DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 523-4564 • Fax: (808) 523-4567
Web site: www.honolulu.gov

MUFI HANNEMANN
MAYOR

EUGENE C. LEE, P.E.
DIRECTOR

CRAIG I. NISHIMURA, P.E.
DEPUTY DIRECTOR

WW.P 06-0274

September 27 2006

Ms. Genevieve Salmonson, Director
Office of Environmental Quality Control
State of Hawai'i
235 South Beretania Street, Suite 702
Honolulu, Hawai'i 96813

Dear Ms. Salmonson:

Subject: Notice of Determination – Finding of No Significant Impact
Halona Street Relief Sewer
Kalihi, Oahu, Hawai'i
Tax Map Key Nos. 1-6-002, 1-6-004, 1-6-006, 1-6-023

The City and County of Honolulu Department of Design and Construction (DDC), has reviewed the responses to comments related to the Draft Environmental Assessment (EA) received during the 30-day public comment period that began on July 23, 2006. The agency has determined that this project will not have significant environmental effects and has issued a Finding of No Significant Impact. Please publish this notice in the October 8, 2006 edition of *The Environmental Notice*.

We have enclosed the following items for your review:

(1) One copy of the OEQC Environmental Notice Publication Form;
(2) Four copies of the Final EA.

The following information is provided in accordance with the requirements for a Notice of Determination:

Identification of Applicant/Agency
City and County of Honolulu, Department of Design and Construction

Identification of Accepting Agency
City and County of Honolulu, Department of Design and Construction,

Determination
Finding of No Significant Impact (FONSI)

2006-10-08-OA-FEA- HALONA STREET RELIEF SEWER

Final Environmental Assessment

for

HALONA STREET RELIEF SEWER
Tax Map Key Nos. 1-6-002, 1-6-004, 1-6-006, 1-6-023
Kalihi, Honolulu, Oahu, Hawaii

Submitted pursuant to Chapter 343, Hawaii Revised Statues

Proposing Agency:
Department of Design and Construction
City & County of Honolulu
650 South King Street
Honolulu, HI 96813

Prepared by:
Okahara & Associates, Inc.
677 Ala Moana Boulevard, Suite 703
Honolulu, HI 96813

September 2006

HALONA STREET RELIEF SEWER
FINAL ENVIRONMENTAL ASSESSMENT
Kalihi, Honolulu, Oahu, Hawaii

Tax Map Key Nos. 1-6-002, 1-6-004, 1-6-006, 1-6-023

Submitted pursuant to Chapter 343, Hawaii Revised Statues

PROPOSING AGENCY:
Department of Design and Construction
City & County of Honolulu
650 South King Street
Honolulu, HI 96813

Prepared by:
Okahara & Associates, Inc.
677 Ala Moana Boulevard, Suite 703
Honolulu, HI 96813

September 2006

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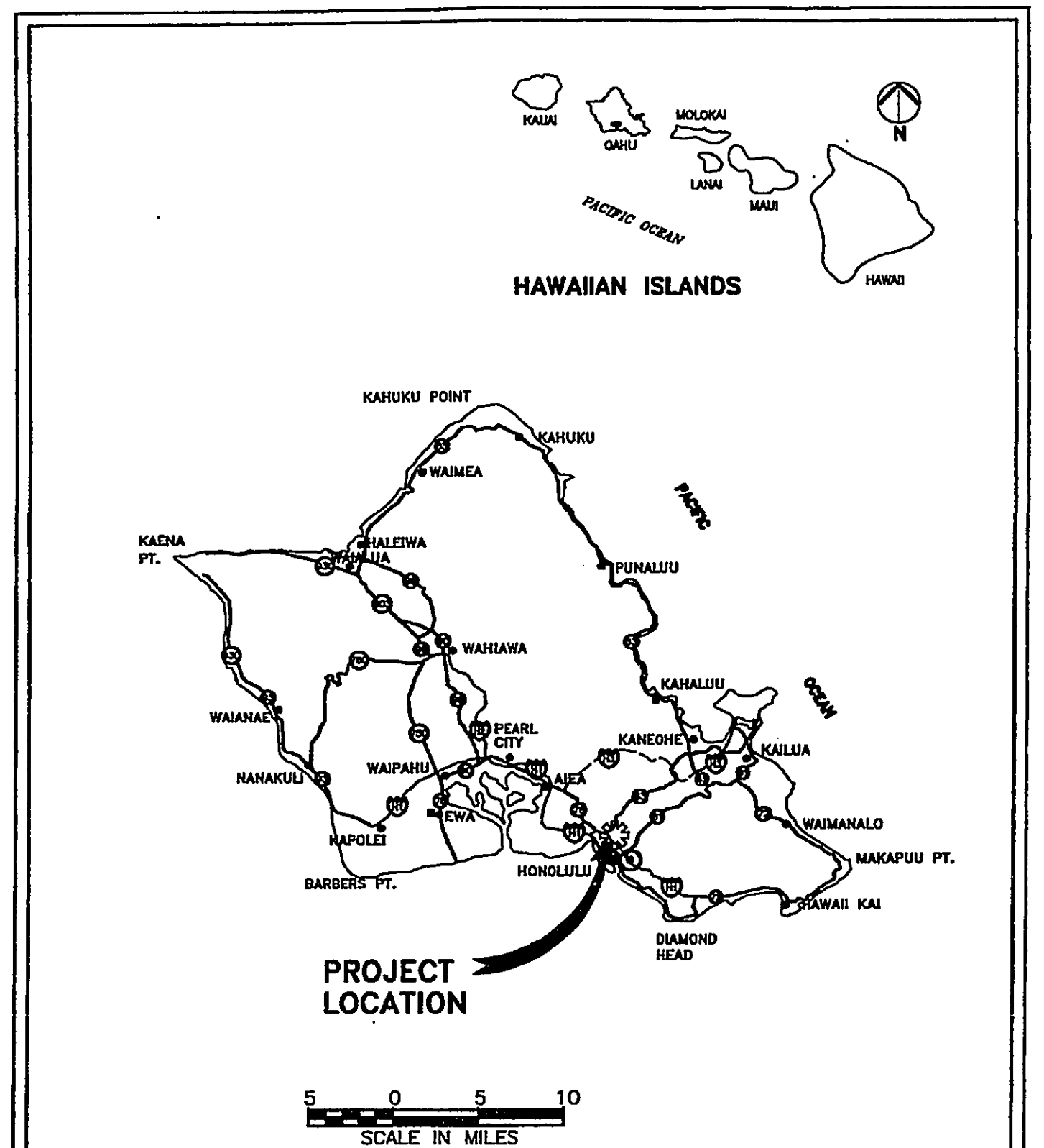
I. SUMMARY

A. GENERAL INFORMATION

The City & County of Honolulu Department of Design and Construction (DDC) proposes to correct inadequacies within the sewer system along Kohou Street, Halona Street, and Houghtailing Street. In 2001, the City & County hired Okahara & Associates, Inc. to prepare a Design Alternatives Report for rehabilitation of the wastewater system's Kohou, Halona and Houghtailing Street sewer. A Final Design Alternative Report dated March 2006 included discussions on the alternatives considered for the corrective action and a recommendation of the most cost-effective and least disruptive solution for the rehabilitation by cured-in-place pipe (CIPP) lining and Open Trench replacement. Besides rehabilitation by this combined method, other alternatives considered included rehabilitation by pipe ramming, pipebursting, and microtunneling. Please refer to Figures 1 and 2 for Project Location and Vicinity Maps. Figure 3 illustrates a master site plan.

The City and County endorsed the rehabilitation by a combined CIPP liner and Open Trench Method. It is proposed to rehabilitate the existing sewer line along Houghtailing and Halona Streets and under the H-1 Freeway near Kohou Street using the CIPP method. Also, the open trench method is being considered for the installation of the new sewer section on Houghtailing Street between Halona and Olomea Streets, along Olomea Street and for the sewer line replacement along Olomea and Kohou Streets. This method will provide excellent hydraulic capacity by increasing the pipe size in specific areas and also lowering the roughness of coefficient of the pipe. The combination of the CIPP liner and open trench methods will also offer minimal public and traffic disturbances, minimal sewer system down time during construction, and minimal maintenance problems in the future compared to the other design options. Redirecting flows to Olomea Street was chosen to eliminate impedance of traffic on Lunalilo Freeway. The combination of the CIPP liner and open trench to redirect the flows is the most cost effective option. This option will provide a long-term solution to improve the current and future hydraulic conditions while minimizing the disturbance to the public. Also, the proposed manhole rehabilitation will solve the infiltration and structural deficiency problems with the existing sewer manholes.

The project involves the reconstruction and/or rehabilitation of 10-inch cast iron pipe, 8-inch vitrified clay pipe, and 17 manholes. Approximately 627 linear feet of 8-inch CIPP liner will be installed throughout Houghtailing Street, approximately 1,200 linear feet along Halona Street, and approximately 234 linear feet of 10-inch CIPP liner from Halona to Olomea Street on



Halona Street, Relief Sewer Environmental Assessment

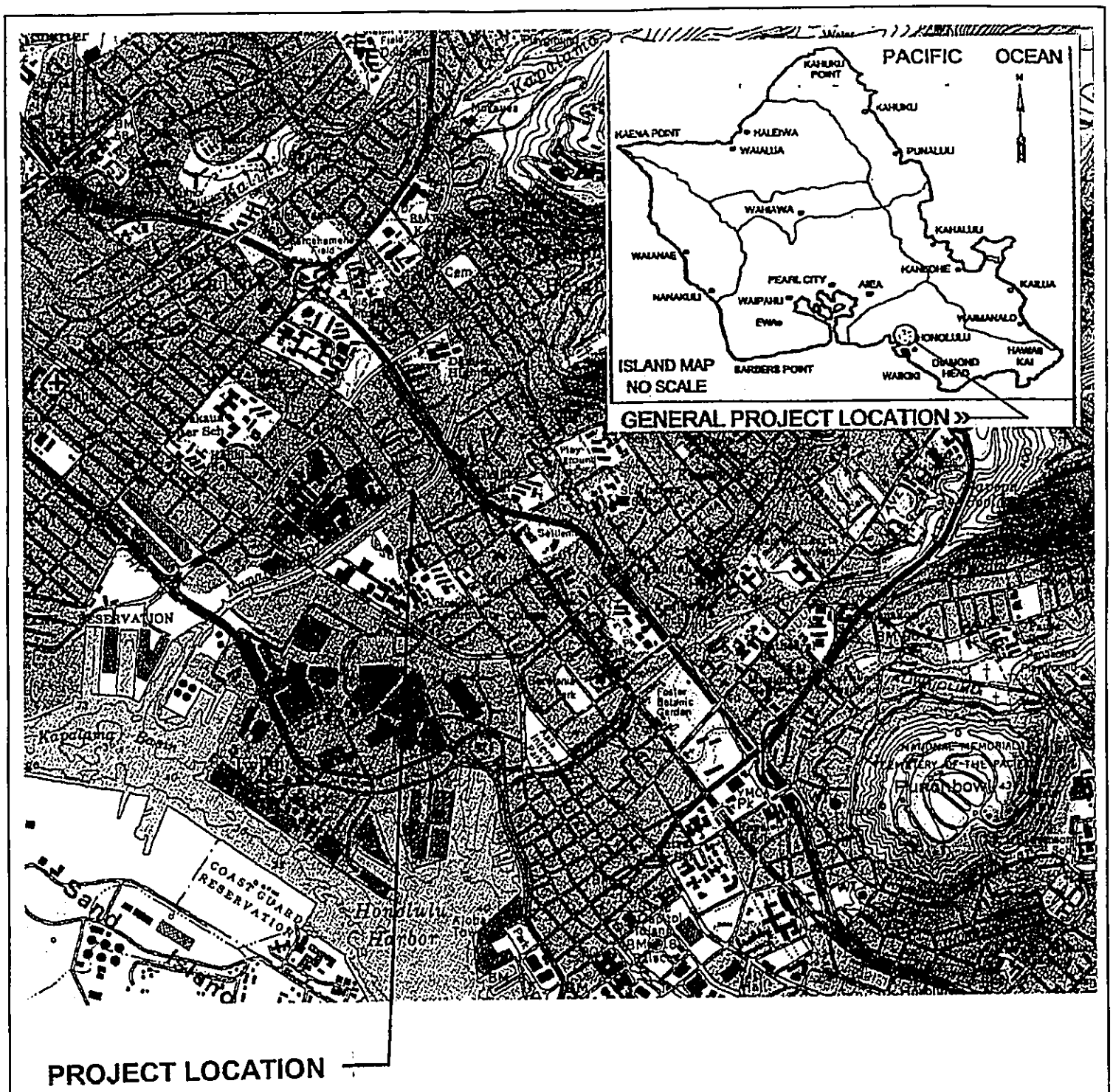
Figure 1

Department of Design & Construction

LOCATION MAP

Wastewater Design and Engineering Division - Planning

Date: February 2004



Halona Street, Relief Sewer
Environmental Assessment

Figure 2

Department of
Design & Construction

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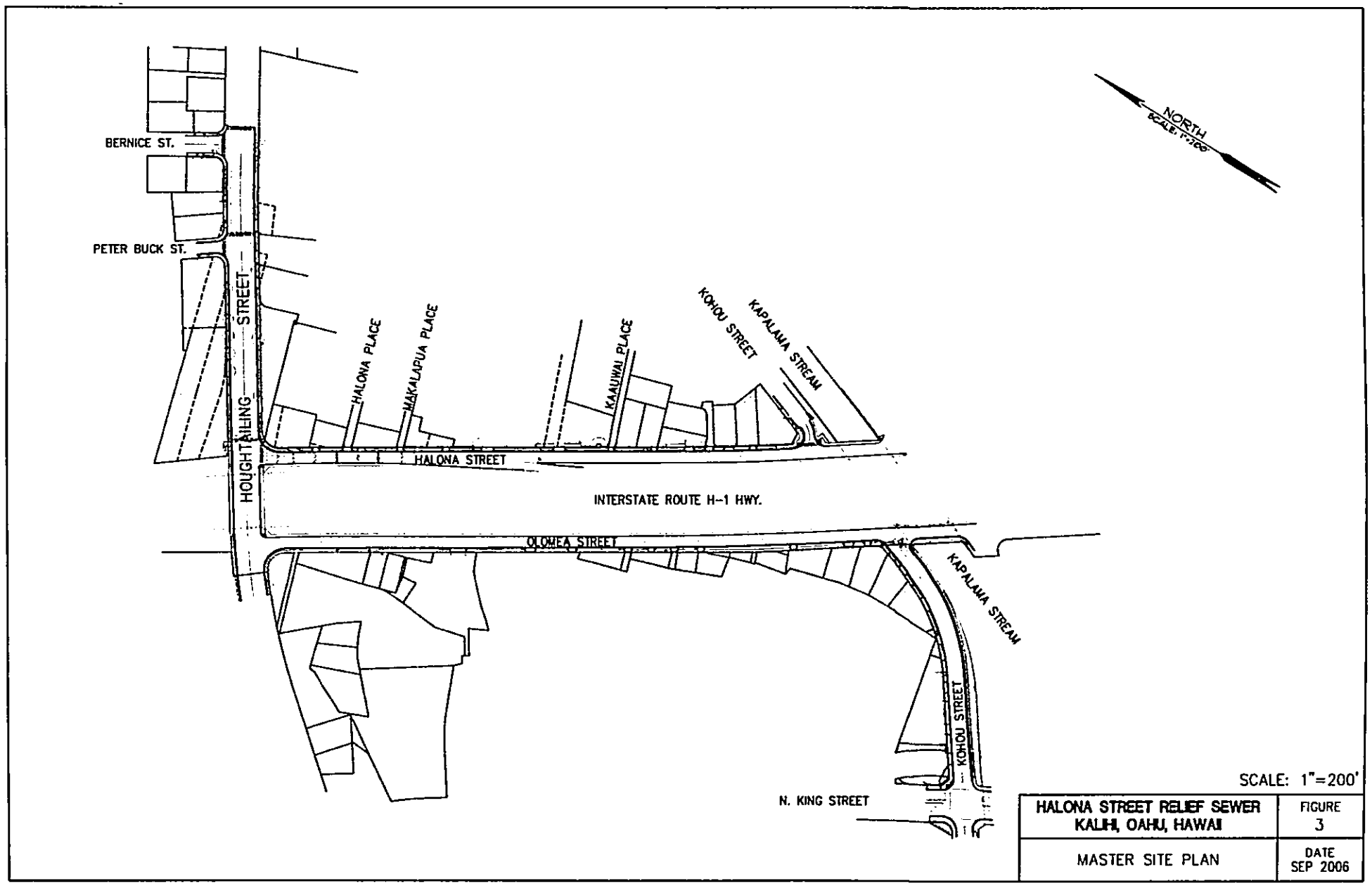
SCALE: 1" = 2000'

VICINITY MAP

Wastewater Division — July 2004



SCALE: 1"=200'

HALONA STREET RELIEF SEWER KALIHI, OAHU, HAWAII	FIGURE 3
MASTER SITE PLAN	DATE SEP 2006

Kohou Street. The open trench method will be utilized to install approximately 1,068 linear feet of 10-inch pipe along Houghtailing and Olomea Streets, and to upsize the existing sewer pipes along the remainder of Olomea and Kohou Street to 10-inch and 15-inch pipe.

B. ENVIRONMENTAL ASSESSMENT PROCESS

This Environmental Assessment (EA) has been prepared pursuant to Chapter 343, HRS, as amended. It describes the project and affected environment and discusses proposed actions, potential environmental impacts and appropriate mitigation measures. Environmental review in accordance with HRS Chapter 343 is required for the proposed project because of the use of City and County land and road rights-of-way and use of public funds. These triggers involve the DDC which is responsible for the review and acceptance of the project design and development. Consistent with guidance provided in Section 11-200-4(b) of the Hawaii Administrative Rules (HAR), DDC is identified as the appropriate accepting agency.

Availability of the Draft EA (DEA) was announced in the July 23, 2006 issue of OEQC's Environmental Notice. Following a 30-day comment and review period of this document by governmental agencies and other interested organizations and individuals, the DDC received and reviewed written comments from eight (8) agencies. Based on its review DDC determined that the project will not have a significant impact on the environment and that a Finding of No Significant Impact (FONSI) is appropriate for this action.

C. PROJECT SUMMARY

Proposing and Approving Agency:	Department of Design and Construction City and County of Honolulu
Responsible Official:	Eugene C. Lee, P.E.
Contact Person: Phone Number:	Jay Hamai, P.E., Project Manager, 527-5003
Prepared by:	Okahara & Associates, Inc. 677 Ala Moana Blvd., Suite 703 Honolulu, HI 96813 Contact: Shannon Kimoto (524-1224)
Project Name:	Halona Street Relief Sewer
Project Description:	Rehabilitation/installation of 4,416 linear feet of 10-inch cast iron and 8-inch vitrified clay pipe, and 24 manholes within the Kohou Street sewer system. The CIP are approx. 32 years old and VCP approx. 44 years old.
Project Location:	Kalihi, Oahu, Hawaii
Tax Map Key:	1-6-002; 003; 004; 005; 006; and 023
State Land Use Designation:	Urban
Land Owners:	City and County of Honolulu and State of Hawaii
County Zoning:	Residential
Special Designations:	none

Estimated Construction Cost: $4.6 million

D. PARTIES CONSULTED

- Pre-Assessment and DEA Consultation

Prior to preparing the DEA, agencies, organizations, and utilities were consulted by letter in May, 2002. Residents and businesses of parcels adjoining Kohou, Halona and Houghtailing Streets were consulted by letter in November, 2002. Written responses were received from parties marked below with a check (√) and comments were incorporated into the DEA. Public review of the DEA began for a 30-day period on July 23, 2006. Copies of comment letters and written responses are included in the Appendix.

Federal:	Pre-Assessment	DEA
U.S. Department of Interior, USFWS		
U.S. Army Corps of Engineers, POD	√	√
State of Hawaii:		
State Department of Land and Natural Resources		
State Historic Preservation Division	√	√
State Department of Education		√
State Department of Health, Clean Water Branch		√
Office of Environmental Quality Control		√
State Department of Transportation	√	
Office of Hawaiian Affairs		√
City and County of Honolulu:		
Department of Environmental Services		
*Department of Planning & Permitting		
Department of Transportation Services	√	√
Council Member Rod Tam		
Utilities:		
Board of Water Supply	√	√
Hawaiian Electric Company		
The Gas Company	√	
Verizon Hawaii	√	
Oceanic Cable	√	
Community Groups:		
Kalihi-Palama Neighborhood Board No. 15		
Residents, Businesses in Project Area (26)		

II. PROJECT CHARACTERISTICS

A. PROJECT DESCRIPTION

The City and County of Honolulu Department of Design and Construction proposes to reconstruct and/or rehabilitate the sewer system along Kohou Street, Olomea Street, Halona Street, and Houghtailing Street. The existing sewer pipe system consists of 875 linear feet (LF) of 10-inch cast iron pipe (CIP) along Kohou Street, 600 LF of 8-inch vitrified clay pipe (VCP) along Olomea Street, 276 LF of 10-inch VCP and 1,700 LF of 8-inch VCP along Halona and Houghtailing Streets, and 24 manholes. The CIP are approximately 32 years old and the VCP are approximately 44 years old.

