AND COUNTY OF HONOLULU

Construction Plans review and approval will be required from DPP and BWS for replacement well and well connection.

A Street Usage Permit will be required from DTS if temporary parking of construction vehicles in City streets is needed.

CHAPTER 8
REFERENCES

City and County of Honolulu, General Plan, Honolulu, Hawaii.

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Giambelluca, T.W., X. Shuai, M.L. Barnes, R.J. Alliss, R.J. Longman, T. Miura, Q. Chen, A.G. Frazier, R.G. Mudd, L. Cuo, and A.D. Businger. 2014. Evapotranspiration of Hawai‘i. Final report submitted to the U.S. Army Corps of Engineers—Honolulu District, and the Commission on Water Resource Management, State of Hawai‘i.

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State of Hawaii Land Use Commission, Land Use District Maps, Honolulu, Hawaii, 2005.

Takasaki, K.J., and Valenciano, S., 1969, Water in the Kahuku Area, Oahu, USGS Water Supply Paper 1874.

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APPENDIX A

PRE-ASSESSMENT CONSULTATION

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
Civil, Environmental & Structural Engineers
1126 12th Avenue, Room 309
Honolulu, Hawaii 96816-3715
Ph.: (808) 737-1875 FAX: (808) 734-5516
E-mail: seyeng@seyeng.com

MEMORANDUM

Date: November 13, 2015

To: Project File

From: Howard K. Endo

Subject Hauula Well Replacement EA

1. Pre-assessment letters were sent to agencies, organizations, utilities; and twenty one (21) neighboring or nearby property owners and recorded lessees were consulted notifying them of the proposed project and requesting pre-assessment comments regarding possible impacts due to the project. A list of parties consulted is included in Section 1.3.1 of the Draft EA.

2. Thirty one (31) agencies, organizations, and utilities were consulted. Comments were received from twenty (20) parties and one (1) resident comment was received.

3. Generally, the comments included impacts of noise, dust, street closures, traffic detours, parking, access to businesses and residences, uncovering of archeological features such as human burials, native Hawaiian cultural practices and resources, trench restoration, and request for prior public notification of construction and detour schedules.

4. All comments received to the pre-assessment letters have been reviewed, evaluated and incorporated into the Draft EA as appropriate.

5. Copies of comment letters and responses are included in Appendix A of the Draft EA.

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
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E-mail: seyeng@seyeng.com

September 25, 2015

Mr. Aaron Nadig
Island Team Manager
United States Department of the Interior
Fish and Wildlife Service
Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122
Honolulu, Hawaii 96850

Subject: Species List for the Hauula Well Replacement Project

Dear Mr. Nadig:

Thank you for your letter of September 22, 2015 in response to our inquiry regarding the presence of federally listed and proposed endangered or threatened species and critical habitat in the vicinity of the subject project. We acknowledge that your department has determined that there are no federally designated critical habitats within the immediate vicinity of the project; however, the federally endangered Hawaiian hoary bat (Lasiurus cinereus semotus) may forage and roost within the vicinity.

Please do not hesitate to contact me should you have any questions.

Very truly yours,

Howard K. Endo, Ph.D., P.E.
President

HKE:sno

cc: Scot Muraoka/BWS

RECEIVED SEP 2 4 2015

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122
Honolulu, Hawai'i 96850

In Reply Refer To:
2015-SL-0416

SEP 2 2 2015

Howard K. Endo, Ph.D., P.E.
President
Shimabukuro, Endo & Yoshizaki, Inc.
Civil, Environmental & Structural Engineers
1126 12th Avenue, Room 309
Honolulu, Hawai'i 96816-3715

Subject: Species List for the Hauula Well Replacement Project, Hauula, O'ahu

Dear Mr. Endo:

The U.S. Fish and Wildlife Service (Service) received your letter on August 24, 2015, requesting information regarding the presence of federally listed and proposed endangered or threatened species and critical habitat within the vicinity of the proposed Hauula Well Replacement Project, Hauula, O'ahu [TMK 5-4-015: 30]. We understand the Board of Water Supply has contracted Shimabukuro, Endo & Yoshizaki, Inc. to conduct the proposed project. The proposed project is located on the corner of Hanaimoa Street and Puuowaa Street at 54-177 Hanaimoa Street. The existing well, which was built in 1906, consists of a 12-inch (30 centimeter) solid casing from ground surface to a depth of 75 feet (ft.) [23 meters (m)] followed by an open hole to its terminal depth of 253 ft. (77 m). The well is at the end of its service life therefore, the Board of Water Supply is proposing to replace it with a new well. The new well will be constructed next to the existing well with similar characteristics.

We have reviewed the information you provided and pertinent information in our files, including data compiled by the Hawai'i Biodiversity and Mapping Program as it pertains to listed species and designated critical habitat. There is no federally designated critical habitat within the immediate vicinity of the proposed project. Our data indicate the federally endangered Hawaiian hoary bat (*Lasiurus cinereus semotus*) may forage and roost within the vicinity of the project area.

The Hawaiian hoary bat roosts in both exotic and native woody vegetation and, while foraging, will leave young unattended in "nursery" trees and shrubs when they forage. If trees or shrubs suitable for bat roosting are cleared during the breeding season, there is a risk that young bats could inadvertently be harmed or killed since they are too young to fly or may not move away. To minimize impacts to the endangered Hawaiian hoary bat, woody plants greater than 15 ft (4.6 m) tall should not be disturbed, removed, or trimmed during the bat birthing and pup rearing season (June 1 through September 15). Site clearing should be timed to avoid disturbance to Hawaiian hoary bats in the project area.

If it is determined that the proposed project may affect federally listed species, we recommend you contact our office early in the planning process so that we may assist you with Endangered Species Act compliance. Because the proposed project will involve earthwork, we are attaching the Service's recommended Best Management Practices regarding sedimentation and erosion control. We encourage you to incorporate the relevant practices into your project design.

We appreciate your efforts to conserve Hawaii's natural resources. If you have questions regarding these comments, please contact Leila Gibson, Fish and Wildlife Biologist (phone: 808-792-9400, email: leila_gibson@fws.gov).

Sincerely,

Aaron Nadig
Island Team Manager
O'ahu, Kaua'i, North Western Hawaiian Islands, and American Samoa

Enclosure: Service BMPs for erosion and sediment control

cc: Board of Water Supply

U.S. Fish and Wildlife Service
Recommended Standard Best Management Practices

The U.S. Fish and Wildlife Service (USFWS) recommends the following measures to be incorporated into project planning to avoid or minimize impacts to fish and wildlife resources. Best Management Practices (BMPs) include the incorporation of procedures or materials that may be used to reduce either direct or indirect negative impacts to aquatic habitats that result from project construction-related activities. These BMPs are recommended in addition to, and do not over-ride any terms, conditions, or other recommendations prepared by the USFWS, other federal, state or local agencies. If you have questions concerning these BMPs, please contact the USFWS Aquatic Ecosystems Conservation Program at 808-792-9400.

1. Authorized dredging and filling-related activities that may result in the temporary or permanent loss of aquatic habitats should be designed to avoid indirect, negative impacts to aquatic habitats beyond the planned project area.

2. Dredging/filling in the marine environment should be scheduled to avoid coral spawning and recruitment periods, and sea turtle nesting and hatching periods. Because these periods are variable throughout the Pacific islands, we recommend contacting the relevant local, state, or federal fish and wildlife resource agency for site specific guidance.

3. Turbidity and siltation from project-related work should be minimized and contained within the project area by silt containment devices and curtailing work during flooding or adverse tidal and weather conditions. BMPs should be maintained for the life of the construction period until turbidity and siltation within the project area is stabilized. All project construction-related debris and sediment containment devices should be removed and disposed of at an approved site.

4. All project construction-related materials and equipment (dredges, vessels, backhoes, silt curtains, etc.) to be placed in an aquatic environment should be inspected for pollutants including, but not limited to; marine fouling organisms, grease, oil, etc., and cleaned to remove pollutants prior to use. Project related activities should not result in any debris disposal, non-native species introductions, or attraction of non-native pests to the affected or adjacent aquatic or terrestrial habitats. Implementing both a litter-control plan and a Hazard Analysis and Critical Control Point plan (HACCP – see *http://www.haccp-nrm.org/Wizard/default.asp*) can help to prevent attraction and introduction of non-native species.

5. Project construction-related materials (fill, revetment rock, pipe, etc.) should not be stockpiled in, or in close proximity to aquatic habitats and should be protected from erosion (*e.g.*, with filter fabric, etc.), to prevent materials from being carried into waters by wind, rain, or high surf.

6. Fueling of project-related vehicles and equipment should take place away from the aquatic environment and a contingency plan to control petroleum products accidentally spilled during the project should be developed. The plan should be retained on site with the person responsible for compliance with the plan. Absorbent pads and containment booms should be stored on-site to facilitate the clean-up of accidental petroleum releases.

7. All deliberately exposed soil or under-layer materials used in the project near water should be protected from erosion and stabilized as soon as possible with geotextile, filter fabric or native or non-invasive vegetation matting, hydro-seeding, etc.

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E-mail: seyeng@seyeng.com

August 14, 2015

Laura Leialoha Phillips McIntyre, AICP
Program Manager
Environmental Planning Office (EPO)
Department of Health (DOH)
P.O. Box 3378
Honolulu, Hawaii 96801-3378

Subject: Your Response of August 13, 2015 Regarding the
Pre-Assessment Notice for the
Proposed Board of Water Supply
Hauula Well Replacement Project

Dear Ms. McIntyre:

Thank you for your response regarding the Pre-Assessment Notice for the proposed Hauula Well Replacement project. We will review the DOH links provided for the standard comments and available strategies recommend and will adhere to all applicable standard comments as it relates to the Board of Water Supply Environmental Assessment process.

If you have any questions, please call me at 737-1875.

Very truly yours,

Howard K. Endo, Ph.D., P.E.
President

HKE:sno

cc: Scot Muraoka/BWS

DAVID Y. IGE
GOVERNOR OF HAWAII

VIRGINIA PRESSLER, M.D.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HI 96801-3378

In reply, please refer to:
File:

EPO 15-205

August 14, 2015

Mr. Howard K. Endo, Ph.D., P.E.
Shimabukuro, Endo & Yoshizaki, Inc.
1126 12th Avenue, Room 309
Honolulu, Hawaii 96816-3715
Via e-mail: seyeng@seyeng.com

Dear Mr. Endo:

SUBJECT: Pre-Assessment (PA) for the Hauula Well Replacement Project
54-177 Hanaimoa Street
TMK: 5-4-015:30

The Department of Health (DOH), Environmental Planning Office (EPO), acknowledges receipt of your PA to our office on August 14, 2015. Thank you for allowing us to review and comment on the proposed project. The PA was routed to the Safe Drinking Water Branch. They will provide specific comments to you if necessary. EPO recommends that you review the standard comments and available strategies to support sustainable and healthy design provided at: http://health.hawaii.gov/epo/home/landuse-planning-review-program. Projects are required to adhere to all applicable standard comments.

