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WW.CSE 17-062

May 11, 2017

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

Dear Mr. Glenn:

SUBJECT: Draft Environmental Assessment and Anticipated Finding of No Significant Impact for Awa Street Wastewater Pump Station Force Main and Sewer System Improvements – Waiakamilo Road Trunk Sewer

With this letter, the City and County of Honolulu (CCH), Department of Design and Construction (DDC) transmits the Draft Environmental Assessment and Anticipated Finding of No Significant Impact (DEA-FONSI) for the subject project for publication in the next available edition of the Environmental Notice.

The following items are enclosed and provided as required by OEQC:

1. OEQC Publication Form (one printed hard copy and one MS Word file on CD).
2. Draft Environmental Assessment (one printed hard copy and one PDF file on CD)

Should any additional information be required, please contact Megan Inouye of our Wastewater Division at (808) 768-8739 or via email at minouye3@honolulu.gov.

Very truly yours,

Robert J. Kroning, P.E.
Director

Enclosures

17-498

AGENCY
PUBLICATION FORM

Project Name:	Awa Street Wastewater Pump Station Force Main and Sewer System Improvements – Waiakamilo Road Trunk Sewer
Project Short Name:	Waiakamilo Road Trunk Sewer
HRS §343-5 Trigger(s):	§343-5 (1) and §343-5 (9)(A)
Island(s):	Oahu
Judicial District(s):	Honolulu
TMK(s):	(1)-1-5 (portions of Waiakamilo Road) (1)-1-6 (portions of Houghtailing Street)
Permit(s)/Approval(s):	State of Hawaii : NPDES Permits, Noise Permit, Community Noise Variance, Permit to Discharge into the State Highways Drainage System, Use and Occupancy Agreement, Chapter 6E Historic Preservation Review City & County of Honolulu : SMA Permit, Street Usage Permit, Excavation Permit, Grading Permit, Industrial Wastewater Discharge Permit for temporary discharge
Proposing/Determining Agency:	City and County of Honolulu Department of Design and Construction Wastewater Division 650 South King Street, 14th Floor Honolulu, Hawaii 96813
Contact Name, Email, Telephone, Address	Megan Inouye, P.E. email minouye3@honolulu.gov phone (808) 768-8739 City and County of Honolulu Department of Design and Construction Wastewater Division 650 South King Street, 14th Floor Honolulu, Hawaii 96813
Accepting Authority:	(for EIS submittals only)
Contact Name, Email, Telephone, Address	
Consultant:	Okahara and Associates, Inc. 677 Ala Moana Boulevard, Suite 703 Honolulu, Hawaii 96813
Contact Name, Email, Telephone, Address	Edmund Yoshida, P.E. email eyoshida@okahara.com phone (808) 524-1224 Okahara and Associates, Inc. 677 Ala Moana Boulevard, Suite 703 Honolulu, Hawaii 96813

Status (select one)	**Submittal Requirements**
__X__ DEA-AFONSI	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 Determination	The accepting authority simultaneously transmits to both the OEQC and the proposing agency a letter of its determination of acceptance or nonacceptance (pursuant to Section 11-200-23, HAR) of the FEIS; no comment period ensues upon publication in the Notice.
FEIS Statutory Acceptance	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 City and County of Honolulu Department of Design and Construction proposes to construct a new gravity flow trunk sewer line within Waiakamilo Road and Houghtailing Street from Nimitz Highway to School Street. The proposed "Waiakamilo Road Trunk Sewer" project will construct approximately 6,000 linear feet of new trunk sewer line including new sewer manholes, temporary sewer bypasses, and connections to existing sewer lines.

The purpose of this project is to comply with the Consent Decree jointly executed in year 2010 by the United States Environmental Protection Agency, the State of Hawaii, and the City and County of Honolulu. The Consent Decree identifies the existing Awa Street Wastewater Pump Station (WWPS) as at-risk for potential sewage spills or overflows due to the volume of sewer flows received at that facility. Therefore, to reduce the volume of sewer flows into the Awa Street WWPS and to mitigate the potential for sewage spills, the new trunk sewer will divert about 40 percent of the existing sewer flows away from the existing Awa Street WWPS and will redirect those sewer flows to the existing Hart Street WWPS which has sufficient capacity to accept such flows.

DRAFT ENVIRONMENTAL ASSESSMENT
for the
Awa Street Wastewater Pump Station
Force Main and Sewer System Improvements
Waiakamilo Road Trunk Sewer
Honolulu, Hawaii

Prepared for
City and County of Honolulu
Department of Design and Construction
Wastewater Division

Prepared by
Okahara and Associates, Inc.

May 2017

TABLE OF CONTENTS

LIST OF FIGURES AND TABLES

1.0 PREFACE

This Draft Environmental Assessment is prepared for the City and County of Honolulu's sewer system improvements project titled as :

AWA STREET WASTEWATER PUMP STATION
FORCE MAIN AND SEWER SYSTEM IMPROVEMENTS
WAIAKAMILO ROAD TRUNK SEWER
HONOLULU, HAWAII
DDC Job W5-16

The purpose of this project is to comply with the Consent Decree jointly executed in year 2010 by the United States Environmental Protection Agency, the State of Hawaii, and the City and County of Honolulu. The Consent Decree mandates the City to make improvements to the municipal sewer system and sewer facilities in order to reduce or avoid sewage spills and overflows. The City is and has been preparing various sewer improvements projects to comply with the Consent Decree. This subject project is but one of the several different projects intended for compliance with the Consent Decree.

The Consent Decree identifies the existing Awa Street Wastewater Pump Station (WWPS) as at-risk for potential sewage spills or overflows due to the volume of sewer flows received at that facility. Therefore, to mitigate that potential for sewage spills or overflows, this project will reduce the volume of sewer flows into the Awa Street WWPS through the design and construction of a new Waiakamilo Road Trunk Sewer which will divert about 40 percent of the existing sewer flows away from the existing Awa Street WWPS and will redirect those sewer flows to the existing Hart Street WWPS which has sufficient capacity to accept such flows.

A Finding of No Significant Impact (FONSI) is anticipated in accordance with the Hawaii Revised Statutes, Chapter 343, Section 5.

2.0 GENERAL INFORMATION

Project Name	Awa Street Wastewater Pump Station Force Main and Sewer System Improvements Waiakamilo Road Trunk Sewer Honolulu, Hawaii DDC Job W5-16
Project Location	Waiakamilo Road and Houghtailing Street (from Nimitz Highway to School Street) Honolulu, Oahu, Hawaii
Tax Map Key	(1)-1-5 and (1)-1-6
Applicant / Proposing Agency	City and County of Honolulu Department of Design and Construction Wastewater Division 650 South King Street, 14th Floor Honolulu, Hawaii 96813 Contact: Megan Inouye, P.E. Phone: (808) 768-8739 Email: minouye3@honolulu.gov
Approving Agency	City and County of Honolulu Department of Design and Construction Wastewater Division 650 South King Street, 14th Floor Honolulu, Hawaii 96813
Consultant	Okahara and Associates, Inc. 677 Ala Moana Boulevard, Suite 703 Honolulu, Hawaii 96813 Contact: Edmund Yoshida, P.E. Phone: (808) 524-1224 Email: eyoshida@okahara.com
Anticipated Determination	Finding of No Significant Impact (FONSI)

3.0 ALTERNATIVES ANALYSIS

Alternative methods and approaches were analyzed in determining the project scope, as described below.

Alternative 1 : No Action

A “no action” alternative is not prudent because the Consent Decree mandates the City to make improvements to the existing sewer system to minimize the occurrence of sewage spill events at the Awa Street Wastewater Pump Station and undertaking “no action” will not comply with the Consent Decree.

Alternative 2 : Upgrade the Awa Street Wastewater Pump Station

Upgrading the existing Awa Street Wastewater Pump Station to increase pumping capacity has been considered. This alternative is not selected because the existing property is undersized and would require entire demolition and replacement with a new facility. The construction of the new facility would require duplicate temporary mechanical and electrical systems to convey the sewer flows while the existing facility is demolished and replaced. The existing property does not have sufficient land area to situate the duplicate temporary systems.

Alternative 3 : Divert All Sewer Flows to Bypass the Awa Street Wastewater Pump Station and Decommission the Facility.

Diverting all sewer flows to bypass the Awa Street Wastewater Pump Station and subsequently decommissioning the facility has been considered. This alternative is not selected because the existing facility is capable of handling lesser sewer flows while still complying with the Consent Decree.

Alternative 4 : Divert a Portion of the Sewer Flows to Bypass the Awa Street Wastewater Pump Station and Continue to Operate the Facility.

Diverting a portion of the existing sewer flows to the Awa Street Wastewater Pump Station to the existing Hart Street Wastewater Pump Station is the selected approach. This alternative is selected because continuing to operate the Awa Street facility provides the optimal sewer services for the region while still complying with the Consent Decree.

4.0 CONSULTATIONS WITH AGENCIES, CITIZENS GROUPS, AND INDIVIDUALS

The following parties were consulted during the preparation of this Draft Environmental Assessment.

State of Hawaii
Office of Hawaiian Affairs
Department of Health, Clean Water Branch
Department of Health, Safe Drinking Water Branch
Department of Health, Solid and Hazardous Waste Branch
Department of Health, Hazard Evaluation and Emergency Response Branch
Department of Health, Indoor and Radiological Health Branch
Department of Land and Natural Resources, State Historic Preservation Division
Department of Transportation, Highways Division

City and County of Honolulu
Honolulu Board of Water Supply
Department of Design and Construction
Department of Environmental Services
Department of Planning and Permitting
Department of Transportation Services
Honolulu Fire Department

Citizens Groups and Individuals
Kalihi-Palama Neighborhood Board
Iwilei District Participating Parties, LLC

5.0 DESCRIPTION OF THE PROJECT DESIGN AND CONSTRUCTION

5.1 New Waiakamilo Road Trunk Sewer

The City and County of Honolulu proposes to construct a new gravity flow trunk sewer within Waiakamilo Road and Houghtailing Street from Nimitz Highway to School Street as shown in Figure 1 below. The on-site construction is anticipated to start in 2018 with completion by June 2020 and is estimated to cost approximately $80 million.

Figure 1 : Aerial Map for Waiakamilo Road Trunk Sewer (Base Map from Google Earth)

5.2 Project Location

The project is located within Oahu Island First District Zone 1 Section 5 and Zone 1 Section 6, as shown in the Tax Map Figures 2 and 3 below.

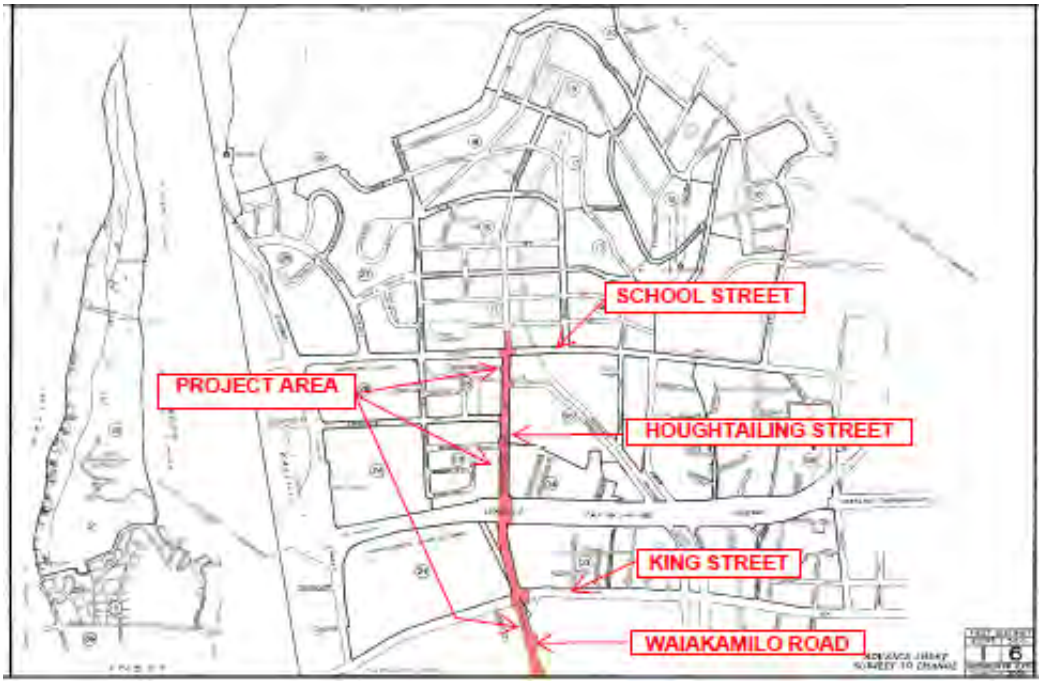


Figure 2 : Tax Map (1) 1-6

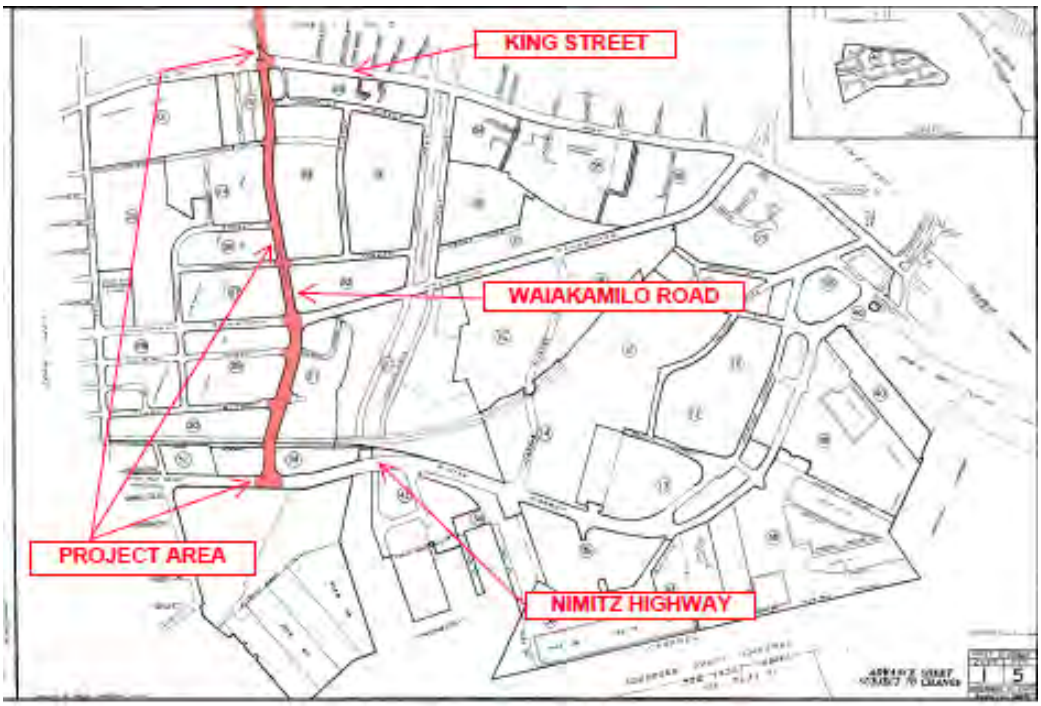


Figure 3 : Tax Map (1) 1-5

5.3 Design of New Trunk Sewer

Figure 4 below illustrates the schematic engineering design layout of the new Waiakamilo Road Trunk Sewer. The overall length of the new trunk sewer will be approximately 6,000 feet long from Nimitz Highway to School Street. Pipe diameter sizes for the new trunk sewer will be 30-inch, 36-inch, and 54-inch. Pipe diameter sizes for connections to the existing sewer system will be 8-inch, 12-inch, and 15-inch. These pipe sizes may be modified as the engineering design is reviewed and approved by the City Department of Design and Construction.