B. TECHNICAL CHARACTERISTICS

1. Wastewater Flows and Hydraulic Analysis

Both existing and future design flow calculations were performed based on the Design Standards of the Department of Design and Construction, Wastewater Division, Volume 1, July 1993 as part of Design Alternative Study. The Study used a database consisting of manholes, sewer lines, parcels, and wastewater demands for both existing and future data. The production of sewage is computed and summed for each sewer line starting from the highest node downward to a wastewater treatment plant.

The hydraulic analysis, which compares the capacity of the existing sewer lines to the estimated peak wastewater flows for existing and future conditions, were provided in the Design Alternative Study. Mannings Equation and the existing sewer line attributes are used to calculate the pipe capacity. The hydraulic analysis indicates that most of the existing 8-inch VCP and 10-inch CIP do not have sufficient capacity to deliver both existing and future peak flows. The reasons for the insufficient capacity may be attributed to the minimal slope, roughness, and small diameter of the existing pipe. Only the 8-inch VCP section between SMH SI82AA2021 and SI82AA2023, and the 10-inch CIP section between SMH SI82AA2013 and SI82AA2014 have adequate capacity to deliver both existing and future peak flows.

The sewer line reports of the existing and future flows are included in the Design Alternatives Report.

2. Cured-in-Place Pipe Lining

Cured-in-Place Pipe (CIPP) is a pipe lining material consisting of a flexible fabric tube and a thermosetting resin system. The CIPP method involves inserting the lining into the existing sewer pipe and heat curing it into place. The lining is inserted through the existing manholes and

installed using hydrostatic inversion, air inversion, or a mechanical winching process. The water inversion process utilizes water pressure to expand the lining against the walls of the host pipe. The air inversion process employs air pressure to invert the lining. With the mechanical winching process, the lining is winched into place and expanded using a calibration hose inverted into the lining under water pressure. Circulating hot water or steam cures the resin and shapes the lining into the form of the host pipe. Application of heat hardens the resin after a few hours, forming a jointless pipe-within-a-pipe. The resin used to cure the liner can be formulated to increase its strength and elasticity. This may be useful in different situations like a soil movement problem or a load-bearing problem.

Lateral pipes are restored from inside the CIPP by robotically cutting the liner at the lateral pipe locations. Bulges that form in the CIPP at the lateral locations assist this process.

3. Open Trench Method

The most common method of pipe repair is the open-trench replacement method. It involves excavating a trench to install a new pipeline, either in place of the existing pipeline, or nearby as a bypass to provide continual service to the area. The new pipeline can be the same size as the existing line or larger. The new pipe material is chosen to match the project situation and does not need to match the existing pipe material. The new pipe proposed for installation in this project will be made of polyvinyl chloride (PVC). PVC is recommended for its rigidity to prevent sag conditions.

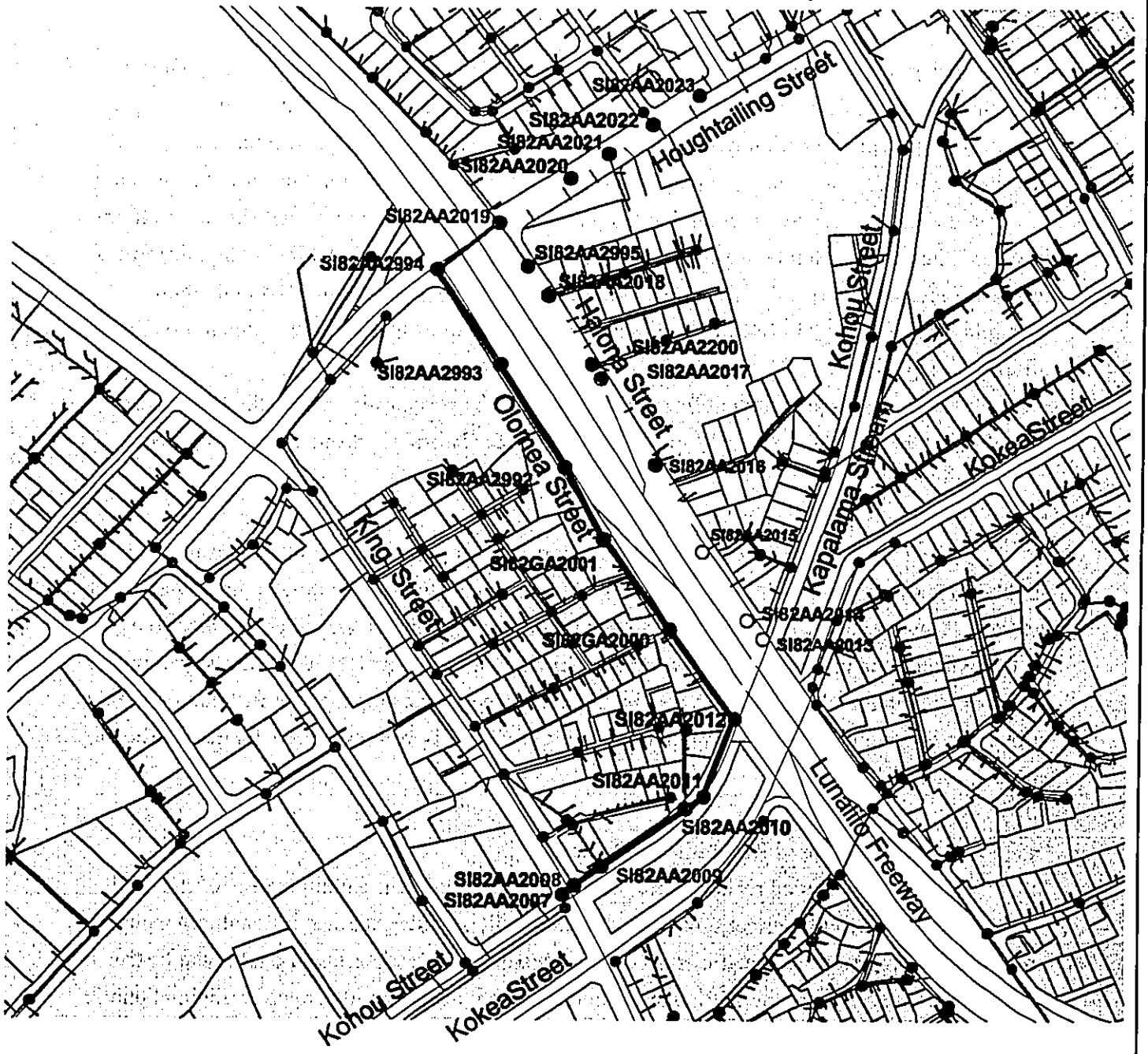
4. Proposed Rehabilitation Method

The recommended rehabilitation method for this project is a combination of the CIPP liner and open trench to redirect flows. This method will provide excellent hydraulic capacity by increasing the pipe size in specific areas and also lowering the roughness of coefficient of the pipe. The combination of the CIPP liner and open trench methods will also offer minimal public and traffic disturbances, minimal sewer system down time during construction, and minimal maintenance problems in the future compared to the other design options. Redirecting flows to Olomea Street was chosen to eliminate impedance of traffic on Lunalilo Freeway. Redirecting the flows to Olomea Street will avoid the necessity of upsizing the existing 10-inch sewer line under the Lunalilo Freeway near Kohou Street. The combination of the CIPP liner and open trench to redirect flows is the most cost effective option. This option will provide a long-term solution to improve the current and future hydraulic conditions while minimizing the disturbance to the public. See Figure 4.

Also, the Portland cement with epoxy coating will solve the infiltration and structural

Total Length of CIPP=2,060 L.F.

Total Length of Open Trench Replacement=2,355 L.F.



LEGEND:

CIPP Liner	● Existing Manhole within this project
Sewer Main	● New Manhole within this project
Open Trench	○ Existing Manhole to be rehabilitated

Halona Street, Relief Sewer
Design Alternative Report

Figure 4

Department of
Design & Construction

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SCALE: 1" = 400'

6-16

DESIGN OPTION 5
CIPP LINER AND OPEN TRENCH
TO REDIRECT FLOWS
PREFERRED PLAN

Wastewater Division Date: February 2006

deficiency problems with the existing sewer manholes. This method was the most economical compared to other manhole rehabilitation/replacement methods.

Approximately 627 linear feet of 8-inch Cured-In-Place Pipe (CIPP) liner will be installed throughout Houghtailing Street from manholes SI82AA2023 to SI82AA2019, and approximately 1200 linear feet of 8-inch CIPP liner will be installed throughout Halona Street from manholes SI82AA2995 (new manhole located approximately 149 feet from SI82AA2019) to SI82AA2013. Approximately 234 linear feet of 10-inch CIPP liner will be installed under the H-1 Freeway near Kohou Street between manholes SI82AA2013 and SI82AA2012.

Due to the severity of surcharge-flow percentages along Halona Street between manholes SI82AA2019 and SI82AA2014, the majority of the flows will be re-directed to Olomea Street. At the intersection of Houghtailing Street and Halona Street, the existing 8-inch sewer line along Halona Street will be cut and plugged at manhole SI82AA2019. A new manhole, SI82AA2995, will be installed on Halona Street approximately 149 feet from SI82AA2019. This new manhole will be the beginning of the sewer line on Halona Street where two laterals intersect the sewer main.

Approximately 213 linear feet of new 10-inch sewer line will be installed under the Lunalilo Freeway on Houghtailing Street between the existing SI82AA2019 and the proposed manhole SI82AA2994. SI82AA2994 will be installed at the intersection of Houghtailing Street and Olomea Street. 855 linear feet of 10-inch sewer line will be installed along Olomea Street between the proposed manhole SI82AA2994 and the existing manhole SI82GA2001. 600 linear feet of 8-inch pipe along Olomea Street between SI82GA2001 and SI82AA2012 will be upsized to a 10-inch pipe to increase the diameter of the pipe. Approximately 688 linear feet of 10-inch pipe will be upsized to a 15-inch pipe along Kohou Street between manholes SI82AA2012 and SI82AA2007.

Open trench method is recommended for the installation of new pipe and upsized pipe. The open trench method is economical and the project location is located in an area that will not significantly impact the public.

Because manholes SI82AA2013, SI82AA2014 and SI82AA2015 have brick structures that are causing infiltration, they will be rehabilitated with Portland cement and epoxy coating method. This method will improve the structural integrity of the manhole and stop infiltration.

C. SOCIO-ECONOMIC CHARACTERISTICS

The preliminary estimated construction of this sewer system rehabilitation project is approximately $4.6 million dollars. The labor costs associated with a sewer rehabilitation project of this magnitude will provide a positive economic impact on the construction industry. The growth and development of the business and residential community in the tributary area upstream of the Halona Street relief sewer are the main long-term positive socio-economic effects of this project.

In the year 2000, population of the Kalihi-Palama neighborhood board district, within which the project site is located, was 37,987. This represented about four percent of the island of Oahu population of 872,900, or about three percent of the state's total population of 1,197,300 (http://www.state.hi.us/dbedt/db01.pdf, accessed August 3, 2004).

Short-term negative effects will be experienced by residents adjacent to the project areas of Halona, Houghtailing, Kohou, and Olomea Streets during the sewer line rehabilitation construction activities, and are discussed in the following Section IV. Motorists traveling on these streets will be rerouted around the work areas. There will be no long-term negative effects because the road rights-of-way and immediate surrounding areas would be returned to their pre-construction conditions upon project completion.

The project construction is expected to begin upon receipt of all necessary permits, and should last approximately nine (9) months.

Funding will be provided by the City and County of Honolulu. The project will not require direct assessments from the residents being serviced by the sewer collection system affected by this rehabilitation project.

D. ENVIRONMENTAL CHARACTERISTCS

Temporary disruptions to the environment will occur because of construction activities that would include trenching and dewatering for access into the existing sewer system. Traffic flow would be impacted by lane closures and detours during construction activities. Operation of construction equipment will temporarily increase dust, noise, and exhaust emission levels. Some short-term increase in odors may result during the CIPP inversion process when fabric tube is impregnated with thermosetting resin. Construction and maneuvering of machinery and equipment would be within City and County of Honolulu and State of Hawaii rights-of-way, and normal working hours will be between 8:30 a.m. and 3:30 p.m., Monday through Friday unless otherwise permitted by the Department of Transportation Services (DTS). Environmental

impacts such as noise and dust caused by the project would be mitigated by the City and County's strict enforcement of practical and implementable Best Management Practices (BMPs) imposed by the City and County's DDC on its contractor. See Section IV for a summary of potential impacts and proposed mitigation measures. Any work affecting State-owned rights-of-way will require permission from the State Department of Transportation (SDOT).

III. DESCRIPTION OF AFFECTED ENVIRONMENT, POTENTIAL IMP ACTS AND MITIGATION MEASURES

A. PROJECT LOCATION

The project is located along Houghtailing Street, Halona Street, Olomea Street, and Kohou Street in the Kalihi area of Honolulu on the Island of Oahu, Hawaii. The upstream portion of the sewer line extends along Houghtailing Street beginning at the intersection with Bernice Street to the intersection with Halona Street. The relief sewer line then extends along Halona Street from Houghtailing Street to the intersection with Kapalama Stream. From the intersection of Kapalama Stream and Halona Street, the sewer line traverses under the Interstate Route H-1 Highway and extends in the southwest direction along Kohou Street. The downstream end of the sewer line terminates at the intersection of Kohou Street and North King Street. A new sewer line will be installed along Houghtailing Street between Halona Street and Olomea Street. The new relief sewer will extend along Olomea Street to Kohou Street. See Project Vicinity Map, Figure 2.

B. EXISTING SITE AND LAND USE

The Halona Street project site is located near the Lunalilo Freeway in the southern region of the Kalihi District. It includes the sewer systems on Kohou Street, Olomea Street, Halona Street, and Houghtailing Street. The Halona Street relief sewer is located in City and County of Honolulu road rights-of-way, designated as Tax Map Keys 1-6-002, 003, 004, 005,006, and 023.

Houghtailing Street is a two-way asphalt concrete-paved roadway with a bike lane and shoulder parking. The existing pavement was observed to be in fair to good condition with moderate to heavy traffic volumes. The portion of Houghtailing Street within the project limits is bordered by single-family homes and Peter Buck Mini Park along the Ewa side and Hawaii Carpenters Union, Damien Memorial High School, and The Gospel of Salvation Church along the Diamond Head side. The existing pavement surface elevations along this portion of Houghtailing Street generally range between about +27 and +40 feet Mean Sea Level (MSL).

Halona Street is a one-way asphalt concrete-paved roadway with a parking lane along the mauka side. An off-ramp exit (Exit 20B) from the Interstate Route H-1 Highway merges with Halona Street between about Makalapua Place and Kaauwai Place. According to the State

Department of Transportation, Halona Street is under State jurisdiction. The existing pavement was observed to be in fair to good condition with light to moderate traffic volume. The portion of Halona Street within the project limits is bordered by single-family homes and Queen Lili'uokalani Children's Center along the mauka side and the Interstate Route H-1 Highway along the makai side. The existing pavement surface elevations along this portion of Halona Street generally range between about + 10 and +29 feet MSL.

Olomea Street is a one-way asphalt concrete-paved roadway with a parking lane along the makai side. Olomea Street is under State jurisdiction. The existing pavement was observed to be in fair to poor condition with light to moderate traffic volume. The portion of Olomea Street within the project limits is bordered by the Interstate Route H-1 Highway along the mauka side and single-family homes, a car dealership, and a church on the makai side. The existing surface elevations along this portion of Olomea Street generally range between about +10 and +25 feet MSL.

Kohou Street is a two-way asphalt concrete-paved roadway separated by the Interstate Route H-1 Highway. The portion of Kohou Street under this project lies on the Makai side of the Interstate Route H-1 Highway and terminates at the intersection with North King Street. The existing pavement was observed to be in fair to poor condition with signs of distress, such as cracking and potholes. The portion of Kohou Street within the project limits is bordered by single-family homes and commercial buildings along the Ewa side and the Kapalama Stream along the Diamond Head side. The existing pavement surface elevations along this portion of Kohou Street generally range between about +8 and + 10 feet MSL.

The surrounding area is predominantly residential with single-family dwellings. Most of the parcels are zoned residential district R-5. The major activities within the vicinity are some commercial businesses located on the corner of King Street and Kohou Street, Houghtailing Street and Olomea Street, and Damien Memorial High School, which is located along Houghtailing. Kapalama Stream runs along the east side of Kohou Street, outside of the affected area. This neighborhood is an older, established urban community in Honolulu. House lots are small; community business activities are concentrated along Kohou Street.

The entire project area is within the State Land Use District Urban designation and the

proposed project does not require a change in that designation. According to the Federal Emergency Management Agency's Flood Insurance Rate Map (FIRM), the project site lies within Zone X. The entire project area is in an area determined to be outside the 500-year flood plain. The project area is not within the boundaries of the Special Management Area.

There will be no long-term interference with any existing or proposed land use of adjacent properties. During construction, residents will be inconvenienced in terms of access to and from their driveways to adjoining roadways and road frontage usage (mail, deliveries, and parking) may be occasionally hampered by trenching, paving, construction materials deliveries, etc. The contractor will be required to minimize disruptions to the residents and perform work in accordance with a City and County approved construction schedule and traffic control plan and the terms of the sewer easement. For example, the DDC would require the contractor to notify neighboring residents and businesses of the anticipated start of construction and the details of the sequence of activities involved. The contractor may also be required to provide neighborhood residents his/her phone number in case there are questions or complaints on a daily basis. Section IV of this DEA discusses traffic impacts during construction and mitigation measures in detail.

C. GEOLOGY, TOPOGRAPHY AND SOILS

1. Geology

The Island of Oahu was built by the extrusion of basaltic lava from two shield volcanoes, Waianae and Koolau. The older volcano, Waianae, is estimated to be middle to late Pliocene in age and forms the bulk of the western third of the island. The younger shield, Koolau, is estimated to be late Pliocene to early Pleistocene in age and forms the majority of the eastern two-thirds of the island. Waianae became extinct while Koolau was still active, and its eastern flank was partially buried below Koolau lava.

During the later Pleistocene Epoch, sea levels fluctuated in response to the cycles of continental glaciation. As the continental glaciers advance, less water was available to fill the oceanic basins such that the sea levels fell to below the present stand. When the glaciers melted and receded, an excess of water became available such that the sea levels rose to above the present level.

Locally, the fringing coral/algal reefs continued to grow during the high stands of the sea leaving fossil reefs and coralline sediments that are now exposed above sea level. Interbedded with these coral/algal materials are alluvial sediments which were transported from the nearby eroding Koolau Range. As the sea level continued to rise, the off-shore fringing reef continued to build and created a lagoon behind it, which was later filled with loose sediments. As the lagoon became shallower, soft organic sediments were deposited in a swampy marsh environment.

Contemporaneous with the Pleistocene sea level changes, thickly bedded lava flows from the Honolulu Volcanic Series Makuku vent covered portions of the site. Subsequently, as the forces of weathering and erosion continued to erode the adjacent Koolau land mass to the east, alluvial deposits accumulated forming a thin mantle over most of the site. In more recent years, the low-lying marsh areas as well as other areas at the site appear to have been filled with nearby alluvial soils and coralline sediments to the present elevations.

2. Topography

The existing relief sewer route varies in elevation from 8 to 43 feet above mean sea level (+MSL). The existing pavement surface along the project portion of Halona Street generally range between 10 and 29 feet+ MSL, and slopes up and down to provide low points for surface drainage collection. Along Houghtailing Street elevations are between 27 and 43feet+ MSL. Along Olomea Street elevations are between 10 and 25+ MSL. Along Kohou Street elevations generally range about 8 to 10 feet+ MSL.

A geotechnical investigation of the existing relief sewer route was completed in 2002 by Geolabs, Inc. Eight exploratory borings were drilled to depths of 25.5 to 55.5 feet for a total of approximately 297 linear feet of subsurface exploration. Elevations of the project site range from as low as +8 and + 10 feet above mean sea level (MSL) on Kohou Street to as high as +40 and +44 feet MSL along Halona and Houghtailing Streets.

3. Soils

In general, the relief sewer alignment is generally underlain by variable subsurface soil/rock and groundwater conditions at about the pipe invert elevations. The subsurface conditions at about the pipe invert elevations generally range from very dense basalt cobbles and boulders along Houghtailing Street, to very stiff and hard alluvial soils along Halona Street, and to

soft/loose alluvial/lagoonal deposits along Kohou Street. Groundwater was encountered in the majority of the borings drilled at depths ranging from about 7.5 to 12.1 feet below the existing pavement surface.