As you are most likely aware, the Safe Drinking Water Branch (SDWB) administers programs in the areas of: 1) public water systems; 2) underground injection control; and 3) groundwater protection. For additional information regarding any of these programs, please contact the Safe Drinking Water Branch at 586-4258 and/or sdwb@doh.hawaii.gov. Additional information is available at: http://health.hawaii.gov/sdwb

EPO also encourages you to examine and utilize the Hawaii Environmental Health Portal. The portal provides links to our e-Permitting Portal, Environmental Health Warehouse, Groundwater Contamination Viewer, Hawaii Emergency Response Exchange, Hawaii State and Local Emission Inventory System, Water Pollution Control Viewer, Water Quality Data, Warnings, Advisories and Postings. The Portal is continually updated. Please visit it regularly at: https://eha-cloud.doh.hawaii.gov

We request that you utilize all of this information on your proposed project to increase sustainable, innovative, inspirational, transparent and healthy design.

Mahalo nui loa,

Laura Leialoha Phillips McIntyre, AICP
Program Manager, Environmental Planning Office

c: SDWB {via email only}

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
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September 8 2015

Ms. Jessica E. Wooley, Director
State of Hawaii
Office of Environmental Control (OEQC)
Department of Health
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

Subject: Your Response of September 8, 2015 Regarding the
Pre-Assessment Notice for the
Proposed Board of Water Supply
Hauula Well Replacement Project

Dear Ms. Wooley:

Thank you for your response regarding the Pre-Assessment Notice for the proposed Hauula Well Replacement project. We acknowledge and will consult the OEQC link on using industry appropriate best practices on addressing the installation of the new well and the disposition of the old well.

Your office will be kept abreast during the Environmental Assessment process for the subject project.

If you have any questions, please call me at 737-1875.

Very truly yours,

Howard K. Endo, Ph.D., P.E.
President

HKE:sno

cc: Scot Muraoka/BWS

DAVID Y. IGE
GOVERNOR OF HAWAII

JESSICA E. WOOLEY
DIRECTOR

STATE OF HAWAIʻI
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
Department of Health
235 South Beretania Street, Suite 702
Honolulu, Hawaiʻi 96813
Telephone (808) 586-4185
Facsimile (808) 586-4186
Email: oeqchawaii@doh.hawaii.gov

September 8, 2015

Shimabukuro, Endo & Yoshaizaki, INC.
Attn: Howard K. Endo. President
1126 12th Avenue, Room 309
Honolulu, HI 96816

Dear Mr. Endo,

SUBJECT: Chapter 343, Hawaii Revised Statues Early Consultation Request for the Proposed Hauula Well Replacement project, Hauula, Oahu, Hawaii.

The Office of Environmental Quality Control has reviewed the information contained in your August 10, 2015 letter about the subject project, and offers the following standard comments for your consideration.

Pursuant to Chapter 343, Hawaii Revised Statues, and the provisions of Chapter 11-200, Hawaii Administrative Rules, as an Agency Action by the City and County of Honolulu Board of Water Supply (BWS), this agency is the "Proposing and Determination agency" that implements the environmental review process for this project by either 1) anticipating a Finding of No Significant Impact and then preparing a Draft Environmental Assessment (EA) for public review and comment, or 2) based on their judgment and experience, deciding to by-pass the EA step and proceeding directly to the Environmental Impact Statement (EIS) Preparation Notice step if significant effects may or will occur from the project.

In the event that the agency makes a determination to prepare an EIS, either initially or if significant impacts are identified in the Final EA, then the Mayor or his designated representative would determine the acceptability of the subsequent Final EIS.

As to specific comments on the proposed project, at this time we suggest the consideration of using the industry appropriate best practices while working on the new well. The OEQC has a prepared guidance for Well Development that we highly recommend consulting before you begin the EA. Here is the link for our online Well Guidelines. We also recommend that the disposition of the old well be addressed in the EA.

We look forward to reviewing a Draft EA that includes sufficiently thorough information to enable recipients and the public to understand the project and to be able to provide substantive feedback.

Thank you for your role in Hawaii's environmental review process and for the opportunity to comment at this early stage of this project. As you prepare to submit documents for publication and public review in The Environmental Notice, we appreciate your diligence in using current and correct publication forms available online. If you have any questions as you navigate this process, please consult our website at http://health.hawaii.gov/oeqc (see in particular the link to the Environmental Assessment Preparation Toolkit on the right panel) or contact our office at (808) 586-4185.

Sincerely,

Jessica E. Wooley, Director

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
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1126 12th Avenue, Room 309
Honolulu, Hawaii 96816-3715
Ph.: (808) 737-1875 FAX: (808) 734-5516
E-mail: seyeng@seyeng.com

August 31, 2015

Ms. Joanna L. Seto, P.E., Chief
State of Hawaii
Department of Health
Safe Drinking Water Branch
919 Ala Moana Boulevard, Suite 309
Honolulu, Hawaii 96814-4920

Subject: Your Response of August 25, 2015 Regarding the
Pre-Assessment Notice for the
Proposed Board of Water Supply
Hauula Well Replacement Project

Dear Ms. Seto:

We appreciate the comments of the Department of Health, Safe Drinking Water Branch, regarding drinking water serving the public water system in compliance with HAR Section 11-20-29 and necessary documentation and assessments to ensure drinking water standards and source water protection measures.

Your office will be kept abreast during the Environmental Assessment process for the subject project.

If you have any questions, please call me at 737-1875.

Very truly yours,

Howard K. Endo, Ph.D., P.E.
President

HKE:sno

cc: Scot Muraoka/BWS

DAVID Y. IGE
GOVERNOR OF HAWAII

VIRGINIA PRESSLER, M.D.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
SAFE DRINKING WATER BRANCH
919 ALA MOANA BLVD., ROOM 308
HONOLULU, HI 96814-4920

In reply, please refer to:
File: SDWB
Hauula Well01.docx

August 25, 2015

RECEIVED AUG 3 1 2015

Mr. Howard K. Endo
Shimabukuro, Endo & Yoshizaki, Inc.
1126 12th Avenue, Room 309
Honolulu, Hawaii 96816-3715

Dear Mr. Endo:

SUBJECT: HAUULA WELL REPLACEMENT PROJECT
PRE-ENVIRONMENTAL ASSESSMENT
HAUULA, OAHU

The Safe Drinking Water Branch (SDWB) has reviewed the subject document and has the following comments:

1. Projects that propose development of new sources of drinking water serving or proposed to serve a public water system must comply with the terms of HAR, Section 11-20-29, "Use of new sources of raw water for public water systems." This section requires that all new public water system sources be approved by the Director of Health (Director) prior to its use. Such approval is based primarily upon the submission of a satisfactory engineering report which addresses the requirements set in HAR, Section 11-20-29.

2. The engineering report must identify all potential sources of contamination and evaluate alternative control measures which could be implemented to reduce or eliminate the potential for contamination, including treatment of the water source. In addition, water quality analyses for all regulated contaminants, performed by a laboratory certified by the State Laboratories Division of the State of Hawaii, must be submitted as part of the report to demonstrate compliance with all drinking water standards. Additional parameters may be required by the Director for this submittal or additional tests required upon his or her review of the information submitted.

3. All sources of public water systems must undergo a source water assessment which will delineate a source water protection area. This process is preliminary to the creation of a source water protection plan for that source and activities which will take place to protect the source of drinking water.

4. All projects which propose the establishment of a potentially contaminating activity (as identified in the Hawai`i Source Water Assessment Plan) within the source water protection area of an existing source of water for a public water supply should address this potential and activities that will be implemented to prevent or reduce the potential for contamination of the drinking water source.

If there are any questions, please call Ms. Jennifer Nikaido of the SDWB Engineering Section at 586-4258.

Sincerely,

Joanna L Seto

JOANNA L. SETO, P.E., CHIEF
Safe Drinking Water Branch

JN:cb

c: EPO Log #15-205 (via email only)

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
Civil, Environmental & Structural Engineers
1126 12th Avenue, Room 309
Honolulu, Hawaii 96816-3715
Ph.: (808) 737-1875 FAX: (808) 734-5516
E-mail: seyeng@seyeng.com

September 2, 2015

Mr. Russell Y. Tsujii, Land Administrator
State of Hawaii
Department of Land and Natural Resources
P.O. Box 621
Honolulu, Hawaii 96809

Subject: Your Response of August 31, 2015 Regarding the Pre-Assessment Notice for the Proposed Board of Water Supply Hauula Well Replacement Project

Dear Mr. Tsujii:

Thank you for your response regarding the Pre-Assessment Notice for the proposed Hauula Well Replacement project. We acknowledge that: 1) the Land Division - Oahu District has no comments at this time; 2) the Office of Conservation & Coastal Lands has noted that the project is not in a conservation district; 3) Engineering Division has noted that the project is in located Flood Zones X and D; 4) no other comments were received as of your suspense date.

Your office will be kept abreast during the Environmental Assessment process for the subject project.

If you have any questions, please call me at 737-1875.

Very truly yours,

Howard K. Endo, Ph.D., P.E.
President

HKE:sno

cc: Scot Muraoka/BWS

Sharon Oshiro

From: Steve.Molmen@hawaii.gov
Sent: Wednesday, September 02, 2015 8:40 AM
To: seyeng@seyeng.com
Subject: Pre-Assessment Comments, Environmental Assessment (EA) for the Hauula Well Replacement Project
Attachments: 20150902082243558.pdf

Dear Mr. Endo,

Attached, please find our comments on the subject project. No hard copy will be sent.

Best regards,

Steve Molmen, Supervising Land Agent
Land Division
Department of Land and Natural Resources
State of Hawaii
1151 Punchbowl Street, Suite 220
Honolulu, HI 96809-0621
Tel.: (808) 587-0439
Fax: (808) 312-6357
Email: steve.molmen@hawaii.gov

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 SEP 2 2015

August 31, 2015

Shimabukuro, Endo & Yoshizaki, Inc.
Attn: Howard K. Endo, President
1126 12th Avenue, Room 309
Honolulu, Hawaii 96816-3715

via email: seyeng@seyeng.com

Dear Mr. Endo,

SUBJECT: Pre-Assessment Comments, Environmental Assessment (EA) for the Hauula Well Replacement Project

Thank you for the opportunity to review and comment on the subject matter. The Department of Land and Natural Resources' (DLNR) Land Division distributed or made available a copy of your report pertaining to the subject matter to DLNR Divisions for their review and comments.

At this time, enclosed are comments from the (1) Land Division - Oahu District; (2) Office of Conservation and Coastal Lands; and (3) Engineering Division. No other comments were received as of our suspense date. Should you have any questions, please feel free to call Supervising Land Agent Steve Molmen at 587-0439. Thank you.

