NEIL ABERCROMBIE
GOVERNOR

GLENN M. OKIMOTO
DIRECTOR

Deputy Directors
FORD N. FUCHIGAMI
RANDY GRUNE
AUDREY HIDANO
JADINE URASAKI

IN REPLY REFER TO:

HWY-OM 2.14-0106

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

February 7, 2014

TO: THE HONORABLE GARY GILL
ACTING DIRECTOR OF HEALTH

ATTN: DIRECTOR
OFFICE OF ENVIRONMENTAL AND QUALITY CONTROL

FROM: GLENN M. OKIMOTO, PH. D.
DIRECTOR OF TRANSPORTATION

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT (DEA) AND ANTICIPATED FINDING OF NO SIGNIFICANT IMPACT (FONSI) FOR OAHU DISTRICT OFFICE AND BASE YARD MAINTENANCE STORAGE BUILDING AND CANOPY EXTENSION PROJECTS AT
727 KAKOI STREET, HONOLULU, OAHU, HAWAII
PROJECT NO: HWY-O 2014M; HWY-O 2015S

The Department of Transportation, Highways Division, has reviewed the DEA prepared for the subject project, and anticipates a FONSI determination. Please publish the notice of availability of the DEA for this project in the next Office of Environment Quality Control (OEQC) Environmental Notice.

We have enclosed a completed OEQC Publication Form, one Compact Disc (CD) copy of the DEA, and two copies of the DEA. A Portable Document Format and Microsoft Word copy of the Publication Form is included on the CD. Should you or your staff have further questions, please contact Mr. Charles Lee, Facilities Engineer of our Maintenance Facilities Section at our Oahu District Office at (808) 831-6700 x 129.

Enclosures

AGENCY ACTIONS
SECTION 343-5(B), HRS
PUBLICATION FORM (FEBRUARY 2013 REVISION)

Project Name: **State of Hawaii Department of Transportation, Oahu District Office and Base Yard Canopy Extension and Maintenance Storage Building DEA (AFNSI)**
Island: **Oahu**
District: **Honolulu**
TMK: **1-1-064:026**
Permits: **None**
Proposing/Determination Agency:
State of Hawaii, Department of Transportation, Highways Division, Oahu District
727 Kakoi Street, Honolulu, Hawaii 96819
Contact: Mr. Charles Lee, (808) 831-6792
Accepting Authority:
N/A
Consultant:
The Limtiaco Consulting Group
1622 Kanakanui Street, Honolulu, Hawaii 96817
Contact: Mr. Jason Nakata, (808) 596-7790

Status (check one only):

_X_ DEA-AFNSI	Submit the proposing agency notice of determination/transmittal on agency letterhead, a hard copy of DEA, a completed OEQC publication form, along with an electronic word processing summary and a PDF copy (you may send both summary and PDF to oeqchawaii@doh.hawaii.gov); a 30-day comment period ensues upon publication in the periodic bulletin.
__FEA-FONSI	Submit the proposing agency notice of determination/transmittal on agency letterhead, a hard copy of the FEA, an OEQC publication form, along with an electronic word processing summary and a PDF copy (send both summary and PDF to oeqchawaii@doh.hawaii.gov); no comment period ensues upon publication in the periodic bulletin.
__FEA-EISPN	Submit the proposing agency notice of determination/transmittal on agency letterhead, a hard copy of the FEA, an OEQC publication form, along with an electronic word processing summary and PDF copy (you may send both summary and PDF to oeqchawaii@doh.hawaii.gov); a 30-day consultation period ensues upon publication in the periodic bulletin.
__Act 172-12 EISPN	Submit the proposing agency notice of determination on agency letterhead, an OEQC publication form, and an electronic word processing summary (you may send the summary to oeqchawaii@doh.hawaii.gov). NO environmental assessment is required and a 30-day consultation period upon publication in the periodic bulletin.
__DEIS	The proposing agency simultaneously transmits to both the OEQC and the accepting authority, a hard copy of the DEIS, a completed OEQC publication form, a distribution list, along with an electronic word processing summary and PDF copy of the DEIS (you may send both the summary and PDF to oeqchawaii@doh.hawaii.gov); a 45-day comment period ensues upon publication in the periodic bulletin.
__FEIS	The proposing agency simultaneously transmits to both the OEQC and the accepting authority, a hard copy of the FEIS, a completed OEQC publication form, a distribution list, along with an electronic word processing summary and PDF copy of the FEIS (you may send both the summary and PDF to oeqchawaii@doh.hawaii.gov); no comment period ensues upon publication in the periodic bulletin.
__ Section 11-200-23 Determination	The accepting authority simultaneously transmits its determination of acceptance or nonacceptance (pursuant to Section 11-200-23, HAR) of the FEIS to both OEQC and the proposing agency. No comment period ensues upon publication in the periodic bulletin.
__Section 11-200-27 Determination	The accepting authority simultaneously transmits its notice to both the proposing agency and the OEQC that it has reviewed (pursuant to Section 11-200-27, HAR) the previously

accepted FEIS and determines that a supplemental EIS is not required. No EA is required and no comment period ensues upon publication in the periodic bulletin.

__Withdrawal (explain)

Summary (Provide proposed action and purpose/need in less than 200 words. Please keep the summary brief and on this one page)**:**

The State of Hawaii, Department of Transportation (HDOT) plans construction of two improvements projects at its Kakoi Street district office and baseyard. The first is construction of an overhead canopy extension to an existing motorpool building. The second is replacement of an existing storage building with a larger modern storage shed.

The canopy extension will provide cover to a paved area where vehicles awaiting service are frequently parked. Stormwater that falls on the exposed concrete at this location could carry pollutants from automobiles to nearby waterbodies. The canopy extension will shelter the covered area from stormwater, mitigating the pollution of runoff.

The storage shed replacement project will replace an existing corrugated metal storage shed with a pre-engineered CMU and metal storage shed. The existing shed is of substandard construction and is not large enough for HDOT's needs. The new storage building will be of higher quality construction and will add almost 1,000 square feet of additional storage space.