Some trenching for sewer line replacement and access into the relief sewer laterals will be necessary and backfill material will be required. However, excavated soils will be returned to pre-construction locations thereby minimizing any potential long-term elevation or topographic alterations to the project area.

D. CLIMATE AND AIR QUALITY

The area is characterized by mild subtropical climate with prevailing northeast trade winds. Mean annual temperature is 77°F. Occasional average temperatures are in the lower seventies in January-February and slightly over 80°F during August-October. The mean annual rainfall averages 22.4 inches at the Honolulu International Airport. The mean annual precipitation at the Nuuanu Reservoir No.4 is 124 inches. Heavy rains often occur during November-February, with only about 20 percent of the annual rainfall occurring in March-October.

Air quality in Honolulu is generally good due to the lack of stationary sources of pollutants and the effects of the tradewinds. During periods of light or calm winds, however, "hot spots" where air pollutants may exceed short-term standards can occur in areas of traffic congestion. Such areas do not exist near the project area.

Exhaust emissions during construction would be generated from vehicles and construction machinery. Fugitive dust will be generated during trenching activities and as a result of vehicular traffic.

Impacts due to exhaust emissions will be minimized by keeping all equipment properly tuned and maintained, as well as by minimizing unnecessary idle time. The contractor will be required to comply with Hawaii Administrative Rules (HAR) Title 11 Department of Health (DOH) Chapter 60.1 Air Pollution control which contains restrictions on visible emissions from motor vehicles and fugitive dust generation.

To reduce fugitive dust emissions, the area being worked on at any time shall be limited to the inversion manhole vicinity and exposed surfaces will be kept well watered whenever feasible. Wet cutting or dry cutting with other dust control measures will be required for asphaltic concrete pavements. Requirements to minimize fugitive dust emissions and erosion from trenching, stockpiling and other operations will be included in the project specifications to mitigate dust problems to the adjacent residences and nearby Damien High School.

E. WATER RESOURCES

Kapalama Drainage Canal runs along the eastside of Kohou Street. All of the service area is designated Zone X, which means it is an area of minimal flooding, on the Flood Insurance Rate Map (FIRM) prepared by the National Flood Insurance Program, U.S. Department of Housing and Urban Development, Federal Insurance Administration.

There is a 24-inch concrete drainage pipe located on the northeast sidewalk of Halona Street. It starts between Halona Place and Makalapua Place and discharges into Kapalama Stream. The drain line is approximately 10 feet away from the sewer main at the closest point. There are 48-inch, 36-inch, 24-inch, and 18-inch concrete drainage pipes located along both sides of Houghtailing Street. Two 18-inch drainage pipes cross the existing 8-inch sewer main. The drain line is approximately 30 feet away from the sewer main at the closest point. Two 48-inch lines and a 24-inch line enter a catch basin at the intersection of Houghtailing Street and Halona Street. A 4-foot by 4-foot drain box exits the catch basin and continues along Houghtailing Street onto Olomea Street. The drain box continues along the north side of Olomea Street. Two 24-inch lines traverse Olomea Street and connect into the drain box. The drain box enlarges to a 6-foot by 4-foot drain box. The 6-foot by 4-foot box drain and a 24-inch drain line traverse the sewer line on Kohou Street. Two 18-inch drain lines cross the sewer main. All drainage systems discharge into Kapalama Stream.

During construction, there is a potential for transport of storm runoff from the Kapalama Stream to Honolulu Harbor. Adherence to the City and County's Grading Ordinance, prompt paving and revegetation, and possibly scheduling work during expected dry weather months

would reduce sediment delivery to the harbor.

Dewatering of excavations will be necessary where the existing groundwater level is above the bottom of the proposed excavation. Groundwater was encountered at depths ranging between about 7.5 to 12.1 feet below the existing pavement surface during field exploration for the geotechnical investigation. Based on the groundwater levels anticipated and the design invert elevations of the sewer line, dewatering may be required in localized areas at the planned excavations of the project construction. Therefore, dewatering provisions will need to be included in the contract documents for the proposed construction. Because the excavation will involve discharge of groundwater, a National Pollutant Discharge Elimination System (NPDES) permit may be required for this discharge. At least 30 days prior to the start of construction the contractor will be required to file a Notice of Intent (NOI) for coverage under the NPDES General Permit pursuant to HAR Title 11 DOH Chapter 55 Water Pollution control with the DOH Clean Water Branch, employ best management practices and comply with the requirements of the General Permit regarding discharge of dewatered effluent.

Because the quality of the discharge of dewatered effluent is unknown at this time, the method of treatment and disposal of dewatered discharge is uncertain and must be developed by the contractor. The common practice of pumping discharge to a nearby sediment settling box(es) to settle out solids and discharging the desilted effluent to an existing City and County drainage system to Kapalama Stream should be permitted subject to approval of contractor's means, methods, techniques and/or sequence of procedures for dewatering. The contractor shall ensure that effluent exiting the sediment settling box is in compliance with appropriate water quality criteria and the conditions of the NPDES General Permit by monitoring the discharge. If this option is not acceptable to the City and County and DOH, the more costly option of treating the discharge onsite and/or offsite prior to discharge must be considered. In any event, the contractor will be required to file an NOI and comply with the requirements of the NPDES General Permit. Hot water may be used during the CIPP curing process. It will not contain any pollutants and will be disposed of by the contractor at ambient temperature in an environmentally safe manner in accordance with applicable Federal, State and City and County rules and regulations.

F. FLORA AND FAUNA

The project site is within urbanized City and County road rights-of-way developed for residential uses. No native habitat exists there. The introduced grasses, shrubs, and trees that prevail in the area provide some degree of habitat for the typical array of birds and mammals that one would expect in this urban Honolulu neighborhood and in this type of environment throughout the island. No candidate, endangered or threatened plant or animal species are known to exist on the site or use the site as habitat.

The Houghtailing and Halona Street roadsides are landscaped with grasses and predominantly Shower Trees. Although portions of the sidewalks may be used by the contractor for work-related activities such as materials storage, temporary above ground bypass piping, etc., the impact caused by these CIPP and rehabilitation related activities will be minimal. No existing plants will be removed and any plants, grassed area and surface improvement damaged by construction shall be restored by the contractor to the original or improved condition. Meticulous standards and requirements for the restoration of the Halona, Houghtailing, Olomea, and Kohou Street roadsides will be incorporated into the project specifications.

G. ARCHAEOLOGICAL AND HISTORIC RESOURCES

The Department of Land and Natural Resources (DLNR) State Historic Preservation Division (SHPD) records indicate there are no known historic sites at the Halona, Houghtailing, Olomea, and Kohou Streets sewer system locations. The SHPD believes that there are no historic properties present because, 1) residential development/urbanization has altered the land; and 2) improvements will be to an existing sewer system, and historic sites were not found during development of this existing sewer. Thus, SHPD concluded no historic properties will be affected by this undertaking (letters dated June 3, 2002 and September 5, 2006).

If significant sites including human burials are uncovered during construction, the contractor will be required to stop work and contact SHPD at 692-8015. A qualified archaeologist and a Hawaiian cultural expert recognized within the Hawaiian community for his/her cultural expertise shall be retained by the contractor to determine if any historic sites are present. If historic sites are found, the archaeologist and the Hawaiian cultural expert shall gather sufficient information to evaluate their significance and submit the findings to the SHPD. If burial remains

are found, the Oahu Island Burial Council at DLNR will be contacted. A mitigation plan will be developed, if required, and approved by the SHPD prior to continuing with construction activities.

H. RECREATIONAL ACTIVITIES

Peter Buck Mini Park is a public recreational facility adjacent to Houghtailing Street near the Halona Street intersection. Construction activities on Houghtailing Street may make pedestrian access to the park somewhat inconvenient, but this will be temporary. Upon completion of the sewer rehabilitation, complete access to the park will be restored to existing conditions. Operation of the rehabilitated sewer system will not in any way hinder public recreational programs or facilities or use of the park.

I. UTILITIES

1. Water

Several water mains are in the vicinity of the existing sewer main. There is an 8-inch cast-iron water main located in the middle of Kohou Street. The horizontal distance between the 8-inch water main and the sewer main ranges from 5 to 20 feet. The depth of the water main is approximately 3 to 4 feet deep. There is an 8-inch and 42-inch ductile-iron water main along the northeast side of Halona Street. The approximate horizontal distance between the 42-inch water main and the sewer main is 0 to 30 feet. The horizontal distance between the 8-inch waterline and the sewer main is approximately 0 to 20 feet. The water main crosses over the sewer main between sewer manholes SI82AA2014 and SI82AA2015. The approximate depth is 3 to 4 feet. Also, there is a 12-inch and a 20-inch water main on Houghtailing Street. The approximate horizontal distance between the 20-inch water main and the sewer main is 14 to 16 feet. The 12-inch waterline is reduced to an 8-inch water line and crosses the sewer line near sewer manhole SI82AA2022. The approximate horizontal distance between the 12-inch water main and the sewer main is 15 feet. There is a 12-inch waterline on Olomea Street. The approximate horizontal distance between the waterline and the existing sewer main is 6 feet. The depth of the 12-inch water main is approximately 5 feet.

2. Drainage

There is a 24-inch concrete drainage pipe located on the northeast sidewalk of Halona Street. It starts between Halona Place and Makalapua Place and discharges into Kapalama Stream.

The drain line is approximately 10 feet away from the sewer main at the closest point. There are 48-inch, 36-inch, 24-inch, and 18-inch concrete drainage pipes located along both sides of Houghtailing Street between manholes SI82AA2023 and SI82AA2019. The drain line is approximately 30 feet away from the sewer main to the closest point. Two 18-inch drain pipes cross the existing 8-inch sewer main between sewer manholes SI82AA2019 and SI82AA2021.

The vertical clearance between the drain lines and the sewer line is approximately 2 to 3 feet. Two 48-inch lines and a 24-inch line enter a catch basin near manhole SI82AA2019. A 4-foot by 4-foot drain box exits the catch basin and continues along Houghtailing Street on to Olomea Street. The drain box continues along the north side of Olomea Street. Two 24-inch lines traverse Olomea Street and connect into the drain box. The drain box enlarges to a 6-foot by 4-foot drain box between manholes SI82GA2001 and SI82GA2012 where it is located directly above the sewer line with one foot clearance. The 6-foot by 4-foot box drain and a 24-inch drain line traverse the sewer main between manholes SI82AA2011 and SI82AA2012 on Kohou Street. Two 18-inch drain line cross the sewer main between manholes SI82AA2009 and SI82AA2010. The vertical clearance between the drain lines and sewer lines is approximately 4.5 to 5.5 feet. All drainage systems discharge into Kapalama Stream.

3. Gas

There is a 4-inch and a 6-inch gas line located on the northwest side of Houghtailing Street. The gas line is located approximately 22 feet from the sewer line. There is a 2-inch gas pipe in the sidewalk on the east side of Kohou Street. The approximate horizontal distance from the gas line to the sewer line is 11 to 39 feet. There is a 3-inch gas line at the intersection of Kohou Street and King Street. The gas line traverses the sewer line at the intersection. There is a 2-inch gas line on the south side of Olomea Street that extends approximately 225 from Houghtailing Street.

4. Electrical

Electrical service is supplied through overhead power lines on the southeast side of Houghtailing Street. Traffic signals and streetlights are serviced through underground conduits on the northwest side of Houghtailing Street. Electrical service is supplied through overhead power lines on the northwest side of Halona Street. On Kohou Street electrical service is supplied through underground conduits along the southeast side of the roadway. Electrical service is

provided through underground conduits on Olomea Street along the south side of the street.

5. Telephone

Telephone service is supplied through overhead power lines on the southeast side of Houghtailing Street. Telephone service on Halona Street is supplied through overhead power lines on the northwest side of the roadway. On Kohou Street, telephone service is supplied through underground conduits along the southeast side of the road. Telephone service is provided through underground conduits on Olomea Street along the south side of the street. Telephone service is provided through underground conduits on Olomea Street along the south side of the street.

J. NOISE

The operation of construction equipment such as backhoes, trucks, compactors, and pavers will raise ambient noise levels in the project vicinity. Noise impacts may have direct and indirect effects on the residential units along Houghtailing, Halona, Olomea, and Kohou Streets, and the nearby Damien High School. Sources of noise from CIPP operations include the boiler truck, submersible circulation pump, trailer mounted engine generator, and bypass pumps. The boiler truck will be used to heat up the water for curing the installed CIPP liner.

No significant noise increase is anticipated from the boiler truck because it contains no moveable parts. The submersible circulation pump will be used to circulate the heated water within the inverted CIPP liner and will be housed below water at the bottom of the inversion manhole. No significant noise increase is anticipated from the pumps but contingency measures should be available to cover as much of the manhole opening as possible with acoustical attenuating material to reduce noise levels above ground. The engine generator will be housed in an acoustical attenuation enclosure to reduce noise levels to acceptable standards.

Construction equipment and on-site vehicles or devices requiring an exhaust for gas or air will be equipped with mufflers. In addition, all construction-related vehicles traveling on roadways shall meet the vehicle noise level requirements set by HAR Title 11 DOH Chapter 42 Vehicular Noise Control for Oahu.

Along the Houghtailing, Halona, Olomea, and Kohou Street residential areas and the nearby Damien High School, the allowable noise level is 55 dBA at the property line during the

day (7 a.m. to 10 p.m.) and 45 dBA at night (10 p.m. to 7 a.m.). Noise levels at Damien High School should not exceed the allowable noise level. Noise levels along Houghtailing, Halona, Olomea, and Kohou Streets will exceed the allowable levels for more than ten percent of the time within any twenty minute period. Thus, a Noise Permit will be required for construction activities from DOH in accordance with the HAR Title 11 DOH Chapter 46 Community Noise Control. Required permit conditions for construction activities which the contractor must comply with include the following:

(1) No permit shall allow any construction activities creating excessive noise when measured at or beyond the property line of the construction site for the hours before 7:00 a.m. and after 6:00 p.m. on weekdays.
(2) No permit shall allow construction activities creating excessive noise when measured at or beyond the property line of the construction site for the hours before 9:00 a.m. and after 6:00 p.m. on Saturdays.
(3) No permit shall allow construction activities which exceed the allowable noise levels on Sundays and holidays.

The above conditions shall be enforced and violators penalized by the Director of the DOH. If the above conditions cannot be met, a construction noise variance from HAR Title 11 Chapter 46 will have to be obtained by the contractor from DOH. A noise variance would be required for the bypass pumps and if the contractor will need to do some night CIPP work.

K. ODOR

Odor control has not been a problem with the CIPP liner rehabilitation method. The contractor will be responsible for odor mitigation on this project in accordance with applicable Federal, State and City and County regulations. The contractor will be required to monitor the surrounding area and minimize any odors that may occur due to the construction activities. The average concentration of hydrogen sulfide (H_2S) from wastewater gases measured by a reference method shall not exceed thirty-five (35) micrograms per cubic meter of air (twenty-five (25) parts per billion) in any one-hour period in accordance with HAR Title 11 DOH Chapter 59 Ambient Air Quality Standards. Odor scrubbers, fans, etc., will be provided to minimize H_2S odors, if required.

Odors will be generated by the CIPP process when the fabric tube is impregnated (wet-out) with thermosetting resin. The odor is not harmful to the public but may be objectionable

to some residents along the western edge (ewa side) of Houghtailing Street. If necessary, an offsite staging area could be provided to the contractor to house the wet-out facility to impregnate the fabric tube with thermosetting resin.

L. TRAFFIC

Driveways to properties adjacent to the work areas and portion of one lane of Houghtailing Street will be closed to vehicular traffic during the CIPP rehabilitation work, including bypass/diversion pumping (BDP) work. Satisfactory and safe access will be provided by the contractor to all properties as required by the Street Usage Permit from DTS. Onsite-staging areas will be needed at the CIPP inversion manholes for the truck/trailer that contains the impregnated fabric tube and control instrumentation and for other inversion equipment. An area approximately 15 feet by 150 feet will be required for each onsite staging area 24-hour lane closure of any roadway should not be required. A small coned off area surrounding the construction area will also be required for completion of the relief sewer rehabilitation work. Vehicular access to and from the adjacent properties will be impacted by the partial closure of roadway during the day.

Construction and traffic control plans (TCP) will be prepared during the design phase of this project to minimize disruptions and inconveniences to the residents and the public using subject roadways and shall be submitted to DPP Traffic Review Branch and DTS for review and consultation. The TCP will be prepared by a licensed civil engineer qualified to prepare TCPs. The contractor will be permitted to modify the TCP to suit his method of CIPP rehabilitation and BDP. Modifications by the contractor shall be prepared by a licensed civil engineer qualified to prepare TCP and shall be re-reviewed by the DDC, DPP , DTS, and SDOT prior to commencement of construction of the project.

During construction, vehicular traffic passing through the project site will be disrupted and vehicles will have to be diverted around the roadway work areas of the projects. Standard City and County special provisions for traffic control will be included in the project specifications to control vehicular traffic during construction with requirements for the contractors to coordinate their work and traffic control plans during construction to minimize traffic disruptions to the public and construction disruptions to the project. Appropriate signs and barriers will be required, and generally at least one lane will remain open during working hours (8:30 a.m. to 3:30 p.m.).

Pedestrian traffic will be provided for the duration of construction. After working hours, trenches will be covered with a non-skid bridging material and all lanes will be opened to traffic. Special-duty police officers and/or trained construction flagmen will be provided for traffic control to improve traffic flow.

The contractor will be required to obtain a Street Usage Permit from DTS prior to commencement of any work that will temporarily obstruct any portion of the roadway or sidewalk and comply with its requirements. The contractor will be required to notify all affected residents along the subject roadways, area residents, the Department of Education, the Damien High School, the Kalihi-Palama Neighborhood Board, emergency services (fire, police and ambulance), the general public, DTS, and State DOT at least 2 weeks prior to commencement of the work. The notification shall include the nature of the work, the construction schedule of lane and street closures or detours, suggested alternate routes, the expected length of time of inconveniences of any restrictions which may be imposed to complete the work, and the contractor's phone number to be called to report traffic concerns.

M. RELATIONSHIP TO STATE AND COUNTY PLANS AND POLICIES

1. STATE LAND USE COMMISSION (SLUC)

The project service area is located within the boundaries of the State Urban district. Thus, the project is consistent with the SLUC plans and policies for the Urban district.

2. CITY AND COUNTY GENERAL PLAN AND DEVELOPMENT PLAN

The General Plan guides the "development and improvement of the City and County" as mandated by the City and County of Honolulu. The General Plan is a relatively broad document, consisting primarily of objectives and policies that provide guidelines for shaping the future of Oahu.

The project is located in the Primary Urban Center Development Plan (PUC DP) area. The DP land use map, PUC-Central (April 2002) designates the project area for Lower-Density Residential land use. The DP does not indicate any changes to the future land use pattern for this area. With respect to the PUC DP's Guidelines on aging wastewater systems, the proposed project complies with Guideline 4.2.3:

Complete current projects needed to correct currently identified service or facility inadequacies to neighborhoods where change in service demand is not anticipated.

3. CITY AND COUNTY ZONING

The project service area is located in the R-5 (Residential) zoning district (http://gis.hicentral.com/website/parcelzoning/viewer.htm) (downloaded Feb. 17, 2004). See Figure 5.