Sincerely,

Russell Y. Tsuji
Land Administrator

Enclosure(s)

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

August 17, 2015

MEMORANDUM

TO: **DLNR Agencies:**
___Div. of Aquatic Resources
___Div. of Boating & Ocean Recreation
_X_Engineering Division
___Div. of Forestry & Wildlife
___Div. of State Parks
_X_Commission on Water Resource Management
_X_Office of Conservation & Coastal Lands
_X_Land Division – Oahu District
_X_Historic Preservation

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Pre-Assessment Comments, Environmental Assessment (EA) for the Hauula Well Replacement Project
LOCATION: 54-177 Hanaimoa Street; Tax Map Key 5-4-015:30
APPLICANT: City and County of Honolulu Board of Water Supply by its consultant Shimabukuro, Endo & Yoshizaki, Inc.

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document.

Please submit any comments by August 31, 2015. If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

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

Signed: _____
Print Name: _____
Date: 8/26/15 SL

OA-16-40

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

RECEIVED
OFFICE OF CONSERVATION
AND COASTAL LANDS

2015 AUG 19 A 11:32

DEPT OF LAND & NATURAL RESOURCES
STATE OF HAWAII

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

August 17, 2015

MEMORANDUM

TO: **DLNR Agencies:**
___Div. of Aquatic Resources
___Div. of Boating & Ocean Recreation
_X_ Engineering Division
___Div. of Forestry & Wildlife
___Div. of State Parks
_X_ Commission on Water Resource Management
_X_ Office of Conservation & Coastal Lands
_X_ Land Division – Oahu District
_X_ Historic Preservation

RECEIVED
2015 AUG 31 PM 1:51
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Pre-Assessment Comments, Environmental Assessment (EA) for the Hauula Well Replacement Project
LOCATION: 54-177 Hanaimoa Street; Tax Map Key 5-4-015:30
APPLICANT: City and County of Honolulu Board of Water Supply by its consultant Shimabukuro, Endo & Yoshizaki, Inc.

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document.

Please submit any comments by August 31, 2015. If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

Not in Conservation District.

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

Signed: _____
Print Name: SAM LEMMO
Date: _____

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

'15 AUG 18 PM 12:02 ENGINEERING

August 17, 2015

MEMORANDUM

TO: PR

DLNR Agencies:
___Div. of Aquatic Resources
___Div. of Boating & Ocean Recreation
_X_ Engineering Division
___Div. of Forestry & Wildlife
___Div. of State Parks
_X_ Commission on Water Resource Management
_X_ Office of Conservation & Coastal Lands
_X_ Land Division – Oahu District
_X_ Historic Preservation

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Pre-Assessment Comments, Environmental Assessment (EA) for the Hauula Well Replacement Project
LOCATION: 54-177 Hanaimoa Street; Tax Map Key 5-4-015:30
APPLICANT: City and County of Honolulu Board of Water Supply by its consultant Shimabukuro, Endo & Yoshizaki, Inc.

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document.

Please submit any comments by August 31, 2015. If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

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

Signed: _____
Print Name: Carty S. Chang, Chief Engineer
Date: 8/27/15

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/ Russell Y. Tsuji
REF: Pre-Assessment Comments for EA for Hauula Well Replacement Project
Oahu.059

COMMENTS

( ) We confirm that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Flood Zone ___.

(X) Please take note that the project site according to the Flood Insurance Rate Map (FIRM), is located in Zones X and D. The National Flood Insurance Program (NFIP) does not regulate developments within Zone X. Also, Zone D is an area where flood hazards are undetermined.

( ) Please note that the correct Flood Zone Designation for the project site according to the Flood Insurance Rate Map (FIRM) is ___.

( ) Please note that the project must comply with the rules and regulations of the National Flood Insurance Program (NFIP) presented in Title 44 of the Code of Federal Regulations (44CFR), whenever development within a Special Flood Hazard Area is undertaken. If there are any questions, please contact the State NFIP Coordinator, Ms. Carol Tyau-Beam, of the Department of Land and Natural Resources, Engineering Division at (808) 587-0267.

Please be advised that 44CFR indicates the minimum standards set forth by the NFIP. Your Community's local flood ordinance may prove to be more restrictive and thus take precedence over the minimum NFIP standards. If there are questions regarding the local flood ordinances, please contact the applicable County NFIP Coordinators below:

( ) Mr. Mario Siu Li at (808) 768-8098 of the City and County of Honolulu, Department of Planning and Permitting.

( ) Mr. Carter Romero (Acting) at (808) 961-8943 of the County of Hawaii, Department of Public Works.

( ) Ms. Carolyn Cortez at (808) 270-7253 of the County of Maui, Department of Planning.

( ) Mr. Stanford Iwamoto at (808) 241-4896 of the County of Kauai, Department of Public Works.

( ) The applicant should include project water demands and infrastructure required to meet water demands. Please note that the implementation of any State-sponsored projects requiring water service from the Honolulu Board of Water Supply system must first obtain water allocation credits from the Engineering Division before it can receive a building permit and/or water meter.

( ) The applicant should provide the water demands and calculations to the Engineering Division so it can be included in the State Water Projects Plan Update.

( ) Additional Comments: _____

_____

( ) Other: _____

_____

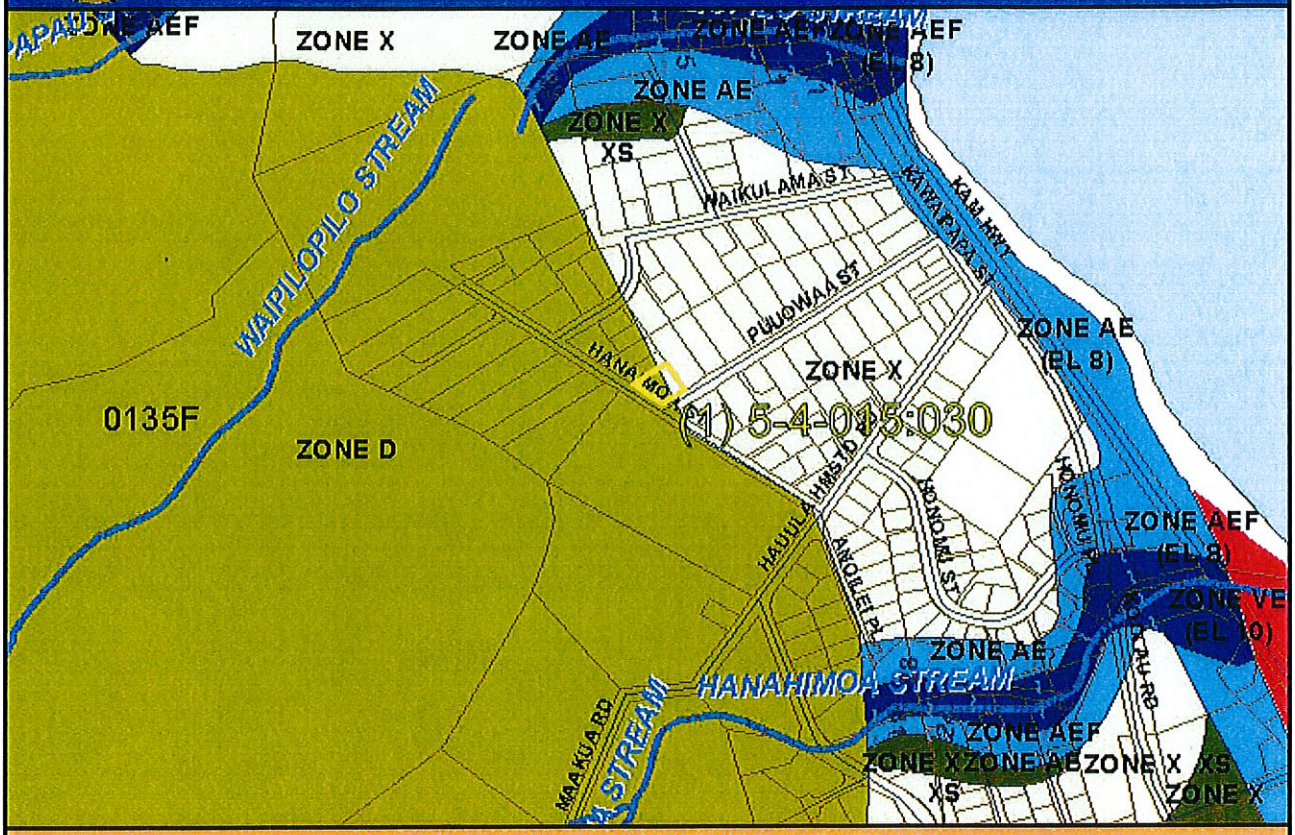
Should you have any questions, please call Mr. Dennis Imada of the Planning Branch at 587-0257.

Signed: _____
CARTY S. CHANG, CHIEF ENGINEER

Date: 8/27/15

State of Hawaii

FLOOD HAZARD ASSESSMENT REPORT



NATIONAL FLOOD INSURANCE PROGRAM

FLOOD ZONE DEFINITIONS

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD – The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zone A, AE, AH, AO, V, and VE. The Base Flood Elevation (BFE) is the water-surface elevation of the 1% annual chance flood. Mandatory flood insurance purchase applies in these zones:

- **Zone A:** No BFE determined.
- **Zone AE:** BFE determined.
- **Zone AH:** Flood depths of 1 to 3 feet (usually areas of ponding); BFE determined.
- **Zone AO:** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined.
- **Zone V:** Coastal flood zone with velocity hazard (wave action); no BFE determined.
- **Zone VE:** Coastal flood zone with velocity hazard (wave action); BFE determined.
- **Zone AEF:** Floodway areas in Zone AE. The floodway is the channel of stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without increasing the BFE.

NON-SPECIAL FLOOD HAZARD AREA – An area in a low-to-moderate risk flood zone. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.

- **Zone XS (X shaded):** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
- **Zone X:** Areas determined to be outside the 0.2% annual chance floodplain.

OTHER FLOOD AREAS

- **Zone D:** Unstudied areas where flood hazards are undetermined, but flooding is possible. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.

PROPERTY INFORMATION

COUNTY:	HONOLULU
TMK NO:	(1) 5-4-015-030
PARCEL ADDRESS:	
FIRM INDEX DATE:	NOVEMBER 05, 2014
LETTER OF MAP CHANGE(S):	NONE
FEMA FIRM PANEL(S):	15003C0135F
PANEL EFFECTIVE DATE:	SEPTEMBER 30, 2004

PARCEL DATA FROM:	APRIL 2014
IMAGERY DATA FROM:	MAY 2006

IMPORTANT PHONE NUMBERS

County NFIP Coordinator	
City and County of Honolulu	
Mario Siu-Li, CFM	(808) 768-8098
State NFIP Coordinator	
Carol Tyau-Beam, P.E., CFM	(808) 587-0267

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

September 28, 2015

Shimabukuro, Endo & Yoshizaki, Inc.
Attn: Howard K. Endo, President
1126 12th Avenue, Room 309
Honolulu, Hawaii 96816-3715

via email: seyeng@seyeng.com

Dear Mr. Endo,

SUBJECT: Pre-Assessment Comments, Environmental Assessment (EA) for the Hauula Well Replacement Project

Thank you for the opportunity to review and comment on the subject matter. In addition to the comments sent to you dated August 31, 2015, enclosed are additional comments from the State Historic Preservation Division. Should you have any questions, please feel free to call Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Sincerely,

Russell Y. Tsuji
Land Administrator

Enclosure(s)

Duplicate

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

SL

2015.03079

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

August 17, 2015

MEMORANDUM

TO: **DLNR Agencies:**
___Div. of Aquatic Resources
___Div. of Boating & Ocean Recreation
_X_ Engineering Division
___Div. of Forestry & Wildlife
___Div. of State Parks
_X_ Commission on Water Resource Management
_X_ Office of Conservation & Coastal Lands
_X_ Land Division – Oahu District
_X_ Historic Preservation

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Pre-Assessment Comments, Environmental Assessment (EA) for the Hauula Well Replacement Project
LOCATION: 54-177 Hanaimoa Street; Tax Map Key 5-4-015:30
APPLICANT: City and County of Honolulu Board of Water Supply by its consultant Shimabukuro, Endo & Yoshizaki, Inc.