Draft Environmental Assessment

State of Hawaii Department of Transportation
Oahu District Office Base Yard
Canopy Extension and Maintenance Storage Building

Honolulu, Oahu, Hawaii

December 2013

Prepared for:

State of Hawaii
Department of Transportation

Prepared by:

THE LIMTIACO CONSULTING GROUP
CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

Draft Environmental Assessment

OAHU DISTRICT OFFICE BASE YARD CANOPY EXTENSION AND MAINTENANCE STORAGE BUILDING

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION

Honolulu, Oahu, Hawaii

Prepared For:

State of Hawaii
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

Prepared By:

The Limtiaco Consulting Group
Civil Engineering and Environmental Consultants
1622 Kanakanui Street
Honolulu, Hawaii 96817

December 2013

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LIST OF ABBREVIATIONS

Abbreviation	Definition
%	Percent
BMPs	Best management practices
CCH	City and County of Honolulu
CMU	Concrete masonry unit
CWB	State of Hawaii, Department of Health, Clean Water Branch
CZM	Coastal Zone Management
dBA	A-weighted decibel
DLNR	State of Hawaii, Department of Land and Natural Resources
DOH	State of Hawaii, Department of Health
EA	Environmental assessment
ft	Foot/feet
GIS	Geographic information systems
HAR	Hawaii Administrative Rules
HDOT	State of Hawaii, Department of Transportation
HPD	City and County of Honolulu, Honolulu Police Department
HRS	Hawaii Revised Statutes
in	Inch/inches
IRHB	State of Hawaii, Department of Health, Indoor & Radiological Health Branch
MSL	Mean-sea-level
NAAQS	National Ambient Air Quality Standards
NPDES	National Pollutant Discharge Elimination System
OP	State of Hawaii, Office of Planning
ROH	Revised Ordinances of Honolulu
SAAQS	State Ambient Air Quality Standards
sf	Square Feet
SMA	Special Management Area
State	State of Hawaii
TMDLs	Total Maximum Daily Loads
TMK	Tax Map Key
UBC	Uniform Building Code

EXECUTIVE SUMMARY

The State of Hawaii, Department of Transportation (HDOT) proposes construction of two improvements projects at its district office and base yard, located at 727 Kakoi Street (Tax Map Key parcel 1-1-064:026), Honolulu, Oahu, Hawaii. The first project is a canopy extension to an existing motorpool building and the second project is replacement of an existing storage shed.

The canopy extension project will add approximately 2,000 square feet (sf) to the overhead canopy of an existing motorpool building. The canopy will be approximately 20 feet (ft) high and will consist of galvanized metal roofing, steel columns, and steel framing. Work associated with the canopy extension includes demolition of existing concrete pavement, laying a new concrete slab, construction of column footings, construction of steel columns and framing, construction of a corrugated metal canopy, relocation of a 1.5-inch (in) water line to avoid conflicts with the canopy footing, installation of a 64-linear-foot trench drain, and installation of a 6-in drain line to convey runoff from the new trench drain to an existing oil-grease separator.

The purpose of the canopy extension project is to provide cover for a paved area adjacent to the motorpool building where vehicles awaiting service are typically parked. This is important because fluids could leak from these vehicles onto the concrete pavement and subsequently could be carried by stormwater to nearby waterbodies. The canopy extension will protect the area from rain, mitigating contamination of stormwater runoff by automobile fluids. The proposed trench drain will prevent stormwater from running onto the paved area under the canopy extension, further mitigating the pollution of stormwater runoff.

The storage shed replacement project will replace an existing 1,302-sf storage building with a new storage building. The new building will cover approximately 2,200 sf and will be approximately 20 ft high. It will consist of a concrete-masonry-unit (CMU) back wall, prefinished-metal side and front walls, and prefinished metal roofing panels. Work associated with construction of the storage building includes demolition of the existing storage building, removal of existing asphalt pavement, and construction of a new pre-engineered storage building. A hazardous materials study indicates the presence of lead-based and lead-containing paints at various locations in the existing storage building.

The storage shed replacement project will replace the existing corrugated metal storage shed with a pre-engineered CMU and metal storage shed. The existing shed is of substandard construction and is not large enough for HDOTs needs. The new storage building will be of higher quality construction and will add almost 1,000 sf of additional storage space.

Potential impacts of the proposed projects were evaluated against the following environmental considerations: climate, geology and soils, topography, shoreline, groundwater, surface waters, natural hazards (i.e., flood, tsunami, and earthquake), floral and faunal resource, air quality, noise, archaeological and cultural resource, visual, socio-economic, infrastructure and utility. Due to the relatively minor scope of the proposed projects, it was determined that they will not result in significant adverse impacts to the considerations listed above. There may be minor impacts to surface waters, air quality, and noise that occur during construction. The impacts will be of the type and magnitude typical of construction activities (i.e., sounds associated with operation of construction equipment and fugitive dust created by trenching or grading). However, these impacts will be temporary and will cease upon completion of construction. The contractor will be responsible for implementing best management practices, which will be reviewed and approved by the HDOT, to mitigate construction related impacts wherever practicable. The contractor will be responsible for complying with all Federal, State, and local laws regarding air, noise, and water quality.

This Draft Environmental Assessment has been prepared in accordance with the requirements of Chapter 343, Hawaii Revised Statutes and Chapter 11-200, Hawaii Administrative Rules, including performing consultation with agencies that may have jurisdiction or expertise regarding the proposed projects. A Finding of No Significant Impact is anticipated.

PROJECT SUMMARY

Proposing Agency:	State of Hawaii Department of Transportation
Location:	Honolulu, Oahu, Hawaii
Tax Map Key:	1-1-064:026
Land Area:	5 acres
Recorded Fee Owner:	State of Hawaii
Existing Use:	State of Hawaii, Department of Transportation district office and base yard
State Land Use Classification:	Urban District
Development Plan Area:	Primary Urban Center
Development Plan Land Use Designation:	Industrial
County Zoning Designation:	I-2 Intensive Industrial
Proposed Action:	The State of Hawaii, Department of Transportation plans construction of two improvements projects at its Kakoi Street district office and baseyard. The first is construction of an overhead canopy extension to an existing motorpool building. The second is replacement of an existing storage building with a larger modern storage shed.
Impacts:	There are no significant impacts that will result from construction of the proposed improvements. Minor impacts on air quality, noise, and water quality may occur during construction. However, these impacts will be minor and temporary. Appropriate best management practices will be implemented to mitigate these impacts.
Anticipated Determination:	Finding of No Significant Impact

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1. INTRODUCTION

The State of Hawaii, Department of Transportation (HDOT) Kakoi Street district office and base yard is located at 727 Kakoi Street (Tax Map Key [TMK] parcel 1-1-064:026) in Honolulu, Oahu (**Figure 1**). The property houses offices for HDOT Oahu District staff and a base yard that serves the Honolulu area. Vehicles, equipment, and supplies are stored and serviced at the base yard.