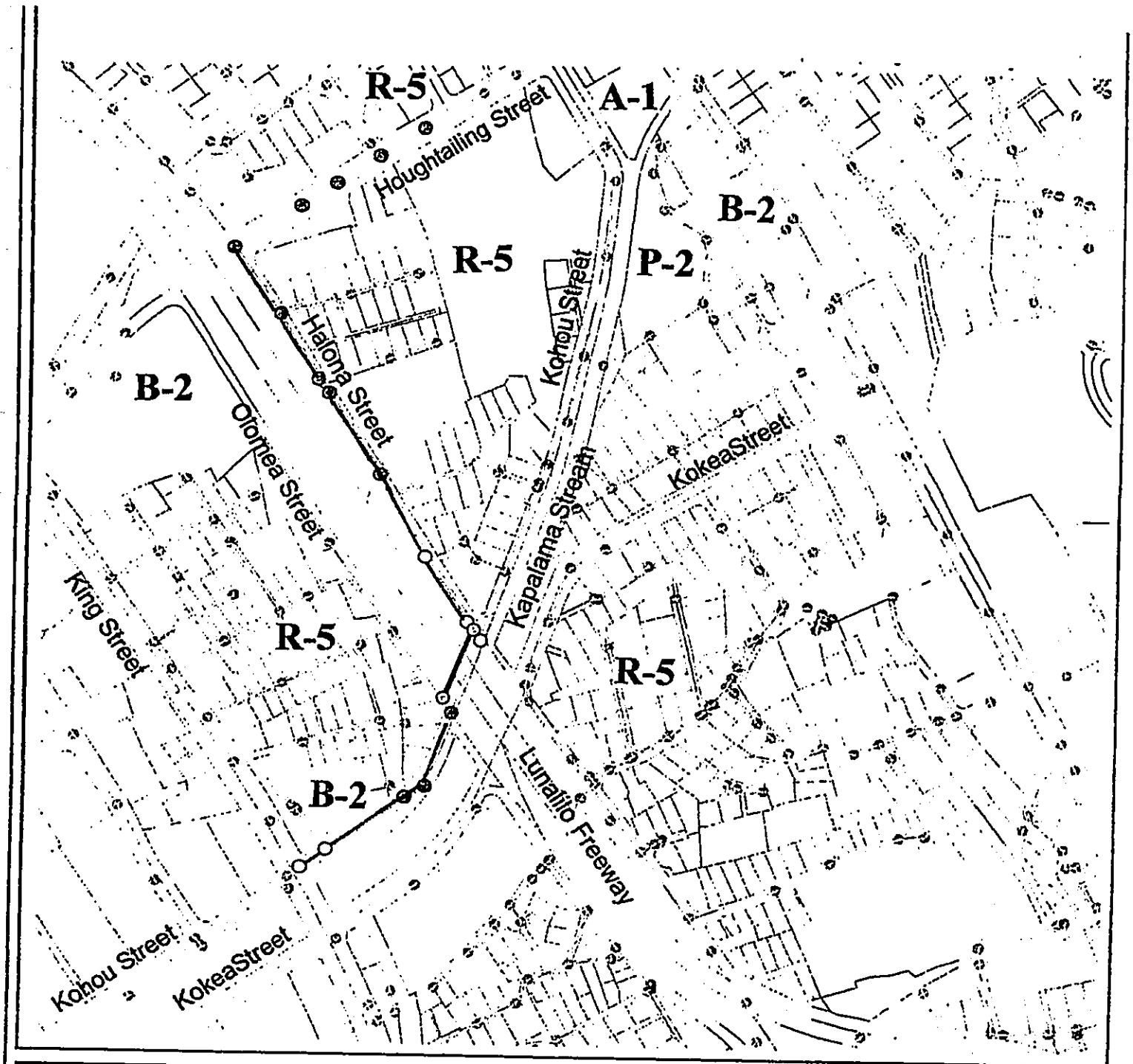
4. SPECIAL MANAGEMENT AREA

The project is not within the boundaries of the Special Management Area.

N. BYPASS PIPING

Bypass piping and/or diversion pumping of wastewater flows will be required around the rehabilitation work area from the upstream manhole to the downstream manhole for a minimum of 48 hours to allow acceptable completion of the Relief Sewer pipeline rehabilitation work. Additionally, bypass/diversion pumping (BDP) will be required to maintain and prevent backup of wastewater in service laterals connecting to the sewer being rehabilitated and during manhole rehabilitation. BDP will include all power, primary and standby pumps, appurtenances, access pits, bypass piping, temporary plugs, etc. required to maintain existing wastewater flows and services. BDP shall be performed in such a manner as to not damage improvements in City and County streets and residential properties, disrupt traffic, create nuisance or hazards including excessive noise, and shall comply with all applicable Federal, State, and City and County laws, rules, and regulations.

Sufficient measures shall be taken to prevent wastewater spills and damage from excessive sewer surcharging. All pumped wastewater shall be enclosed in pipe that is adequately protected from pedestrian and vehicular traffic and shall be redirected into the Relief Sewer. Metal, HDPE, or PVC pipes, fittings, and manifolds shall be used for containing pumped wastewater flows. Prior to commencement of BDP work, the contractor will be required to conduct a preconstruction site survey of the project site. The survey shall include photographs, videotapes and report of all improvements, including plants, signs and markings, at and adjacent to the project site which may be damaged by construction activities. A copy of the preconstruction site survey shall be provided to the City and County.



LEGEND:

R-5	Single-Family Residential	B-2	Community Business
A-1	Apartment	P-2	General Preservation

Halona Street Relief Sewer
Environmental Assessment
Figure 5
Department of
Design & Construction

N

SCALE: 1" = 400'

ZONING

Wastewater Division July 2004

BDP piping shall be placed above ground in the median strip or next to the curb where possible with the approval of the City and County. Temporary underground trenches and surface ramps for BDP piping may be constructed across street intersections and driveways with the approval of DDC, DPP and Department of Transportation Services (DTS). All BDP equipment and piping shall be removed and the area restored to its original or better condition following the completion of each section of CIPP rehabilitation work. The City and County will evaluate the restoration work in accordance with the preconstruction site survey photographs, videotapes and report of the project site provided by the contractor.

At least 30 working days prior to the planned start of work, the contractor will be required to prepare and submit to the City and County a wastewater BDP plan that identifies bypass piping and diversion pumping locations, traffic detours, and lane closures. Contractor's plan for BDP and traffic detours shall be approved by the DDC, DPP and DTS and the public shall be notified by legal notice two weeks prior to start of traffic detours and commencement of BDP work. In addition, the contractor shall notify the Department of Environmental Services (ENV) Division of Environmental Quality 12 days prior to the start of BDP work.

IV. SUMMARY OF POTENTIAL IMPACTS AND PROPOSED MITIGATION MEASURES

A. SHORT TERM IMPACTS

The project is scheduled to begin upon receipt of necessary permit approvals, and should last approximately 9 months. During the construction period the following short term potential impacts are anticipated:

1. During construction, access to and from driveways to adjoining roadways and road frontage usage (mail, deliveries, parking) may be occasionally hampered by trenching, paving, construction materials deliveries, etc. Disruptions will be mitigated by requiring the contractor to perform work in accordance with a City and County reviewed construction schedule and traffic control plan and the terms of the sewer easement. There will be no long term interference with any existing or proposed land use of adjacent properties due to the project.

2. The project will have minimal effect on existing soils and topography.

3. The contractor shall keep the project and surrounding area free from dust nuisance with mitigative measures such as water sprinkling and limiting the area being worked on at any given time. The work shall be in conformance with HAR Title 11 DOH Chapter 60.1 Air Pollution Control. The contractor shall be required to provide proper tuning and maintenance of all construction equipment and vehicles to minimize pollutants from exhaust emissions.

4. No impacts are expected to any surface freshwater resources. During construction, there is a potential for transport of storm runoff from the Kapalama Stream to Honolulu Harbor. Adherence to the City and County's Grading Ordinance, prompt paving and revegetation, and possibly scheduling work during expected dry weather months would reduce sediment delivery to the harbor.

5. Dewatering of excavations will be necessary where the existing groundwater level is above the bottom of the proposed excavation. Groundwater was encountered at depths ranging between about 7.5 to 12.1 feet below the existing pavement surface during field exploration for the geotechnical investigation. Based on the groundwater levels anticipated and the design invert

elevations of the sewer line, dewatering may be required in localized areas at the planned excavations of the project construction. Therefore, dewatering provisions will need to be included in the contract documents for the proposed construction. Because the excavation will involve discharge of groundwater, a National Pollutant Discharge Elimination System (NPDES) permit may be required for this discharge. This will minimize the discharge of pollutants.

6. Hot water may be used during the CIPP curing process. The contractor shall be responsible for properly disposing of the water and any other waste materials generated during the Relief Sewer rehabilitation work in an environmentally safe manner in accordance with applicable Federal, State and City and County rules and regulations.

7. The project will have no effect on flora and fauna since no threatened plant or animal species are known to exist at the project site. Any existing plants, grassed areas and surface improvements damaged by construction shall be restored by the contractor to original or better condition.

8. Archaeological or historic sites, including human burials, are not known to exist along the project site, but if they are uncovered during construction, work will stop and the SHPD will be contacted at 692-8015. A qualified archeologist and a Hawaiian cultural expert will be retained and a mitigation plan will be developed and approved by SHPD prior to continuing with the work. If burial remains are found, the O'ahu Island Burial Council at DLNR will also be contacted.

9. No recreation programs or facilities will be hindered by the project. Peter Buck Mini Park is a public recreational facility adjacent to Houghtailing Street near the Halona Street intersection. Construction activities on Houghtailing Street may make pedestrian access to the park somewhat inconvenient, but this will be temporary.

10. Utility services for water, gas, electric, telephone, and cable TV should not be disrupted during construction activities. The contractor shall verify utility locations, protect utilities during construction and ensure no interruption of services of all existing utilities within the project area during construction.

11. Periodic noise from construction equipment such as backhoes, trucks, compactors, pumps, generators and pavers will impact residents or businesses near the project site and should not impact the nearby school.

12. Installation of the CIPP liner by hydrostatic inversion will require bypass piping and pumping which will affect noise levels. Noise impacts will be mitigated by applying current techniques and methods of sound attenuation and abatement such as noise reducing mufflers. The contractor shall obtain a Noise Permit from the DOH and observe and comply with HAR Title 11, DOH Chapters 42 and 46 regarding noise control to protect the public from the effects of noise from vehicular and construction activities. Restrictions on noise levels and operational hours of the noisiest equipment will minimize the impacts on the adjoining community. If it is not possible to meet the noise limits during night time or other restricted hours of operations, construction noise variance will be obtained by the contractor from DOH.

13. The contractor shall be responsible for odor mitigation on the project. Average concentration of hydrogen sulfide from wastewater gases shall be maintained below levels permitted by HAR Title 11 DOH Chapter 59 Ambient Air Quality Standards. Odor scrubbers, fans, etc., will be provided to minimize odors, if required. If necessary, an offsite wet-out area will be provided by the ENV for the contractor to impregnate (wet-out) the fabric tube with thermosetting resin for the CIPP liner.

14. Bypass piping and/or diversion pumping of wastewater flows will be required around the rehabilitation work area from the upstream manhole to the downstream manhole for a minimum of 48 hours to allow acceptable completion of the sewer pipeline rehabilitation work. Additionally, BDP will be required to maintain and prevent backup of wastewater in service laterals connecting to the sewer being rehabilitated and during manhole rehabilitation. The contractor shall be required to perform BDP work in such a manner as to not damage improvements in City and County streets and residential properties, disrupt traffic, create nuisance or hazards including excessive noise, and shall comply with all applicable Federal, State, and City and County laws, rules, and regulations. Sufficient measures shall be taken to prevent wastewater spills and damage

from excessive sewer surcharging. Prior to commencement of BDP work, the contractor will be required to conduct a preconstruction site survey of the project. The survey shall include photographs, videotapes and report of all improvements, including plants, signs and markings, at and adjacent to the project site which may be damaged by construction activities. A copy of the preconstruction site survey shall be provided to the City and County.

BDP piping shall be adequately protected from pedestrian and vehicular traffic and shall be placed above ground in the median strip or next to the curb where possible with the approval of the City and County. Temporary underground trenches and surface ramps for BDP piping may be constructed across street intersections and driveways with the approval of DDC and DPP. To mitigate inconvenience to the public, at least 30 working days prior to the planned start of work, the contractor shall be required to prepare and submit to the City and County, a wastewater BDP plan that identifies bypass piping and diversion pumping locations, traffic detours, and lane closures. Contractor's plan for BDP and traffic detours shall be approved by the DDC, DPP and DTS and the public shall be notified by legal notice two weeks prior to start of traffic detours and commencement of BDP work. Following the completion of each section of CIPP rehabilitation work, the contractor shall remove all BDP equipment and piping and the area shall be restored to its original or better condition. The City and County will evaluate the restoration work in accordance with the preconstruction site survey photographs, videotapes and report of the project site provided by the contractor.

15. Traffic passing through the project site will be disrupted as vehicles will be diverted around the construction work areas such as CIPP liner inversion and receiving manholes and open trenches for bypass piping and diversion pumps of the Relief Sewer and service laterals. Parking will be restricted on both sides of the street during construction where applicable. Traffic control plans will be prepared during the design phase by a licensed civil engineer and will be submitted to DPP Traffic Review Branch and DTS for review and approval. Traffic through the construction work areas during the various construction phases will be controlled by police officers and/or trained construction flagmen to minimize disruptions and inconveniences and to improve traffic flow. Pedestrian traffic will be provided for. The contractor will be required to obtain a Right-of-Entry from the State DOT for work in the Halona and Olomea Street ROW and a Street

Usage Permit from the DTS prior to commencement of and work that will temporarily obstruct any portion of the roadway or sidewalk and comply with its requirements. Provisions for traffic control will be included in the project specifications to control vehicular traffic during construction to minimize traffic disruptions to the public.

16. The contractor shall inform the public of the proposed project at least 2 weeks prior to commencement of Sewer rehabilitation work. The contractor will be required to notify all affected residents along subject roadways, area residents, the Department of Education, the Damien High School, the Kalihi-Palama Neighborhood Board, emergency services (fire, police and ambulance), the general public, and DTS of the nature of the work, the construction schedule, of lane and street closures or detours, suggested alternative routes, the expected length of time of inconveniences, of any restrictions which may be imposed to complete the work and the contractor's phone number to be called to report traffic concerns.

B. LONG TERM IMPACI'S

The long term impact of this project is positive. The severely deteriorated existing Relief Sewer's structural integrity will be restored and the threat of imminent failure and associated disruptions to the existing environment will be removed. There are no long term negative impacts associated with the implementation of this project.

V. ALTERNATIVES CONSIDERED

A. NO/DELAYED ACTION ALTERNATIVES

The "no action" and "delay action" alternatives were considered but omitted since the Halona Street Relief Sewer is severely deteriorated and structural failure is imminent. An immediate positive action is required.

B. MICROTUNNELING

Approximately 627 linear feet of 8-inch CIPP liner will be installed throughout Houghtailing Street from manholes SI82AA2023 to SI82AA2019.

Due to the severity of the surcharge-flow percentages along Halona Street between manholes SI82AA2019 and SI82AA2014 the open trench method will be utilized to install 10-inch pipe between manholes SI82AA2019 and SI82AA2015 and 12-inch pipe between manholes SI82AA2015 and SI82AA2014. There are twelve laterals that will be reinstated after the pipe has been installed. This will require excavating at these locations, and then connecting to the existing 6-inch VCP lateral. See Figure 6.

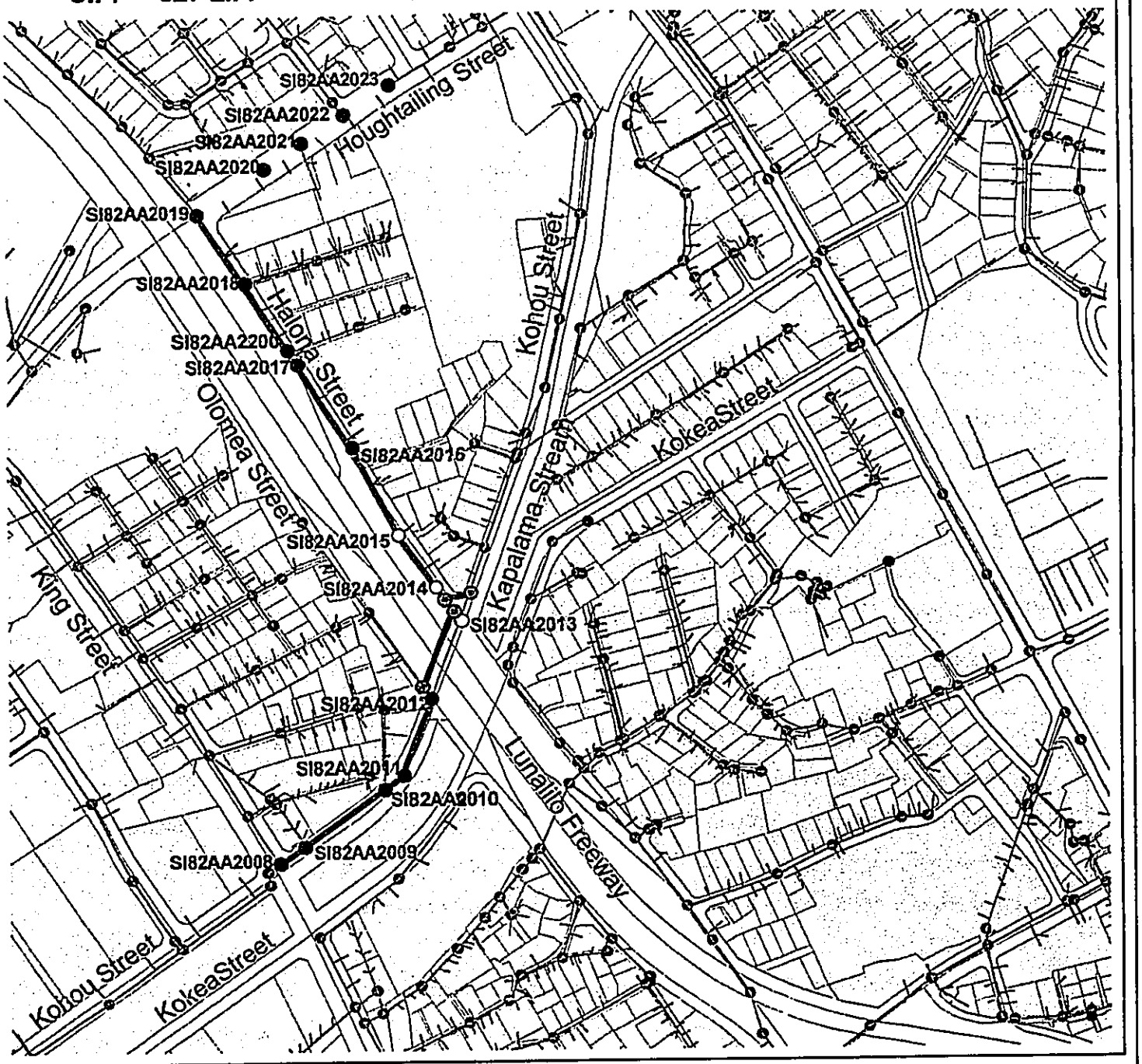
The existing 10-inch CIP pipe section between manholes SI82AA2013 and SI82AA2012 will be abandoned due to its sag condition. A new 14-inch PVC pipe will be installed using the microtunneling method. It will be parallel to and approximately 15 feet northwest of the existing 10-inch CIP pipe. Two new manholes and a 10-inch pipe will be installed to direct flows from Kohou Street into the new 14-inch line. A sewer manhole (SI82AA2996) will be installed on Kohou Street to direct the flows to a new manhole (SI82AA2997) located between manhole SI82AA2014 and the manhole (SI82AA2998) upstream of the new 14-inch pipe. Two sewer manholes will be installed at each end of the new pipe. The upstream manhole (SI82AA2998) will block all flows to the existing manhole (SI82AA2013) and direct it to the new pipe. The downstream manhole (SI82AA2999) will be connected to the existing 8-inch pipe along Olomea Street. From the new manhole on Olomea Street, a 14-inch pipe will connect back into manhole SI82AA2012.

According to a geotechnical report, the microtunneling method was preferred over pipe ramming

Total Length of CIPP = 627 L.F.

Total Length of Open Trench Replacement = 652 L.F.

Total Length of Microtunneling = 237 L.F.



LEGEND:

- CIPP Liner
- Sewer Main
- Microtunneling
- Open Trench Replacement
- ● Existing Manhole within this project
- ○ Existing Manhole to be rehabilitated
- ⊗ New Manhole within this project

Halona Street, Relief Sewer
Design Alternative Report

Figure 6

Department of
Design & Construction

N

SCALE: 1" = 400'

DESIGN OPTION 4

CIPP Liner, Open Trench Replacement, & Microtunneling

Wastewater Division Date: February 2006

is a possibility that the pipe would be installed with a sag, which would result in long-term operational problems for the City's sewer pipe. Jet grouting would require lane closures on the H-1 Freeway due to the operational space requirements of such a procedure. Thus, microtunneling could not be further considered for this project due to engineering and public disturbance disadvantages.

C. CIPP LINER AND OPEN- TRENCH REPLACEMENT:

Majority of the flow on Halona Street will be redirected to Olomea Street. The reduction in flow will not require upsizing of pipe between manholes SI82AA2019 and SI82AA2012. This is the only option that will not require lane closure of Lunalilo Freeway. At the intersection of Houghtailing Street and Halona Street, the 8-inch sewer line along Halona Street will be cut and plugged at manhole SI82AA2019. A new manhole, SI82AA2995, will be installed on Halona Street approximately 149 feet from SI82AA2019. This new manhole will begin the sewer line on Halona Street where two laterals intersect the sewer main. The shattered pipe section and cracked pipe laterals will be replaced during the installation of manhole SI82AA2995. Approximately 213 linear feet of new 10-inch sewer line will be installed under the Lunalilo Freeway and Houghtailing Street between the existing SI82AA2019 and proposed manhole SI82AA2994. 855 linear feet of 10-inch sewer line will be installed along Olomea Street between the proposed manhole SI82AA2994 and the existing manhole SI82GA2001. 600 linear feet of 8-inch pipe along Olomea Street between SI82GA2001 and SI82AA2012 will be upsized to a 10-inch pipe to accommodate the additional flow to the pipes. Approximately 688 linear feet of 10-inch pipe will be upsized to a 15-inch pipe along Kohou Street between manholes SI82AA2012 and SI82AA2007. Open trench method is recommended for the installation of new pipe and upsized pipe. According to the geotechnical report by Geolabs, Inc, potential soft and/or loose alluvial and lagoonal deposits may be encountered. Open trench method allows over excavation and replacement with suitable soil to prevent potential settlement problems. The open trench method is economical and the project location is located in an area that will not significantly impact the public.