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document.

Please submit any comments by August 31, 2015. If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

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

Signed: Alan Downer
Print Name: ALAN DOWNER
Date: 9.23.15

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

KEKOA KALUHIWA
FIRST DEPUTY

W. ROY HARDY
ACTING DEPUTY DIRECTOR - WATER

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

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
KAKUHIHEWA BUILDING
601 KAMOKILA BLVD, STE 555
KAPOLEI, HAWAII 96707

August 19, 2015

Mr. Jason H. Takaki, Head
Capital Projects Division
Board of Water Supply
City and County of Honolulu
630 South Beretania Street
Honolulu, HI 96843

Log No. 2015.03079
Doc. No. 1508GC12
Archaeology

Dear Mr. Takaki:

SUBJECT: **Chapter 6E-8 Historic Preservation Review –**
City and County Board of Water Supply
Hauula Well Replacement (State Well No. 2655-01; Formerly Well No. 394)
Hau'ula Ahupua'a, Ko'olauloa District, Island of O'ahu
TMK: (1) 5-4-015:030

Thank you for the opportunity to review this submittal which we received from Shimabukuro, Endo and Yoshizaki, Inc., on August 12, 2015. The submittal indicates that the City and County of Honolulu, Board of Water Supply (BWS) proposes to replace the existing Hau'ula Well (State Well No. 2655-01) located on the 4,968 square foot parcel owned by the City and County and identified as TMK: (1) 5-4-015:030.

The submittal indicates that the proposed project will consist of replacing the existing well with a new well, and that an Environmental Assessment will prepared for this well replacement project. At this time, we have insufficient information to make a determination for the proposed project and its effect to potential historic properties. Therefore, we request the following information:

(1) Narrative description of the proposed project, including total area in acres and the nature of any land alteration, new construction, demolition or modification of existing structures;

(2) A TMK map showing the full extent of the project area within the affected parcels;

(3) Description of current vegetation cover and condition of the project area, including structures, roads, wall or other features within the project area (photographs preferred);

(4) Summary of land use history, such as previous intensive cultivation, grubbing or grading; and

(5) Copies or dates of previously approved permits, survey reports, and/or prior SHPD review letters that pertain to the property.

Please contact me at (808) 692-8019 or at Susan.A.Lebo@hawaii.gov if you have any questions regarding this letter.

Aloha,

Susan A. Lebo

Susan A. Lebo, PhD
Archaeology Branch Chief

cc: Jonathan Suzuki, BWS (jsuzuki@hbws.org)
Howard Endo, P.E. SEY (seyeng@seyeng.com)

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
Civil, Environmental & Structural Engineers
1126 12th Avenue, Room 309
Honolulu, Hawaii 96816-3715
Ph.: (808) 737-1875 FAX: (808) 734-5516
E-mail: seyeng@seyeng.com

August 31, 2015

Susan A. Lebo, Ph.D.
Archaeology Branch Chief
State Historic Preservation Division (SHPD)
Department of Land and Natural Resources
601 Kamokila Blvd., Suite 555
Kapolei, Hawaii 96707

Subject: Your Response of August 25, 2015 Regarding the
Pre-Assessment Notice for the
Proposed Board of Water Supply
Hauula Well Replacement Project

Dear Dr. Lebo:

Thank you for your response (Log No. 2015.03079, Doc. No 1508GC12 Archaeology) regarding the Pre-Assessment Notice for the proposed Hauula Well Replacement project. The following information is provided in the order of items requested in your letter to assist in evaluating the presence of historic properties in the project area that may be affected by the proposed work.

(1) Narrative Description of the Proposed Project

The Board of Water Supply (BWS) proposes to improve the reliability of Hauula Well Station by decommissioning the existing well and constructing a new well approximately 25 feet from the existing well. The well station is located at 54-177 Hanaimoa Street (see attached Figure 1) and the lot has an area of 8,751 square feet. The characteristics of the new well will be similar to the existing well. The existing well consists of 12-inch solid casing from ground surface to a depth of 75 feet below ground followed by an open hole to its terminal depth of approximately 253 feet. The yield of the existing Hauula Well is 0.25 million gallons per day and no increase in yield for the new well is planned. Land alteration activities will consist of drilling a 16-inch to 20-inch borehole underground to install the 12-inch solid casing and constructing a small square or circular concrete pad on the surface at the borehole. Google images are attached that show the location and size of the concrete pad for the existing Hauula Well.

(2) TMK Map of the of the Full Extent of Project Area

The Hauula Well Station is contained in parcel TMK 5-4-015:30 as shown in Figure 2. The well station is located in a residential neighborhood in Hauula.

(3) Description of Current Vegetation Cover and Condition of the Project Area

The current vegetation mainly consists of common grassing, palm trees, plumeria trees, and crotons. See attached Google images of existing conditions. Note that an ongoing well station renovation project is underway that will remove all trees within the well station lot so that only grass will remain.

(4) Summary of Land Use History

The existing Hauula Well was constructed around 1906 and is nearing the end of its service life. A 1939 U.S. Geological Survey Report mentioned that a small pump house owned by the City and County of Honolulu existed on the site at that time. The well was used for domestic purposes, similar to its present day use. No records of improvements to the well station were found in the BWS files between 1939 and 1981. In 1981 the pump house was demolished, and new pumps and a motor control center were constructed. The next improvements started in 2013 and is ongoing with the well station renovation station project. The renovation project will replace the pumps, motor control center, driveway, and piping at the site.

(5) Previously Approved Permits

Previous building permits approved by the City and County of Honolulu include: 156188 and 156189 dated July 7, 1981; 169858 dated July 13, 1982; and 714977 dated January 25, 2013 for the construction that is presently on-going.

Should you have any questions, please call me at 737-1875.

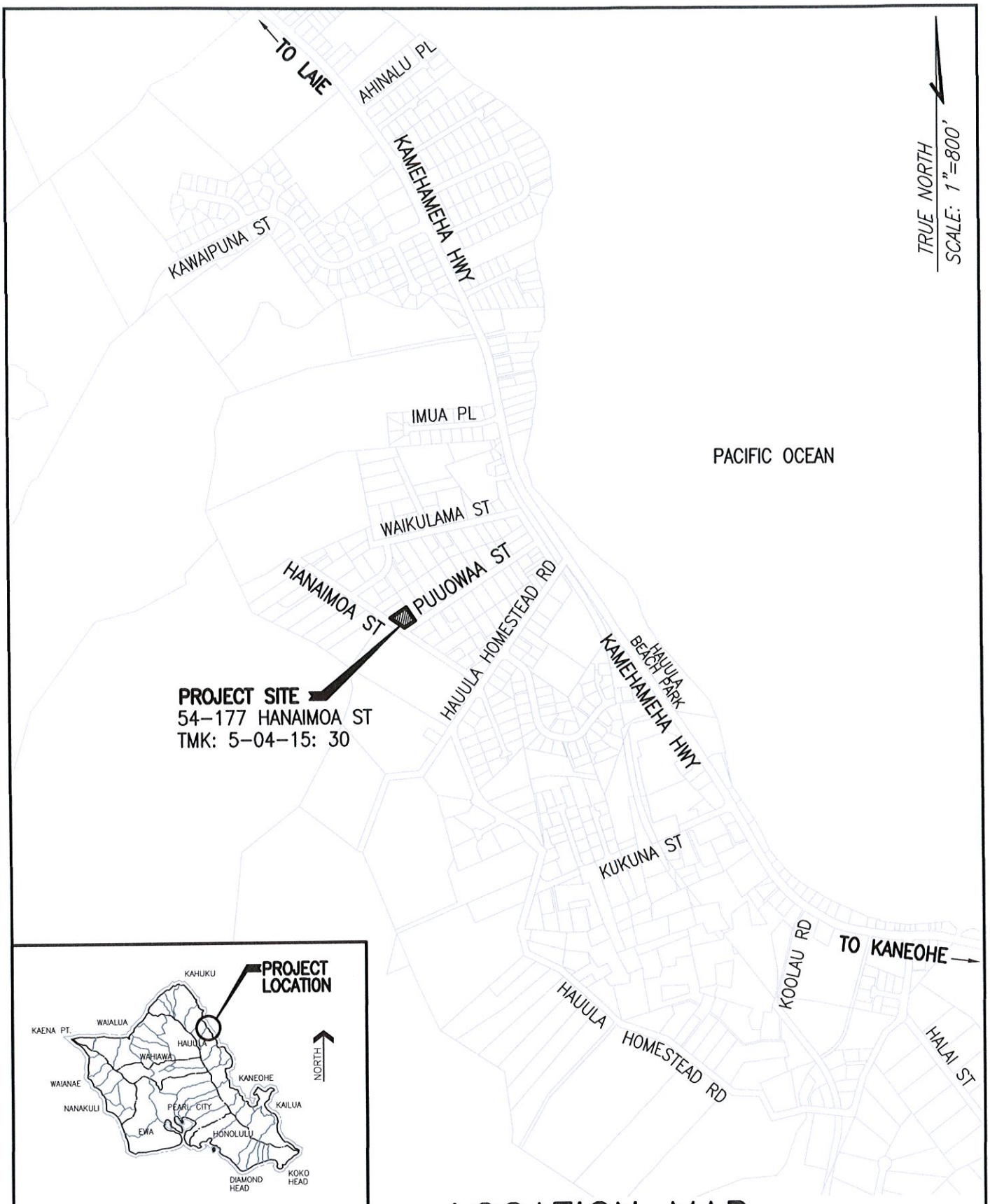
Very truly yours,

Howard K. Endo, Ph.D., P.E.
President

HKE:mja

Enclosures

cc: Scot Muraoka/BWS



VICINITY MAP
NOT TO SCALE

LOCATION MAP

SCALE: 1"=800'