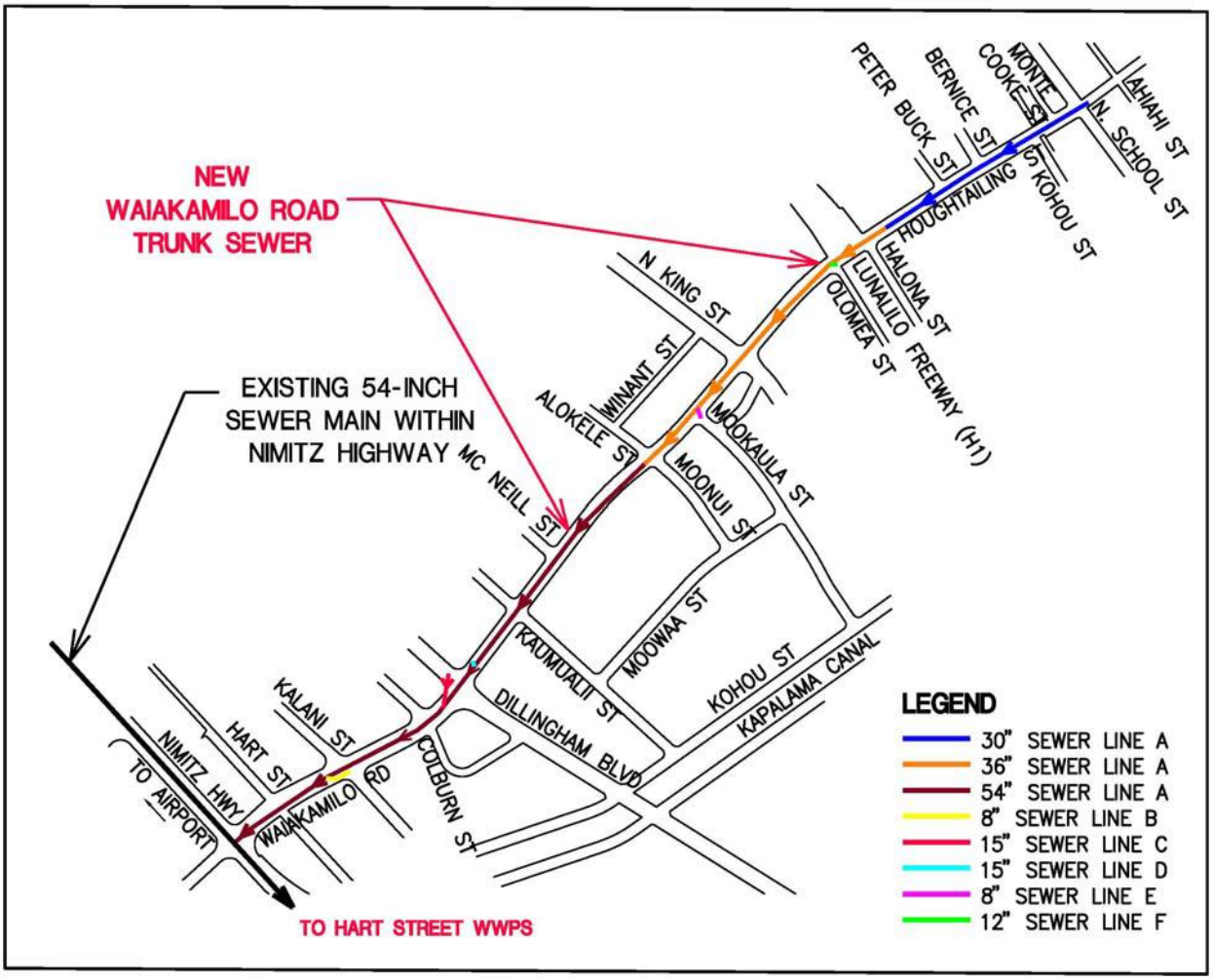


Figure 4 : Schematic Design Layout for the new Waiakamilo Road Trunk Sewer.

The new Waiakamilo Road Trunk Sewer will connect into the existing 54-inch sewer main within Nimitz Highway to convey the sewer flows to the Hart Street WWPS, as illustrated above.

5.4 Divert Sewer Flows from Awa Street WWPS to Hart Street WWPS

Figure 5 below illustrates the diversion of sewer flows from the existing Awa Street Wastewater Pump Station (WWPS) to the existing Hart Street WWPS.

A. The sewer flows generated by the tributary area west of Waiakamilo Road and currently received at the Awa Street WWPS will be diverted by the new Waiakamilo Road Trunk Sewer to the Hart Street WWPS.

B. The new Waiakamilo Road Trunk Sewer will connect to the existing 54-inch sewer main within Nimitz Highway and the flows will be conveyed via gravity sewer to the Hart Street WWPS.

C. The Hart Street WWPS will convey the wastewaters via force main to the Sand Island Wastewater Treatment Plant for treatment and disposal.

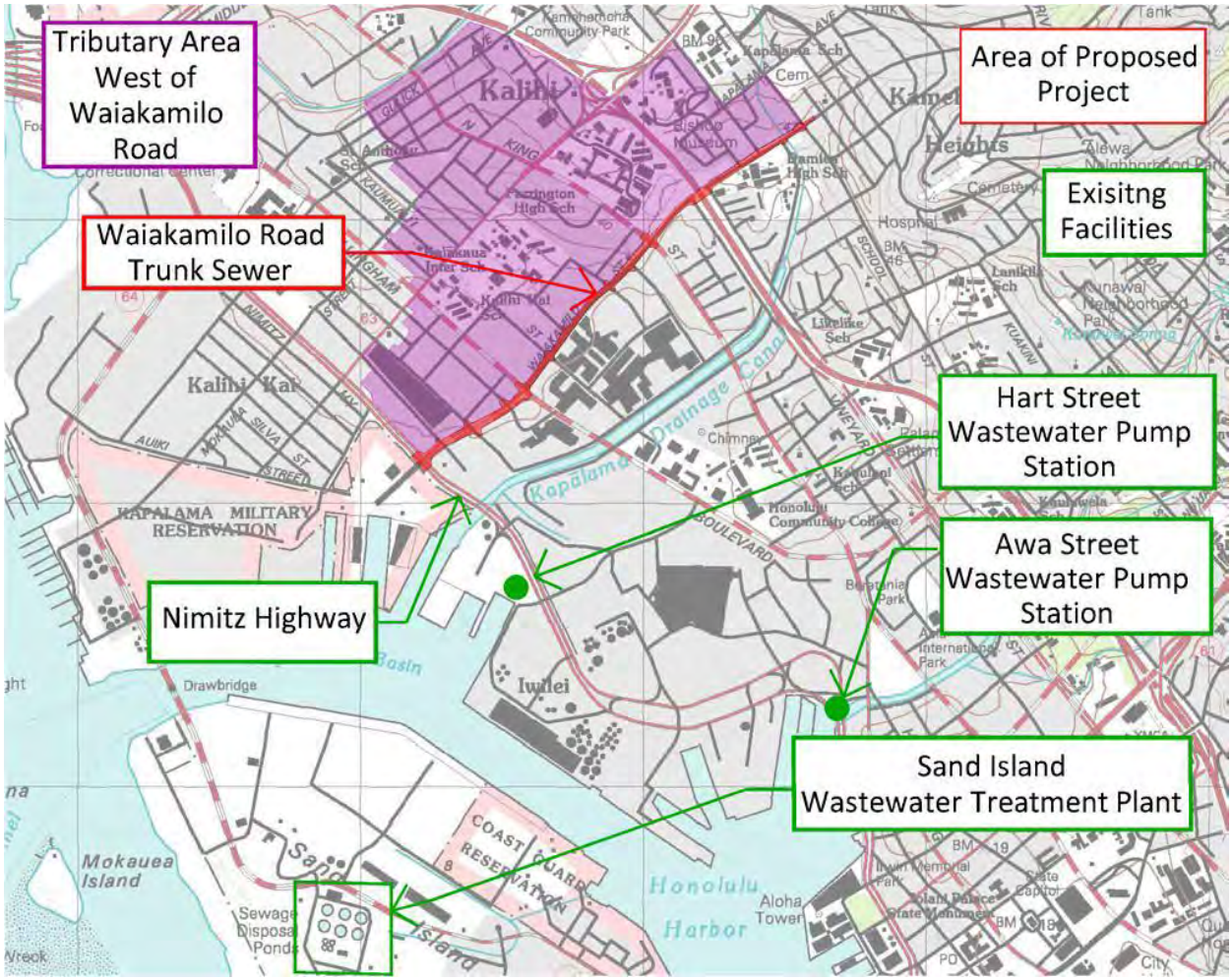


Figure 5 : Diversion of Sewer Flows

5.5 Construction Methods and Activities

The project construction will install the new trunk sewer pipes, other sewer pipes to make connections, and new sewer manholes by both open trench excavation and subsurface microtunnel methods.

Open trench excavation methods will be employed mainly to connect the new trunk sewer to existing sewer lines, to install temporary sewer bypasses, to construct new manholes, and to work at locations where the microtunnel method may not be feasible.

Microtunnel methods will be used to install most of the new trunk sewer pipes at depths between 10 and 30 feet below the street level. Microtunneling will also involve the excavation and shoring of pipe-jacking and pipe-receiving shafts which will be used for the specialized microtunnel boring machine equipment to install the new trunk sewer pipes.

Other anticipated construction activities will include concrete jet grouting for soils stabilization, excavation of basalt materials, construction dewatering, soils sampling for contaminants, excavated soils stockpiling and dewatering at an off-site location, temporary sewer bypass operations, utilities relocations, backfilling, pavement restoration; temporary closures and detours of traffic and parking lanes, and archaeological monitoring.

5.6 Open-Trench Excavation

Open trench excavation will be used to construct the connections of new sewer lines to existing sewer lines, new sewer manholes, sewer laterals connections, temporary sewer bypasses, and at locations where the microtunnel method may not be feasible.

Typical equipment used in open trench excavation are large and small excavators, loaders, compactors, various trucks and small equipment, trench shoring, pumps for construction dewatering.

Temporary construction work zones for open trench excavation are anticipated to be about 150 feet long by 20 feet wide, depending on the Contractor’s means and methods.

5.7 Microtunneling

Microtunneling is a specialized method of installing underground pipelines using a remote controlled, laser-guided, steerable microtunnel boring machine. The pipeline is installed using pipe-jacking methods from a jacking shaft to a receiving shaft located up to about 1,000 feet away depending on the size of the pipes. The subsurface jacking and receiving shafts are typically excavated at new manhole locations. Intermediate shafts between the jacking and receiving shafts will serve to install other intermediate manholes.

Example of Microtunnel Operation

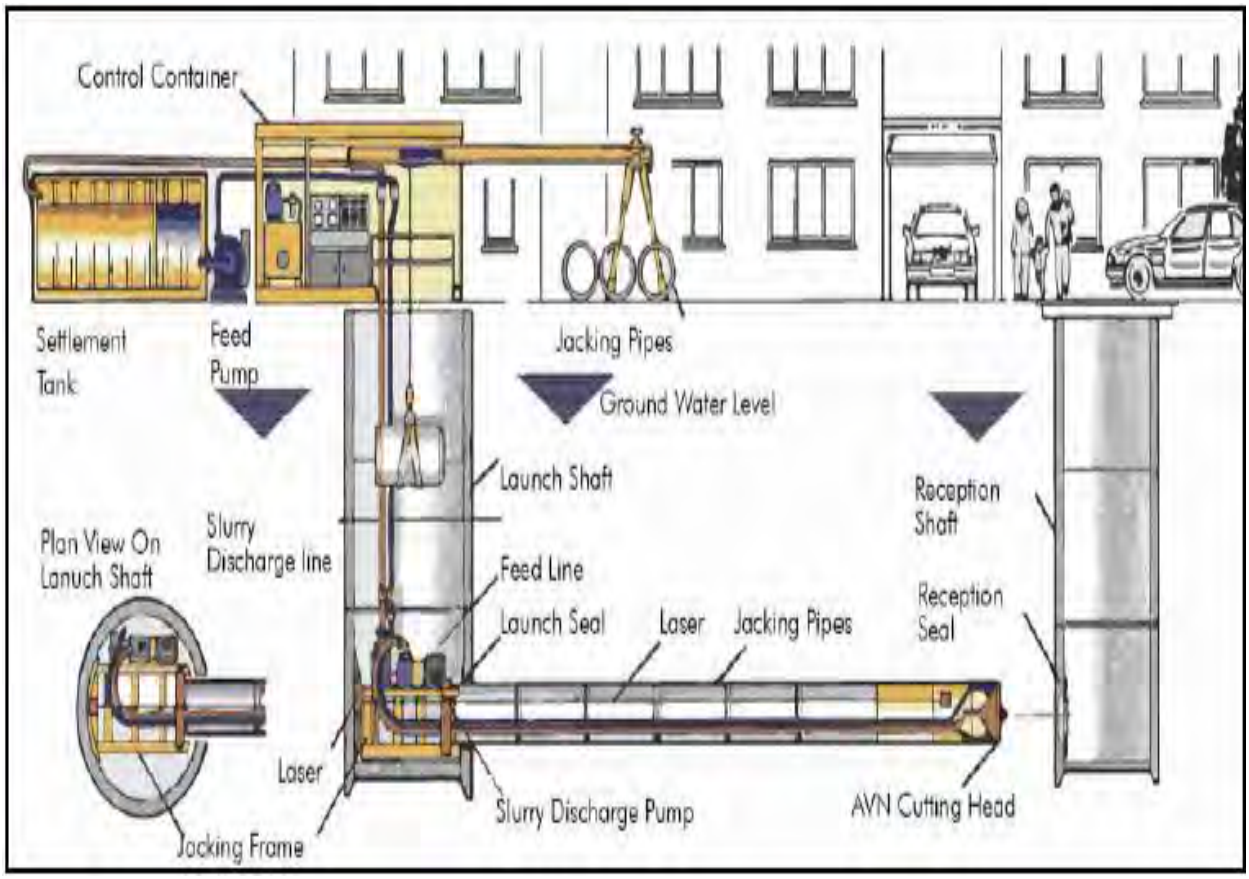
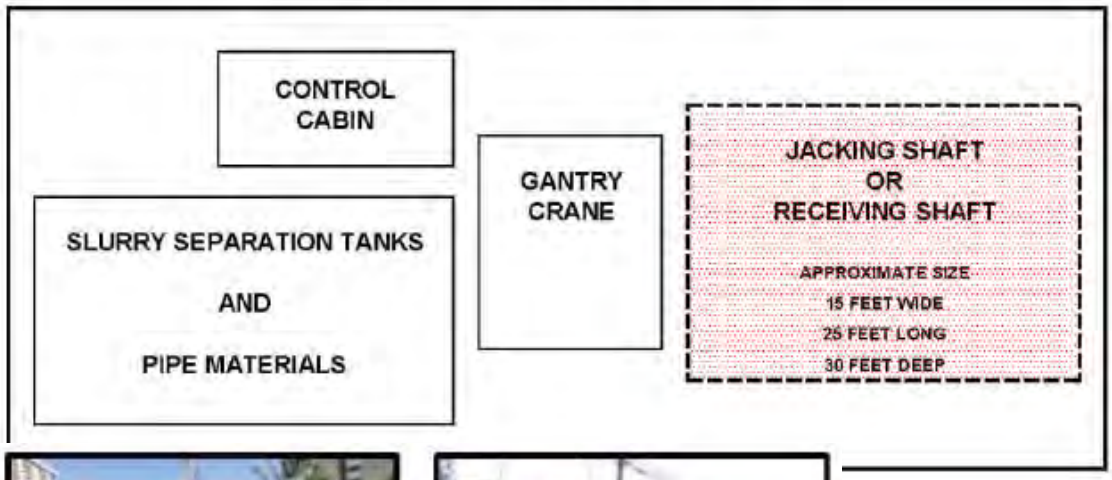


Figure 6 : Example of Microtunnel Operations

Microtunnel operations require temporary construction work zones at the street level. Typically, support equipment such as the control cabin which houses the computer remote controls operating the tunnel boring machine, a gantry crane or a mobile crane which is used for pipe lifting, slurry separation tanks for excavated spoils, and pipe materials are staged adjacent to the excavated shored shaft within the temporary construction work zone of approximately 150 feet long by 20 feet wide.