Approximately 627 linear feet of 8-inch Cured-In-Place Pipe (CIPP) liner will be installed throughout Houghtailing Street from manholes SI82AA2023 to SI82AA2019. The pipes between manholes SI82AA2019 and SI82AA2012 does not require upsizing, due to the reduced

flow. Approximately 1200 linear feet of 8-inch CIPP liner will be installed throughout Halona Street from the new manhole SI82AA2995 to existing manhole SI82AA2013. Approximately 234 linear feet of 10-inch CIPP liner will be installed under the Lunalilo Freeway near Kohou Street between manholes SI82AA2013 and SI82AA2012. This will be done to improve the hydraulic characteristics of the pipe. Four new manholes will be installed to redirect the flows to Olomea Street. Sewer manholes SI82AA2012 to SI82AA2008 will be replaced with new sewer manholes. It is difficult to reinstall sewer lines into the existing manholes because the lower sections of the sewer manholes have brick structures. Installing new manholes will prevent infiltration at the connection from the pipe to the manholes, eliminate the need of rehabilitation, and is more feasible than rehabilitating existing manholes. Because manholes SI82AA2013, SI82AA2014 and SI82AA2015 have brick structures that are causing infiltration, they will be rehabilitated with Portland cement and epoxy coating method. This method will improve the structural integrity of the manhole and stop infiltration. Polyvinyl chloride (PVC) pipe is recommended for this project because of its rigidity. The rigidity of PVC pipe will prevent any sagging and ensure a constant slope within the pipe. The probable cost of construction is approximately $4.63 million.

D. CONCLUSIONS

The most common method of pipe repair is the open-trench replacement method. It involves excavating a trench to install a new pipeline, either in place of the existing pipeline, or nearby as a bypass to provide continual service to the area. The new pipeline can be the same size as the existing line or larger. The new pipe material was chosen to match the project situation and does not need to match the existing pipe material. The new pipe being installed for this project will be made of polyvinyl chloride (PVC). PVC was selected for its rigidity to prevent sag conditions. The advantage of the open-trench method is that a new pipeline system is installed and it allows for the re-construction of the trench where bedding failure is a problem and sag conditions occur. The recommended rehabilitation method for this project is CIPP liner and open-trench replacement.

The CIPP and Open Trench method will provide excellent hydraulic capacity by increasing the pipe size in specific areas and also lowering the roughness of coefficient of the pipe. The combination of the CIPP liner and open trench methods will also offer minimal public and

traffic disturbances, minimal sewer system down time during construction, and minimal maintenance problems in the future compared to the other design options. Redirecting flows to Olomea Street was chosen over other design options to eliminate impedance of traffic on Lunalilo Freeway.

The combination of the CIPP liner and open trench to redirect flows is the most cost effective option. This option will provide a long-term solution to improve the current and future hydraulic conditions while minimizing the disturbance to the public.

The Portland cement with epoxy coating will solve the infiltration and structural deficiency problems with the existing sewer manholes. This method was the most economical compared to the other three manhole RR methods, which also made this the optimal method.

VI. APPROVALS AND PERMITS REQUIRED

State of Hawaii

a. Dept. of Health Community Noise Permit for Construction Activities
b. Dept. of Health NPDES Permit for Construction Dewatering
c. Right of Entry for use of State-owned rights-of-way (Halona Street and Olomea Street)

City and County of Honolulu

a. Permit to work within City and County ROW
b. Building Permit
c. Construction Dewatering Permit (Temporary)
d. Street Usage Permit
e. Permit to Excavate Public Right-of-Way

VII. DETERMINATION

This Final Environmental Assessment is part of the environmental review process meeting requirements of Chapter 343, Hawaii Revised Statues. The potential effects of the proposed project evaluated in this document are based on the significance criteria in section 11-200-12 (Hawaii Administrative Rules, revised in 1996). After consideration of potential environmental effects of the proposed project and consultation with government agencies of the DDC has determined that a Finding of No Significant Impact (FONSI) is in order. The following is a summary of the potential effects of the action.

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

Development of the proposed project will not impact natural or cultural resources, as the project site is located in a developed area and the ground has been previously disturbed by the existing sewer line. Consultation with the SHPD indicates that no known historic or cultural resources were identified at the project site. Correspondence with SHPD is available in the Appendix for reference.

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

The proposed project will be compatible with the existing uses of the surrounding area and will have minimal disturbance to the community as it is located underground.

3. Conflicts with the State's long-term environmental policies or goals and guidelines as expressed in chapter 344 HRS.

The proposed project is consistent with the State's long-term environmental policies as well as the State's Land Use Commission policies.

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

Short-term construction related activities may result in negative impacts, as well as positive economic impact from cash infusion during implementation of the project. Long-term adverse effects are not foreseeable, as the economic and social welfare of the community should return to pre-construction conditions.

5. Substantially affects public health.

Short-term construction related activities will not impact public health as they are temporary in nature. In addition, construction activities will be regulated by State standards to minimize noise, dust, and exhaust emissions.

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

The proposed project does not directly result in secondary impacts, and will only increase capacity of the sewer system to serve planned development of lands in conformance with the County General Plan.

7. Involves a substantial degradation of environmental quality.

The proposed project is located underground; therefore the environmental quality of the surrounding area will be preserved.

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 any cumulative effect upon the environment, and no larger commitments are required for the proposed sewer system.

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

There are no known rare, endangered, or threatened species or habitat associated with the project site. The area has been urbanized and the new sewer alignment has undergone significant disturbance over the years for roadway use.

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

Negative effects on environmental quality will be short-term due to construction and limited to the areas adjacent to the project. These short-term impacts will be mitigated to meet project plan and specification regulations.

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

The proposed project is not situated within the SMA. With the proposed sewer line improvement to be located completely underground, the project will not affect environmentally sensitive areas.

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

As the proposed project is located completely underground, visual aesthetics of the surrounding community will not be adversely impacted by the implementation of the improved sewer system.

13. Requires substantial energy consumption.

Energy consumption will consist of short-term construction activities, in which diesel or gas powered equipment will be used. Once completed, the improved sewer system itself will not consume energy.

REFERENCES

Geolabs, Inc., Preliminary Geotechnical Engineering Exploration Halona Street Relief Sewer, Kalihi, Oahu, Hawaii, dated June 12, 2002.

Okahara & Associates, Inc., Halona Street Relief Sewer, Kalihi, Final Design Alternatives Report, March 2006.

Okahara & Associates, Inc., Halona Street Relief Sewer, Kalihi, Design Alternatives Report, 90% Submittal dated July 2004.

Okahara & Associates, Inc., Halona Street Relief Sewer, Kalihi, Design Alternatives Report, Preliminary Submittal, February 2002.

http://gis.hicentral.com/website/parcelzoning/viewer.htm

Juvik, Sonia P. and James O. Juvik, eds, and Chief Cartographer Thomas P. Paradise, Atlas of Hawaii, Third Edition, 1998.

The State of Hawaii Data Book 2001. http://www.state.hi.us/dbedt/db01.pdf, accessed August 3, 2004.

City and County of Honolulu, Department of Planning and Permitting, Primary Urban Center Development Plan, May 2002.

APPENDIX A:
PRE-ASSESSMENT AND DEA PHASES:
PUBLIC CONSULTATION

COMMENTS DURING THE PRE-ASSESSMENT PERIOD

02-0960

DEPARTMENT OF THE ARMY
U. S. ARMY ENGINEER DISTRICT, HONOLULU
FT. SHAFTER, HAWAII 96858-5440

REPLY TO
ATTENTION OF

June 4, 2002

Regulatory Branch

Mr. Raj Rath, Project Manager
Department of Design and Construction
City and County of Honolulu
650 South King Street
Honolulu, HI 96813

Dear Mr. Rath:

This responds to your request dated May 22, 2002 regarding a request for written comments for a Draft Environmental Assessment (dEA) which will address activities proposed for correcting inadequacies within the sewer system along Kohou, Halona and Houghtailing Streets in Kalihi, Oahu Island. The information provided with your Exhibit identifies the general study corridor with no specific locations of proposed activities relative to jurisdictional waters of the United States. Until more detailed information is provided we can only offer general comments at this time.

Our records indicate that waters of the United States, as represented by perennial streams that flow through the Kapalama Drainage Canal into Honolulu Harbor may be affected by work proposed at the Kohou and Halona Street locations. It also appears that other special aquatic sites such as wetlands and anchialine ponds are not present. The dEA should also address the potential for navigable waters of the U.S. to be affected, or not be impacted by construction and use of an improved sewer system. Finally, if studies for the dEA should identify that other waters of the U.S. are present and will be affected by the proposed project alternatives, consultation should take place with the Corps to determine whether a Department of Army permit application shall be submitted for the Least Environmentally Damaging Project Alternative (LEDPA) of the project that will entail ground disturbance, construction, and alteration as well as the placement of fill material within the limits of jurisdictional waters.

Please contact Mr. Farley Watanabe of my staff at 438-7701, FAX 438-4060, if you have any questions or additional information. Please refer to File Number 200200339 in any future correspondence with us.

Sincerely,

George P. Young, P.E.
Chief, Regulatory Branch

Copy furnished:
Mr. Corey Kogasaka, P.E., Okahara & Associates, Inc., 677 Ala Moana Boulevard, Suite 703, Honolulu, HI 96813

02-0785

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

GILBERT S. COLOMA-AGARAN, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

DEPUTIES
ERIC T. HIRANO
LINNEL NISHIOKA

STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION
KAKUHIHEWA BUILDING, ROOM 555
601 KAMOKILA BOULEVARD
KAPOLEI, HAWAII 96707

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND
STATE PARKS

HAWAI'I HISTORIC PRESERVATION DIVISION REVIEW

Log #: 29994
Doc #: 0205EJ34

Applicant/Agency: Mr. Raj Rath
Department of Design and Construction, 11th Floor

Address: City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

SUBJECT: Halona Street Relief Sewer Improvements

Ahupua`a: Kalihi
District, Island: Kona, O`ahu
TMK: (1) 1-6-002, 1-6-004, 1-6-005, 1-6-023

1. We believe there are no historic properties present, because:
___ a) intensive cultivation has altered the land
✓ b) residential development/urbanization has altered the land
___ c) previous grubbing/grading has altered the land
___ d) an acceptable archaeological assessment or inventory survey found no historic properties
✓ e) other: The improvements will be to an existing sewer system. Historic sites were not found during development of this existing sewer.

2. This project has already gone through the historic preservation review process, and mitigation has been completed ___.

✓ Thus, we believe that "no historic properties will be affected" by this undertaking

Staff: Elaine Jourdane Date: 6/3/02

Title: Elaine Jourdane, Assistant Archaeologist O`ahu Phone (808) 692-8027

Cc: Mr. Corey Kogasaka, P. E. Okahara & Associates, Inc. 677 Ala Moana Boulevard, Suite 703, Honolulu, HI 96813

BENJAMIN J. CAYETANO
GOVERNOR

BRIAN K. MINAAI
DIRECTOR

DEPUTY DIRECTORS
JEAN L. OSHITA
JADINE Y. URASAKI

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

03-1142

IN REPLY REFER TO:

HWY-PS
2.7008

JUN 28 2002

Mr. Raj Rath
Department of Design and Construction
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Rath:

Subject: Halona Street Relief Sewer Improvements, Kalihi, Oahu, TMK: 1-6-002, 1-6-004, 1-6-005, 1-6-006, 1-6-023

Thank you for the notice that an environmental assessment is being prepared in accordance with Chapter 343, HRS.

We have the following comments:

1. We request that a copy of the environmental assessment be sent to us for review by our Highways Division;

2. Halona Street is under State jurisdiction;

3. All plans for construction within the State Highway right-of-way must be submitted for our review and approval;

4. The project must comply with the Freeways requirements in the enclosed Chapter 105 of Title 19, Accommodation and Installation of Utilities on State Highways and Federal Aid County Highways, Administrative Rules, Sections 105-10 through 105-13.

If you have any questions, please contact Ronald Tsuzuki, Head Planning Engineer, Highways Division, at 587-1830.

Very truly yours,

BRIAN K. MINAAI
Director of Transportation

c: Mr. Corey Kogasaka, P.E., Okahara & Associates, Inc.

Enclosure

DEPARTMENT OF TRANSPORTATION

Rules Repealing Rules and Regulations Relating to the Accommodation and Installation of Utilities on State Highways and Federal Aid Secondary Highways, and Adopting Chapter 105, Title 19, Administrative Rules

SUMMARY

1. Rules and Regulations Relating to the Accommodation and Installation of Utilities on State Highways and Federal Aid Secondary Highways are repealed.

2. Chapter 105 of title 19, entitled "Accommodation and Installation of Utilities on State Highways and Federal Aid County Highways", is adopted.

CORRECTION

THE PRECEDING DOCUMENT(S) HAS BEEN REPHOTOGRAPHED TO ASSURE LEGIBILITY
SEE FRAME(S)
IMMEDIATELY FOLLOWING

DEPARTMENT OF TRANSPORTATION

Rules Repealing Rules and Regulations Relating to the Accommodation and Installation of Utilities on State Highways and Federal Aid Secondary Highways, and Adopting Chapter 105, Title 19, Administrative Rules

SUMMARY

1. Rules and Regulations Relating to the Accommodation and Installation of Utilities on State Highways and Federal Aid Secondary Highways are repealed.

2. Chapter 105 of title 19, entitled "Accommodation and Installation of Utilities on State Highways and Federal Aid County Highways", is adopted.

PHONE (808) 594-1888

FAX (808) 594-1865

02-0961

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

'02 JUN -5 P3:?

HRD02-619

May 28, 2002

Mr. Raj Rath
Department of Design and Construction
City and County of Honolulu
650 South King Street
Honolulu, HI 96813

SUBJECT: PROPOSED ENGINEERING MEASURES TO CORRECT INADEQUACIES WITHIN THE SEWER SYSTEM

Dear Mr. Rath:

Thank you for the opportunity review the above referenced project which proposes engineering measures to correct inadequacies within the sewer system along Kohou, Halona and Houghtailing Streets in Kalihi, Oahu.

The Office of Hawaiian Affairs (OHA) has no comments at this point in time. We look forward to receiving the Environmental Assessment for the project.

If you have any questions, please contact Jerry B. Norris at 594-1847 or email him at jerryn@oha.org.

Sincerely,

Jalna S. Keala
Acting Director, Hawaiian Rights Division

cc: OHA Board of Trustees
Clyde W. Namu'o, OHA Administrator

02-1140

DEPARTMENT OF PLANNING AND PERMITTING

CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
Phone: (808) 523-4414 • Fax: (808) 527-6743

'02 JUL -3

JEREMY HARRIS
MAYOR

RANDALL K. FUJIKI, AIA
DIRECTOR

LORETTA K.C. CHEE
DEPUTY DIRECTOR

02WWB104 (SG)
2002/ELOG-1426

June 28, 2002

MEMORANDUM

TO: RAE M. LOUI, P.E., DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

ATTN: RAJ RATH
WASTEWATER DIVISION

FROM: Dennis M. Nishimura
DENNIS M. NISHIMURA
WASTEWATER BRANCH
DEPARTMENT OF PLANNING AND PERMITTING

SUBJECT: **HALONA STREET RELIEF SEWER IMPROVEMENTS**

This is in response to your letter dated May 22, 2002, requesting comments for the proposed sewer relief project's Environmental Assessment (EA). The EA should address erosion control measures employed during construction. Also, include a listing of all applicable permits. The proposed project will reconstruct and/or rehabilitate existing municipal sewer lines and manholes utilizing various methods.

If you have any questions, please contact Mr. Scott Gushi of the Wastewater Branch at 523-4886.

DMN:dl
[162637]

cc: Corey Kogasaka, P.E. (Okahara & Associates, Inc.)

02-1020

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 3RD FLOOR • HONOLULU, HAWAII 96813
TELEPHONE: (808) 523-4529 • FAX: (808) 523-4730 • INTERNET: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

CHERYL D. SOON
DIRECTOR

GEORGE "KEOKI" MIYAMOTO
DEPUTY DIRECTOR

June 12, 2002

TP5/02-02086R

MEMORANDUM

TO: RAE M. LOUI, P.E., DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

ATTN: RAJ RATH

FROM: CHERYL D. SOON, DIRECTOR

SUBJECT: HALONA STREET RELIEF SEWER IMPROVEMENTS

This responds to your request for comment on the proposed Halona Street sewer relief line projects.

Anticipating traffic impacts, we request the earliest submittal of traffic control plans for construction to ensure adequate mitigation measures.

We would also like to know the duration of work expected on the sewer improvement project.

Should you have any questions, please contact Bruce Nagao of the Transportation Planning Division at Local 6899.

CHERYL D. SOON

02-0747

BOARD OF WATER SUPPLY

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

'02 JUN -5 A7:37

June 3, 2002

TO: MS. RAE M. LOUI, P.E., DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

ATTN: RAJ RATH

FROM: for CLIFFORD S. JAMILE, MANAGER AND CHIEF ENGINEER

SUBJECT: MEMORANDUM DATED MAY 22, 2002 REGARDING THE HALONA STREET RELIEF SEWER IMPROVEMENTS, TMK: 1-6-002, 1-6-004, 1-6-005, 1-6-006, 1-6-023

02 JUN -5 AM 7:37

Thank you for the opportunity to review the proposed sewer improvements.

The construction schedule should be coordinated to minimize impacts to the community and our water system. In conjunction with the project scheduling, the construction plans should be submitted for our review.

If you have any questions, please contact Joseph Kaakua at 527-6123.

cc: Corey Kogasaka, Okahara & Associates, Inc.

02-0962

Oceanic CABLE

200 Akamainui Street • Mililani, Hawaii 96789-3999 • Telephone: (808) 625-2100

June 3, 2002

Mr. Raj Rath
Department of Design and Construction
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Rath:

Re: **Halona Street Relief Sewer Improvements**
TMK Nos. 1-6-002, 1-6-004, 1-6-005, 1-6-006, Kalihi, Oahu

This is to inform you that Oceanic's cable facilities should not be affected by the sewer improvements. The facilities along Halona Street from Halona Place to Iao Lane are aerial on the utility owned poles. From Halona Street into Houghtailing Street and along Olomea Street from Houghtailing Street, the facilities are underground in Verizon owned conduit. Oceanic Cable has no concerns regarding environmental issues specific to the project.

Please call Darrick Miyata, area engineer, at 625-8354 if you have any questions.

Sincerely,

Alvin Park

Cc: Darrick Miyata
Office File

02-1000

E

515 Kamakee Street Honolulu, Hawaii 96814
P.O. Box 3000 Honolulu, Hawaii 96802-3000
Telephone 808.535.5900 Facsimile 808.594.5630 Sales

THE GAS COMPANY
Citizens Energy Services

June 4, 2002

Department of Design and Construction
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Attention: Mr. Raj Rath

Gentlemen:

Subject: Draft Environmental Assessment for
Halona Street Relief Sewer Improvements

Please be advised that The Gas Company maintains underground utility gas mains in the project vicinity, which serves commercial and residential customers in the area and is interconnected with the utility network in Kalihi. We would appreciate your consideration during the project planning and design process to minimize any potential conflicts with the existing gas facilities in the project area.

Thank you for the opportunity to comment on the Draft Environmental Assessment. Should there be any questions, or if additional information is desired, please call Chris Anderson at 594-5564.

Sincerely,

Charles E. Calvet, P.E.
Manager, Engineering

CEC:krs
02-170

cc: Mr. Corey Kogasaka, P.E., Okahara & Associates, Inc.

WD
22-112

verizon

Verizon Hawaii Inc.
P.O. Box 2200
Honolulu, HI 96841

02 JUN 28 PM 2:47

June 25, 2002

Mr. Rae Loui
City and County of Honolulu
650 South King Street, 11th Floor
Honolulu, Hawaii 96813

Dear Mr. Loui,

Subject: ***Halona Street Relief Sewer Improvements***
TMK Nos 1-6-002, 1-6-004, 1-6-005, 1-6-006, 1-6-023, Kalihi, Oahu

Thank you for the opportunity to review and comment on the above subject project. At this time, Verizon Hawaii has not comments regarding this project. However, please be aware that Verizon Hawaii will require further review during the design stages of the project to determine if there will be any impact to our existing facilities in the project area.