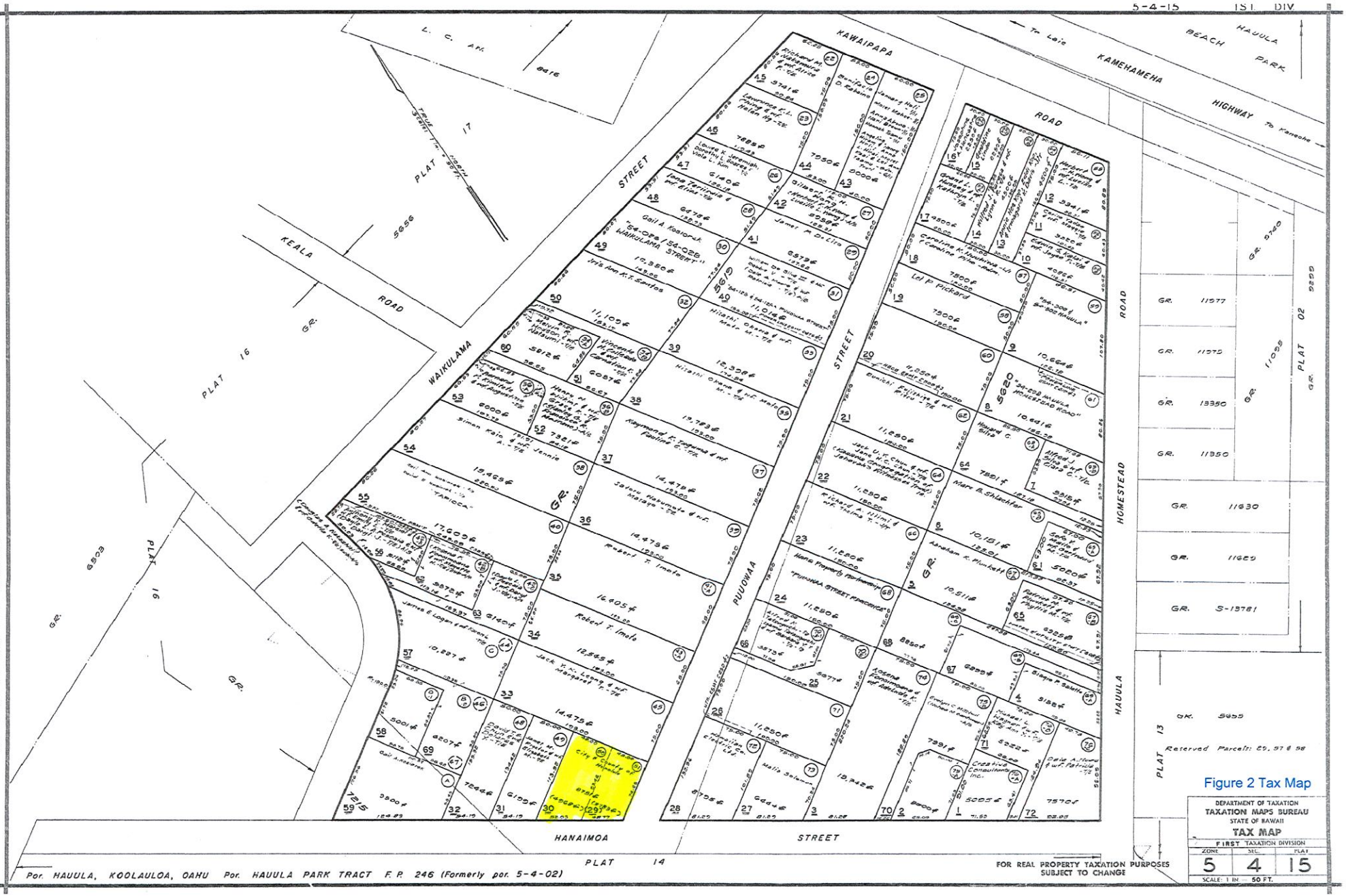
PREPARED FOR:
BOARD OF WATER SUPPLY
CITY & COUNTY OF HONOLULU

Shimabukuro, Endo & Yoshizaki, Inc.
Civil & Structural Engineers

HAUULA WELL REPLACEMENT
ENVIRONMENTAL ASSESSMENT
HAUULA, OAHU, HAWAII

LOCATION & VICINITY MAPS

FIGURE
1


5-4-15 1ST DIV
KAWAIPAPA STREET
WAIKULAMA STREET
PUUOWAA STREET
KEALA ROAD
HAULA HOMESTEAD ROAD
KAMEHAMEHA HIGHWAY
To Laie
To Kaneohe
HAULA BEACH PARK
HANAIMOA STREET
PLAT 16
PLAT 17
PLAT 13
PLAT 14
PLAT 02
GR. 6503
GR. 5656
GR. 6416
GR. 5140
GR. 11577
GR. 11575
GR. 13350
GR. 11350
GR. 11630
GR. 11629
GR. S-13781
GR. 5655
GR. 11035
5620 "54-028 HAULA HOMESTEAD ROAD"
5619 "54-028 (54-028-11) WAIKULAMA STREET"
Reserved Parcels: 69, 97 & 98
Figure 2 Tax Map
DEPARTMENT OF TAXATION
TAXATION MAPS BUREAU
STATE OF HAWAII
TAX MAP
FIRST TAXATION DIVISION
ZONE 5 SEC. 4 PLAT 15
SCALE: 1 IN. = 50 FT.
Por. HAULA, KOOLAULOA, OAHU Por. HAULA PARK TRACT F. P. 246 (Formerly por. 5-4-02)
FOR REAL PROPERTY TAXATION PURPOSES
SUBJECT TO CHANGE
DWG. NO.: 5199
SOURCE: F. P. 246
BY: J.Y.L.N. DATE: Oct. 31, 1961

Google 54 Puuowaa St

Image capture: Aug 2011 © 2015 Google

Hauula, Hawaii

Street View - Aug 2011 View of Hauula Well from Puuowaa Street looking North.

Google 54 Hanaimoa St

Image capture: Aug 2011 © 2015 Google

Hauula, Hawaii

Street View - Aug 2011 View of Hauula Well from Hanaimoa Street looking East.

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

KEKOA KALUHIWA
FIRST DEPUTY

JEFFREY T. PEARSON
DEPUTY DIRECTOR - WATER

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

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
KAKUHIHEWA BUILDING
601 KAMOKILA BLVD, STE 555
KAPOLEI, HAWAII 96707

September 3, 2015

Mr. Jason H. Takaki, Head
Capital Projects Division
Board of Water Supply
City and County of Honolulu
630 South Beretania Street
Honolulu, HI 96843

Log No. 2015.03302
Doc. No. 1509GC01
Archaeology, Architecture

Dear Mr. Takaki:

SUBJECT: **Chapter 6E-8 Historic Preservation Review –**
City and County Board of Water Supply
Hau'ula Well Replacement (State Well No. 2655-01; Formerly Well No. 394)
Hau'ula Ahupua'a, Ko'olauloa District, Island of O'ahu
TMK: (1) 5-4-015:030

Thank you for responding to SHPD's request for additional information (August 19, 2015; Log No: 2015.03079, Log No: 1508GC12) regarding the City and County of Honolulu, Board of Water Supply's (BWS) proposed Hau'ula Well Replacement Project. We received the requested information on September 2, 2015.

The BWS proposes to replace the existing Hau'ula Well which was constructed in 1906 with a new well approximately 25 feet from the existing well. A 1939 U.S. Geological Survey report indicates that a pump house and well existed on the property. The pump house was demolished in 1981 and was replaced with new pumps and a motor control center. Ongoing station renovations and improvements began in 2013.

A review of our records shows that no archaeological historic properties have been identified within the project parcel. The USDA identifies the soils within this parcel as Waialua silty clay (Foote et al. 1972).

Based on the above information, SHPD's determination is **no historic properties affected**. The permit may be issued.

Please attach to the permit: In the unlikely event that subsurface historic resources, including human skeletal remains, structural remains, cultural deposits, artifacts, sand deposits, or sink holes are identified during the demolition and/or construction work, cease work in the immediate vicinity of the find, protect the find from additional disturbance, and contact the State Historic Preservation Division, at (808) 692-8015.

Please contact me at Susan.A.Lebo@hawaii.gov or at (808) 692-8019 if you have any questions regarding this letter.

Aloha,

Susan A. Lebo

Susan A. Lebo, PhD
Archaeology Branch Chief

cc: Jonathan Suzuki, BWS (jsuzuki@hbws.org)
Scott Muraoka, BWS (smuraoka@hbws.org)
Howard Endo, P.E. SEY (seyeng@seyeng.com)

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
Civil, Environmental & Structural Engineers
1126 12th Avenue, Room 309
Honolulu, Hawaii 96816-3715
Ph.: (808) 737-1875 FAX: (808) 734-5516
E-mail: seyeng@seyeng.com

September 4, 2015

Susan A. Lebo, Ph.D.
Archaeology Branch Chief
State Historic Preservation Division
Department of Land and Natural Resources
601 Kamokila Boulevard, Suite 555
Kapolei, Hawaii 96707

Subject: Your Response of September 3, 2015 Regarding the
Pre-Assessment Notice for the
Proposed Board of Water Supply
Hauula Well Replacement Project

Dear Dr. Lebo:

Thank you for your response regarding the Pre-Assessment Notice for the proposed Hauula Well Replacement project. We acknowledge that your department has determined that there are no historic properties affected.

Your office will be kept abreast during the Environmental Assessment process for the subject project.

If you have any questions, please call me at 737-1875.

Very truly yours,

Howard K. Endo, Ph.D., P.E.
President

HKE:sno

cc: Scot Muraoka/BWS

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
Civil, Environmental & Structural Engineers
1126 12th Avenue, Room 309
Honolulu, Hawaii 96816-3715
Ph.: (808) 737-1875 FAX: (808) 734-5516
E-mail: seyeng@seyeng.com

September 4, 2015

Kamana'opono M. Crabbe, Ph.D.
State of Hawaii
Office of Hawaiian Affairs
Attention: OHA Compliance Enforcement
560 N. Nimitz Highway, Suite 200
Honolulu, Hawaii 96817

Subject: Your Response of August 26, 2015 Regarding the
Pre-Assessment Notice for the
Proposed Board of Water Supply
Hauula Well Replacement Project

Dear Dr. Crabbe:

Thank you for your response regarding the Pre-Assessment Notice for the proposed Hauula Well Replacement project. We acknowledge that your department has no comments or objections at this time.

Your office will be kept abreast during the Environmental Assessment process for the subject project.

If you have any questions, please call me at 737-1875.

Very truly yours,

Howard K. Endo, Ph.D., P.E.
President

HKE:sno

cc: Scot Muraoka/BWS

PHONE (808) 594-1888 FAX (808) 594-1938

STATE OF HAWAI'I
OFFICE OF HAWAIIAN AFFAIRS
560 N. NIMITZ HWY., SUITE 200
HONOLULU, HAWAI'I 96817

HRD 15-7576

August 26, 2015

Howard K. Endo, Ph.D., P.E.
Shimabukuro, Endo & Yoshizaki, Inc.
1126 12th Avenue, Room 309
Honolulu, Hawai'i 96816

Re: Hau'ula Well Replacement Project Pre-Assessment Request for Comments
Hau'ula Ahupua'a, Ko'olauloa Moku, O'ahu Mokupuni
TMK: (1) 5-4-015:030

Aloha Mr. Endo:

The Office of Hawaiian Affairs (OHA) received your letter dated August 10, 2015, requesting comments on the above-titled project. Given the project descriptions provided, our agency has no comments at this time. Should you have any questions, please contact Everett Ohta at 594-0231 or everetto@oha.org.