Microtunnel work zones are set-up within the public street.

Microtunneling can also be performed during nighttime hours.

Figure 7 : Typical Microtunnel Work Zone

6.0 ENVIRONMENTAL STUDIES, FINDINGS, IMPACTS, AND MITIGATION

6.1 Study for Native Hawaiian Cultural and Historic Resources

In 2015, the archaeological consultant firm Cultural Surveys Hawaii, Inc. (CSH) had performed a reconnaissance level field investigation and had prepared a written report to assess any potential impacts which could be caused by the project upon cultural and historic resources within the project area.

CSH prepared a Literature Review and Field Investigation (LRFI) report which was submitted to the State Historic Preservation Division (SHPD). The LRFI reports that the project's street-level surface areas are completely developed with industrial, business, and residential uses and thus significant cultural-historic items are not apparent at street levels. However, the LRFI also reports that other prior subsurface excavation activities within the Kapalama and Honolulu ahupuaa had encountered archaeological items and therefore the LRFI recommends that archaeological monitoring be performed during the subject project's excavation activities.

SHPD reviewed and concurred with the LRFI report. SHPD replied that prior studies had documented that numerous subsurface traditional and/or post-contact in-situ human burials, skeletal remains, artifacts, fishponds, and architectural features within the Kapalama and Honolulu ahupuaa. SHPD concurred with the LRFI recommendation to perform archaeological monitoring during the subject project's excavation activities. A copy of the SHPD December 16, 2015, review letter is included within Appendix A.

Currently in 2017, CSH is preparing an Archaeological Monitoring Plan (AMP) for the subject project for SHPD approval.

The City Department of Design and Construction will retain a qualified archaeologist to monitor all on-site ground-disturbing and excavation activities during the course of the subject project. The AMP will require that if any cultural or historic items should be encountered or discovered during the excavation activities, then the excavation activities will be stopped and the discovery will be reported to SHPD for appropriate and proper procedures to document and resolve the discovery.

6.2 Study for Geotechnical Surface and Subsurface Conditions

In 2016, the geotechnical engineering consultant firm Yogi Kwong Engineers, LLC (YKE), had performed an extensive geotechnical investigation of the surface and subsurface soils conditions within the project area to assess the feasibilities of open trench excavation and microtunnel installations of the new sewer pipes and sewer manholes.

The geotechnical investigation consisted of on-site exploratory soils borings to extract soils and rock samples at 24 locations coinciding with the proposed design locations of the new sewer manholes and laboratory analyses to determine the engineering properties of the subsurface materials.

Based on the geotechnical investigation, YKE prepared a Geotechnical Engineering Report to provide subsurface data and geotechnical recommendations for the design and construction of the new sewer installations. These geotechnical recommendations form the design bases for the microtunnel installation methods for the new trunk sewer.

6.3 Study for Prior Subsurface Releases of Contaminants

In 2013, the environmental sciences consultant firm Myounghee Noh & Associates, LLC (MNA) had performed reconnaissance level site investigations and research of State of Hawaii Department of Health (DOH) records to prepare an Environmental Site Assessment (ESA) report identifying the recognized environmental conditions within the project area.

DOH records have documented prior subsurface releases of contaminants mainly from leaking underground storage tanks and/or pipes at several locations within or nearby to the project area. Because these contaminants may have migrated through the subsurface soils and may also have been spread by the flow of groundwater, the contaminants may exist within the excavated soils, dewatering effluent, and/or microtunnel slurry generated by the project construction.

Through follow-up discussions and consultations with the DOH, it was determined that representative sampling of soils and groundwater would need be performed to ascertain the levels of concentrations of the particular contaminant categories believed to be present within the project area. Therefore, in 2017, MNA performed on-site borings to extract representative soils and groundwater samples which were laboratory analyzed for concentration levels of contaminants. The laboratory results of this work are described in the following Section 6.4.

6.4 Soils and Groundwater Sampling and Laboratory Analyses

DOH records contain prior reports of leaking underground storage tanks or leaking underground pipes which had released contaminants of concern mainly petroleum fuels, oils, and laundry dry cleaning chemicals within the vicinity of the project area. The street address locations and types of contaminants previously reported to the DOH are listed here :

A. 1331 North Nimitz Highway, Piers 39 and 40 : Petroleum fuel and oil.

B. 1385 Colburn Street : Petroleum fuel and oil.

C. 1336 Dillingham Boulevard : Laundry dry cleaning chemicals.

D. 609 Waiakamilo Road : Petroleum fuel.

E. 1403 North School Street : Petroleum fuel.

F. 1402 North School Street : Petroleum fuel.

G. 1342 North School Street : Petroleum fuel.

To determine the concentration levels of contaminants within the soils and groundwater of the project area, representative samples of soils and groundwater were obtained by performing on-site borings. Through guidance and consultation with the DOH, the representative samples were laboratory analyzed for concentrations of the contaminants believed likely to be present based on current and/or prior industrial users.

The results of the laboratory analyses for soils and groundwater generally showed the concentrations of contaminants to be significantly lower than the environmental action levels which are those concentrations which would cause the excavated soils, dewatering effluent, or microtunnel slurry to be identified and specially handled as hazardous materials. From the laboratory analyses, it is anticipated that most (but not all) of the project's excavated soils and dewatering effluent should likely be identified as non-hazardous.

The laboratory analyses, however, also show an elevated concentration of lead (in the form of lead hydroxide which is moderately water soluble) within the groundwater sample at Site 4 which is located on Waiakamilo Road near to the Mookaula Street intersection. The lead concentration at Site 4 was analyzed at 26 micrograms per liter where the environmental action level is 29 micrograms per liter. From this laboratory result, there appears the possibility that there may be elevated concentrations of lead within the construction dewatering effluent as well as within the excavated soils near to the Waiakamilo Road-Mookaula Street intersection.

To address and mitigate the potential for lead concentrations or other contaminants within the excavated soils, construction dewatering effluents, or microtunnel slurry which may exceed the respective environmental action levels, the Contractor will be required to develop and implement a Soils Management and Construction Dewatering Plan to assure that any hazardous materials resulting from the construction activities will be properly identified, handled, and disposed in accordance with federal and state laws and regulations.

The Soils Management and Construction Dewatering Plan will need to assure that if the concentrations of lead should be analyzed to exceed the environmental action level of 29 micrograms per liter within the construction dewatering effluent, then that effluent will need to be appropriately treated to remove lead before disposal of that effluent. There are several possible treatment methods to remove lead from effluent such as : (a) coagulation and sand filtration, (b) ion exchange, (c) active carbon filtration, (d) reverse osmosis.

If lead concentrations within the excavated soils or microtunnel slurry should be found to exceed the environmental action level of 200 milligrams per kilogram, then one option to appropriately handle those soils and slurry materials would be to re-use those contaminated materials as backfill into the same excavation provided that those contaminated materials will be covered and capped by a layer of non-contaminated backfill materials of minimum two feet thickness at the roadway surface. Another available option would be to instead dispose those contaminated excavated soils or microtunnel slurry materials as hazardous materials at the privately-operated PVT Landfill located in Nanakuli subject to the rules and requirements of the landfill operator.

It is anticipated that the Contractor and the City Department of Design and Construction will capably adhere to and comply with the federal and state laws and regulations pertaining to the handling and disposal of lead concentrations and other contaminants, if any, within the dewatering effluents and excavated soils. Therefore, it is anticipated that the project will not have any adverse impact upon the environment due to encountering hazardous materials during the construction excavation, construction dewatering, and microtunneling activities.

The locations of the prior reports of leaking underground storage tanks or leaking underground pipes, the locations of the project's soils and groundwater sampling sites, and the results of the laboratory analyses are shown on the following pages in Table 1 through Table 6.

Representative samples of soils and groundwater were obtained by on-site borings at the locations shown in the map Figure 8 below.

- Sites 1 through 5 are the locations of the borings for soils and groundwater samplings.
- Sites A through G are the locations of the reported contaminants.

Figure 8 : Sites 1 through 5 for Soils and Groundwater Samples

Table 1 : Soil Sample Laboratory Analyses for Site 1 Waiakamilo Road-Nimitz Highway

SITE 1 : Soils Analyses at Waiakamilo Road-Nimitz Highway			
Analytes	Boring 1	Boring 2	Environmental Action Level (mg/kg)
1. Gasoline Range Organics	ND	ND	100
2. Diesel Range Organics	12 mg/kg	2.3 mg/kg	260
3. TPH Residual Range Organics	260 mg/kg	46 mg/kg	500
4. Naphthalene	ND	ND	7
5. 2-Methylnaphthalene	ND	ND	17
6. Acenaphthylene	ND	ND	130
7. Acenaphthene	ND	ND	120
8. Fluorene	ND	ND	93
9. Phenanthrene	ND	ND	460
10. Anthracene	ND	ND	4.2
11. Fluoranthene	ND	ND	120
12. Pyrene	ND	ND	44
13. Benzo (a) anthracene	ND	ND	16
14. Chrysene	ND	ND	30
15. Benzo (b) fluoranthene	ND	ND	16
16. Benzo (k) fluoranthene	ND	ND	39
17. Benzo (a) pyrene	ND	ND	1.6
18. Indeno (1,2,3-cd) pyrene	ND	ND	16
19. Dibenzo (a,h) anthracene	ND	ND	1.6
20. Benzo (g,h,i) perylene	ND	ND	35
21. PCB	ND	ND	1.2
22. Arsenic	6.5 mg/kg	7.2 mg/kg	24
23. Lead	2.2 mg/kg	ND	200

ND = Not Detected

Table 2 : Soil Sample Laboratory Analyses for Site 2 Waiakamilo Road-Colburn Street

SITE 2 : Soils Analyses at Waiakamilo Road-Colburn Street				
Analytes	Boring 3	Boring 4	Boring 5	Environmental Action Level (mg/kg)
1. Gasoline Range Organics	4.6 mg/kg	ND	ND	100
2. Diesel Range Organics	3.1 mg/kg	1.8 mg/kg	2 mg/kg	260
3. TPH Residual Range Organics	18 mg/kg	12 mg/kg	7.5 mg/kg	500
4. Naphthalene	ND	ND	ND	7
5. 2-Methylnaphthalene	ND	ND	ND	17
6. Acenaphthylene	ND	ND	ND	130
7. Acenaphthene	ND	ND	ND	120
8. Fluorene	ND	ND	ND	93
9. Phenanthrene	ND	ND	ND	460
10. Anthracene	ND	ND	ND	4.2
11. Fluoranthene	ND	ND	ND	120
12. Pyrene	ND	ND	ND	44
13. Benzo (a) anthracene	ND	ND	ND	16
14. Chrysene	ND	ND	ND	30
15. Benzo (b) fluoranthene	ND	ND	ND	16
16. Benzo (k) fluoranthene	ND	ND	ND	39
17. Benzo (a) pyrene	ND	ND	ND	1.6
18. Indeno (1,2,3-cd) pyrene	ND	ND	ND	16
19. Dibenzo (a,h) anthracene	ND	ND	ND	1.6
20. Benzo (g,h,i) perylene	ND	ND	ND	35
21. PCB	ND	ND	ND	1.2
22. Arsenic	6.3 mg/kg	9.2 mg/kg	6.8 mg/kg	24
23. Lead	270 mg/kg	ND	ND	200

ND = Not Detected

Table 3 : Soil Sample Laboratory Analyses for Site 3 Waiakamilo Road-Moonui Street

SITE 3 : Soils Analyses at Waiakamilo Road-Moonui Street				
Analytes	Boring 6	Boring 7	Boring 8	Environmental Action Level (mg/kg)
1. Gasoline Range Organics	ND	ND	ND	100
2. Diesel Range Organics	3.4 mg/kg	5.5 mg/kg	ND	260
3. TPH Residual Range Organics	26 mg/kg	36 mg/kg	10 mg/kg	500
4. Naphthalene	ND	ND	ND	7
5. 2-Methylnaphthalene	ND	ND	ND	17
6. Acenaphthylene	ND	ND	ND	130
7. Acenaphthene	ND	ND	ND	120
8. Fluorene	ND	ND	ND	93
9. Phenanthrene	ND	ND	ND	460
10. Anthracene	ND	ND	ND	4.2
11. Fluoranthene	ND	ND	ND	120
12. Pyrene	ND	ND	ND	44
13. Benzo (a) anthracene	ND	ND	ND	16
14. Chrysene	ND	ND	ND	30
15. Benzo (b) fluoranthene	ND	ND	ND	16
16. Benzo (k) fluoranthene	ND	ND	ND	39
17. Benzo (a) pyrene	ND	ND	ND	1.6
18. Indeno (1,2,3-cd) pyrene	ND	ND	ND	16
19. Dibenzo (a,h) anthracene	ND	ND	ND	1.6
20. Benzo (g,h,i) perylene	ND	ND	ND	35
21. PCB	ND	ND	ND	1.2
22. Arsenic	11 mg/kg	3.5 mg/kg	ND	24
23. Lead	8.2 mg/kg	43 mg/kg	38 mg/kg	200

ND = Not Detected

Table 4 : Soil Sample Laboratory Analyses for Site 4 Waiakamilo Road-Mookaula Street

SITE 4 : Soils Analyses at Waiakamilo Road-Mookaula Street			
Analytes	Boring 9	Boring 10	Environmental Action Level (mg/kg)
1. Gasoline Range Organics	ND	ND	100
2. Diesel Range Organics	3.3 mg/kg	5.2 mg/kg	260
3. TPH Residual Range Organics	21 mg/kg	21 mg/kg	500
4. Naphthalene	ND	ND	7
5. 2-Methylnaphthalene	ND	ND	17
6. Acenaphthylene	ND	ND	130
7. Acenaphthene	ND	ND	120
8. Fluorene	ND	ND	93
9. Phenanthrene	ND	ND	460
10. Anthracene	ND	ND	4.2
11. Fluoranthene	ND	ND	120
12. Pyrene	ND	ND	44
13. Benzo (a) anthracene	ND	ND	16
14. Chrysene	ND	ND	30
15. Benzo (b) fluoranthene	ND	ND	16
16. Benzo (k) fluoranthene	ND	ND	39
17. Benzo (a) pyrene	ND	ND	1.6
18. Indeno (1,2,3-cd) pyrene	ND	ND	16
19. Dibenzo (a,h) anthracene	ND	ND	1.6
20. Benzo (g,h,i) perylene	ND	ND	35
21. PCB	ND	ND	1.2
22. Arsenic	ND	ND	24
23. Lead	8.2 mg/kg	11 mg/kg	200