If you have any questions, please call Kenwynn Goo at 840-2967.

Sincerely,

Lynette Yoshida
Section Manager - Network Engineering and Planning

c: File (Kalihi)
K. Goo
K. Ayano

COMMENTS AND RESPONSES
DURING THE
DEA PUBLIC REVIEW PERIOD

DEPARTMENT OF THE ARMY
U. S. ARMY ENGINEER DISTRICT, HONOLULU
FT. SHAFTER, HAWAII 96858-5440

REPLY TO
ATTENTION OF

August 25, 2006

Regulatory Branch

File No. **POH-2006-340**

Mr. Eugene Lee
Director
Department of Planning & Permitting
City & County of Honolulu
650 South King Street, 2nd Floor
Honolulu, HI 96813

Dear Mr. Lee:

This responds to your request for written comments for the draft Environmental Assessment (dEA) which addressess activities and impacts of the proposed Halona Street Relief Sewer project, at Kalihi, Oahu Island.

The dEA confirms that a water of the United States, as represented by Kapalama Drainage Canal, is adjacent to the proposed project area. It also confirms that other special aquatic sites such as wetlands or springs are absent. The dEA states in appropriate sections that there is no or little potential for the discharge of excavated fill material to be discharged into these waters by construction of project structures and associated ground disturbing activities within the proposed sewer line improvement areas. Therefore, it is determined that a Department of Army (DA) permit for Section 404 activities of the Clean Water Act does not be appear to be required for the proposed project.

Thank you for your consideration of potential impacts to the aquatic environment in the Kalihi watershed. Please contact Mr. Farley Watanabe of my staff at 438-7701, or facsimile 438-4060, or Farley.K.Watanabe@usace.army.mil if you have any questions or need additional information. Please refer to file number above in any future correspondence with us regarding this project.

Sincerely,

George P. Young, P.E.
Chief, Regulatory Branch

Copy Furnished:

Shannon Kimoto, Okahara & Associates, Inc., 677 Ala Moana Blvd. #703, Honolulu, HI 96813

COPY
ORIGINAL FILED
IN 201-028

RECEIVED
AUG 28 2006
SK
OKAHARA & ASSOC., INC.

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 523-4564 • Fax: (808) 523-4567
Web site: www.honolulu.gov

MUFI HANNEMANN
MAYOR

EUGENE C. LEE, P.E.
DIRECTOR

CRAIG I. NISHIMURA, P.E.
DEPUTY DIRECTOR

WW.P 06-0259

September 14, 2006

Mr. George P. Young, P.E.
Chief, Regulatory Branch
Department of the Army
U.S. Army Engineer District, Honolulu
Ft. Shafter, Hawaii 96858-5440
Attention: Mr. Farley Watanabe

Subject: Draft Environmental Assessment for the Halona Street Relief Sewer, Honolulu, Oahu, Hawaii, TMK Plats 1-6-002 to 1-6-006, 1-6-023

We have received your comment letter dated August 25, 2006 regarding the subject project in which the Army determined that a Department of the Army permit for Section 404 activities of the Clean Water Act will not be required for the proposed project.

Your participation in the planning phase of this important project is appreciated.

Very truly yours,

Eugene C. Lee, P.E.
Director

c: Shannon Kimoto, Okahara & Associates, Inc.

LINDA LINGLE
GOVERNOR OF HAWAII

CHIYOME L. FUKINO, M.D.
DIRECTOR OF HEALTH

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

in reply, please refer to:
EMO / CWB

08003PKP.06

August 1, 2006

Mr. Jay Hamai
Department of Design and Construction
City and County of Honolulu
650 South King Street, 14th Floor
Honolulu, Hawaii 96813

201-028
RECEIVED
AUG 3 - 2006
OKAHARA & ASSOC., INC.

Dear Mr. Hamai:

Subject: Draft Environmental Assessment
Halona Street Relief Sewer
Kalihi, Oahu, Hawaii

The Department of Health (DOH), Clean Water Branch (CWB), acknowledges receipt of your letter, dated July 12, 2006, and associated documents. The CWB has reviewed the limited information contained in the subject document and offers the following comments:

1. The Army Corps of Engineers should be contacted at (808) 438-9258 for this project. 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, Code of Federal Regulations (CFR), Section 122.2; and Hawaii Administrative Rules (HAR), Chapter 11-54.

2. In accordance with HAR, Sections 11-55-04 and 11-55-34.05, the Director of Health may require the submittal of an individual permit application or a Notice of Intent (NOI) for general permit coverage authorized under the National Pollutant Discharge Elimination System (NPDES).

   a. An application for an NPDES individual permit is to be submitted at least 180 days before the commencement of the respective activities. The NPDES application forms may also be picked up at our office or downloaded from our website at http://www.hawaii.gov/health/environmental/water/cleanwater/forms/indiv-index.html.

b. An NOI to be covered by an NPDES general permit is to be submitted at least 30 days before the commencement of the respective activity. A separate NOI is needed for coverage under each NPDES general permit. The NOI forms may be picked up at our office or downloaded from our website at: http://www.hawaii.gov/health/environmental/water/cleanwater/forms/genl-index.html.

i. Storm water associated with industrial activities, as defined in Title 40, CFR, Sections 122.26(b)(14)(i) through 122.26(b)(14)(ix) and 122.26(b)(14)(xi). [HAR, Chapter 11-55, Appendix B]

ii. Construction activities, including clearing, grading, and excavation, that result in the disturbance of equal to or greater than one (1) acre of total land area. The total land area includes a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under a larger common plan of development or sale. **An NPDES permit is required before the commencement of the construction activities.** [HAR, Chapter 11-55, Appendix C]

iii. Discharges of treated effluent from leaking underground storage tank remedial activities. [HAR, Chapter 11-55, Appendix D]

iv. Discharges of once through cooling water less than one (1) million gallons per day. [HAR, Chapter 11-55, Appendix E]

v. Discharges of hydrotesting water. [HAR, Chapter 11-55, Appendix F]

vi. Discharges of construction dewatering effluent. [HAR, Chapter 11-55, Appendix G]

vii. Discharges of treated effluent from petroleum bulk stations and terminals. [HAR, Chapter 11-55, Appendix H]

viii. Discharges of treated effluent from well drilling activities. [HAR, Chapter 11-55, Appendix I]

ix. Discharges of treated effluent from recycled water distribution systems. [HAR, Chapter 11-55, Appendix J]

x. Discharges of storm water from a small municipal separate storm sewer system. [HAR, Chapter 11-55, Appendix K]

xi. Discharges of circulation water from decorative ponds or tanks. [HAR, Chapter 11-55, Appendix L]

3. In accordance with HAR, Section 11-55-38, the applicant for an NPDES permit is required to either submit a copy of the new NOI or NPDES permit application to the State Department of Land and Natural Resources, State Historic Preservation Division (SHPD), or demonstrate to the satisfaction of the DOH that the project, activity, or site covered by the NOI or application has been or is being reviewed by SHPD. If applicable, please submit a copy of the request for review by SHPD or SHPD's determination letter for the project.

4. Any discharges related to project construction or operation activities, with or without a Section 401 WQC or NPDES permit coverage, shall comply with the applicable State Water Quality Standards as specified in HAR, Chapter 11-54.

The Hawaii Revised Statutes, Subsection 342D-50(a), requires that "[n]o person, including any public body, shall discharge any water pollutants into state waters, or cause or allow any water pollutant to enter state waters except in compliance with this chapter, rules adopted pursuant to this Chapter, or a permit or variance issued by the director."

If you have any questions, please contact Mr. Alec Wong, Supervisor of the Engineering Section, CWB, at 586-4309.

Sincerely,

for DENIS R. LAU, P.E., CHIEF
Clean Water Branch

KP:np

c: OEQC
Ms. Shannon Kimoto, Okahara & Associates, Inc.

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 523-4564 • Fax: (808) 523-4567
Web site: www.honolulu.gov

MUFI HANNEMANN
MAYOR

EUGENE C. LEE, P.E.
DIRECTOR

CRAIG I. NISHIMURA, P.E.
DEPUTY DIRECTOR

WW.P 06-0260

September 14, 2006

Mr. Denis R. Lau, P.E., Chief
Clean Water Branch
Department of Health
State of Hawaii
P.O. Box 3378
Honolulu, HI 96801-3378

Subject: Draft Environmental Assessment (EA) for the Halona Street Relief Sewer, Honolulu, Oahu, Hawaii, TMK Plats 1-6-002 to 1-6-006, 1-6-023

We have received your comment letter dated August 1, 2006 regarding the subject project. The following has been prepared in response to your recommendations.

1. The Army Corps of Engineers was provided a copy of the Draft EA for review and comment, and the agency indicated that a Department of the Army (DA) permit for Section 404 activities of the Clean Water Act is not required for the project. Please see DA letter dated August 25, 2006 in the Appendix.
2. As stated in Section VI, page 36 of the Draft EA, a National Pollutant Discharge Elimination System (NPDES) permit for construction dewatering activities will be submitted prior to the commencement of construction.
3. The State Historic Preservation Division will be consulted in accordance with HAR, Section 11-55-38 with respect to the exact location of the work that will have been approved by the new Notice of Intent or NPDES.
4. Discharges related to project construction or operation activities will comply with applicable State Water Quality Standards as specified in HAR, Chapter 11-54.

Thank you for your participation in the planning phase of this important project.

Very truly yours,

Eugene C. Lee, P.E.
Director

c: OEQC
Shannon Kimoto, Okahara and Associates, Inc.

LINDA LINGLE
GOVERNOR OF HAWAII

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
235 SOUTH BERETANIA STREET
SUITE 702
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4185
FACSIMILE (808) 586-4186
E-mail: oeqc@health.state.hi.us

GENEVIEVE SALMONSON
DIRECTOR

August 15, 2006

Mr. Eugene Lee, Deputy Director
Department of Design and Construction
City and County of Honolulu
650 South King Street, 11th Floor
Honolulu, Hawaii 96813

Dear Mr. Lee:

Subject: Draft Environmental Assessment for the Halona Street Relief Sewer, Oahu

Thank you for the opportunity to review the subject document. We have the following comments.

1. Councilmember Rod Tam is the current representative for the area. Please update your consultation list.

2. Please print on both sides of the pages in the final document to reduce bulk and save on paper. HRS 342G-44 requires double-sided copying in all state and county agencies, offices and facilities.

Should you have any questions, please call Jeyan Thirugnanam at 586-4185.

Sincerely,

Genevieve Salmonson

Genevieve Salmonson
Director

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 523-4564 • Fax: (808) 523-4567
Web site: www.honolulu.gov

MUFI HANNEMANN
MAYOR

EUGENE C. LEE, P.E.
DIRECTOR

CRAIG I. NISHIMURA, P.E.
DEPUTY DIRECTOR

WW.P 06-0262

September 14, 2006

Ms. Genevieve Salmonson, Director
Office of Environmental Quality Control
State of Hawaii
235 South Beretania Street, Suite 702
Honolulu, HI 96813

Subject: Draft Environmental Assessment for the Halona Street Relief Sewer, Honolulu, Oahu, Hawaii, TMK Plats 1-6-002 to 1-6-006, 1-6-023

We have received your comment letter dated August 15, 2006 regarding the subject project. The following has been prepared in response to your recommendations.

1. Our consultation list has been updated to reflect Councilmember Rod Tam as the current representative of the area.
2. The Final EA will be double-sided printed to meet the requirement of HRS 342G-44.

Thank you for participating in the planning phase of this important project.

Very truly yours,

Eugene C. Lee, P.E.
Director

c: Shannon Kimoto, Okahara and Associates, Inc.

PHONE (808) 594-1888

FAX (808) 594-1865

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

August 28, 2006

HRD06/2595

Jay Hamai
City and County of Honolulu
Department of Design and Construction
650 South King Street, 14th Floor
Honolulu, HI 96813

RE: Draft Environmental Assessment for the Proposed Halona Street Relief Sewer, Kalihi, O'ahu, TMK 1-6-002, 003, 004, 005, 006 and 023.

Dear Jay Hamai,

The Office of Hawaiian Affairs (OHA) is in receipt of your July 21, 2006 submission and offers the following comments:

Our staff concurres with the applicants proposal to contract a Native Hawaiian cultural expert in addition to an archaeological consultant should iwi or Native Hawaiian cultural or traditional deposits be found during the course of the project.

Thank you for the opportunity to comment. If you have further questions or concerns, please contact Jesse Yorck, Native Rights Policy Advocate, at (808) 594-0239 or jessey@oha.org.

Aloha,

Clyde W. Nāmu'o
Administrator

CC: Corey Kogasaka
Okahara & Associates, Inc.
677 Ala Moana Blvd., Suite 703
Honolulu, HI 96813

Genevieve Salmonson
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, HI 96813

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IN 201.028

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SEP - 5 2006
OKAHARA & ASSOC., INC.

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 523-4564 • Fax: (808) 523-4567
Web site: www.honolulu.gov

MUFI HANNEMANN
MAYOR

EUGENE C. LEE, P.E.
DIRECTOR

CRAIG I. NISHIMURA, P.E.
DEPUTY DIRECTOR

WW.P 06-0261

September 14, 2006

Mr. Clyde W. Namuo
Office of Hawaiian Affairs
State of Hawaii
711 Kapiolani Boulevard, Suite 500
Honolulu, HI 96813

Subject: Draft Environmental Assessment for the Halona Street Relief Sewer, Honolulu, Oahu, Hawaii, TMK Plats 1-6-002 to 1-6-006, 1-6-023

We have received your letter dated August 28, 2006 regarding the subject project in which you concur with the proposal to contract a Native Hawaiian cultural expert in addition to an archaeological consultant should iwi or Native Hawaiian cultural or traditional deposits be found during the course of the project.

Thank you for your participation in the planning phase of this important project.

Very truly yours,

Eugene C. Lee, P.E.
Director

c: C. Kogasaka, Okahara & Associates, Inc.
G. Salmonson, OEQC

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
601 KAMOKILA BOULEVARD, ROOM 555
KAPOLEI, HAWAII 96707

September 5, 2006

Mr. Corey Kogasaka
Okahara & Associates, Inc.
677 Ala Moana Blvd., Suite 703
Honolulu, Hawai'i 96813

LOG NO: 2006.3067
DOC NO: 0609AJ02
Archaeology

Dear Mr. Kogaska:

SUBJECT: **Chapter 6E-8 Historic Preservation Review [City & County/DDC]–**
Draft Environmental Assessment – Halona Street Relief Sewer
Kalihi Ahupua'a, Honolulu [Kona] District, Island of O'ahu
TMK: (1) 1-6-002, 003, 004, 005, 006, and 023:various parcels

Thank you for the opportunity to review the aforementioned project, which we received on July 24, 2006. We apologize for the delay. The proposed undertaking involves the reconstruction/rehabilitation of existing sewer lines located along Houghtailing Street, from Bernice Street to Halona Street; along Halona Street to Kohou Street; along Olomea Street; and, along Kohou Street, from the H-1 Freeway to North King Street. Subsurface excavation is required for the rehabilitation of the sewer system.

We determine that **no historic properties will be affected** by this undertaking because:

- ☐ Intensive cultivation has altered the land
- ☒ Residential development/urbanization has altered the land
- ☒ Previous grubbing/grading has altered the land
- ☐ An accepted archaeological inventory survey (AIS) found no historic properties
- ☒ SHPD previously reviewed this project and mitigation has been completed
- ☒ Other: *We have previously commented on the proposed undertaking. In a letter dated June 3, 2006, we determined that the proposed undertaking will have "no effect" on historically-significant resources (LOG NO: 29994; DOC NO: 0205EJ34).*

In the event that historic resources, including human skeletal remains, are identified during the construction activities, all work needs to cease in the immediate vicinity of the find, the find needs to be protected from additional disturbance, and the State Historic Preservation Division, O'ahu Section, needs to be contacted immediately at (808) 692-8015.

Please contact Mr. Adam Johnson if you have any questions or concerns regarding this letter.

Aloha,

Melanie Chinen, Administrator
State Historic Preservation Division

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201-028
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SEP 11 2006
OKAHARA & ASSOC., INC.

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 523-4564 • Fax: (808) 523-4567
Web site: www.honolulu.gov

MUFI HANNEMANN
MAYOR

EUGENE C. LEE, P.E.
DIRECTOR

CRAIG I. NISHIMURA, P.E.
DEPUTY DIRECTOR

WW.P 06-0258

September 14, 2006

Ms. Melanie Chinen. Administrator
State Historic Preservation Division
Department of Land & Natural Resources
State of Hawaii
601 Kamokila Boulevard, Room 555
Kapolei, HI 96707

Dear Ms. Chinen:

Subject: Draft Environmental Assessment for the Halona Street Relief Sewer, Honolulu, Oahu, Hawaii, TMK Plats 1-6-002 to 1-6-006, 1-6-023

We have received your letter dated September 5, 2006 regarding your division's Chapter 6E-8 review of the subject project and acknowledge your determination that no historic properties will be affected by the proposed project. Your previous review dated June 3, 2006 in which your division concluded that the proposed undertaking will have "no effect" on historically significant resources (LOG NO. 29994; DOC NO. 0205EJ34) has also been documented in the environmental assessment.

Thank you for your participation in the planning phase of this important project.

Very truly yours,

Eugene C. Lee, P.E.
Director

c: Corey Kogasaka, Okahara & Associates, Inc.

167663

LINDA LINGLE
GOVERNOR

PATRICIA HAMAMOTO
SUPERINTENDENT

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

OFFICE OF THE SUPERINTENDENT

August 7, 2006

RECEIVED
06 AUG -8 P1:38
DESIGN & CONSTRUCTION
WASTEWATER DIV.

Mr. Jay Hamai
Department of Design and Construction
City and County of Honolulu
650 South King Street, 14th Floor
Honolulu, Hawaii 96813

Dear Mr. Hamai:

Subject: Halona Street Relief Sewer

The Department of Education has no comment on the Draft Environmental Assessment (DEA) for the Halona Street Relief Sewer. Thank you for the opportunity to review and comment on the DEA.

Should you have any questions, please call Heidi Meeker of the Facilities Development Branch at 733-4862.

Very truly yours,

Patricia Hamamoto
Superintendent

PH:jmb

c: Randolph Moore, Acting Assistant Superintendent, OBS
Duane Kashiwai, Public Works Manager, FDB
Ronn Nozoe, CAS, Farrington/Kaiser Complex Areas

LINDA LINGLE
GOVERNOR OF HAWAII

GENEVIEVE SALMONSON
DIRECTOR

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
235 SOUTH BERETANIA STREET
SUITE 702
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4185
FACSIMILE (808) 586-4186
E-mail: oeqc@health.state.hi.us

110044
'06 AUG 23 PM 2:28

August 15, 2006

Mr. Eugene Lee, Deputy Director
Department of Design and Construction
City and County of Honolulu
650 South King Street, 11th Floor
Honolulu, Hawaii 96813

Dear Mr. Lee:

Subject: Draft Environmental Assessment for the Halona Street Relief Sewer, Oahu

Thank you for the opportunity to review the subject document. We have the following comments.

1. Councilmember Rod Tam is the current representative for the area. Please update your consultation list.

2. Please print on both sides of the pages in the final document to reduce bulk and save on paper. HRS 342G-44 requires double-sided copying in all state and county agencies, offices and facilities.

Should you have any questions, please call Jeyan Thirugnanam at 586-4185.

Sincerely,

Genevieve Salmonson

Genevieve Salmonson
Director

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 523-4564 • Fax: (808) 523-4567
Web site: www.honolulu.gov

MUFI HANNEMANN
MAYOR

EUGENE C. LEE, P.E.
DIRECTOR

CRAIG I. NISHIMURA, P.E.
DEPUTY DIRECTOR

WW.P 06-0255

September 14, 2006

Ms. Patricia Hamamoto
Superintendent
Department of Education
State of Hawaii
P.O. Box 2360
Honolulu, HI 96804

Subject: Draft Environmental Assessment for the Halona Street Relief Sewer, Honolulu, Oahu, Hawaii, TMK Plats 1-6-002 to 1-6-006, 1-6-023

We have received your letter dated August 1, 2006 regarding the subject project in which the Department of Education has no comment at this time.

Thank you for your participation in the planning phase of this important project.

Very truly yours,

for Eugene C. Lee, P.E.
Director

c: Randolph Moore, Acting Asst. Superintendent, OBS
Duane Kashiwai, Public Works Manager, FDB
Ronn Nozoe, CAS, Farrington/Kaiser Complex Areas
Shannon Kimoto, Okahara & Associates, Inc.

DEPARTMENT OF TRANSPORTATION SERVICES

CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 3RD FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 523-4529 • Fax: (808) 523-4730 • Internet: www.honolulu.gov

MUFI HANNEMANN
MAYOR

MELVIN N. KAKU
DIRECTOR

TP7/06-165577R

August 25, 2006

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AUG 29 2006
OKAHARA & ASSOC., INC.