The HDOT plans the construction of two improvements projects at the base yard: an overhead canopy extension to an existing motorpool building and a new storage building to replace an existing corrugated-metal storage shed.

The canopy extension project will add approximately 2,000 square feet (sf) of coverage to the motorpool building's existing overhead canopy. The canopy will be approximately 20 feet (ft) high and will consist of galvanized metal roofing, steel columns, and steel framing. Work associated with the canopy extension includes demolition of existing concrete pavement, laying a new concrete slab, construction of column footings, construction of steel columns and framing, construction of a corrugated metal canopy, relocation of a 1.5-inch (in) water line to avoid conflicts with the canopy footing, installation of a 64-linear-foot trench drain, and installation of a 6-in drain line to convey runoff from the new trench drain to an existing oil-grease separator. The oil-grease separator discharges into the City and County of Honolulu (CCH) sanitary sewer system. Preliminary design drawings (not to scale) for the canopy extension project are provided in **Appendix A**.

The storage shed replacement project will replace an existing 1,302-sf storage building with a new storage building. The new building will cover approximately 2,200 sf and will be approximately 20 ft high. It will consist of a concrete-masonry-unit (CMU) back wall, prefinished metal side and front walls, and prefinished metal roofing panels. Work associated with construction of the storage building includes demolition of the existing storage building, removal of existing asphalt pavement, and construction of the new pre-engineered storage building. A hazardous materials study indicates the presence of lead-based paints and lead-containing paints at various locations in the existing storage building. Preliminary design drawings (not to scale) for the maintenance storage building project are provided in **Appendix B**.

This Environmental Assessment (EA) identifies and evaluates potential impacts associated with both projects. The HDOT is the proposing agency for both projects.

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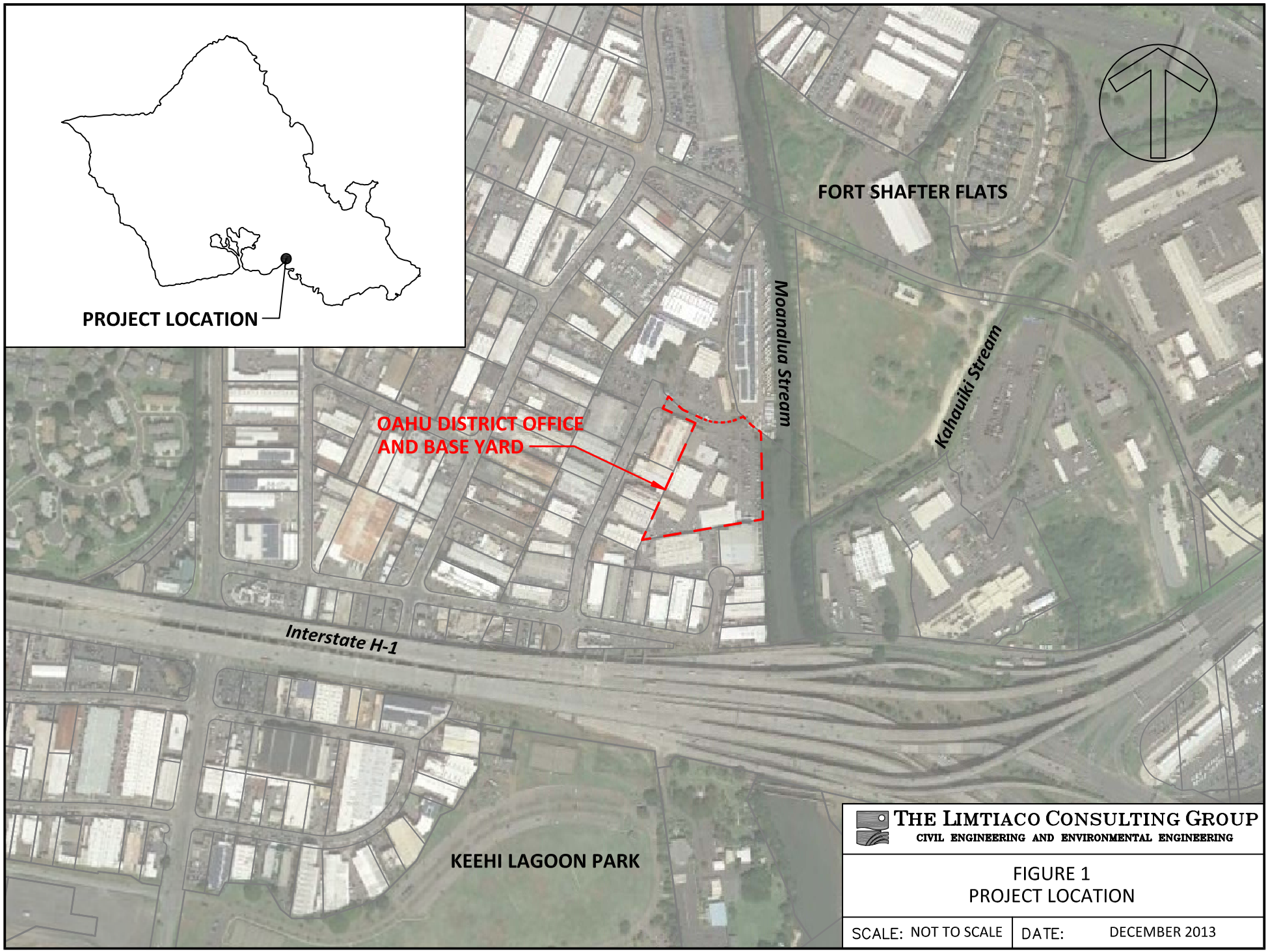

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FIGURE 1
PROJECT LOCATION

SCALE: NOT TO SCALE | DATE: DECEMBER 2013

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2. SETTING AND PROJECT DESCRIPTION

2.1. Project Need and Objectives

The canopy extension project will provide cover for the paved area immediately adjacent to the garage doors of the motorpool building. This location was chosen since vehicles awaiting service are frequently parked there. Fluids could leak from these vehicles onto the concrete pavement, and subsequently could be carried by stormwater to nearby waterbodies. The canopy extension will protect this particular area from rain, mitigating contamination of the stormwater by automobile fluids. Installation of a trench drain will prevent stormwater from running onto the paved area under the canopy extension, further mitigating contamination of stormwater. Connecting the trench drain to the existing oil-grease separator will help to remove any petroleum hydrocarbons or other suspended pollutants that are picked up by stormwater. Effluent from the oil-grease separator will be discharged to the CCH sanitary sewer system and taken to the Sand Island Wastewater Treatment Plant, where it will be further treated prior to disposal.