ND = Not Detected

Table 5 : Soil Sample Laboratory Analyses for Site 5 Houghtailing Street-School Street

SITE 5 : Soils Analyses at Houghtailing Street-School Street				
Analytes	Boring 11	Boring 12	Boring 13	Environmental Action Level (mg/kg)
1. Gasoline Range Organics	ND	ND	270 mg/kg	100
2. Diesel Range Organics	12 mg/kg	11 mg/kg	2.8 mg/kg	260
3. TPH Residual Range Organics	110 mg/kg	120 mg/kg	22 mg/kg	500
4. Naphthalene	ND	ND	ND	7
5. 2-Methylnaphthalene	ND	ND	ND	17
6. Acenaphthylene	ND	ND	ND	130
7. Acenaphthene	ND	ND	ND	120
8. Fluorene	ND	ND	ND	93
9. Phenanthrene	ND	ND	ND	460
10. Anthracene	ND	ND	ND	4.2
11. Fluoranthene	ND	ND	ND	120
12. Pyrene	ND	ND	ND	44
13. Benzo (a) anthracene	ND	ND	ND	16
14. Chrysene	ND	ND	ND	30
15. Benzo (b) fluoranthene	ND	ND	ND	16
16. Benzo (k) fluoranthene	ND	ND	ND	39
17. Benzo (a) pyrene	ND	ND	ND	1.6
18. Indeno (1,2,3-cd) pyrene	ND	ND	ND	16
19. Dibenzo (a,h) anthracene	ND	ND	ND	1.6
20. Benzo (g,h,i) perylene	ND	ND	ND	35
21. PCB	ND	ND	ND	1.2
22. Arsenic	ND	ND	ND	24
23. Lead	28 mg/kg	7 mg/kg	6 mg/kg	200

ND = Not Detected

Table 6 : Groundwater Samples Laboratory Analyses for Sites 1 through 5

Groundwater Analyses : Sites 1 through 5						
Analytes	Site 1	Site 2	Site 3	Site 4	Site 5	Environmental Action Level (µg/L)
1. Gasoline Range Organics	ND	ND	ND	ND	ND	5,000
2. Diesel Range Organics	160 µg/L	ND	ND	170 µg/L	ND	2,500
3. TPH Residual Range Organics	ND	ND	ND	ND	ND	2,500
4. Naphthalene	ND	ND	ND	ND	ND	210
5. 2-Methylnaphthalene	ND	ND	ND	ND	ND	42
6. Acenaphthylene	ND	ND	ND	ND	ND	300
7. Acenaphthene	ND	ND	ND	ND	ND	200
8. Fluorene	ND	ND	ND	ND	ND	300
9. Phenanthrene	ND	ND	ND	ND	ND	300
10. Anthracene	ND	ND	ND	ND	ND	0.18
11. Fluoranthene	ND	ND	ND	ND	ND	13
12. Pyrene	ND	ND	ND	ND	ND	68
13. Benzo (a) anthracene	ND	ND	ND	ND	ND	4.7
14. Chrysene	ND	ND	ND	ND	ND	1
15. Benzo (b) fluoranthene	ND	ND	ND	ND	ND	0.75
16. Benzo (k) fluoranthene	ND	ND	ND	ND	ND	0.4
17. Benzo (a) pyrene	ND	ND	ND	ND	ND	0.8
18. Indeno (1,2,3-cd) pyrene	ND	ND	ND	ND	ND	0.095
19. Dibenzo (a,h) anthracene	ND	ND	ND	ND	ND	1.3
20. Benzo (g,h,i) perylene	ND	ND	ND	ND	ND	0.13
21. PCB	ND	ND	ND	ND	ND	2
22. Arsenic	ND	ND	ND	ND	ND	69
23. Lead	ND	ND	ND	26 µg/L	ND	29

ND = Not Detected

6.5 Soils Management and Construction Dewatering Plan

The construction Contractor will be required to prepare a Soils Management and Construction Dewatering Plan which must be specific to the contractor's operations, means and methods, and construction schedule. The Soils Management and Construction Dewatering Plan must be submitted to and approved by the City Department of Design and Construction prior to the start of construction activities at the project site.

The Soils Management and Construction Dewatering Plan will require procedures to assure compliance with State of Hawaii Department of Health regulations relating to handling and disposal of hazardous materials and will specify performance requirements including but not limited to the following :

1. Continuous soils monitoring during all excavations activities.
2. On-site sampling and testing of excavated soils during excavation activities.
3. On-site sampling and testing of construction dewatering effluent and microtunnel slurry.
4. Off-site sampling and testing of excavated soils, slurry spoils, and dewatering leachates at the off-site location which is designated for stockpiling, dewatering, and drying of excavated soils prior to disposal to landfill.
5. Recording and reporting of all sampling and testing results.
6. Preparation of an appropriate off-site location to properly stockpile, dewater, and manage excavated soils containing contaminants including any contaminated leachate.

6.6 Off-Site Soils Mitigation Area at the Sand Island WWTP

To address and mitigate the potential of contaminants within the excavated soils and microtunnel slurry, the City will allow the Contractor the option of temporarily utilizing an area within the Sand Island Wastewater Treatment Plant (WWTP) for stockpiling, dewatering, and management of excavated soils and contaminated leachate. A conceptual layout of the soils mitigation site at the Sand Island Wastewater Treatment Plant and a conceptual sketch of the temporary soils mitigation area are illustrated on the following pages.

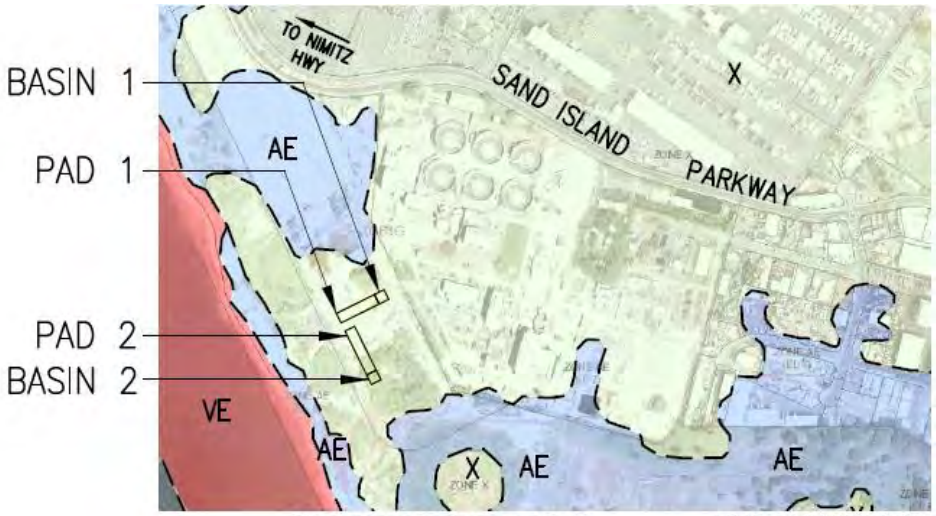
If the Contractor should decide to utilize this area, then the Contractor will be required to construct and maintain appropriate facilities in accordance with the performance requirements specified in the construction plans and special provisions pertaining to Soils Mitigation Management and Construction Dewatering Plan.

A conceptual layout for the Sand Island WWTP site and a conceptual sketch for soils mitigation area are shown below. The Contractor will be required to obtain a SMA Permit if the Contractor should decide to use this area for this project.

Figure 9 : Conceptual Layout for Sand Island WWTP Site

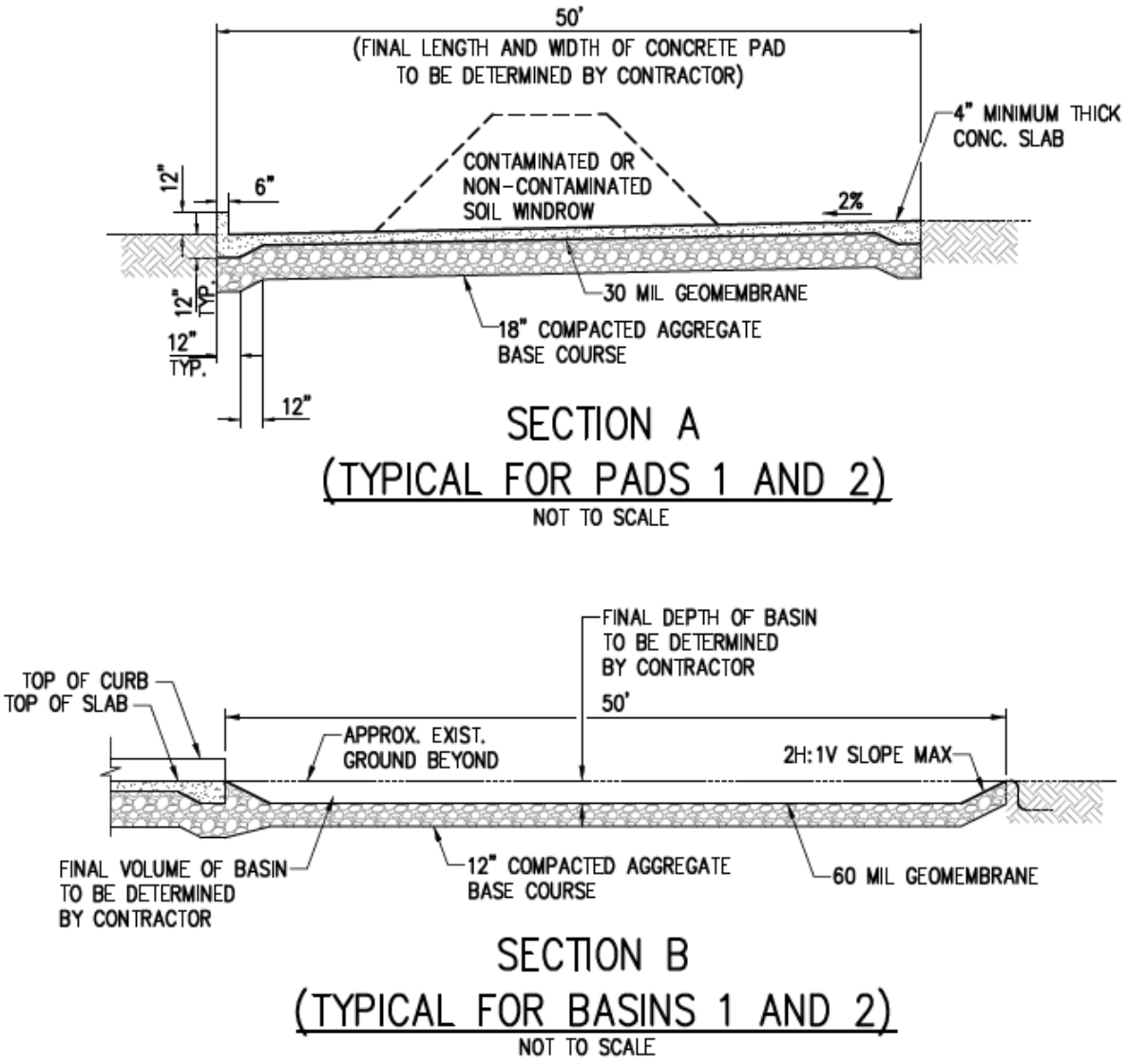
SITE PLAN
OFF-SITE STOCKPILING AND DEWATERING
SAND ISLAND WASTEWATER TREATMENT PLANT
NOT TO SCALE

Figure 10 : Flood Hazard Map for Soils Mitigation Area



FLOOD HAZARD MAP
NOT TO SCALE

Figure 11 : Typical Cross Sections for Dewatering Pads and Detention Basins



6.7 SMA Minor Permit for Sand Island Wastewater Treatment Plant Site

The area available at the Sand Island WWTP is located within the boundaries of the Special Management Area (SMA). Use of this area will require a SMA Permit (Minor or Major).

If the Contractor should decide to utilize this site, then the Contractor will be required to obtain a SMA Minor Permit from the City Department of Planning and Permitting through coordination with the City Department of Design and Construction.

The SMA Minor Permit is only applicable to construction values of less than $500,000.

6.8 Study for Traffic Impacts

In 2016, the traffic engineering consultant firm The Traffic Management Consultant, Inc. (TMC) had performed on-site traffic investigations including 24-hour video monitoring and traffic counting at each of the street intersections within the project area in order to assess the potential impacts of the new trunk sewer construction upon current vehicular, bicycle, and pedestrian traffic.

Based on findings of the on-site traffic investigations, TMC prepared a Traffic Assessment Report which identified the current traffic volumes at peak and off-peak hours and also evaluated the existing operational Level of Service (LOS) of the intersections within the project area. Traffic volumes ranged between 200 and 1500 vehicles per hour within the project area streets, depending on time of day.

The Traffic Assessment Report was submitted to the City Department of Transportation Services (DTS) for discussion and consultation to notify DTS of the proposed sewer project and the anticipated temporary impacts to traffic and to coordinate with DTS the possible mitigative measures available during the construction activities. The construction activities will cause temporary closures to traffic lanes, parking lanes, and sidewalks. In addition, traffic detours will need to be implemented at particular locations and adjoining streets.

Traffic detours will be implemented at the following intersections :

- Nimitz Highway – Waiakamilo Road
- Waiakamilo Road – Dillingham Boulevard
- Waiakamilo Road – Moonui Street
- Houghtailing Street – School Street

To assist in mitigating the traffic impacts due to the temporary traffic lane closures and traffic detours during the construction activities, DTS will monitor the traffic within the project area streets as well as the traffic within streets nearby to the project area by means of the many existing DTS traffic cameras currently mounted at street intersections and, when necessary, DTS will remotely modify (from the DTS Traffic Signals Control Center) the timing and phasing of the traffic signals at signalized intersections to mitigate effects of the changed traffic patterns.

6.9 Construction Work Zones, Traffic Control, Extended Work Hours

Construction work zones within the public streets will be implemented to temporarily close traffic lanes, parking lanes, bicycle lanes, and sidewalks. The purpose of the temporary construction work zones will be to allow construction activities and construction equipment operations. The construction work zones will cause temporary impacts to vehicle, bicycle, and pedestrian traffic within Nimitz Highway, Waiakamilo Road, Houghtailing Street, Dillingham Boulevard, School Street and other adjoining streets. To mitigate these traffic impacts, the construction Contractor will be required to implement appropriate traffic control within the affected streets.

The sizes of the construction work zones are anticipated to be about 20 feet in width and vary in length between 100 feet and 150 feet. In many instances where possible, the existing parking lanes and bicycle lanes approaching to and adjacent to the construction work zones will be temporarily used as through traffic lanes thereby mitigating vehicular traffic impacts.

Site-specific Traffic Control Plans (TCPs) conforming to the Manual of Uniform Traffic Control Devices and approved by the City Department of Planning and Permitting (DPP) and the City Department of Transportation Services (DTS) will be required to define the construction work zones within the public streets and sidewalks. These site-specific TCPs will define the extents of the temporary lane closures, detours, closures of on-street parking and bike lanes, and the installations of traffic control devices and traffic warning signs.

Many site-specific approved TCPs are provided within the project's construction plans for the specific locations where the construction activities are to be performed. The Contractor will be allowed to utilize these TCPs at the Contractor's option as well as to prepare and submit any additional TCPs to DPP and DTS for approval as the Contractor may require for the project.

The construction work zones will be implemented through various times of daytime and nighttime hours during weekdays and weekends, depending on the project's construction schedule which will need be approved by the City Department of Design and Construction.