MEMORANDUM

TO: EUGENE C. LEE, P.E., ACTING DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

ATTN: JAY HAMAI

FROM: MELVIN N. KAKU, DIRECTOR

SUBJECT: HALONA STREET RELIEF SEWER

Thank you for your July 25, 2006 memorandum, requesting our review of and comments on the draft environmental assessment (EA) for the subject project. We have the following comments regarding the document:

1. Figure 3, Master Site Plan, on Page 4 is not complete; some portions of Houghtailing and Olomea Streets that are parts of the project are not shown.

2. The draft EA should be submitted to the Hawaii State Department of Transportation (HDOT) for review and comment because Olomea and Halona Streets are under its jurisdiction.

3. The second paragraph in Section III.L. TRAFFIC (Page 23) discusses construction and traffic control plans for the project.

    a. This paragraph should be corrected to reflect that the Department of Transportation Services (DTS) does not approve traffic control plans.

b. The following statement should be added to this section: "All traffic controls within the street right-of-way shall be maintained during the construction phase and all permanent traffic controls disturbed during the construction phase shall be replaced and restored to pre-construction condition by the contractor upon completion of the construction work".

4. The previous Comments 3a. and 3b. are also applicable to Impact 14. (Page 29) in Section IV.A. SHORT TERM IMPACTS.

Should you have any questions regarding these comments, please contact Faith Miyamoto of the Transportation Planning Division at Local 6976.

MELVIN N. KAKU

cc: Ms. Genevieve Salmonson, Director
Office of Environmental Quality Control

Ms. Shannon Kimoto
Okahara & Associates, Inc.

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 523-4564 • Fax: (808) 523-4567
Web site: www.honolulu.gov

MUFI HANNEMANN
MAYOR

EUGENE C. LEE, P.E.
DIRECTOR

CRAIG I. NISHIMURA, P.E.
DEPUTY DIRECTOR

WW.P 06-0256

September 14, 2006

MEMORANDUM

TO: MELVIN N. KAKU, DIRECTOR
DEPARTMENT OF TRANSPORTATION SERVICES

FROM: /s/ EUGENE C. LEE, P.E., DIRECTOR

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT (EA) FOR THE HALONA STREET RELIEF SEWER, HONOLULU, OAHU, HAWAII, TMK PLATS 1-6-002 TO 1-6-006, 1-6-023

We have received your memorandum dated August 25, 2006 regarding the subject project. The following has been prepared in response to your recommendations.

1. Figure 3, Master Site Plan, has been updated to comprehensively include the entire project area.
2. The Draft EA was submitted to the State Department of Transportation (DOT) for the agency's review and comment. DOT's written response will be included in the Final EA.
3. a. Section III.L. TRAFFIC (page 23) will be corrected to reflect that the Department of Transportation Services (DTS) does not approve traffic control plans.
   b. The following statement has been added to this section: "All traffic controls within the street right-of-way shall be maintained during the construction phase and all permanent traffic controls disturbed during the construction phase shall be replaced and restored to pre-construction condition by the contractor upon completion of the construction work."
4. Section IV.A. SHORT TERM IMPACTS will be revised to reflect your comments in item no. 3 above.

Thank you for participating in the planning phase of this important project.

c: Genevieve Salmonson, OEQC
Shannon Kimoto, Okahara & Associates, Inc.

BOARD OF WATER SUPPLY

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

August 3, 2006

TO: JAY HAMAI
DEPARTMENT OF DESIGN AND CONSTRUCTION

FROM: KEITH S. SHIDA, PRINCIPAL EXECUTIVE
CUSTOMER CARE DIVISION

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR HALONA STREET RELIEF SEWER, TMK PLATS 1-6-002 TO 1-6-006, 1-6-023

Thank you for the opportunity to comment on the proposed project.

The construction drawings should be submitted for our review and approval.

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

Please coordinate construction with the Board of Water Supply's Capital Projects Division, Support Section (748-5740) for possible conflicts.

If you have any questions, please contact Robert Chun at 748-5443.

cc: Office of Environmental Quality Control
Shannon Kimoto, Okahara and Associates, Inc.

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 523-4564 • Fax: (808) 523-4567
Web site: www.honolulu.gov

MUFI HANNEMANN
MAYOR

EUGENE C. LEE, P.E.
DIRECTOR

CRAIG I. NISHIMURA, P.E.
DEPUTY DIRECTOR

WW.P 06-0257

September 14, 2006

TO: CLIFFORD P. LUM, P.E., MANAGER AND CHIEF ENGINEER
BOARD OF WATER SUPPLY

ATTN: KEITH S. SHIDA, PRINCIPAL EXECUTIVE
CUSTOMER CARE DIVISION

FROM: EUGENE C. LEE, P.E., DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR THE HALONA STREET RELIEF SEWER, TMK PLATS 1-6-002 to 1-6-006, 1-6-023

We have received your memorandum dated August 3, 2006 regarding the subject project. The following has been prepared in response to your recommendations.

Construction drawings will be submitted to Board of Water Supply (BWS) for review and approval. The construction schedule will be coordinated to minimize impact to the water system. Additionally, construction will be coordinated with the Board of Water Supply's Capital Projects Division, Support Section to avoid potential conflicts.

We appreciate your participation in the planning phase of this important project.

c: Office of Environmental Quality Control
Shannon Kimoto, Okahara and Associates, Inc.

APPENDIX B:
CONSTRUCTION PLANS

JOB NO. W8-0

HALONA STR
RELIEF SEW

KALIHI, HONOLULU, OAHU,
TMK: 1-6-002; 004; 005; 00

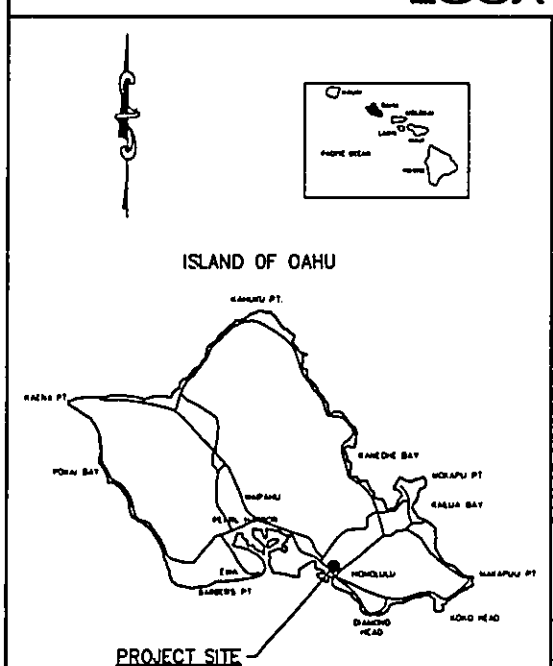
PREPARED FOR:

WASTEWATER DIVISIO
DEPARTMENT OF DESIGN AND C
CITY & COUNTY OF HON

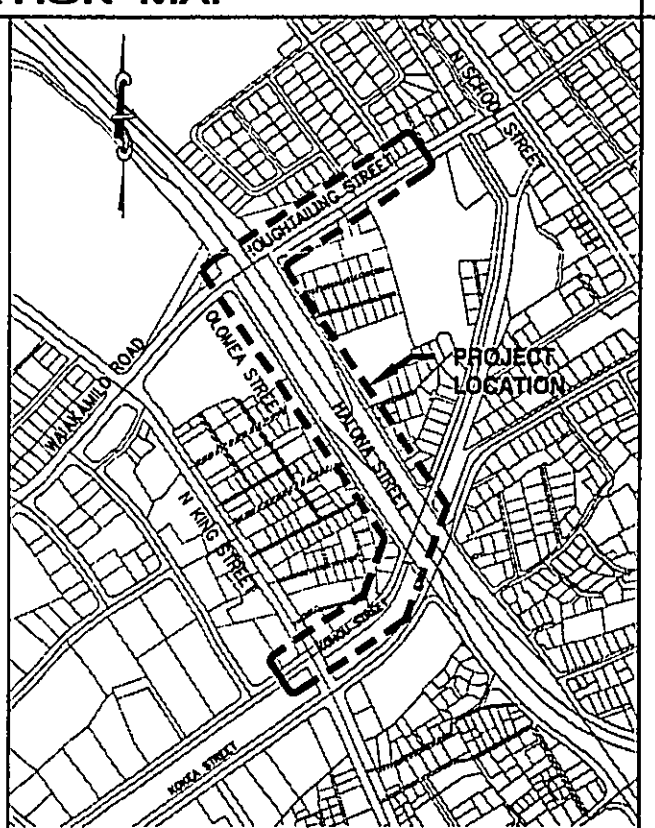
PREPARED BY:

OKAHARA & ASSOCIATES, INC.
677 ALA MOANA BLVD. SUITE 70
HONOLULU, HAWAII 96813

LOCATION MAP



VICINITY MAP
SCALE: N.T.S.



PROJECT SITE
SCALE: N.T.S.
(TMK: 1-6-002; 004; 005; 006; 023)

APPROV

DIRECTOR
DEPARTMENT OF DESIGN & CONSTRUCT
CITY AND COUNTY OF HONOLULU

DIRECTOR
DEPARTMENT OF ENVIRONMENTAL SERV
CITY AND COUNTY OF HONOLULU

ADMINISTRATOR, HIGHWAYS DIVISION
STATE DEPARTMENT OF TRANSPORTATIO
GRANTED FOR WORK WITHIN STATE RIG
ONLY. ID NO. _____
APPROVAL NO. HWY-T _____ D

DIRECTOR
CHIEF, ENVIRONMENT MANAGEMENT DIV
DEPARTMENT OF HEALTH, STATE OF HA

FINAL DRAFT SUBMITTAL
(90% SUBMITTAL)
SEPTEMBER 20, 2006

JOB NO. W8-06

NO. W8-06

NA STREET
F SEWER

OLULU, OAHU, HAWAII
; 004; 005; 006 & 023

REPARED FOR:

WATER DIVISION
DESIGN AND CONSTRUCTION
UNTY OF HONOLULU

REPARED BY:

A & ASSOCIATES, INC.
MOANA BLVD. SUITE 703
LU, HAWAII 96813

APPROVED

DR _____ DATE _____
NT OF DESIGN & CONSTRUCTION
COUNTY OF HONOLULU

DR _____ DATE _____
NT OF ENVIRONMENTAL SERVICES
COUNTY OF HONOLULU

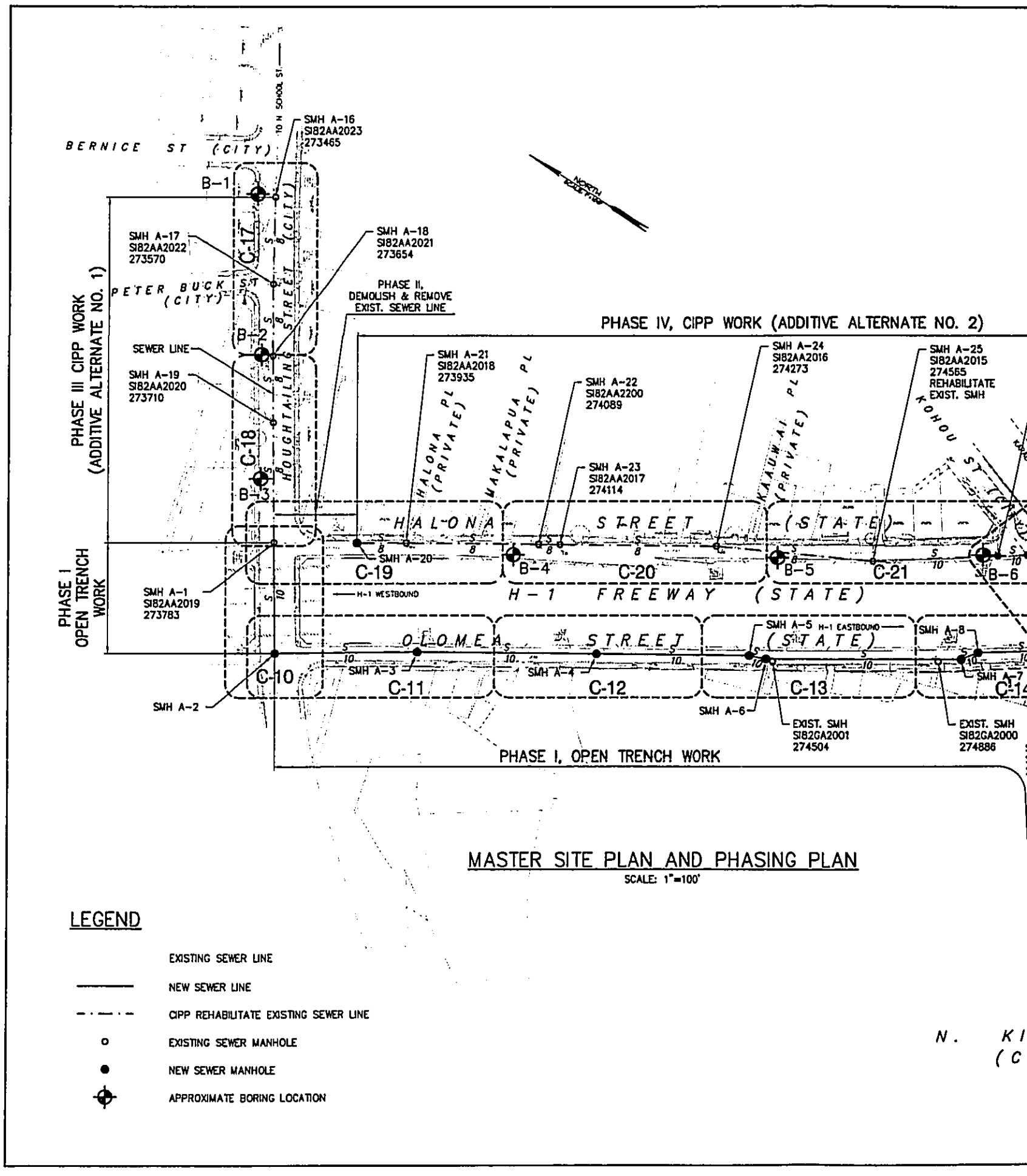
_____ DATE _____
ATOR, HIGHWAYS DIVISION
PARTMENT OF TRANSPORTATION (APPROVAL
FOR WORK WITHIN STATE RIGHT-OF-WAY
NO. _____, LETTER OF
NO. HWY-T _____ DATED _____.)

DR _____ DATE _____
VIRONMENT MANAGEMENT DIVISION
NT OF HEALTH, STATE OF HAWAII

INDEX

DRAWING T-1 SHEET 1 OF 36

HALONA STREET RELIEF SEWER



MASTER SITE PLAN AND PHASING PLAN

SCALE: 1"=100'

LEGEND

- EXISTING SEWER LINE
- NEW SEWER LINE
- CIPP REHABILITATE EXISTING SEWER LINE
- EXISTING SEWER MANHOLE
- NEW SEWER MANHOLE
- APPROXIMATE BORING LOCATION

TIVE ALTERNATE NO. 2)

24
016

SMH A-25
SI82AA2015
274565
REHABILITATE
EXIST. SMH

SMH A-26
SI82AA2014
274845
REHABILITATE
EXIST. SMH

SMH A-27
SI82AA2013
274930
REHABILITATE
EXIST. SMH

SMH A-9

KOHOU ST (CITY)

KALIAWA DRAINAGE CANAL

T A T E)

C-21 B-6 C-22

TE)

H-1 EASTBOUND

A T E)

SMH A-8

SMH A-7

C-14

13

T. SMH
2GA2001
504

EXIST. SMH
SI82GA2000
274886

SMH A-10
SI82AA2012
275255

SEWER LINE TO BE ABANDONED IN PLACE

TO VINEYARD BLVD.

KOKEA ST

SMH
SI82AA2011
275673
TO BE ABANDONED IN PLACE

B-7

C-15

SEWER LINE TO BE ABANDONED IN PLACE

SMH A-11

SMH A-12
SI82AA2010
275723

PLAN

SMH A-13
SI82AA2009
275900

SMH A-14
SI82AA2008
275951

C-16

B-8

(CITY)

TO KALIHI ST

TO LILIHA ST.

N. KING ST.
(CITY)

SMH A-15
SI82AA2007
275975

TO DILLINGHAM BLVD

100 0 100 200
GRAPHIC SCALE: 1" = 100'

REVISION	DATE	BRIEF	BY	APPROVED

WASTEWATER DIVISION
DEPARTMENT OF DESIGN & CONSTRUCTION
CITY AND COUNTY OF HONOLULU

PROJECT: HONOLULU, OAHU, HAWAII
HALONA STREET RELIEF SEWER

ITEM: MASTER SITE & PHASING PLAN

DESIGNED BY: SMK
DRAWN BY: EGM
APPROVED:
CHECKED BY: CHK
SECTION HEAD:
BRANCH HEAD:

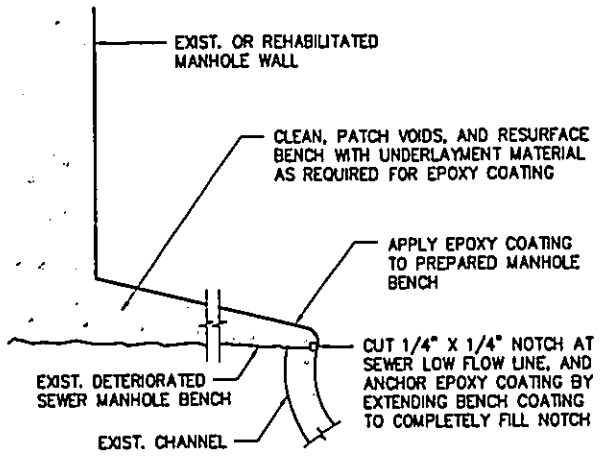
COREY H. KOBAYAKA
LICENSED PROFESSIONAL ENGINEER
No. 8971-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION

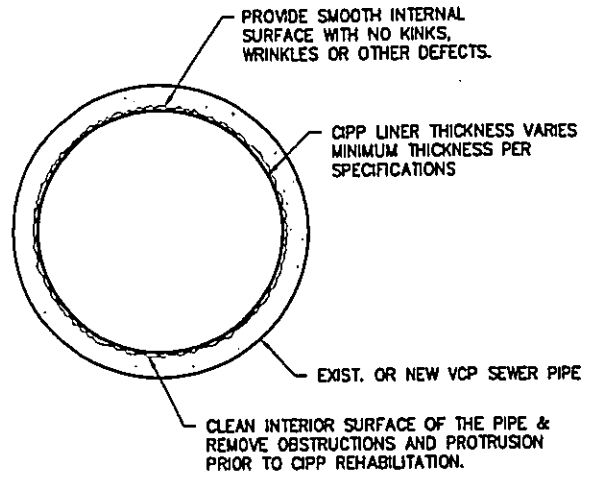
APRIL 2008

W8-06

DRAWING C-5 SHEET 6 OF 36



1 C-23 EPOXY MANHOLE BENCH REHABILITATION DETAIL
N.T.S.



2 C-23 TYP. PIPELINE REHABILITATION DETAIL
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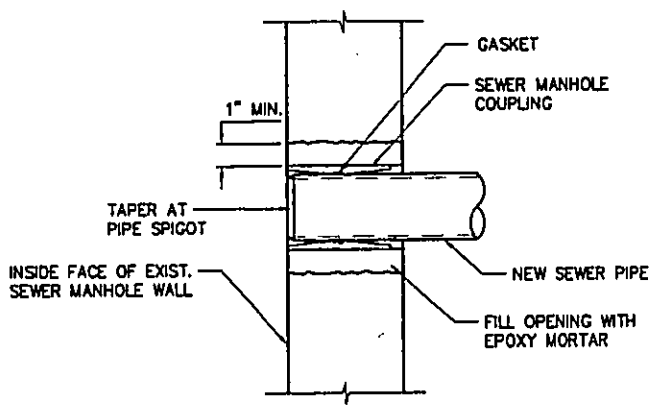
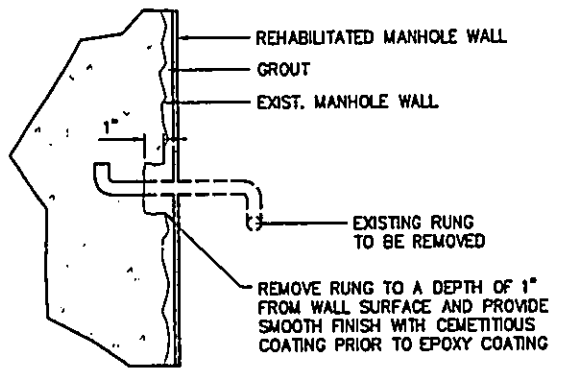


3 C-23 CONNECTION TO SMH DETAIL
N.T.S.



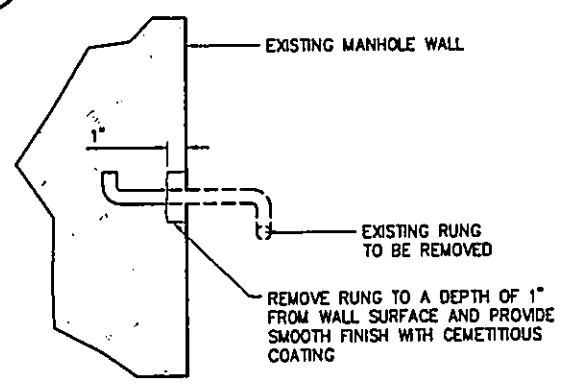
4 C-23 MANHOLE RUNG REMOVAL DETAIL (TYP.)
N.T.S.