The storage shed replacement project will replace the existing corrugated metal storage shed with a pre-engineered CMU and metal storage shed. The existing shed is of substandard construction and is not large enough for HDOTs needs. The new storage building will be of higher quality construction, and will add almost 1,000 sf of additional storage space.

This Draft EA addresses the potential environmental impacts of the canopy extension and storage shed replacement projects, and proposes mitigation measures for those impacts.

2.2. Project Location

Photo 1 – Canopy Extension Project Location

The property is located at 727 Kakoi Street (TMK parcel 1-1-064:026), in the Mapunapuna area of Honolulu, Oahu (**Figure 1**). The 5-acre parcel is located approximately 2 miles from the Honolulu International Airport. The property is set back approximately 250 ft from Kakoi Street, and is adjacent to Moanalua Stream.

The canopy extension project is located in the center of the parcel in an open, concrete-paved area adjacent to the existing motorpool building (see **Photo 1**).

The storage shed replacement project is located along the western property boundary at the location of the existing corrugated metal storage shed (see **Photo 2**).

Photo 2 – Storage Shed Replacement Project Location

A site layout is provided in **Figure 2**.

2.3. Existing Conditions

The property and its surrounding areas are largely built-out, and are typical of an urban-industrial area.

The property's five large buildings serve as offices, materials storage, equipment and vehicle maintenance areas, and storage areas for large construction equipment. There are also smaller ancillary structures for storage and vehicle fueling. The remainder of the site is paved and serves as either parking or storage areas for State of Hawaii (State) vehicles.

2.4. Land Ownership

The property is owned by the State, and is operated by the HDOT.

2.5. Surrounding Uses, Land Use, and Zoning

The property is located in an industrial area. Buildings in the vicinity of the property are primarily warehouses, along with some office buildings and storefront. Moanalua Stream runs along the eastern property boundary. Located directly across the stream are the CCH Keehi Transfer Station and the U.S. Army Garrison at Fort Shafter. **Figure 3** indicates the TMK of the immediately adjacent properties and their owners, who were consulted prior to preparation of this Draft EA.

The property and all immediately surrounding areas are located within the Urban Land Use District, as designated by the State. **Figure 4** shows the land use designations of all surrounding properties.

The property and the immediately neighboring parcels to the north, west, and south are located within the I-2 Intensive Industrial District, as designated by the CCH. Moanalua Stream is located within the P-1 Restricted Preservation District. **Figure 5** shows the Zoning designations of all surrounding properties.