Although the usual times and hours for road work and construction work zones within the City streets are 8:30am through 3:30pm Mondays through Fridays, the Contractor will be allowed to work during times and extended hours beyond 3:30pm daily and will also be allowed to implement 24-hours construction work zones where the lane closures will be in effect for 24-hours per day periods, subject to approval by DPP and DTS and also subject to the conditions and restrictions of the project's Noise Variance, in consideration of the materials and equipment staging required for the open trench excavation and microtunnel operations.

Table 7 below shows the locations of work and the allowable days and times when the work will be permitted. The actual schedule of work locations, work days, and extended work hours must be submitted by the Contractor to the City Department of Design and Construction for approval.

Table 7 : Permitted Work Days and Work Hours

Location of Work	Permitted Work Days and Work Hours
Nimitz Hwy / Waiakamilo Road intersection (within the State right-of-way)	Night Work Only • Monday thru Friday 9:00pm – 2:00am • Saturday and Sunday 9:00pm – 5:00am
Waiakamilo Road Nimitz Hwy to Dillingham Blvd (within the City right-of-way)	Extended Work Hours • Monday thru Friday 8:30am – 9:00pm • Saturday and Sunday 9:00am – 9:00pm
Waiakamilo Road / Dillingham Blvd intersection (within the City right-of-way)	Night Work Only • Monday thru Friday 9:00pm – 5:00am • Saturday and Sunday 9:00pm – 5:00am
Waiakamilo Road Dillingham Blvd to King Street (within the City right-of-way)	Extended Work Hours • Monday thru Friday 8:30am – 9:00pm • Saturday and Sunday 9:00am – 9:00pm
Houghtailing Street King Street to Olomea Street (within the City right-of-way)	Extended Work Hours • Monday thru Friday 8:30am – 9:00pm • Saturday and Sunday 9:00am – 9:00pm
Houghtailing Street Olomea Street to Halona Road (within the State right-of-way)	Night Work Only • Monday thru Friday 9:00pm – 5:00am • Saturday and Sunday 9:00pm – 5:00am
Houghtailing Street Halona Road to School Street (within the City right-of-way)	Extended Work Hours • Monday thru Friday 8:30am – 9:00pm • Saturday and Sunday 9:00am – 9:00pm
Houghtailing Street / School Street intersection (within the City right-of-way)	Extended Work Hours • Monday thru Friday 8:30am – 9:00pm • Saturday and Sunday 9:00am – 9:00pm

6.10 Construction Traffic Mitigation and Management Plan

The construction Contractor will be required to prepare a Construction Traffic Mitigation and Management Plan (CTMMP) for approval by the City Department of Design and Construction and by the City Department of Transportation Services. CTMMP approval shall be obtained prior to starting any lane closures within the public streets rights-of-ways and prior to issuance of the City Street Usage Permit to the Contractor.

The CTMMP prepared by the Contractor shall include but not be limited to the following information and requirements :

1. Construction Schedule of work days, work hours, and work locations, particularly identifying the days and times outside of the weekday times of 8:30am to 3:30pm, and the work locations within 500 feet of residences, in compliance with the Noise Variance. Provide, at minimum, monthly updates to the Construction Schedule.

2. A comprehensive set of site-specific Traffic Control Plans approved by the Department of Transportation Services which the Contractor will follow for the management of traffic.

3. Deploy flashing message boards for at least 10 consecutive days in advance of any traffic lanes closures to inform the public of the upcoming schedule of traffic lanes closures or detours. Deploy flashing message boards continuously for all times when any 24-hours lane closures or detours are implemented. The locations for the flashing message boards and the wording of the flashing messages shall be approved by the City Department of Transportation Services.

4. Coordinate with the City Department of Transportation Services for temporary modifications to the timing and phasing of traffic signals at signalized intersections as necessary.

5. Communicate and coordinate with adjacent property owners to ensure vehicular ingress and egress from the adjacent driveways and facilities. Prepare and distribute written notices of the construction activities to the adjacent property owners and property users.

6. The CTMMP shall be closely coordinated with the project's Construction Noise Mitigation and Management Plan since both mitigation plans are necessary to working extended hours and to implementing 24-hours construction work zones.

7. Work within the State of Hawaii right-of-way at Nimitz Highway will be limited to the weekdays and weekends nighttime hours of 9:00pm through 2:00am only.

8. Work within the State of Hawaii right-of-way at Halona Road and Olomea Street will be limited to the weekdays and weekends nighttime hours of 9:00pm through 5:00am only

6.11 Study for Noise Impacts and Application for Noise Variance

In 2016, the acoustical engineering consultant firm Y.Ebisu & Associates, Inc. had performed on-site acoustical investigations including field monitoring and sound measurements within the project area in order to assess the potential noise impacts of the construction activities and to prepare acoustical data for an "Application for Community Noise Variance" for this project to the State DOH Indoor and Radiological Health Branch.

Noise is regulated by the DOH in accordance with Hawaii Revised Statutes Chapter 342, "Noise Pollution" and Hawaii Administrative Rules, Title 11 Chapter 46, "Community Noise Control." The maximum permissible noise levels are classified into 3 zoning districts :

Zoning	7:00am-10:00pm	10:00pm-7:00am
Class A (Residential)	55 dBA	45 dBA
Class B (Business and Commercial)	60 dBA	50 dBA
Class C (Industrial) :	75 dBA	70 dBA

Applying for and obtaining a Community Noise Variance for this project will provide DOH regulatory approval allowing limited sound generating construction activities to be performed beyond the usual Mondays through Fridays working hours 8:30am to 3:30pm for work within the City streets. Such noise variance is often normally obtained for City projects which will require extended work hours for the construction activities.

On October 6, 2016, a Public Informational Meeting was held at Farrington High School specifically to explain to the public the purpose and nature of the project's Community Noise Variance application.

On December 13, 2016, the DOH executed a Decision and Order granting a Variance for Community Noise Control to the City Department and Design for this project

Impacts from noise are anticipated to be short-term from construction-related activities and traffic associated with the construction activities. No significant long-term impacts relating to noise are anticipated as a result of the project.

6.12 Noise Variance

State DOH Decision and Order (Docket No. 16-NR-VN-39, V-936) dated December 13, 2016, granted a Variance for Community Noise Control to the City Department of Design and Construction, pursuant to Hawaii Revised Statutes Chapter 342F and Hawaii Administrative Rules Chapter 11-46.

A copy of the DOH Decision and Order is provided in Appendix B.

6.13 Construction Noise Mitigation and Management Plan

The construction Contractor will be required to prepare a Construction Noise Mitigation and Management Plan (CNMMP) for approval by the City Department of Design and Construction and the City Department of Transportation Services.

The CNMMP prepared by the Contractor shall include but not be limited to the following information and requirements :

1. The Contractor shall adhere to and implement the restrictions and conditions cited in the Noise Variance.

2. Contractor acknowledgement that should the noise levels cause numerous complaints to the State Department of Health, the Contractor will be ordered to cease operations and complete the project during hours on weekdays and weekends as directed.

3. Construction Schedule of work days, work hours, and work locations, particularly identifying the days and times outside of the weekday times of 8:30am to 3:30pm, and the work locations within 500 feet of residences, in compliance with the Noise Variance. Provide, at minimum, monthly updates to the Construction Schedule.

4. The Contractor shall assign both a primary on-site supervisor and a secondary on-site supervisor to whom noise complaints can be forwarded for prompt response and who shall have the responsibilities of monitoring noise levels and supervising the work. The names, positions, and emergency 24-hour mobile phone numbers for these on-site supervisors shall be included within the CNMMP. Provide immediate notification if the assignment of these supervisors should change and provide the necessary information for the replacement on-site supervisors who will assume the responsibilities.

5. The Contractor shall retain a qualified acoustical technician, subject to approval by the City Department of Design and Construction, to continually monitor, measure, record, and report the noise levels generated by the construction activities.

6. The Contractor shall provide daily noise reports to the City Department of Design and Construction. The location of the work, the type of work, the types of equipment used, and the noise levels measured shall be included within each daily noise report.

7. The CNMMP shall be closely coordinated with the project's Construction Traffic Mitigation and Management Plan since both mitigation plans are necessary to working extended hours and to implementing 24-hours construction work zones. The Contractor shall submit the CNMMP to the City Department of Transportation Services together with the Construction Traffic Mitigation and Management Plan, for approval.

6.14 Relocation of Existing Subsurface and Overhead Utilities

The construction excavations will encounter existing subsurface and overhead utilities such as other sewer pipes, storm water drain pipes and box culverts, water pipes, traffic signals, electrical conduits, natural gas pipes, and communications systems conduits within Waiakamilo Road, Houghtailing Street, and the adjoining streets of the project area. In general, the project design attempts to avoid impacting the existing subsurface and overhead utilities. However, there will be locations where the subsurface or overhead utilities will need to be relocated or protected due to the installation of the new trunk sewer.

The existing subsurface and overhead utilities are owned and maintained by :

- Hawaiian Electric Company
- Hawaiian Telcom
- Hawaii Gas Company
- Honolulu Board of Water Supply
- City and County of Honolulu
- Oceanic Time Warner

These owners of the existing subsurface and overhead utilities are receiving copies of the project design plans for their review and comment. If there will be need to relocate any of these other utilities, then the relocation design and construction will be closely coordinated with the respective owner of that utility.

7.0 SUMMARY DESCRIPTION OF THE AFFECTED ENVIRONMENT

7.1 United States Geological Survey (USGS)

USGS QUADRANGLE MAP : The project area is shown in the USGS Honolulu Quadrangle map.

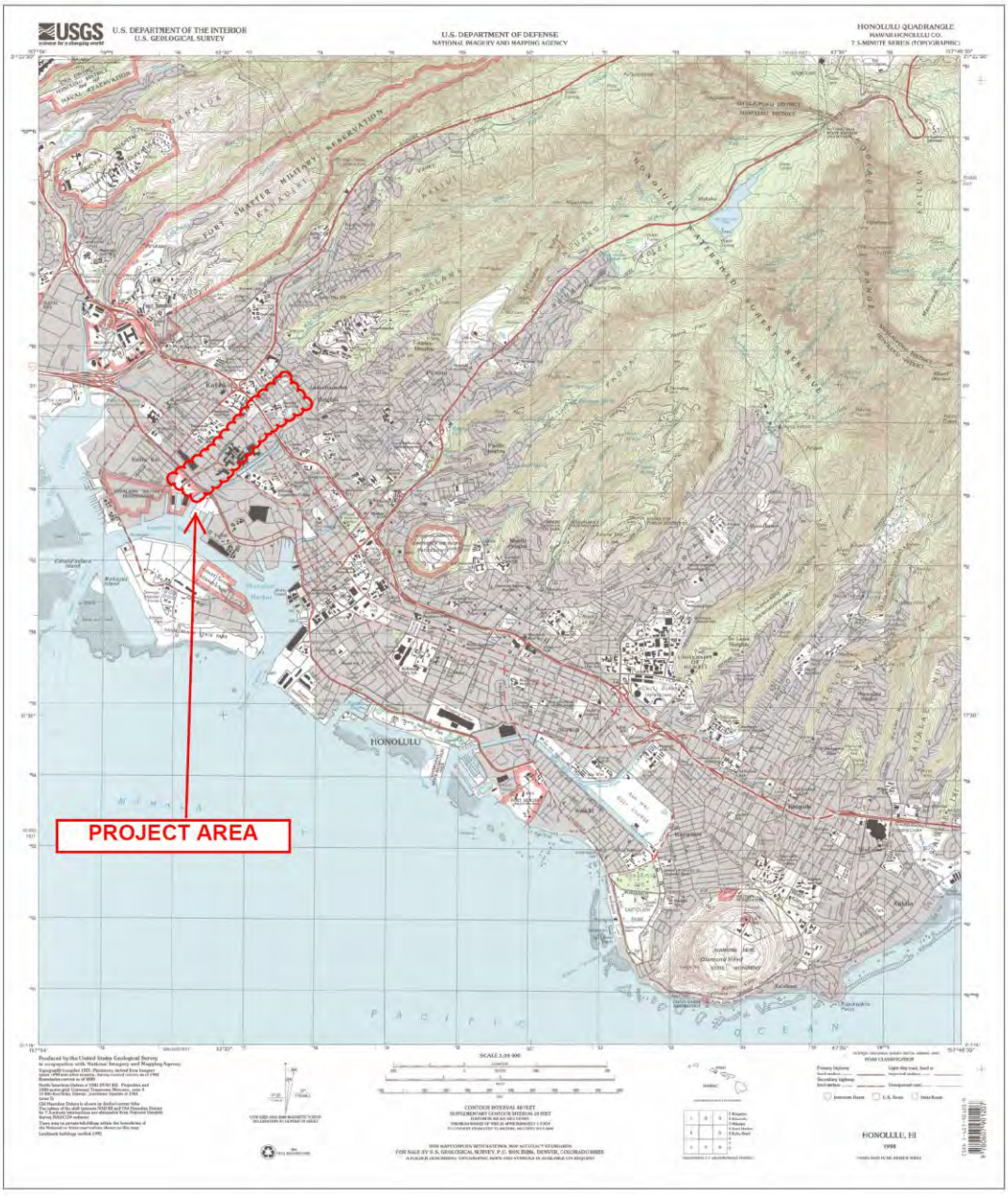


Figure 12 : USGS Quadrangle Map (Honolulu Quadrangle)

7.2 State Land Use Classification

The State Land Use law and land use classifications are administered by the State Land Use Commission. Lands in Hawaii are classified into four land use districts: Urban, Rural, Agricultural, and Conservation.

The project area is within the Urban District which includes lands characterized by concentrations of people, structures and services as would generally form an environment similar to a city.

7.3 City and County of Honolulu Zoning

Zoning on Oahu is administered by the City Department of Planning and Permitting.

The zoning designations for properties located along Waiakamilo Road and Houghtailing Street within the project area and nearby to the project area consist of :

IMX……...Industrial-Commercial Mixed Use

BMX-3…..Business Mixed Use-Community

R-5……...Residential

B-2……...Community Business

Location	Zoning
Waiakamilo Road	
Nimitz Highway to Mookaula Street	IMX-1
Mookaula Street to King Street	BMX-3
Houghtailing Street	
King Street to Monte Cook Place	R-5
Monte Cook Place to School Street	B-2

7.4 Coastal Zone Management

The Coastal Zone Management program is administered by the State Office of Planning for purposes of coastal and shoreline management.

The project area is not located near to the coastal shoreline and is not required to file any applications with the Coastal Zone Management program

7.5 Special Management Area

Special Management Areas (SMA) on Oahu are administered by the City Department of Planning and Permitting.

The project area of Waiakamilo Road and Houghtailing Street is not within the SMA. Therefore, a SMA Permit is not required for the construction within the project area.

The Off-Site Soils Mitigation Area at the Sand Island Wastewater Treatment Plant is within the SMA. Therefore, if the construction Contractor will decide to utilize the Sand Island Wastewater Treatment Plan site, then a SMA Minor Permit (for construction values less than $500,000) will need to be obtained. The Contractor shall be required to apply for and obtain the SMA Minor Permit through coordination with the City Department of Design and Construction.

7.6 Special Flood Hazard Area

Special Flood Hazard Areas are defined by the Federal Emergency Management Agency Flood Insurance Rate Maps (FIRM). The Special Flood Hazard Areas are locally administered by the City Department of Planning and Permitting.