REHABILITATE SEWER MANHOLE BENCH PER DETAIL NO. 1 ON THIS SHEET.

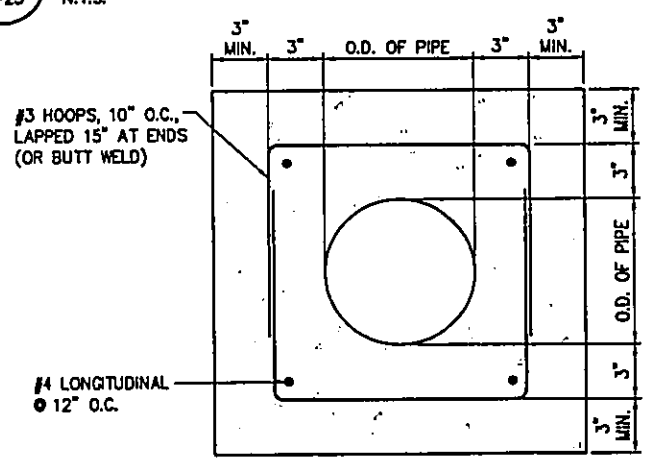
EXISTING BENCH

NOTE
1. IN A
2. EP S

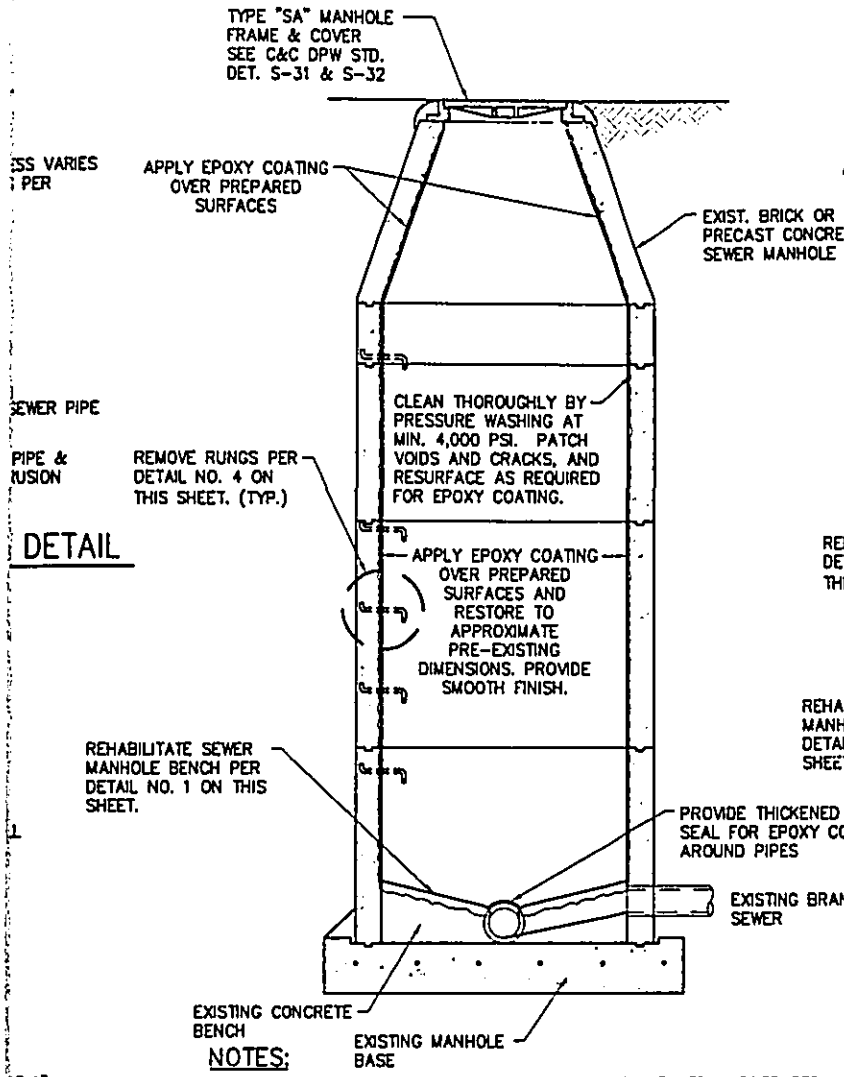
5 C-23 N



7 C-23 RUNG REMOVAL FOR SEWER MANHOLE 274845 (SI82AA2014)
N.T.S.



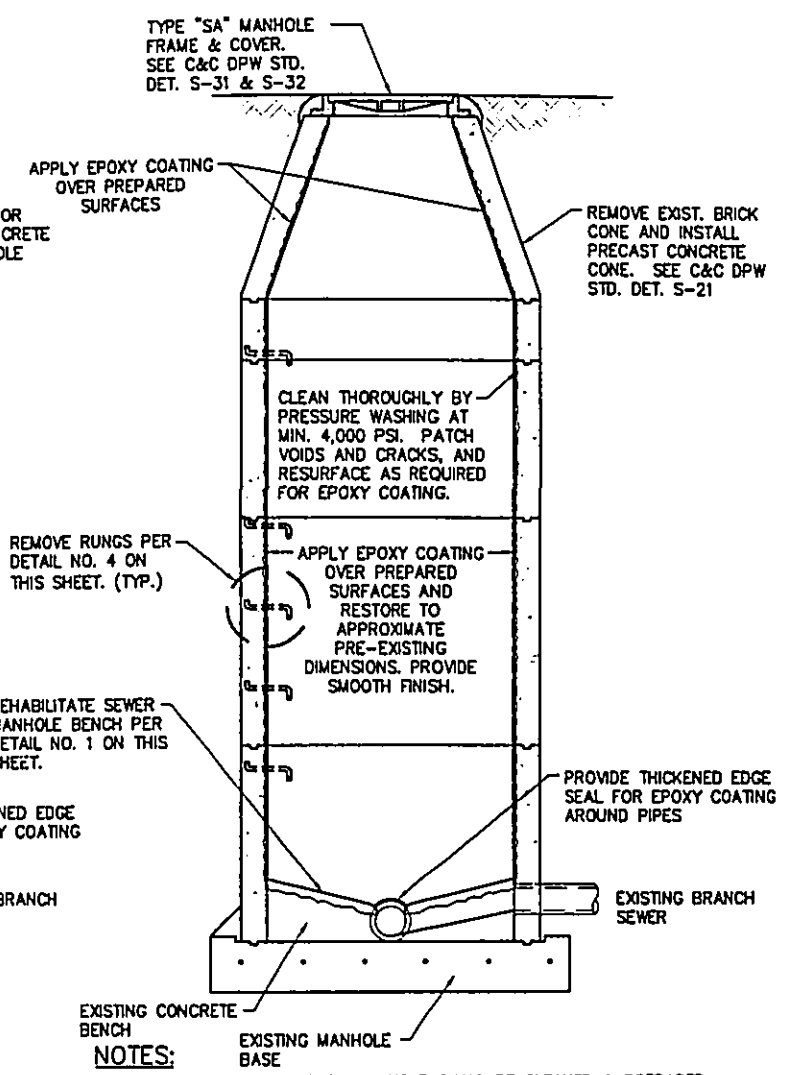
8 C-23 CONCRETE JACKET DETAIL
N.T.S.



NOTES:

1. INTERIOR WALLS OF SEWER MANHOLE SHALL BE CLEANED & PREPARED AS SPECIFIED IN THE SPECIAL PROVISIONS PRIOR TO PLACEMENT OF EPOXY COATING.
2. EPOXY COATING SHALL BE APPLIED WITH HAND-TROWEL OR SPRAY APPLICATION.

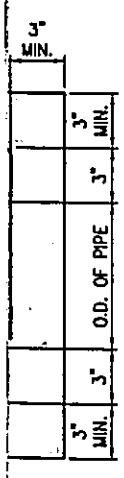
5 C-23 EPOXY COATING REHABILITATION FOR SEWER MANHOLE 274565 (SI82AA2015) N.T.S.



NOTES:

1. INTERIOR WALLS OF SEWER MANHOLE SHALL BE CLEANED & PREPARED AS SPECIFIED IN THE SPECIAL PROVISIONS PRIOR TO PLACEMENT OF EPOXY COATING.
2. EPOXY COATING SHALL BE APPLIED WITH HAND-TROWEL OR SPRAY APPLICATION.

6 C-23 EPOXY COATING REHABILITATION FOR SEWER MANHOLE 274930 (SI82AA2013) N.T.S.



REVISION	DATE	BRIEF	BY	APPROVED

WASTEWATER DIVISION
DEPARTMENT OF DESIGN & CONSTRUCTION
CITY AND COUNTY OF HONOLULU

PROJECT: HONOLULU, OAHU, HAWAII
HALONA STREET RELIEF SEWER

ITEM: SEWER MANHOLE REHABILITATION DETAILS & CONCRETE JACKET

DESIGNED BY SMK CHECKED BY CHK
DRAWN BY EGM SECTION HEAD
APPROVED BRANCH HEAD
DATE DATE

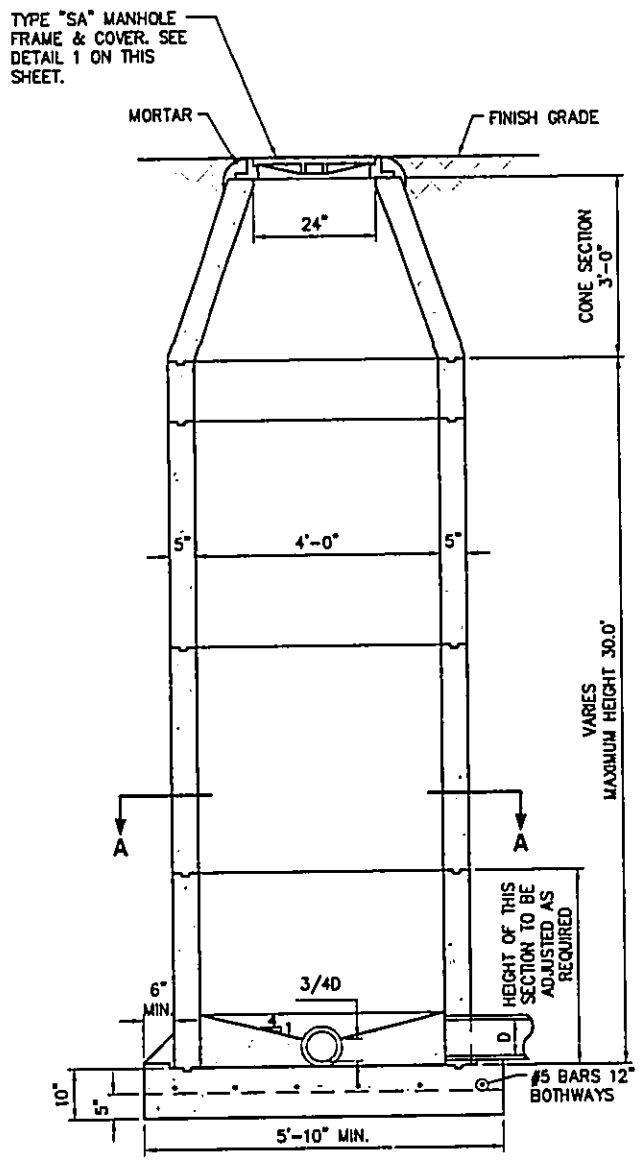
CORBY H. KOGASAKA LICENSED PROFESSIONAL ENGINEER No. 9971-C HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION

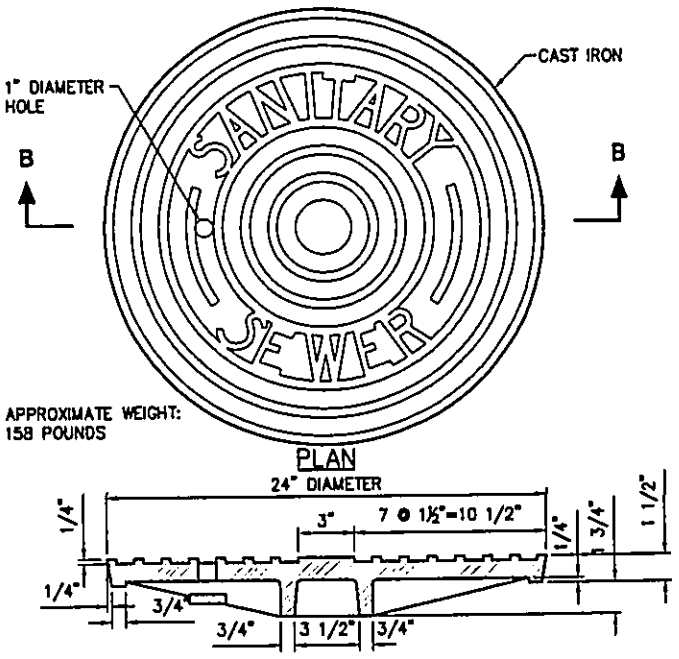
APRIL 2008
DATE SIGNED BY LICENSEE

W8-06

DRAWING C-23 SHEET 24 OF 36

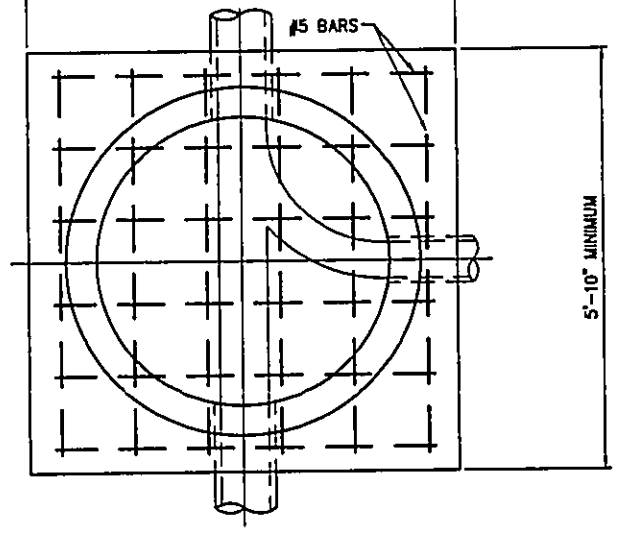


3 C-24 PRE-CAST CONC. SEWER MANHOLE
N.T.S.



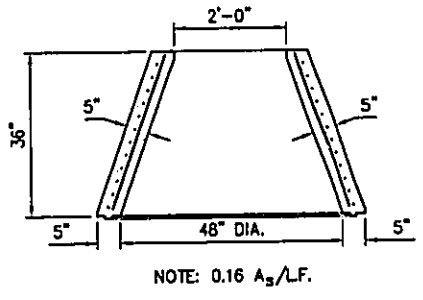
1 C-24 MANHOLE COVER – TYPE SA
N.T.S.

2 C-24 MAN
N.T.S.

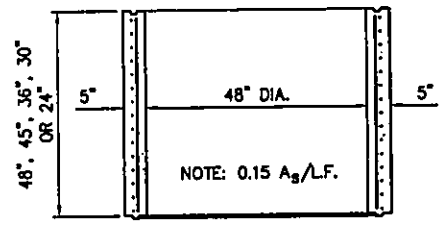


4 C-24 SECTION "A – A"
N.T.S.

5 C-24 SEC
N.T.S.



36" CONE

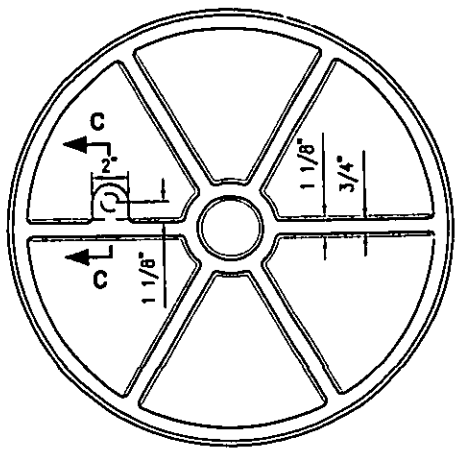


RISER

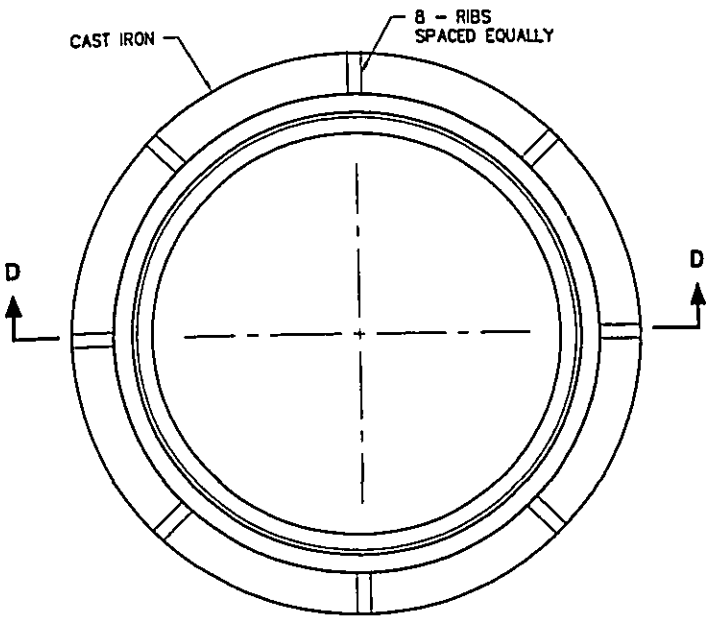
7 C-24 36" CONE AND RISERS DETAIL
N.T.S.

15" OR 12"

CAST IRON

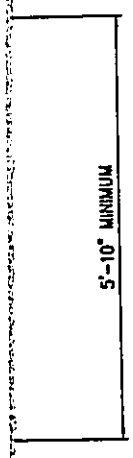


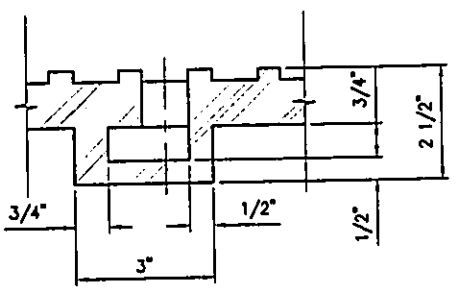
BOTTOM

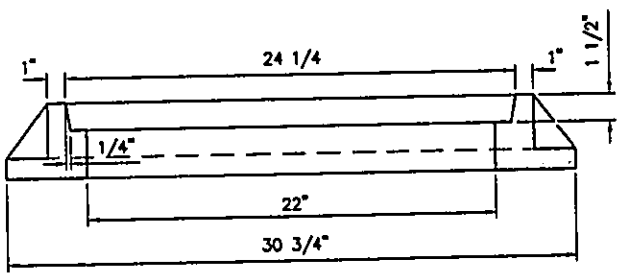


PLAN

A — 2 / C-24 — MANHOLE COVER – TYPE SA — N.T.S.



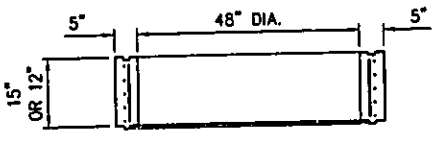




SECTION "D-D"

5 / C-24 — SECTION "C-C" — N.T.S.

6 / C-24 — MANHOLE FRAME – TYPE SA — N.T.S.



NOTE: 0.15 A_s/LF.

RISER

REVISION	DATE	BRIEF	BY	APPROVED

WASTEWATER DIVISION
DEPARTMENT OF DESIGN & CONSTRUCTION
CITY AND COUNTY OF HONOLULU

PROJECT: HONOLULU, OAHU, HAWAII
HALONA STREET RELIEF SEWER

ITEM: NEW SEWER MANHOLE DETAILS

DESIGNED BY: SMK — CHECKED BY: CHK
DRAWN BY: EGM — SECTION HEAD:
APPROVED: — BRANCH HEAD:

COREY H. KOBASHIGAWA — LICENSED PROFESSIONAL ENGINEER — No. 9971-C — HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION

APRIL 2008

W8-08

DRAWING C-24 SHEET 25 OF 36