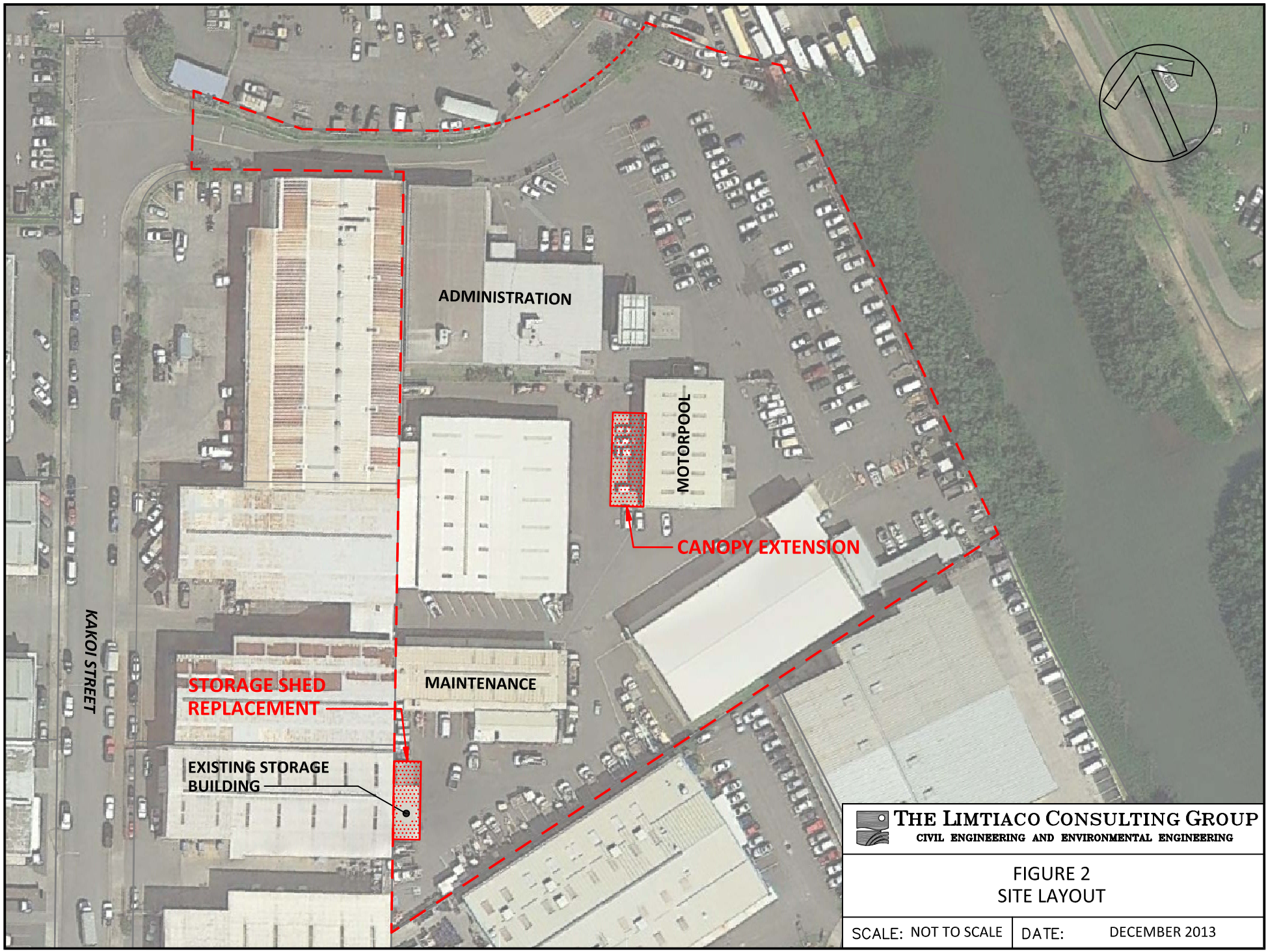

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FIGURE 2
SITE LAYOUT

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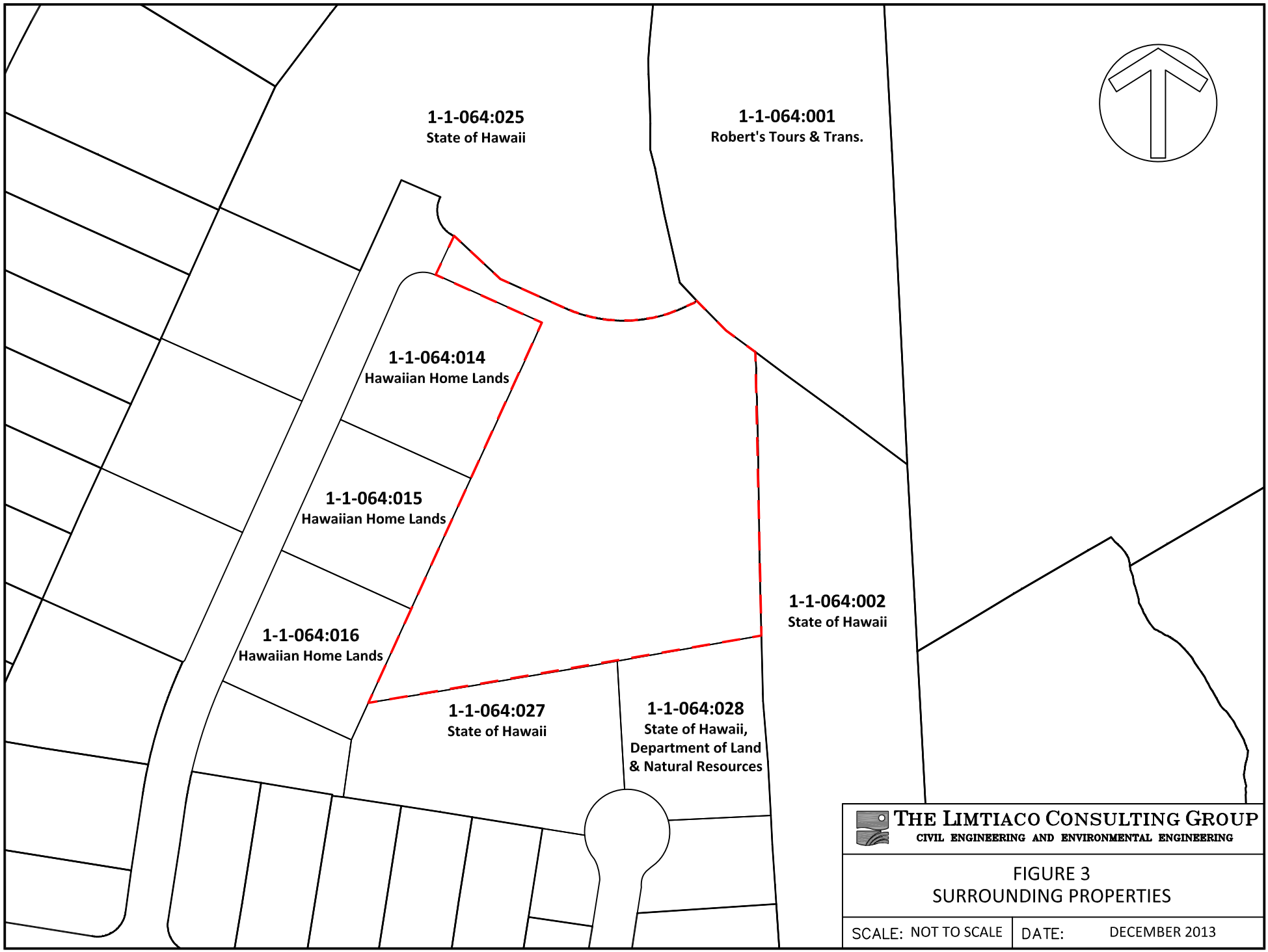
1-1-064:025
State of Hawaii
1-1-064:001
Robert's Tours & Trans.
1-1-064:014
Hawaiian Home Lands
1-1-064:015
Hawaiian Home Lands
1-1-064:016
Hawaiian Home Lands
1-1-064:002
State of Hawaii
1-1-064:027
State of Hawaii
1-1-064:028
State of Hawaii,
Department of Land
& Natural Resources
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FIGURE 3
SURROUNDING PROPERTIES
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DATE: DECEMBER 2013

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LEGEND

URBAN LAND USE DISTRICT

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FIGURE 4
STATE LAND USE DISTRICTS

SCALE: NOT TO SCALE | DATE: DECEMBER 2013

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LEGEND

- F1 - MILITARY & FEDERAL
- I2 - INTENSIVE INDUSTRIAL
- P1 - RESTRICTED PRESERVATION
- State H-1 Freeway/Nimitz Highway

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FIGURE 5
COUNTY ZONING DISTRICTS

SCALE: NOT TO SCALE | DATE: DECEMBER 2013

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2.6. Project Schedule

Both projects are to be constructed in 2014.

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3. DESCRIPTION OF THE EXISTING ENVIRONMENT, PROJECT IMPACTS, AND MITIGATION MEASURES

3.1. Climate

The climate at the project site is typical of the climate that characterizes most of the State: relatively mild and constant temperatures throughout the year, moderate humidity, persistent northeasterly trade winds, and infrequent severe rainstorms (WRRC [1], n.d.). The northeasterly trade wind is the prevailing wind throughout the year for the island of Oahu. The mean annual wind velocity recorded in the vicinity of the project site varies between approximately 9 and 13 miles per hour (WRRC [2], n.d.).

Average temperatures near the project site range from the low-mid 70s (degrees Fahrenheit) in the winter to the low 80s in the summer. Average high temperatures range from the low 80s to the mid-upper 80s. Average low temperatures range from the mid 60s to the mid 70s (NOAA, n.d.)

Hawaii's heaviest rains come from winter storms that generally occur between October and April. The terrain greatly affects trade wind showers, with some effects on storm rainfall. In general, large differences in rainfall occur over small distances because of topography and the location of the rain clouds (WRRC [3], n.d.). Rainfall in the vicinity of the project site is low, with an average annual rainfall of approximately 17 inches (NOAA, n.d.).

Impacts and Mitigation Measures

The canopy extension and storage shed replacement projects will not impact climatic conditions. No mitigation measures are necessary.