The project is entirely located within FIRM areas mapped as Zone X which are areas outside of the 100-year Special Flood Hazard Area. The Zone X designation indicates that the project area is not subject to the one-percent chance annual flood event. The project area is mapped across two different FIRM Panels. The two FIRM Panels are shown below :

1. FIRM Panel 1500300354G, Figure 5 below, shows the Houghtailing Street and School Street areas of the project as being within Zone X.

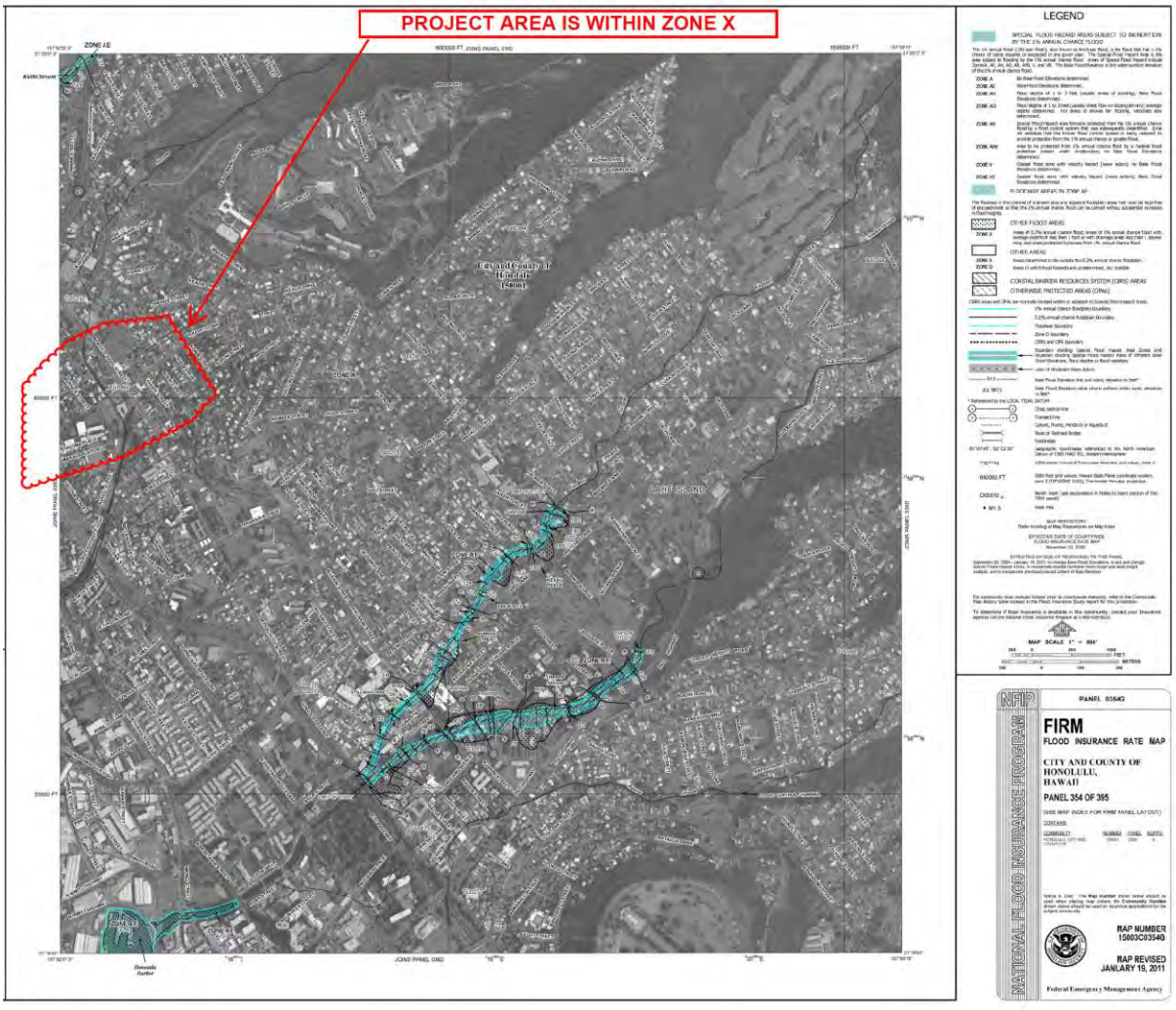


Figure 13 : FIRM Panel 15003C0354G

2. FIRM Panel 1500300353G, Figure 6 below, shows the Waiakamilo Road and Nimitz Highway areas of the project as being within Zone X.

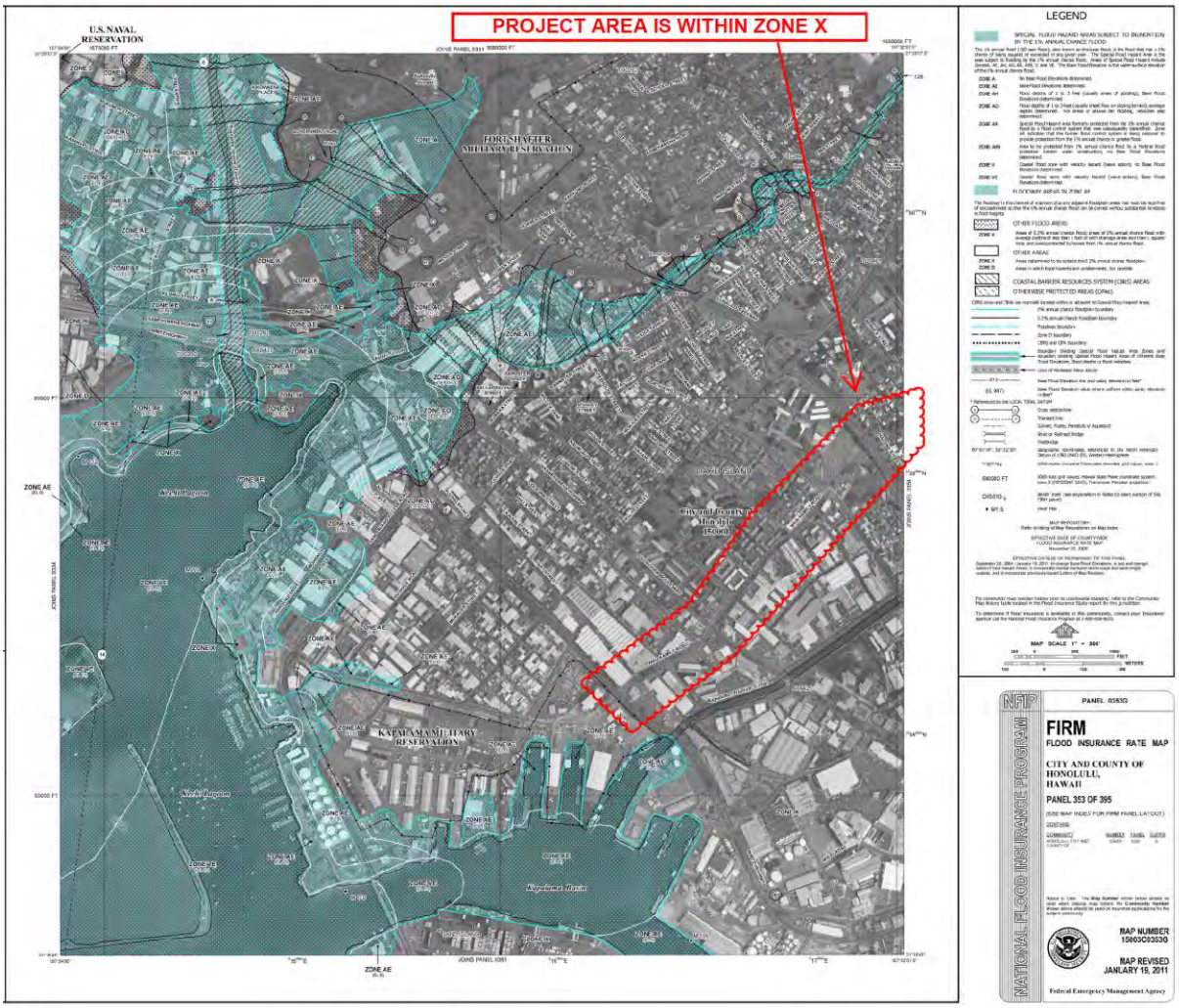


Figure 14 : FIRM Panel 15003C0353G

7.7 Climate and Hydrology

The climate of the project area is characteristic of Honolulu with average daily temperature of about 77°F and average precipitation of about 1.5 inches per month. Rainfall will infiltrate into the groundwater feeding subsurface aquifers or will discharge into nearby streams or into the ocean. The natural flow of groundwater is from the higher mauka elevations to the lower makai elevations.

Oahu aquifers are categorized as either shallow freshwater aquifer or deep saltwater aquifer, where the shallow freshwater aquifers are underground sources of Oahu drinking waters. The Department of Health Administrative Rules, Title 11, Chapter 23 provides regulations to protect the underground sources of drinking water by governing the location, construction, and operation of underground injection wells. The Hawaii Department of Health established an Underground Injection Control (UIC) Line to demarcate a boundary between drinking water and non-drinking water portions of aquifers. Areas which are mountain-side of the UIC Line are within drinking water sections of the aquifer while areas which are seaward-side of the UIC Line are in the non-drinking water sections. Within the project area, the UIC Line runs parallel with and within Dillingham Boulevard (i.e. Dillingham Boulevard marks the UIC Line within the project area).

There is no natural surface water flow through the project site although the nearest stream is the Kapalama Canal located adjacent to Kohou Street.

The proposed project will not increase the volume of peak storm water runoff or contribute contaminants to storm water runoff. Materials that may enter streams and drainage channels include soil from excavations, particles from paving materials, oil and grease from construction equipment, and suspended particles in dewatering effluent. Adverse impacts to surface water quality will be mitigated through erosion control measures, treating dewatering effluent to remove silt, and use of silt fences and sediment-trapping drain inlet filters.

7.8 Flora and Fauna

The project area is located within an area that has been highly built-out and is now occupied by industrial users, mixed business users, and residences where naturally occurring native plants if any have been removed previously. The great majority of the ground surfaces throughout the project area are paved asphalt roadways with concrete sidewalks and driveways. The limited plantings within the project area consist of grasses, shrubs, and trees within the existing sidewalk planting strips and roadway medians. Therefore, no threatened or endangered flora are affected by this project.

Similarly, no threatened or endangered fauna were observed within the project area. Located in a developed urban area, the project area consists of minimal vegetation that would not support any threatened or endangered fauna.

The proposed project is not anticipated to adversely affect any endangered or threatened flora or fauna species as none are known to exist in the project area.

7.9 Air Quality

Air pollution control is regulated by the State Department of Health's Clean Air Branch. Rules and regulations governing air pollution control include HRS, Chapter 342B, "Air Pollution Control," HAR Title 11, Chapter 59, "Ambient Air Quality Standards," and HAR Title 11, Chapter 60.1 "Air Pollution Control."

The project site is located within an urban area with mixed residential, business, and commercial uses. Air quality within the project area may be influenced by vehicular traffic or volcanic smog.

Impacts on air quality are anticipated to be minor and short-term. Short-term effects on air quality may result from construction-related activities that may generate dust affecting the air quality in and around the project area. With the presence of normal trade wind conditions, it is anticipated that pollutants will be blown towards the ocean. However, with Kona winds, the pollutants may be blown landward, resulting in a decline in area air quality. The short-term effects on air quality will be mitigated by compliance with State DOH Administrative Rules, Title 11, Chapter 60, "Air Pollution Control." The following are BMPs that may be implemented to control dust generated by construction activities:

- Phase construction activities, focus on minimizing the amount of dust-generating materials and activities;
- Control dust from debris being hauled away from the project site;
- Provide adequate dust control measures during weekends, after hours, and prior to daily start-up of construction activities

7.10 Socio-Economic Conditions

The project area is located within the Kalihi-Palama Neighborhood which is an urban district with mixed residential, business, industrial, and commercial uses.

Several schools are located in the vicinity of the project area including the Damien Memorial School, Governor Wallace Rider Farrington High School, and Honolulu Community College.

The Kalihi-Palama neighborhood has a population of about 40,000 and a population density of about 8,700 persons per square mile, approximately double the population density of Honolulu. The average household size in Kalihi-Palama was 4, almost double the average household size for Honolulu (2.5).

The proposed project is not anticipated to have any adverse socio-economic effect.

7.11 Water, Electricity, and Communications Services

The water lines in the vicinity of the project are maintained and serviced by the Honolulu Board of Water Supply. Electricity and electrical services are provided by the Hawaiian Electric Company. Communications systems and services are provided by Hawaiian Telcom and Oceanic Time Warner.

The proposed project is not anticipated to have any adverse effect to water, electrical, and communication services.

8.0 REQUIRED PERMITS AND APPROVALS

The following permits and approvals are anticipated to be required for this project :

State Department of Health
- NPDES Storm Water Associated with Construction Activities
- NPDES Construction Activity Dewatering Effluent
- Noise Permit
- Community Noise Variance

State Department of Transportation
- Permit to Discharge into the State Highways Drainage System
- Use and Occupancy Agreement

State Department of Land and Natural Resources
- Chapter 6E Historic Preservation Review

City Department of Planning and Permitting
- Excavation Permit
- Grading Permit
- SMA Permit

City Department of Environmental Services
- Industrial Wastewater Discharge Permit for temporary discharge

City Department of Transportation Services
- Street Usage Permit

9.0 ANTICIPATED DETERMINATION

9.1 Anticipated Finding of No Significant Impact

Based on the studies and consultations performed for this project, the determination is anticipated to be a Finding of No Significant Impact (FONSI).

The proposed project is not anticipated to have significant impacts to the natural, built, or social environment. Although temporary impacts due to the construction activities such as dust, noise, and traffic congestion are anticipated, these temporary impacts will be mitigated though the use of best management practices to minimize and mitigate the temporary impacts.

9.2 Findings and Reasons Supporting the FONSI Determination

The anticipated FONSI determination is based on evaluation of the 13 significance criteria identified in the Hawaii Administrative Rules Section 11-200-12. The 13 significance criteria are listed, numbered, and evaluated below.

1. **Involves an irrevocable commitment to loss or destruction of any natural or cultural resource**

   The proposed project is not anticipated to involve nor cause an irrevocable commitment to loss or destruction of any natural or cultural resource.

   The proposed project and construction activities will occur almost entirely within the existing public streets where these lands have been previously developed and utilized for vehicle and pedestrian traffic upon the surface streets and for utilities installations beneath the surface streets.

   A Literature Review and Field Investigation (LRFI) report has been prepared by the Hawaii firm Cultural Surveys Hawaii and reports that no surface historic or cultural resources relative to the Hawaiian culture are believed to be within the project area. The LRFI report has been submitted to the State Department of Land and Natural Resources Historic Preservation Division (SHPD). SHPD has replied to the LRFI and has advised that on-site archaeological monitoring be performed during the construction excavations. In compliance with SHPD, the construction contractor will retain a qualified archaeologist to perform archaeological monitoring during the construction excavations. If any natural or cultural resources should be encountered during the construction excavations, then the appropriate procedures to stop work and consult with SHPD will be followed.

2. **Curtails the range of beneficial uses of the environment.**

   The proposed project is not anticipated to curtail the range of beneficial uses of the environment.

   The project area consists of the Waiakamilo Road-Houghtailing Street public street corridor from Nimitz Highway to School Street. This public street corridor is and has been used for public traffic and infrastructure utilities consistent with City and State-owned rights-of-ways. The installation of the proposed Waiakamilo Road Trunk Sewer within and beneath the public streets does not curtail any beneficial use of the surrounding environment.

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

   The proposed project does not conflict with the environmental policies, goals, or guidelines as expressed in HRS Chapter 344.