'O wau iho nō me ka 'oia 'i'o,

Kamana'opono M. Crabbe, Ph.D.
Ka Pouhana, Chief Executive Officer

KC: rg

**Please address replies and similar, future correspondence to our agency:*
Dr. Kamana'opono Crabbe
Attn: OHA Compliance Enforcement
560 N. Nimitz Hwy., Ste. 200
Honolulu, Hawai'i 96817

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
Civil, Environmental & Structural Engineers
1126 12th Avenue, Room 309
Honolulu, Hawaii 96816-3715
Ph.: (808) 737-1875 FAX: (808) 734-5516
E-mail: seyeng@seyeng.com

August 31, 2015

Mr. Leo R. Asuncion
Acting Director
State of Hawaii
Office of Planning
P.O. Box 2359
Honolulu, Hawaii 96804

Subject: Your Response of August 25, 2015 Regarding the
Pre-Assessment Notice for the
Proposed Board of Water Supply
Hauula Well Replacement Project

Dear Mr. Asuncion:

We appreciate the Office of Planning comments regarding conformance to the objectives and policies of the Hawaii State Plan and coastal zone management program. In addition, we will review the references listed on sediment and storm water control to safeguard the nearshore environment from pollution.

Your office will be kept abreast during the Environmental Assessment process for the subject project.

If you have any questions, please call me at 737-1875.

Very truly yours,

Howard K. Endo, Ph.D., P.E.
President

HKE:sno

cc: Scot Muraoka/BWS

OFFICE OF PLANNING
STATE OF HAWAII

DAVID Y. IGE
GOVERNOR

LEO R. ASUNCION
ACTING DIRECTOR
OFFICE OF PLANNING

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone: (808) 587-2846
Fax: (808) 587-2824
Web: http://planning.hawaii.gov/

Ref. No. P-14882

RECEIVED AUG 2 8 2015

August 25, 2015

Mr. Howard K. Endo, Ph.D., P.E.
President
Shimabukuro, Endo & Yoshizaki, Inc.
1126 12th Avenue, Room 309
Honolulu, Hawaii 96816-3715

Dear Mr. Endo:

Subject: Pre-consultation for the Proposed Hauula Well Replacement Project, Hauula, Oahu; TMK: (1) 5-4-015:030

Thank you for the opportunity to provide comments on the pre-consultation request, dated August 10, 2015, for a Draft Environmental Assessment (Draft EA) for the Hauula well replacement project. The Draft EA is being prepared on behalf of the Honolulu Board of Water Supply.

It is our understanding that the Honolulu Board of Water Supply proposes to improve the reliability of the well station serving the Hauula area by constructing a new well next to the existing well. The characteristics of the new well will be similar to the existing well. The well consists of 12-inch solid casing from ground surface to a depth of 75 feet, followed by an open hole to its terminal depth of approximately 253 feet. No increase in potable water yield from the station is expected as the new well will replace an existing well.

The Office of Planning (OP) has reviewed the transmitted material and has the following comments to offer:

1. Pursuant to the Hawaii Administrative Rules § 11-200-17(h) – land use plans, policies, and controls – this well project must demonstrate that it is consistent with a number of state environmental, social, and economic goals and policies for land-use and housing development. OP provides technical assistance to state and county agencies in administering the statewide planning system in Hawaii Revised Statutes (HRS) Chapter 226, the Hawaii State Plan. The Hawaii State Plan provides goals, objectives, policies, and priority guidelines for growth, development, and the allocation of resources throughout the State. The Hawaii State Plan includes diverse objectives and policies of state interest including but not limited to the economy, agriculture, the visitor industry, federal expenditure, the physical environment, facility systems, socio-cultural advancement, climate change adaptation, and

sustainability.

The Draft EA should include an analysis that addresses whether the proposed project conforms or is in conflict with the goals, objectives, policies, and priority guidelines listed in the Hawaii State Plan.

2. The coastal zone management area is defined as "all lands of the State and the area extending seaward from the shoreline to the limit of the State's police power and management authority, including the U.S. territorial sea" see HRS § 205A-1 (definition of "coastal zone management area").

   HRS Chapter 205A requires all State and county agencies to enforce the coastal zone management (CZM) objectives and policies. The Draft EA should include an assessment as to how the proposed project conforms to the CZM objectives and its supporting policies set forth in HRS § 205A-2. The assessment on compliance with HRS Chapter 205A is an important component for satisfying the requirements of HRS Chapter 343. These objectives and policies include: recreational resources, historic resources, scenic and open space resources, coastal ecosystems, economic uses, coastal hazards, managing development, public participation, beach protection, and marine resources.

3. The project site is adjacent to a rural community neighborhood in Hauula town. It is surrounded by homes, open space, heavily vegetated areas in the mauka direction, and within the Kaipapau watershed. In order to ensure the coastal waters and marine environment of the north shore of Oahu remain protected, the negative effects of stormwater runoff should be considered and mitigated. The Draft EA should summarize the area's State Land Use District classification, City and County of Honolulu zoning as they relate to density and erosion controls, and this project's relation to wetlands, perennial streams, tsunami evacuation zone, and flood zone. These items, as well as the nearshore water quality classification, should be considered when developing mitigation measures to protect the coastal ecosystem.

   OP has a number of resources available to assist in the development of projects which ensure sediment and stormwater control on land, thus protecting the nearshore environment. OP recommends consulting these guidance documents and stormwater evaluative tools when developing strategies to address polluted runoff. They offer useful techniques to keep soil and sediment in place and prevent contaminating nearshore waters, while considering the practices best suited for each project. These evaluative tools that should be used during the design process include:

- Hawaii Watershed Guidance provides direction on site-appropriate methods to safeguard Hawaii's watersheds and implement watershed plans http://files.hawaii.gov/dbedt/op/czm/initiative/nonpoint/HI Watershed Guidance Final.pdf

- Stormwater Impact Assessments can be used to identify and evaluate information on hydrology, stressors, sensitivity of aquatic and riparian resources, and management measures to control runoff, as well as consider secondary and cumulative impacts to the area http://files.hawaii.gov/dbedt/op/czm/initiative/stomwater_imapct/final_stormwater_impact_assessments_guidance.pdf

- Low Impact Development (LID), A Practitioners Guide covers a range of structural best management practices (BMP's) for stormwater control management, roadway development, and urban layout that minimizes negative environmental impacts http://files.hawaii.gov/dbedt/op/czm/initiative/lid/lid_guide_2006.pdf

If you have any questions regarding this comment letter, please contact Josh Hekekia of our office at (808) 587-2845.

Sincerely,

for Leo R. Asuncion
Acting Director

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
Civil, Environmental & Structural Engineers
1126 12th Avenue, Room 309
Honolulu, Hawaii 96816-3715
Ph.: (808) 737-1875 FAX: (808) 734-5516
E-mail: seyeng@seyeng.com

August 13, 2015

Senator Gil Riviere
Senate District 23
Hawaii State Capitol
415 S. Beretania Street, Room 217
Honolulu, Hawaii 96813

Attention: Ms. Margarete Olson, Office Manager

Subject: Your Response of August 13, 2015 Regarding the
Pre-Assessment Notice for the
Proposed Board of Water Supply
Hauula Well Replacement Project

Dear Senator Riviere:

Thank you for your response regarding the Pre-Assessment Notice for the proposed Hauula Well Replacement project.

We acknowledge your comments that you have no pre-assessment comments at this time. Your office will be kept abreast during the Environmental Assessment process for the subject project.

If you have any questions, please call me at 737-1875.

Very truly yours,

Howard K Endo

Howard K. Endo, Ph.D., P.E.
President

HKE:sno

cc: Scot Muraoka/BWS

Sharon Oshiro

From: Margarete Olson <m.olson@capitol.hawaii.gov>
Sent: Thursday, August 13, 2015 11:42 AM
To: 'seyeng@seyeng.com'
Cc: Sen. Gil Riviere
Subject: Hauula Well Replacement Project (State Well NO. 3655-01)

Aloha Sharon,

Thank you for taking the time to speak with me. We are in receipt of SEY Engineers letter dated August 10, 2015 regarding the above mentioned well. Per our conversation, Senator Riviere would like to be kept abreast of anything that occurs regarding this well station. We have no pre-assessment comments to add at this time. Mahalo!

Margarete Olson
Office Manager
Senator Gil Riviere, District 23
Oahu's North and Windward Shores
Hawaii State Capitol
415 S Beretania St, Room 217
Honolulu, HI 96813
Phone: 808-586-7331
Email: M.Olson@Capitol.Hawaii.Gov

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
Civil, Environmental & Structural Engineers
1126 12th Avenue, Room 309
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Ph.: (808) 737-1875 FAX: (808) 734-5516
E-mail: seyeng@seyeng.com

August 31, 2015

Ernest Y.W. Lau, P.E.
Manager and Chief Engineer
City & County of Honolulu
Board of Water Supply
630 South Beretania Street
Honolulu, Hawaii 96843

Subject: Your Response of August 31, 2015 Regarding the
Pre-Assessment Notice for the
Proposed Board of Water Supply
Hauula Well Replacement Project

Dear Mr. Lau:

Thank you for your response regarding the Pre-Assessment Notice for the proposed Hauula Well Replacement project. Your office will be kept abreast during the Environmental Assessment process for the subject project.

If you have any questions, please call me at 737-1875.

Very truly yours,

Howard K. Endo, Ph.D., P.E.
President

HKE:sno

cc: Scot Muraoka/BWS

BOARD OF WATER SUPPLY

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

August 31, 2015

RECEIVED AUG 3 1 2015

Howard Endo, Ph.D., P.E.
President
Shimabukuro, Endo & Yoshizaki, Inc.
1126 12th Avenue, Room 309
Honolulu, Hawaii 96816-3715

Dear Dr. Endo:

Subject: Your Letter of August 10, 2015 Regarding the Pre-Assessment Notice for the Hauula Well Replacement Environmental Assessment

Thank you for the opportunity to provide pre-assessment comments on the Board of Water Supply's Hauula Well Replacement Environmental Assessment .

The new well will be a vital replacement to an existing well that was installed over 100 years ago. As your client for this well replacement project, my staff will work directly with you as the environmental assessment is developed.

We look forward to reviewing the forthcoming preliminary draft environmental assessment.

If you have any questions, please contact Scot Muraoka, Long-Range Planning Branch of our Water Resources Division, at 748-5942.