3.2. Geology and Soils

The *Web Soil Survey* of the Natural Resources Conservation Service indicates that the property is comprised entirely of “fill land, mixed” (FL) type soil (NRCS, 2013). A map of soils in the vicinity of the property, as classified by the *Web Soil Survey*, is provided in **Figure 6**. FL soil is typically found in Honolulu and areas surrounding Pearl Harbor. It consists of material dredged from the ocean, garbage, and general material from other sources (SCS, 1972).

In 1999, a soil survey was performed for a previous project at the property. The report for this survey describes soil conditions specific to the property. A copy of the report is included in **Appendix C** for reference.

Impacts and Mitigation Measures

The project will entail small amounts of excavation for installation of building footings and utility lines. Backfill for utility lines and structural fill for building foundations will be typical of HDOT construction projects, and will be as specified in the design drawings (**Appendix A** and **Appendix B**) and the *Hawaii Standard Specifications for Road and Bridge Construction, 2005* (HDOT, 2005). The proposed projects will not have any significant adverse effect on geologic conditions at the property. No mitigation measures are necessary.

3.3. Topography

The entire property is relatively flat, and contains no major topographic features. Elevations in the vicinity of the storage shed replacement project range from 5.2 ft to 5.5 ft above mean-sea level (MSL). Elevations in the vicinity of the canopy extension project range from 5.5 to 5.9 ft above MSL.

Impacts and Mitigation Measures

No grading is proposed as a part of the proposed projects. As such, there will be no impact to any topographic features. No mitigation measures are necessary.

3.4. Shoreline

The property is located approximately one-half mile from the nearest shoreline at Keehi Lagoon Beach Park. The park is operated by the CCH, Department of Parks and Recreation. However, the project sites are located outside of the Special Management Area (SMA). The shoreline is not visible from the project sites, or vice-versa, due to the many buildings between the shoreline and the property.

Impacts and Mitigation Measures

The canopy extension and storage shed replacement projects will not impact the shoreline, including any views to or from the shoreline or shoreline access. No mitigation measures are necessary.

LEGEND

- EmA - EWA SILTY CLAY LOAM (0 TO 2 PERCENT SLOPES)
- HxA - HONOULIULI CLAY (0 TO 2 PERCENT SLOPES)
- FL - FILL LAND, MIXED
- WATER > 40 ACRES

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FIGURE 6
SOILS

SCALE: NOT TO SCALE | DATE: DECEMBER 2013

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3.5. Groundwater

According to the State of Hawaii, Department of Land and Natural Resources (DLNR) aquifer classification system, the aquifer underlying the project site is the Moanalua Aquifer System Area of the Honolulu Aquifer Sector Area (CWRM, 2013). Due to the property's proximity to the ocean, it is likely that groundwater at the property is highly saline. As such, it is unlikely that groundwater in the vicinity of the property serves as a source of potable water.

In 1999, a soils survey was performed for a previous project at the property (see **Appendix C**). This survey encountered groundwater at depths ranging from 4.4 to 4.6 feet. The survey report notes that depth to groundwater can be expected to vary with tidal fluctuations (Ernest K. Hirata & Associates, 1999).

Impacts and Mitigation Measures

The canopy extension and storage shed replacement projects will not have adverse impacts on the groundwater.

De minimis levels of contaminants may fall to the ground during construction – contaminants and quantities typical of construction activities, such as minor leaks of oil or gasoline from construction equipment – however, the contaminants will not be released at quantities great enough to penetrate to groundwater.

The contractor, who is yet to be chosen, will determine the means and methods of construction. As such, it is unknown at this time whether dewatering will be required for installation of building foundations or underground utilities. If dewatering is required, the *Hawaii Standard Specifications for Road and Bridge Construction, 2005* states that a site-specific best management practices (BMPs) describing activities to "minimize water pollution and soil erosion into State waters, drainage or sewer systems" must be submitted to the HDOT, and a National Pollutant Discharge Elimination System (NDPES) permit must be obtained if any dewatering effluent is discharged into State waters.

If dewatering is required, it will not occur in quantities large enough to have any significant adverse impact on the groundwater aquifer. Any local impacts will be negligible; it is unlikely that groundwater in the vicinity of the property is used as a potable source due to its proximity to the ocean.

3.6. Surface Waters

The property is located in the Moanalua Watershed, adjacent to the junction of Moanalua and Kahauiki streams. Moanalua Stream, a perennial stream, runs from north to south along the eastern boundary of the property.

According to the State Department of Health (DOH), Clean Water Branch (CWB) Water Quality Standards Maps, Moanalua Stream is a Class 2 inland waterbody (OEP, 1987). The Hawaii Administrative Rules (HAR) states that the purpose of Class 2 waters is to "protect their use for recreational purposes, the support and propagation of aquatic life, agricultural and industrial water supplies, shipping, and navigation" (HAR 11-54, 2009).

Moanalua Stream is listed as an impaired waterbody in the *2012 State of Hawaii Water Quality Monitoring and Assessment Report*, a biennial report prepared by the DOH pursuant to §303(d), Clean Water Act. This report documents the results of DOH sampling efforts Statewide and assesses waterbodies with respect to the State water quality standards. According to the report, Moanalua Stream has not met the State water quality standard for levels of total nitrogen and turbidity. The stream was assigned a "low" priority for development of "total maximum daily loads" (TMDLs): the maximum level of a given pollutant that the stream can receive in order to meet the State water quality standards (DOH, 2013).

Moanalua Stream discharges into Keehi Lagoon less than half a mile south of the property. The CWB classifies Keehi Lagoon is a Class A marine waterbody (OEP, 1987). The HAR states that the purpose of Class A water is to protect "their use for recreational purposes and aesthetic enjoyment" (HAR 11-54, 2009).

Keehi Lagoon is listed by the DOH as an impaired waterbody for exceeding the State water quality standards limit on enterococci. Enterococci serve as indicator bacteria for marine recreational waters. The lagoon is assigned a "low" priority for the development of TMDL (DOH, 2013).

Impacts and Mitigation Measures

Both project sites are comprised entirely of impermeable surfaces and, as such, a high percentage of stormwater at the site becomes stormwater runoff. The proposed projects will not increase impervious surface area at the property, and thus will not result in increased stormwater runoff to Moanalua Stream. In fact, installation of the trench drain will slightly reduce the quantity of stormwater runoff to the stream, as stormwater captured by the trench drain will be treated by the oil-grease separator and diverted to the CCH sewer system. The quantity of stormwater diverted will not be significant enough to impact stream flow.