   The proposed project is undertaken to comply with the Consent Decree jointly executed in year 2010 by the United States Environmental Protection Agency, the State of Hawaii, and the City and County of Honolulu. The Consent Decree mandates the City to make improvements to the municipal sewer system and sewer facilities in order to reduce or avoid sewage spills and overflows.

4. **Substantially affects the economic or social welfare of the community or State.**

   The proposed project does not substantially affect the economic or social welfare of the community or State of Hawaii.

   The project's installation of the new Waiakamilo Road Trunk Sewer will provide an infrastructure improvement to the sewer system within the Kalihi area but will not have any substantial nor significant adverse effect upon the economic or social welfare of the Kalihi community nor the State of Hawaii.

5. **Substantially affects public health.**

   The proposed project is not anticipated to substantially affect public health. The proposed project is not anticipated to adversely affect public health and safety.

   The construction of the new Waiakamilo Road Trunk Sewer will improve the municipal sewer system. In turn, these improvements to the municipal sewer system will provide benefits to the public health and safety.

   Although the construction activities will cause temporary impacts within the public streets such as noise, dust, and traffic congestion, these temporary impacts will be mitigated through the appropriate noise monitoring, dust control, and traffic management implemented by the construction contractor.

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

The proposed project does not involve substantial secondary impacts such as population changes or effects on public facilities.

The proposed project will not cause population changes. Construction of the new Waiakamilo Road Trunk Sewer will divert wastewater flows from the Awa Street WWPS to the Hart Street WWPS which will improve the municipal sewer system but will not cause population changes.

The proposed project will not cause substantial secondary effects upon public facilities. Although the project construction activities will cause temporary traffic impacts within Waiakamilo Road and Houghtailing Street, these temporary impacts will be mitigated through appropriate traffic control and traffic management implemented by the construction contractor.

7. Involves substantial degradation of environmental quality.

The proposed project does not involve degradation of environmental quality.

Although the project's construction activities will cause temporary impacts within the public streets such as noise, dust, and traffic congestion, these temporary impacts will be mitigated through the appropriate noise monitoring, dust control, and traffic management implemented by the construction contractor. After completion of the construction activities, there would not be any substantial change to nor degradation of the currently existing environmental quality.

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

The proposed project does not have a considerable effect upon the environment and does not involve a commitment for larger actions.

The proposed project involves sewer system improvements to construct a new trunk sewer within Waiakamilo Road and Houghtailing Street. Although it is an improvement to the existing municipal sewer system, the new Waiakamilo Road Trunk Sewer will not have a considerable effect upon the environment nor involve a commitment for larger actions.

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

The proposed project does not substantially affect any rare, threatened, or endangered species or its habitat.

The project construction will occur within the public streets Waiakamilo Road and Houghtailing Street from Nimitz Highway to School Street. These streets are fully paved and include concrete sidewalks and subsurface utilities. There are not any rare, threatened, nor endangered species, nor its habitat within the existing public streets environment of this project.

10. Detrimentally affects air or water quality or ambient noise levels.

The proposed project is not anticipated to detrimentally affect air nor water quality nor ambient noise levels.

The proposed project will construct the new Waiakamilo Road Trunk Sewer which will be installed beneath the existing public streets of Waiakamilo Road and Houghtailing Street. Upon its completion, the new trunk sewer will not affect air or water quality nor ambient noise levels.

Although the project's construction activities will cause temporary impacts within the public streets such as noise, and dust, these temporary impacts will be mitigated through the appropriate noise monitoring and dust control implemented by the construction contractor. After the project construction is completed, there will not be any significant change to the air quality and ambient noise levels which are existing prior to undertaking the construction activities.

With respect to water quality, the construction contractor will be required to adhere to State DOH NPDES permits for handling and disposal of construction dewatering effluent and for storm water runoff generated by the construction activities. Compliance with the State DOH NPDES permits will assure that the project construction does not detrimentally water quality.

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

The project area consisting of Waiakamilo Road and Houghtailing Street from Nimitz Highway to School Street is not located within an environmentally sensitive area and does not affect nor is likely suffer damage due to flood hazards, tsunami, beach erosion, geological hazards, or reasons relating to estuary, fresh water, or coastal waters.

The project area is located within Zone X (areas outside of the 100-year floodplain) as identified in the FEMA Flood Insurance Rate Map. The project area is also outside of the tsunami evacuation zone for Oahu island.

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

The proposed project does not substantially affect scenic vistas and view planes identified in county or state plans or studies.

The new Waiakamilo Road Trunk Sewer will be underground beneath Waiakamilo Road and Houghtailing Street and will not cause any effect upon the scenic vistas and view planes.

13. Requires substantial energy consumption.

The proposed project will not require substantial energy consumption.

During the construction of this project, the construction activities will cause only temporary energy consumption in terms of fuels and oils for construction equipment and vehicles.

Upon the completion of construction, the Waiakamilo Road Trunk Sewer will be a gravity flow system which will not require energy input. The diversion of flows from the Awa Street WWPS will reduce the energy consumption at the Awa WWPS. The flows diverted to Hart Street WWPS will cause an increase in energy consumption at the Hart Street WWPS. The energy reduction at Awa WWPS will offset the energy increase at Hart Street WWPS. Overall, this project does not require substantial energy consumption.

APPENDIX A

SHPD REVIEW LETTER

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

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

December 16, 2015

David Shideler
Cultural Surveys Hawaii, Inc.
P.O. Box 1144
Kailua, HI 96734
Dear Mr. Shideler

Log No. 2014.02661
Doc. No. 1512GC14
Archaeology

SUBJECT: **Chapter 6E-8 Historic Preservation Review –**
Archaeological Literature Review and Field Inspection Report for
Awa Street Wastewater Pump Station and Force Main Project
Kapālama and Honolulu Ahupua'a, Kona District, Island of O'ahu
TMK: (1) 1-5 various and 1-6 various

Thank you for the opportunity to review this draft report titled *Draft Archaeological Literature Review and Field Inspection Report for the Awa Street Wastewater Pump Station and Force Main Project, Kapālama and Honolulu Ahupua'a, Kona District, O'ahu Island, TMK: (1) 1-5-002-003, 006-010, 012, 013, 015, 017, 020-024, 026, 027, 029, 030, 032, 033, 039 and (1) 1-6-003-005, 015, 021, 023, 025: Various Parcels* (LaChance and Hammatt, 2014). This submittal was received at our Kapolei office on October 11, 2013 (Log No. 2013.5852), and resubmitted on June 9, 2014 (Log No. 2014.02661). We apologize for the delayed review and appreciate your patience.

The proposed Department of Design and Construction (DDC) project will consist of two phases. Phase I includes sewer improvements on the west side of Kapālama Canal and several transportation arteries within lower Kapālama and Honolulu. In addition, Phase I will include constructing new gravity lines to the existing City and County wastewater collection lines. The project will require open trenching of approximately 2.5 acres (110,868 square feet) of various State, County and privately owned lands. Phase 2 consists of the decommissioning of Awa Street Wastewater Pump Station and associated work on the east side of Kapālama Canal..

Our records indicate that several archaeological studies have been conducted within Kapālama and Honolulu Ahupua'a. These studies included documenting numerous subsurface traditional and/or post-contact *in-situ* human burials, human skeletal remains, artifacts, fishponds, and architectural features. Available documentation indicates that several historic-era buildings (e.g., Kapālama Canal (circa 1964), Kalihi Pumping Station (circa 1900), Kapālama Canal Bridge (circa 1930), Pālama Fire Station (SIHP 50-80-14-1346)) are within the visual plane of the proposed project. They also indicate that while development, including infrastructure work, has altered the area, subsurface archaeological artifacts including human skeletal remains have been identified within existing utility trenches. As such, the LaChance and Hammatt (2014) report recommends that an archaeological monitoring program be conducted to document and mitigate any subsurface archaeological properties encountered during the proposed project. **SHPD concurs with the recommendation that the project proceed under archaeological monitoring**.

Although this document does not fulfill the requirements of an AIS per HAR Chapter §13-276, it serves to facilitate project planning and supports the historic preservation review process. It is accepted pursuant to HAR §13-284-5(b)(2). Please send one hardcopy of the document, clearly marked FINAL, along with a copy of this review letter and a text-searchable PDF version on CD to the Kapolei SHPD office, attention SHPD Library.

Please contact Ka'āhiki Solis at (808) 692-8030 or at Sheleigh.Solis@hawaii.gov for any history and culture concerns. Please contact me at (808) 692-8019 or at Susan.A.Lebo@hawaii.gov for any questions or concerns about this letter.

Aloha,

Susan A. Lebo

Susan A. Lebo, PhD
Archaeology Branch Chief

cc: Megan Inouye, DDC (minouye3@honolulu.gov)

KAPALAMA 15

APPENDIX B

NOISE VARIANCE

675144

DAVID Y. IGE
GOVERNOR OF HAWAII

RECEIVED def
DEPT OF DESIGN & CONSTR
C & C OF HONOLULU
16 DEC 19 AM 10: 10

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:

December 14, 2016

RJK Dir
mm Dep > FYI
WD

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

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

Dear Mr. Kroning:

Enclosed is the VARIANCE (Docket No. 16-NR-VN-39) for Community Noise Control which was granted on December 13, 2016. The Decision and Order specifies the conditions and restrictions that are applicable to your project.

Non-compliance with the conditions and restrictions of the Decision and Order may bring about additional restrictions or possible suspension of the variance. Should you have any questions relative to the variance, please do not hesitate to contact me at (808) 586-4700 or at james.toma@doh.hawaii.gov.

Sincerely,

James E. Toma
Noise Section Supervisor
Indoor and Radiological Health Branch

STATE OF HAWAII
DEPARTMENT OF HEALTH

In the Matter of the Application For Variance for:	)	
CITY AND COUNTY OF HONOLULU DEPT. OF DESIGN & CONSTRUCTION Noise – Force Main and System Improvements along Waiakamilo Road, Between Nimitz Highway and North School Street, Honolulu, Oahu	)	Docket No.16-NR-VN-39 V-936

DECISION AND ORDER

Pursuant to Chapter 342F, Hawaii Revised Statutes (H.R.S.), and Chapter 11-46, Hawaii Administrative Rules (H.A.R.), Community Noise Control; and based upon the application and review by the Indoor and Radiological Health Branch, the variance request from the provisions of Section 11-46-6(a), H.A.R., is hereby GRANTED with the following restrictions and conditions:

1. The variance shall be granted for shaft and manhole construction, MTBM recovery, sewer line connection, backfilling and pavement reconstruction and striping, sewer by-pass pump operations, continuation of the micro tunneling or Pilot tube micro tunneling operations, vacuuming loose material from the shafts, and cleanup of the staging areas.

2. The variance shall be granted from September 1, 2017 to June 30, 2020.

3. The variance shall be granted for the following days/times:

Monday through Friday	Midnight to 7:00 a.m. and 6:00 p.m. to Midnight.
Saturdays	Midnight to 9:00 a.m. and 6:00 p.m. to Midnight.
Sundays and Holidays	All day (Midnight to Midnight).

4. The variance shall be granted with the following restriction:

    1. The use of the *jack hammers*, *concrete saw*, *noisy vacuum truck* shall be prohibited after 10:00 p.m. within 500 feet of residences.

    2. The use of *backhoes*, *loaders*, *hopto*, *excavator*, *paver*, and *cold planers* shall be prohibited after midnight within 500 feet of residences.

5. The applicant shall notify the Indoor and Radiological Health Branch as to the date and time of any variance hour activity as soon as the dates are confirmed and also when the project is completed.

6. Residents within a 500 feet radius of the project site shall be given sufficient notice regarding the project. The notification for the planned nighttime activity shall also contain the name and telephone number of the job-site inspector. In addition, a copy of any notifications, as well as progress reports, shall also be sent to the Indoor and Radiological Health Branch.

7. The applicant shall make every effort to minimize noise emanating from the project.

8. The use of reverse signal alarms shall be prohibited from 8:00 p.m. to 7:00 a.m. Alternative methods such as utilizing a ground guide for signaling shall be employed.

9. Traffic noise from heavy vehicles travelling to and from the project site shall be minimized near residences.

10. The applicant shall have a job-site inspector to whom immediate complaints can be forwarded for prompt response, and who shall have the general responsibility of monitoring quiet work procedures.

11. If the noise level is such that numerous complaints are received by the Department, the applicant shall cease operations upon receipt of an order and complete the project during hours on weekdays and weekends as directed.

12. Pursuant to Section 342F-5(d)(3), H.R.S., the applicant shall be required to perform noise sampling during the variance hours and report the results of such sampling to the Indoor and Radiological Health Branch.

13. Should the duration of the project continue beyond the expiration date, the applicant shall submit a request for extension along with an updated work schedule prior to June 30, 2020.

DATED: Honolulu, Hawaii, DEC 13 2016.

Lynn M Nakasone

LYNN M. NAKASONE
Environmental Health Program Administrator
Environmental Health Services Division

APPENDIX C

CONSULTATION RESPONSE LETTERS

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

July 19, 2016

Townscape, Inc.
Attention: Ms. Angela Fa'anunu, Staff Planner via email: Faanunu@townscapeinc.com
900 Fort Street Mall, Suite 1160
Honolulu, HI 96813

Dear Ms. Fa'anunu:

SUBJECT: Initial Consultation for the Preparation of an Environmental Assessment (EA) for the Awa Street Wastewater Pump Station (WWPS) Sewer System Improvements Phase 1

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 (a) Engineering Division and (b) Land Division – Oahu District on the subject matter. Should you have any questions, please feel free to call Lydia Morikawa at 587-0410. Thank you.

Sincerely,

Russell Y. Tsuji
Land Administrator

Enclosure(s)
cc: Central Files

DAVID Y. IGE
GOVERNOR OF HAWAII

2016 JUL 06 PM 02:04 ENGINEERING

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

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

RECEIVED
LAND DIVISION
2016 JUL 15 AM 10:44
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

July 6, 2016

MEMORANDUM

TO:
FR:

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
___ Office of Conservation & Coastal Lands
_X_ Land Division – Oahu District
_X_ Historic Preservation

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Initial Consultation for the Preparation of an Environmental Assessment (EA) for the Awa Street Wastewater Pump Station (WWPS) Sewer System Improvements Phase 1
LOCATION: Kalahi-Kapalama, Island of Oahu; TMK: (1) various
APPLICANT: City and County of Honolulu

Transmitted for your review and comment is information on the above-referenced notification. We would appreciate your comments on this notification. Please submit any comments by **July 18, 2016**.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Lydia Morikawa at 587-0410. Thank you.

Attachments

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

Signed: Carty S. Chang, Chief Engineer
Print Name:
Date: 7/13/16

cc: Central Files

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

To: Land Division
Ref: Initial Consultation for the Preparation of an Environmental Assessment for the Awa Street Wastewater Pump Station Sewer System Improvements Phase 1

COMMENTS

The rules and regulations of the National Flood Insurance Program (NFIP), Title 44 of the Code of Federal Regulations (44CFR), are in effect when development falls within a designated Flood Hazard.

The owner or the project property and/or their representative is responsible to research the Flood Hazard Zone designation for the project. Flood Hazard Zone designations can be found using the Flood Insurance Rate Map (FIRM), which can be accessed through the Flood Hazard Assessment Tool (FHAT) (http://gis.hawaiinfip.org/FHAT).

National Flood Insurance Program establishes the rules and regulations of the NFIP - Title 44 of the Code of Federal Regulations (44CFR). The NFIP Zone X is a designation where there is no perceived flood impact. Therefore, the NFIP does not regulate any development within a Zone X designation.