Very truly yours,

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

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
Civil, Environmental & Structural Engineers
1126 12th Avenue, Room 309
Honolulu, Hawaii 96816-3715
Ph.: (808) 737-1875 FAX: (808) 734-5516
E-mail: seyeng@seyeng.com

August 31, 2015

Robert J. Kroning, P.E.
Director
Department of Design & Construction
City & County of Honolulu
650 South King Street, 11th Floor
Honolulu, Hawaii 96813

Subject: Your Response of August 28, 2015 Regarding the Pre-Assessment Notice for the Proposed Board of Water Supply Hauula Well Replacement Project

Dear Mr. Kroning:

Thank you for your response regarding the Pre-Assessment Notice for the proposed Hauula Well Replacement project.

We acknowledge that the Department of Design and Construction has no comments at this time. Your office will be kept abreast during the Environmental Assessment process for the subject project.

If you have any questions, please call me at 737-1875.

Very truly yours,

Howard K. Endo, Ph.D., P.E.
President

HKE:sno

cc: Scot Muraoka/BWS

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

ROBERT J. KRONING, P.E.
DIRECTOR

MARK YONAMINE, P.E.
DEPUTY DIRECTOR

August 28, 2015

RECEIVED AUG 3 1 2015

Shimabukuro, Endo & Yoshizaki, Inc.
1126 12th Avenue, Room 309
Honolulu, Hawaii 96816-3715

Attn: Howard Endo

Dear Mr. Endo:

Subject: Hauula Well Replacement project

The Department of Design and Construction does not have comments to offer on the pre-assessment for the above subject.

Thank you for the opportunity to review and comment. Should there be any questions, please contact me at 768-8480.

Sincerely,

Robert J. Kroning, P.E.
Director

RJK: cf (620393)

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
Civil, Environmental & Structural Engineers
1126 12th Avenue, Room 309
Honolulu, Hawaii 96816-3715
Ph.: (808) 737-1875 FAX: (808) 734-5516
E-mail: seyeng@seyeng.com

September 3, 2015

Ross S. Sasamura, P.E.
Director and Chief Engineer
Department of Facility Maintenance
City and County of Honolulu
1000 Uluohia Street, Suite 215
Kapolei, Hawaii 96707

Subject: Your Response of August 31, 2015 Regarding the
Pre-Assessment Notice for the
Proposed Board of Water Supply
Hauula Well Replacement Project

Dear Mr. Sasamura:

Thank you for your response regarding the Pre-Assessment Notice for the proposed Hauula Well Replacement project. We acknowledge that your department has no comments or objections at this time and that there are no affected facilities or easements on the subject property.

Your office will be kept abreast during the Environmental Assessment process for the subject project.

If you have any questions, please call me at 737-1875.

Very truly yours,

Howard K. Endo, Ph.D., P.E.
President

HKE:sno

cc: Scot Muraoka/BWS

DEPARTMENT OF FACILITY MAINTENANCE

CITY AND COUNTY OF HONOLULU

1000 Ulu'ohia Street, Suite 215, Kapolei, Hawaii 96707
Phone: (808) 768-3343 • Fax: (808) 768-3381
Website: www.honolulu.gov

KIRK CALDWELL
MAYOR

ROSS S. SASAMURA, P.E.
DIRECTOR AND CHIEF ENGINEER

EDUARDO P. MANGLALLAN
DEPUTY DIRECTOR

IN REPLY REFER TO:
DRM 15-619

August 31, 2015

Mr. Howard K. Endo, Ph.D., P.E.
Shimabukuro, Endo & Yoshizaki, Inc.
Civil, Environmental & Structural Engineers
1126 12th Avenue, Room 309
Honolulu, Hawaii 96816-3715

Dear Mr. Endo:

SUBJECT: Pre-Assessment of the Proposed Hauula Well Replacement Project

Thank you for the opportunity to review and provide pre-assessment comments regarding your letter dated August 10, 2015, on the above subject.

We have no comments or objections at this time, as we do not have any facilities or easements on the subject property.

If you have any questions, please call Mr. Kyle Oyasato of the Division of Road Maintenance at 768-3697.

Sincerely,

Ross S. Sasamura, P.E.
Director and Chief Engineer

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
Civil, Environmental & Structural Engineers
1126 12th Avenue, Room 309
Honolulu, Hawaii 96816-3715
Ph.: (808) 737-1875 FAX: (808) 734-5516
E-mail: seyeng@seyeng.com

September 10, 2015

Ms. Michele K. Nekota, Director
Department of Parks and Recreation
City and County of Honolulu
1000 Uluohia Street, Suite 309
Kapolei, Hawaii 96707

Subject: Your Response of August 31, 2015 Regarding the
Pre-Assessment Notice for the
Proposed Board of Water Supply
Hauula Well Replacement Project

Dear Ms. Nekota:

Thank you for your response regarding the Pre-Assessment Notice for the proposed Hauula Well Replacement project.

We acknowledge that the Department of Parks and Recreation has no comments as the proposed project will have no impact on any programs or any of its facilities.

If you have any questions, please call me at 737-1875.

Very truly yours,

Howard K. Endo, Ph.D., P.E.
President

HKE:sno

cc: Scot Muraoka/BWS

DEPARTMENT OF PARKS & RECREATION

CITY AND COUNTY OF HONOLULU

1000 Uluohia Street, Suite 309, Kapolei, Hawaii 96707
Phone: (808) 768-3003 • Fax: (808) 768-3053
Website: www.honolulu.gov

KIRK CALDWELL
MAYOR

MICHELE K. NEKOTA
DIRECTOR

JEANNE C. ISHIKAWA
DEPUTY DIRECTOR

August 31, 2015

RECEIVED SEP 10 2015

Mr. Howard K. Endo, Ph.D., P.E.
Shimabukuro, Endo & Yoshizaki, Inc.
1126 12th Avenue, Room 309
Honolulu, Hawaii 96816-3715

Dear Mr. Endo:

SUBJECT: Pre-Assessment Consultation Environmental Assessment
Hauula Well Replacement Project Hauula, Hawaii
TMK: 5-4-015:030

Thank you for the opportunity to review and comment at the pre consultation stage of an Environmental Assessment for the Board of Water Supply's Hauula Well Replacement Project.

The Department of Parks and Recreation has no comment. As the proposed project will have no impact on any of our programs or facilities, you may remove us as a consulted party to the balance of the EIS process.

Should you have any questions, please contact Mr. John Reid, Planner at 768-3017.

Sincerely,

Michele K. Nekota
Director

MKN:jr
(620459)

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
Civil, Environmental & Structural Engineers
1126 12th Avenue, Room 309
Honolulu, Hawaii 96816-3715
Ph.: (808) 737-1875 FAX: (808) 734-5516
E-mail: seyeng@seyeng.com

August 26, 2015

Mr. Michael D. Formby, Director
City & County of Honolulu
Department of Transportation Services
650 S. King Street, 3rd Floor
Honolulu, Hawaii 96813

Subject: Your Response of August 24, 2015 Regarding the Pre-Assessment Notice for the Proposed Board of Water Supply Hauula Well Replacement Project

Dear Mr. Formby:

Thank you for your response regarding the Pre-Assessment Notice for the proposed Hauula Well Replacement project. We acknowledge the Department of Transportation Services comments. The Hauula Well Replacement Environmental Assessment will address the following:

1. A discussion on short-term traffic impacts and mitigation measures on roadways surrounding the project area.

2. Department of Transportation Services' street usage permit requirements for any construction-related work that may require temporary closure of any traffic lane on City street(s).

3. Area Neighborhood Board, residents, businesses, emergency personnel, etc. will be kept appraised of the proposed project and impacts during construction.

4. Any construction materials and equipment will be transferred to and from the site during off-peak traffic hours (8:30 a.m. and 3:30 p.m.) to minimize disruption to traffic on local streets.

Your office will be kept abreast during the Environmental Assessment process for the subject project.

If you have any questions, please call me at 737-1875.

Very truly yours,

Howard K. Endo, Ph.D., P.E.
President

HKE:sno

cc: Scot Muraoka/BWS

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 3RD FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 768-8305 • Fax: (808) 768-4730 • Internet: www.honolulu.gov

KIRK CALDWELL
MAYOR

MICHAEL D. FORMBY
DIRECTOR

MARK N. GARRITY, AICP
DEPUTY DIRECTOR

TP8/15-620609R

RECEIVED AUG 2 6 2015

August 24, 2015

Mr. Howard K. Endo, Ph.D., P.E.
President
Shimabukuro, Endo & Yoshizaki, Inc.
1126 12th Avenue, Room 309
Honolulu, Hawaii 96816-3715

Dear Mr. Endo:

SUBJECT: Pre-Assessment Comments for an Environmental Assessment (EA), Board of Water Supply Hauula Well Replacement Project, Hauula, Oahu, Hawaii

In response to your letter dated August 10, 2015, we have the following comments:

1. The EA should discuss any short-term traffic impacts the project may have on any surrounding City roadways and measures to mitigate these impacts.

2. A street usage permit from the City's Department of Transportation Services should be obtained for any construction-related work that may require the temporary closure of any traffic lane on a City street.

3. The area Neighborhood Board, as well as the area residents, businesses, emergency personnel, etc., should be kept apprised of the details of the proposed project and the impacts, particularly during construction, the project may have on the adjoining local street area network.

4. Any construction materials and equipment should be transferred to and from the project site during off-peak traffic hours (8:30 a.m. to 3:30 p.m.) to minimize any possible disruption to traffic on the local streets.

Thank you for the opportunity to review this matter. Should you have any questions, please contact Renee Yamasaki of my staff at 768-8383.

Very truly yours,

Michael D. Formby
Director

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
Civil, Environmental & Structural Engineers
1126 12th Avenue, Room 309
Honolulu, Hawaii 96816-3715
Ph.: (808) 737-1875 FAX: (808) 734-5516
E-mail: seyeng@seyeng.com

August 24, 2015

Mr. Keith Yasui
Acting Assisting Chief
Honolulu Fire Department
636 South Street
Honolulu, Hawaii 96813

Subject: Your Response of August 20, 2015 Regarding the
Pre-Assessment Notice for the
Proposed Board of Water Supply
Hauula Well Replacement Project

Dear Mr. Yasui:

Thank you for your response regarding the Pre-Assessment Notice for the proposed Hauula Well Replacement project.

We acknowledge your comments that the Honolulu Fire Department has determined that there will be no significant impact to fire department services. Your office will be kept abreast during the Environmental Assessment process for the subject project.

If you have any questions, please call me at 737-1875.

Very truly yours,

Howard K. Endo, Ph.D., P.E.
President

HKE:sno

cc: Scot Muraoka/BWS

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

August 20, 2015

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Mr. Howard Endo, Ph.D., P.E.
President
Shimabukuro, Endo & Yoshizaki, Inc.
1126 12th Avenue, Room 309
Honolulu, Hawaii 96816-3715

Dear Dr. Endo:

Subject: Draft Environmental Assessment
Hauula Well Replacement Project
54-177 Hanaimoa Street
Hauula, Oahu, Hawaii
Tax Map Key: 5-4-015: 30

In response to your letter dated August 10, 2015, regarding the above-mentioned subject, the Honolulu Fire Department determined that there will be no significant impact to fire department services.

Should you have questions, please contact Battalion Chief Terry Seelig of our Fire Prevention Bureau at 723-7151 or tseelig@honolulu.gov.