The canopy extension project is intended to reduce the quantity of pollutants that enter Moanalua Stream via stormwater runoff. Vehicles awaiting service are often parked in the area of the proposed canopy extension. Currently, any fluids leaked from these vehicles (e.g., motor oil) fall onto the pavement and are exposed to stormwater. Stormwater runoff can transport these pollutants to nearby Moanalua Stream. The canopy extension project will limit the exposure of this paved area to stormwater by providing additional cover. It will also prevent stormwater from running on to the area by capturing potential stormwater run-on in a trench drain. These improvements mitigate the amount of pollutants carried by stormwater to Moanalua Stream.

Although the proposed project does not include major earthwork, some ground-disturbing activities will occur. As with any construction activity that includes ground disturbance, stormwater can potentially carry loose soil, excess nutrients, and other pollutants to nearby waterbodies. Mitigation measures will be determined by the contractor, who is yet to be chosen. The *Hawaii Standard Specifications for Road and Bridge Construction, 2005* states that the contractor must submit "written site-specific BMP(s) describing activities to minimize water pollution and soil erosion into State waters" to the HDOT for approval.

The area of ground disturbance will be less than 5,000 sf, well below the 1-acre that would trigger an NPDES permit requirement for stormwater associated with construction activity. However, Appendix C of Chapter 11-55, HAR states that the 1-acre shall include other areas related to construction such as baseyards, staging areas, headquarters and parking areas (HAR 11-55, 2007)[1].

It is unlikely that an NPDES permit for stormwater associated with construction activity will be required due to the size and scope of the proposed project. The contractor will be responsible for obtaining an NPDES permit if it is later found that one will be required.

For the reasons discussed heretofore, the canopy extension and storage shed replacement projects will not have significant adverse impacts on any surface waters. Any potential water quality impacts during construction will be mitigated with the use of BMPs to the extent practicable. The project will not

[1] The CWB is currently in the process of revising Appendix C of Chapter 11-55, HAR. However, the proposed revisions do not change any the definition of "disturbance of land" referenced above (DOH, 2013).

threaten the designated uses of potentially effected waterbodies as defined in Chapter 11-54, HAR.

3.7. Flood, Tsunami, and Earthquake Hazards

According to the Federal Emergency Management Agency Flood Insurance Rate Map, Community Panel Number 15003C 0353G (revised January 19, 2011), the project site is within Flood Zone AE with flood elevations ranging from 6 to 8 ft. (see **Figure 7**). Areas within Flood Zone AE are considered to have a 1 percent (%) annual chance of flooding. A copy of panel 15003C 0353G is provided in **Appendix D**. Both the canopy extension project and storage shed replacement project are located in an area with a 7-ft. flood elevation level.

The property is located just outside of the tsunami evacuation line, as indicated on CCH tsunami evacuation maps. A copy of *Map 19: Airport (Inset 2)* is provided in **Appendix D** for reference.

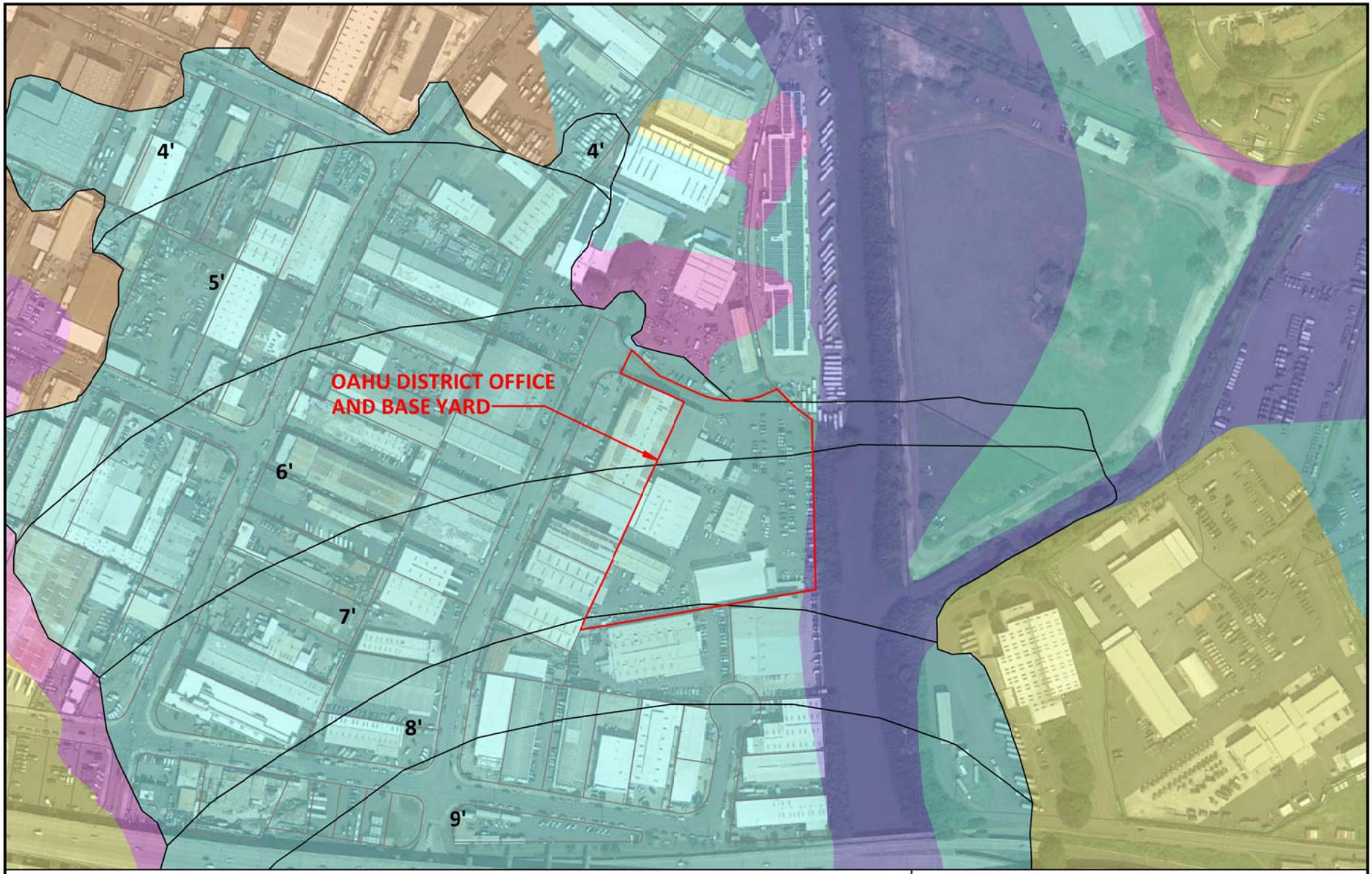
Engineers, seismologists, architects, and planners have carefully evaluated seismic hazards related to building construction and have devised a system of classifying seismic hazards on the basis of the expected strength of ground shaking and the probability of the shaking actually occurring within a specified time. The results are included in the Uniform Building Code (UBC) seismic provisions. The UBC seismic provisions contain six seismic zones, ranging from 0 (no chance of severe ground shaking) to 4 (10% chance of severe shaking in a 50-year interval). In 1997, the State's seismic zone assignments were upgraded for the islands of Oahu and Hawaii. Currently, Oahu lies within the UBC seismic risk zone 2A (USGS, n.d.).