Be advised that 44CFR reflects the minimum standards as set forth by the NFIP. Local community flood ordinances may take precedence over the NFIP standards as local designations prove to be more restrictive. If there are questions regarding the local flood ordinances, please contact the applicable County NFIP Coordinators below:

- Oahu: City and County of Honolulu, Department of Planning and Permitting (808) 768-8098.
- Hawaii Island: County of Hawaii, Department of Public Works (808) 961-8327.
- Maui/Molokai/Lanai County of Maui, Department of Planning (808) 270-7253.
- Kauai: County of Kauai, Department of Public Works (808) 241-4846.

Signed: _____
CARTY S. CHANG, CHIEF ENGINEER

Date: 7/13/14

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

July 6, 2016

MEMORANDUM

FROM: 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
___ Office of Conservation & Coastal Lands
_X_Land Division – Oahu District
_X_Historic Preservation

RECEIVED
LAND DIVISION
2016 JUL -8 AM 5:48
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

TO: FROM: Russell Y. Tsuji, Land Administrator

SUBJECT: Initial Consultation for the Preparation of an Environmental Assessment (EA) for the Awa Street Wastewater Pump Station (WWPS) Sewer System Improvements Phase 1

LOCATION: Kalahi-Kapalama, Island of Oahu; TMK: (1) various

APPLICANT: City and County of Honolulu

Transmitted for your review and comment is information on the above-referenced notification. We would appreciate your comments on this notification. Please submit any comments by **July 18, 2016**.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Lydia Morikawa at 587-0410. Thank you.

Attachments

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

Signed: T Choe

Print Name: Tiffany Cha
Date: 7/7/16

cc: Central Files

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

TP7/16-658168R

July 20, 2016

Ms. Angela Fa'anunu, Ph.D.
Staff Planner
Townscape, Inc.
900 Fort Street Mall, Suite 1160
Honolulu, Hawaii 96813

Dear Dr. Fa'anunu:

SUBJECT: Pre-Consultation for Draft Environmental Assessment (DEA)
Awa Street Wastewater Pump Station Sewer System Improvements
Phase 1

In response to your letter dated June 28, 2016, we have the following comments:

1. The DEA should include a Traffic Mitigation Plan which evaluates existing traffic conditions of the surrounding City roadways, any impacts to the traffic and pedestrian patterns especially during construction, and appropriate mitigation measures.

2. The affected Neighborhood Board, as well as the area residents, businesses, etc., should be kept apprised of the details and any local impacts of the proposed project.

3. Any construction materials and equipment should be transferred to and from the project sites 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.

We reserve further comment pending submission of the DEA.

Thank you for the opportunity to review this matter. Should you have any further questions, please contact Michael Murphy of my staff at 768-8359.

Very truly yours,

Michael D. Formby
Director

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

July 26, 2016

Ms. Angela Fa'anunu, Ph.D
Townscape, Inc.
900 Fort Street Mall, Suite 1160
Honolulu, Hawaii 96813

Dear Dr. Fa'anunu:

Subject: Environmental Assessment for the Awa Street Wastewater Pump Station Sewer System Improvements Phase 1

In response to your letter dated June 28, 2016, 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,

Socrates D. Bratakos

SOCRATES D. BRATAKOS
Assistant Chief

SDB/SY:bh

DAVID Y. IGE
GOVERNOR

FORD N. FUCHIGAMI
DIRECTOR

Deputy Directors
JADE T. BUTAY
ROSS M. HIGASHI
EDWIN H. SNIFFEN
DARRELL T. YOUNG

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

IN REPLY REFER TO:
HWY-PS 2.2820

July 27, 2016

Ms. Angela Fa'anunu, Ph.D.
Townscape, Inc.
900 Fort Street Mall, Suite 1160
Honolulu, Hawaii 96813

Dear Ms. Fa'anunu:

Subject: Pre-Assessment Consultation for Draft Environmental Assessment (EA)
Awa Street Wastewater Pump Station Sewer System Improvements
Kalihi-Kapalama, Honolulu, Oahu, Hawaii
TMK: (1) 1-5-003, 021-023, 032, 033; 1-6-003, 004, 005

Thank you for the opportunity to review the proposed Phase 1 improvements to the existing Awa Street Wastewater Pump Station (WWPS) Sewer System and provide Pre-Assessment Consultation comments on the Draft EA. The project description indicates that the purpose of the proposed Phase 1 improvements is to reduce the wastewater flow to the Awa Street WWPS by diverting some of the flow to the Hart Street WWPS through a new gravity sewer line along Waiakamilo Road/Houghtailing Street. The new sewer line will begin at its connection to the existing gravity sewer line in Nimitz Highway at the intersection with Waiakamilo Road (point of discharge), traverse north along Waiakamilo Road, under/across the Lunalilo Freeway (H-1), and continue along Houghtailing Street to North School Street. Nimitz Highway is State Route 92 with a functional classification of principal arterial.

We have the following comments based on the information provided:

1. The installation of the 54-inch gravity sewer line under Nimitz Highway will not have a significant impact on Nimitz Highway with respect to highway planning.

2. The City and County of Honolulu must obtain all required construction plan approvals and Use and Occupancy Agreements for the installation of the 54-inch sewer line and other work within the Nimitz Highway and Lunalilo Freeway (H-1) right-of-way from the Department of Transportation.

If you have any questions, please contact Nami Wong, Systems Planning Engineer, Highways Division, Planning Branch, at (808)587-6337. Please reference file review number PS 2016-118 in all contacts and correspondence regarding these comments.

Sincerely,

FORD N. FUCHIGAMI
Director of Transportation

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:

LUD – 1 1 5 040 003 Awa Street
WWPS Prep of EA-2865

July 8, 2016

Ms. Angela Faanunu, PhD, Staff Planner
Townscape, Inc.
Environmental and Community Planning
900 Fort Street Mall Suite 1160
Honolulu, Hawaii 96813
Email: Faanunu@townscapeinc.com

Dear Ms. Faanunu:

Subject: Initial Consultation for the Preparation of an Environmental Assessment for the Awa Street Wastewater Pump Station (WWPS) Sewer System Improvements Phase 1
190 Nimitz Highway, Honolulu, Hawaii 96817
TMK: (1) 1-5-040: 003

We appreciate the opportunity to review the subject application for the proposed development and have determined that we have no comments to offer at this time.

Please be informed that wastewater plans must conform to applicable provisions of the Hawaii Administrative Rules, Chapter 11-62, "Wastewater Systems."

Should you have any questions, please contact Mark Tomomitsu of our office at 586-4294.

Sincerely,

SINA PRUDER, P.E., CHIEF
Wastewater Branch

LM:sp

c: Ms. Laura McIntyre, DOH-Environmental Planning Office, via email

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 16-7911

July 11, 2016

Angela Fa'anunu, Ph.D.
Staff Planner
Townscape, Inc.
Environmental & Community Planning
900 Fort Street Mall, Suite 1160
Honolulu, Hawai'i 96813

Re: Initial Consultation for the Preparation of an Environmental Assessment (EA) for the Awa Street Wastewater Pump Station (WWPS) Sewer System Improvements Phase I

Aloha Dr. Fa'anunu:

The Office of Hawaiian Affairs (OHA) received your letter dated June 29, 2016, 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 Anita Manzano at 594-1755 or anitam@oha.org.

'O wau iho nō me ka 'oia 'i'o,

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

KC:acm

**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

DAVID Y. IGE
GOVERNOR OF HAWAII

VIRGINIA PRESSLER, M.D.
DIRECTOR OF HEALTH

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

In reply, please refer to:
EMD/CWB

07018PNN.16

July 19, 2016

Ms. Angela Faanunu
Staff Planner
Townscape, Inc.
900 Fort Street Mall, Suite 1160
Honolulu, Hawaii 96813

Dear Ms. Faanunu:

SUBJECT: Comments on the Initial Consultation for the Preparation of an Environmental Assessment for the Awa Street Wastewater Pump Station Sewer System Improvements Phase 1 Project Kalihi-Palama, Island of Oahu, Hawaii

The Department of Health (DOH), Clean Water Branch (CWB), acknowledges receipt of your letter, dated June 29, 2016, requesting comments on the subject project. The DOH-CWB has reviewed the document and offers these comments. Please note that our review is based solely on the information provided in the subject document and its compliance with the Hawaii Administrative Rules (HAR), Chapters 11-54 and 11-55. You may be responsible for fulfilling additional requirements related to our program. We recommend that you also read our standard comments on our website at: http://health.hawaii.gov/epo/files/2013/05/Clean-Water-Branch-Std-Comments.pdf.

1. Any project and its potential impacts to State waters must meet the following criteria:

   a. Antidegradation policy (HAR, Section 11-54-1.1), which requires that the existing uses and the level of water quality necessary to protect the existing uses of the receiving State water be maintained and protected.

   b. Designated uses (HAR, Section 11-54-3), as determined by the classification of the receiving State waters.

   c. Water quality criteria (HAR, Sections 11-54-4 through 11-54-8).

2. You may be required to obtain National Pollutant Discharge Elimination System (NPDES) permit coverage for discharges of wastewater, including storm water runoff, into State surface waters (HAR, Chapter 11-55).

For NPDES general permit coverage, a Notice of Intent (NOI) form must be submitted at least 30 calendar days before the commencement of the discharge. An application for an NPDES individual permit must be submitted at least 180 calendar days before the commencement of the discharge. To request NPDES permit coverage, you must submit the applicable form ("CWB Individual NPDES Form" or "CWB NOI Form") through the e-Permitting Portal and the hard copy certification statement with the respective filing fee ($1,000 for an individual NPDES permit or $500 for a Notice of General Permit Coverage). Please open the e-Permitting Portal website located at: https://eha-cloud.doh.hawaii.gov/epermit/. You will be asked to do a one-time registration to obtain your login and password. After you register, click on the Application Finder tool and locate the appropriate form. Follow the instructions to complete and submit the form.

3. If your project involves work in, over, or under waters of the United States, it is highly recommended that you contact the Army Corp of Engineers, Regulatory Branch (Tel: 835-4303) regarding their permitting requirements.

   Pursuant to Federal Water Pollution Control Act [commonly known as the "Clean Water Act" (CWA)], Paragraph 401(a)(1), a Section 401 Water Quality Certification (WQC) is required for "[a]ny applicant for Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may **result** in any discharge into the navigable waters..." (emphasis added). The term "discharge" is defined in CWA, Subsections 502(16), 502(12), and 502(6); Title 40 of the Code of Federal Regulations, Section 122.2; and HAR, Chapter 11-54.

4. Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or Section 401 WQC are required, must comply with the State's Water Quality Standards. Noncompliance with water quality requirements contained in HAR, Chapter 11-54, and/or permitting requirements, specified in HAR, Chapter 11-55, may be subject to penalties of $25,000 per day per violation.

5. It is the State's position that all projects must reduce, reuse, and recycle to protect, restore, and sustain water quality and beneficial uses of State waters. Project planning should:

   a. Treat storm water as a resource to be protected by integrating it into project planning and permitting. Storm water has long been recognized as a source of irrigation that will not deplete potable water resources. What is often overlooked is that storm water recharges ground water supplies and feeds streams and estuaries; to ensure that these water cycles are not disrupted, storm water cannot be relegated as a waste product of impervious surfaces. Any project

planning must recognize storm water as an asset that sustains and protects natural ecosystems and traditional beneficial uses of State waters, like community beautification, beach going, swimming, and fishing. The approaches necessary to do so, including low impact development methods or ecological bio-engineering of drainage ways must be identified in the planning stages to allow designers opportunity to include those approaches up front, prior to seeking zoning, construction, or building permits.

b. Clearly articulate the State's position on water quality and the beneficial uses of State waters. The plan should include statements regarding the implementation of methods to conserve natural resources (e.g., minimizing potable water for irrigation, gray water re-use options, energy conservation through smart design) and improve water quality.

c. Consider storm water Best Management Practice (BMP) approaches that minimize the use of potable water for irrigation through storm water storage and reuse, percolate storm water to recharge groundwater to revitalize natural hydrology, and treat storm water which is to be discharged.

d. Consider the use of green building practices, such as pervious pavement and landscaping with native vegetation, to improve water quality by reducing excessive runoff and the need for excessive fertilization, respectively.

e. Identify opportunities for retrofitting or bio-engineering existing storm water infrastructure to restore ecological function while maintaining, or even enhancing, hydraulic capacity. Particular consideration should be given to areas prone to flooding, or where the infrastructure is aged and will need to be rehabilitated.

If you have any questions, please visit our website at: http://health.hawaii.gov/cwb, or contact the Engineering Section, CWB, at (808) 586-4309.

Sincerely,

ALEC WONG, P.E., CHIEF
Clean Water Branch

NN:ak

c: DOH-EPO [via e-mail Noella.Narimatsu@doh.hawaii.gov only]

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
PHONE: (808) 768-8000 • FAX: (808) 768-6041
DEPT. WEB SITE: www.honoluludpp.org • CITY WEB SITE: www.honolulu.gov

KIRK CALDWELL
MAYOR

GEORGE I. ATTA, FAICP
DIRECTOR

ARTHUR D. CHALLACOMBE
DEPUTY DIRECTOR

2016/ELOG-1731(JD)

July 20, 2016

Dr. Angela Fa'anunu, Ph.D.
Townscape, Inc.
900 Fort Street Mall, Suite 1160
Honolulu Hawaii 96813

Dear Dr. Fa'anunu:

SUBJECT: Pre-Assessment for Draft Environmental Assessment (DEA)
Phase 1 - Awa Street Wastewater Pump Station (WWPS)
Sewer System Improvements - Kalihi

This responds to your request for comments, received on June 30, 2016, regarding the Pre-Assessment Consultation of DEA for Phase 1 of the Awa Street WWPS Sewer System Improvements Project. We have reviewed the project summary and have the following comments:

Planning Division:

- Address impacts of the project on the sewer capacity needed to support build out of the Iwilei/Kapalama station areas consistent with the vision in the Kalihi and Downtown Neighborhood Transit-Oriented Development (TOD) Plans.
- Mention other ongoing planning efforts in the area, including the Iwilei/Kapalama Infrastructure Master Plan and the Kapalama Canal Catalytic Project.
- Consider disclosing the status of any other infrastructure projects planned for the area, both public and private, during the same construction period to assess the adequacy of overall capacity for TOD.
- Address any potential impacts that area flooding and sea level rise will have on the proposed system improvements.
- Discuss anticipated timing of the completion of these improvements.

Should you have any questions, please contact Jordan Dildy of our Urban Design Branch at 768-8027 or by email at jdildy@honolulu.gov.

Very truly yours,

FOR George I. Atta, FAICP
Director

Doc 1371351

BOARD OF WATER SUPPLY

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

September 16, 2016

Ms. Angela Fa'anunu, Staff Planner
Townscape, Inc.
900 Fort Street Mall, Suite 1160
Honolulu, Hawaii 96813

Dear Ms. Fa'anunu:

Subject: Your Letter Dated June 28, 2016 Requesting Comments on the Awa Street Wastewater Pump Station Sewer System Improvements Phase I, Kalihi-Palama, Oahu – Tax Map Key: 1-5-040: 03

Thank you for the opportunity to comment on the proposed sewer improvements.

The construction drawings should be submitted for our review.

The construction schedule should be coordinated to minimize impact to the water system.

If you have any questions, please contact Robert Chun, Project Review Branch of our Water Resources Division at 748-5443.

Very truly yours,

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