Sincerely,

KEITH YASUI
Acting Assistant Chief

KY/DB:bh

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
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1126 12th Avenue, Room 309
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E-mail: seyeng@seyeng.com

August 24, 2015

Louis M. Kealoha, Chief of Police
City and County of Honolulu
Police Department
810 South Beretania Street
Honolulu, Hawaii 96813

Attention: Mr. Mark Tsuyemura, Management Analyst VI
Office of the Chief

Subject: Your Response of August 19, 2015 Regarding the
Pre-Assessment Notice for the
Proposed Board of Water Supply
Hauula Well Replacement Project

Dear Chief Kealoha:

Thank you for your response regarding the Pre-Assessment Notice for the proposed Hauula Well Replacement project.

We acknowledge your comments that Honolulu Police Department has no concerns at this time. Your office will be kept abreast during the Environmental Assessment process for the subject project.

If you have any questions, please call me at 737-1875.

Very truly yours,

Howard K Endo

Howard K. Endo, Ph.D., P.E.
President

HKE:sno

cc: Scot Muraoka/BWS

POLICE DEPARTMENT

CITY AND COUNTY OF HONOLULU

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

KIRK CALDWELL
MAYOR

LOUIS M. KEALOHA
CHIEF

DAVE M. KAJIHIRO
MARIE A. McCAULEY
DEPUTY CHIEFS

OUR REFERENCE MT-DK

August 19, 2015

Howard K. Endo, Ph.D., P.E.
President
Shimabukuro, Endo & Yoshizaki, Inc.
Civil, Environmental & Structural Engineers
1126 12th Avenue, Room 309
Honolulu, Hawaii 96816-3715

Dear Dr. Endo:

This is in response to your letter dated August 10, 2014, requesting pre-assessment comments on the proposed Hauula Well Replacement project.

The Honolulu Police Department has no concerns regarding the project at this time.

If there are any questions, please call Major Ryan J. Borges of District 4 (Kailua-Kaneohe-Kahuku) at 723-8639.

Thank you for the opportunity to review this project.

Sincerely,

LOUIS M. KEALOHA
Chief of Police

By
MARK TSUYEMURA
Management Analyst VI
Office of the Chief

Serving and Protecting With Aloha

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
Civil, Environmental & Structural Engineers
1126 12th Avenue, Room 309
Honolulu, Hawaii 96816-3715
Ph.: (808) 737-1875 FAX: (808) 734-5516
E-mail: seyeng@seyeng.com

August 28, 2015

Mr. Keith K. Yamamoto
Manager, Engineering
Hawaii Gas
P.O. Box 3000
Honolulu, Hawaii 96841

Subject: Your Response of August 26, 2015 Regarding the
Pre-Assessment Notice for the
Proposed Board of Water Supply
Hauula Well Replacement Project

Dear Mr. Yamamoto:

Thank you for your response regarding the Pre-Assessment Notice for the proposed Hauula Well Replacement project.

We acknowledge that Hawaii Gas has determined that the area is currently clear of utility gas facilities. Your office will be kept abreast during the Environmental Assessment process for the subject project.

If you have any questions, please call me at 737-1875.

Very truly yours,

Howard K Endo

Howard K. Endo, Ph.D., P.E.
President

HKE:sno

cc: Scot Muraoka/BWS

HAWAI'I GAS
THE CLEAN ENERGY COMPANY

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August 26, 2015

Mr. Howard K. Endo, Ph.D., P.E.
President
Shimabukuro, Endo & Yoshizaki, Inc.
Civil, Environmental & Structural Engineers
1126 12th Avenue, Room 309
Honolulu, Hawaii 96816-3715

Dear Mr. Endo:

Subject: Hauula Well Replacement Project
54-177 Hanaimoa St, Hauula, Oahu
TMK: 5-4-015:030

In response to your letter dated August 10, 2015, it has been determined that the area is currently clear of utility gas facilities.

Thank you for the opportunity to review the map. Should there be any questions, or if additional information is desired, please feel free to call Colin Chikamoto at 596-1430.

Sincerely,

Hawaii Gas

Keith K. Yamamoto
Manager, Engineering

KKY:krs

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
Civil, Environmental & Structural Engineers
1126 12th Avenue, Room 309
Honolulu, Hawaii 96816-3715
Ph.: (808) 737-1875 FAX: (808) 734-5516
E-mail: seyeng@seyeng.com

August 25, 2015

Mr. Rouen Q.W. Liu
Permits Engineer
Hawaiian Electric Company, Inc. (HECO)
P.O. Box 2750
Honolulu, Hawaii 96840-0001

Subject: Your Response of August 25, 2015 Regarding the
Pre-Assessment Notice for the
Proposed Board of Water Supply
Hauula Well Replacement Project

Dear Mr. Liu

Thank you for your response regarding the Pre-Assessment Notice for the proposed Hauula Well Replacement project.

We acknowledge that the Hawaiian Electric Company has no objections to this project and concerns of HECO's continued access for the maintenance of its facilities in the affected area. Your office will be kept abreast during the Environmental Assessment process for the subject project.

If you have any questions, please call me at 737-1875.

Very truly yours,

Howard K. Endo, Ph.D., P.E.
President

HKE:sno

cc: Scot Muraoka/BWS

Sharon Oshiro

From: Liu, Rouen <rouen.liu@hawaiianelectric.com>
Sent: Tuesday, August 25, 2015 3:25 PM
To: 'seyeng@seyeng.com'
Cc: Kuwaye, Kristen
Subject: Hauula Well Replacement project EA pre-consultation

Dear Mr. Howard Endo,

Thank you for the opportunity to comment on the subject project. Hawaiian Electric Company has no objection to the project. Should HECO have existing easements and facilities on the subject property, we will need continued access for maintenance of our facilities.
We appreciate your efforts to keep us apprised of the subject project in the planning process. As the proposed Hauula Well Replacement Project comes to fruition, please continue to keep us informed. Further along in the design, we will be better able to evaluate the effects on our system facilities.
If you have any questions, please call me at 543-7245.

Sincerely,
Rouen Q. W. Liu
Permits Engineer
Tel: (808) 543-7245
Email: Rouen.liu@hawaiianelectric.com

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
Civil, Environmental & Structural Engineers
1126 12th Avenue, Room 309
Honolulu, Hawaii 96816-3715
Ph.: (808) 737-1875 FAX: (808) 734-5516
E-mail: seyeng@seyeng.com

August 28, 2015

Mr. Les Loo, Network Engineer
Network Engineering & Planning
Hawaiian Telcom
P.O. Box 2200
Honolulu, Hawaii 96841

Subject: Your Response of August 24, 2015 Regarding the
Pre-Assessment Notice for the
Proposed Board of Water Supply
Hauula Well Replacement Project

Dear Mr. Loo:

Thank you for your response regarding the Pre-Assessment Notice for the proposed Hauula Well Replacement project.

We acknowledge that Hawaiian Telcom does not have any comments at this time. Your office will be kept abreast during the Environmental Assessment process for the subject project.

If you have any questions, please call me at 737-1875.

Very truly yours,

Howard K. Endo, Ph.D., P.E.
President

HKE:sno

cc: Scot Muraoka/BWS

Hawaiian Telcom

August 24, 2015

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Shimabukuro, Endo & Yoshizaki, Inc.
Civil & Structural Engineers
1126 12th Avenue, Room 309
Honolulu, Hawaii 96816-3715
Attention: Mr. Howard K. Endo, Ph.D., P.E.

Dear Mr. Endo:

Subject: **Environmental Pre-Assessment**
Hauula Well Station
54-177 Hanaimoa Street

Thank you for the opportunity to review and comment on the Environmental Pre-Assessment for the subject project.

Hawaiian Telcom does not have any comments to offer at this time.

If you have any questions or require assistance in the future on this project, please call me at 546-7761.

Sincerely,

Les Loo
Network Engineer
Network Engineering & Planning

cc: File [Laie]

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
Civil, Environmental & Structural Engineers
1126 12th Avenue, Room 309
Honolulu, Hawaii 96816-3715
Ph.: (808) 737-1875 FAX: (808) 734-5516
E-mail: seyeng@seyeng.com

August 13, 2015

Mr. Raymond Lam
OSP Engineer
Oceanic Time Warner Cable
200 Akamainui Street
Mililani, Hawaii 96789

Subject: Your Response of August 13, 2015 Regarding the Pre-Assessment Notice for the Proposed Board of Water Supply Hauula Well Replacement Project

Dear Mr. Lam:

Thank you for your response regarding the Pre-Assessment Notice for the proposed Hauula Well Replacement project.

We acknowledge your comments that Oceanic Time Warner Cable is on existing utility poles and they would not be impacted by this project.

If you have any questions, please call me at 737-1875.

Very truly yours,

Howard K Endo

Howard K. Endo, Ph.D., P.E.
President

HKE:sno

cc: Scot Muraoka/BWS

Sharon Oshiro

From: Lam, Raymond <raymond.lam@twcable.com>
Sent: Thursday, August 13, 2015 7:43 AM
To: seyeng@seyeng.com
Subject: 54-177 Hanaimoa St (State Well No. 3655-01) Comments

Howard,

Oceanic Time Warner Cable is on existing utility poles in the area and should not be impacted by this project.

Thank You,

Raymond Lam
OSP Engineer
Oceanic Time Warner Cable
Office: (808)625-8457
Cell: (808)285-9460

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E-mail: seyeng@seyeng.com

August 13, 2015

Ms. Ruth A. K Buttel
54-148 Puuowaa Street
Hauula, Hawaii 96717

Subject: Your Response of August 13, 2015 Regarding the
Pre-Assessment Notice for the
Proposed Board of Water Supply
Hauula Well Replacement Project

Dear Ms. Buttel:

Thank you for your response regarding the Pre-Assessment Notice for the proposed Hauula Well Replacement project.

Pursuant to our telephone conversation today, this well was drilled in 1906 and is near the end of its service life. The size and depth of the replacement well will be 12 inches in diameter and will be drilled to a depth of about 250 feet. The well capacity will remain the same.

If you have any questions, please call me at 737-1875.

Very truly yours,

Howard K. Endo, Ph.D., P.E.
President

HKE:sno

cc: Scot Muraoka/BWS

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E-mail: seyeng@seyeng.com

TELEPHONE CONVERSATION MEMORANDUM

DATE AND TIME: August 13, 2015, 1:45

CONVERSATION WITH: Ruth Buttel
Resident at 54-148 Puuowaa Street
223-5046

BY: Howard K. Endo

SUBJECT: Hauula Well Replacement Pre-Assessment

Ruth mentioned that construction is currently occurring at the well station and asked the nature of our project. I informed Ruth that our BWS project is to replace the existing well at the well station in 2017. The existing well was drilled in 1906 and is near the end of its service life. She stated her current water quality is not good and wanted to know the size and depth of the new well. I informed her that the well will be 12 inches in diameter and drilled to a depth of about 250 feet. The well will replace the existing well so the capacity will remain the same.