Impacts and Mitigation Measures

Both the canopy extension and storage shed replacement building are unoccupied accessory structures. No electrical or mechanical components (e.g., lights, air-conditioning, etc.) will be constructed as a part of either project. As such, the structures are considered to have a low flood damage potential. A CCH building permit is not sought for either project. As such, there will be no NFIP review of the proposed improvements.

The property is located outside of the tsunami evacuation zone. The proposed projects do not increase the risk to property or human health and safety due to tsunamis.

The existence of the enclosed lanai and seawall will not result in an increased risk of property damage or increased risk to human health or safety due to earthquakes. All appropriate UBC standards will be employed for the proposed projects.



LEGEND

- FLOOD ZONE X
- FLOOD ZONE XS
- FLOOD ZONE AO
- FLOOD ZONE AE
- FLOOD ZONE AEF
- 8' FLOOD ELEVATION (FEET)

THE LIMTIACO CONSULTING GROUP
CIVIL ENGINEERING AND ENVIRONMENTAL ENGINEERING

FIGURE 7
FLOOD ZONE

SCALE: NOT TO SCALE | DATE: DECEMBER 2013

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3.8. Floral and Faunal Resources

The subject property is located within a highly urbanized environment characterized by industrial buildings and warehouses. Lands altered by a high degree of urban development and human activity, such as the subject property, are often populated with floral and faunal communities dominated by introduced species. Consequently, floral and faunal species found within and adjacent to the subject property are primarily non-native species. Since the property is entirely built-up, all floral species on the property are located in landscaped areas.

Most native faunal species that may have once inhabited the project site have been displaced; faunal and avifaunal species at the property are predominantly introduced species and those that are common to urban environments. Avifaunal species presumed to frequent the site are those common to urban environments and may include the common mynah, house finch, house sparrow, northern cardinal, red-vented bulbul, barred dove, spotted dove, and pigeon.

The *Threatened and Endangered Plants* Geographic Information Systems (GIS) layer from the State Office of Planning (OP) indicates there are “little or no” threatened or endangered plant species present at the property (OP [2], 1992). The *Critical Habitat* GIS layer indicates that there are no critical habitats for any endangered or threatened species at the property (OP [1], 2012).

No Federal or State listed floral and faunal species, either candidate threatened or endangered, are known to occur within the subject property. There is no known critical habitat in the vicinity of the property.

Impacts and Mitigation Measures

No significant adverse impacts to flora and fauna will result from the proposed projects. The proposed projects will take place in areas of the property that are already developed, and will not affect any landscaped areas. The subject property and surrounding area are highly altered, influenced by urban development, and characterized by floral and faunal communities dominated by introduced species. Sensitive species or habitats are not known to occur within the project site. No Federal or State listed or candidate threatened or endangered species are known to inhabit or occur within the subject property.

3.9. Air Quality

Per the requirement of the Clean Air Act (last amended in 1990), the U.S. Environmental Protection Agency has established the National Ambient Air Quality Standards (NAAQS) in order to protect public health and welfare and prevent the significant deterioration of air quality. Additionally, the DOH has established State Ambient Air Quality Standards (SAAQS) to regulate air quality statewide. The State

standards for carbon monoxide and nitrogen dioxide are more stringent than their federal counterparts.

The DOH, Clean Air Branch monitors air quality at selected locations throughout the State. The 2013 ambient air monitoring network consists of 13 State and local air monitoring stations and "special purpose monitoring stations". Currently, there are four State-maintained ambient air quality monitoring stations on Oahu that measure various types of pollutants. The nearest monitoring station to the property is the Honolulu monitoring station, which is located just over 3 miles southeast of the property atop the Queen's Medical Center in downtown Honolulu. The Honolulu monitoring station was established in 1972, and currently monitors for the volume of $PM_{2.5}$ (particulate matter less than or equal to 2.5 microns in aerodynamic diameter), PM_{10} (particulate matter less than or equal to 10 microns in aerodynamic diameter) and air toxics such as sulfur dioxide and carbon monoxide (CAB et. al., 2013).

Air quality readings at the Honolulu monitoring station have historically, and continue to remain well below NAAQS and SAAQS.

Impacts and Mitigation Measures

The proposed projects will not result in any significant adverse impacts on air quality. Local short-term impacts on air quality may occur during construction of the canopy extension and storage shed replacement projects. The impacts will be of the type and scale typical of small construction projects (e.g., fugitive dust). The *Hawaii Standard Specifications for Road and Bridge Construction, 2005* states that the contractor must employ site specific BMPs to control fugitive dust. The BMP plan must be submitted to and approved by the HDOT.

3.10. Noise

The property is located within an industrial area and is not adjacent to any residential properties. The Interstate H-1 and Nimitz Highway are located approximately 500 ft. south of the property, and noise can typically be heard from nearby traffic. Predominant sounds at the property include vehicular traffic (vehicles traveling to and from the property), as well as commercial buses which are based at a neighboring property.

Pursuant to Chapter 11-46, HAR on *Community Noise Control*, DOH daytime and nighttime noise limits (expressed in maximum A-weighted decibels [dBA] at the property line) are 70 dBA at the property. A permit from the DOH, Indoor and Radiological Health Branch (IRHB) is required for noise levels that exceed the maximum permissible sound level for more than ten percent of the time within any

twenty minute period, or for impulsive noises ten dBA or more above the maximum permissible sound level.

Impacts and Mitigation Measures

The proposed projects will not result in any long term noise-related impacts. No audible devices will be installed and the projects will not result in permanent increased usage or traffic at the property.

Temporary noise-related impacts may occur during construction. These impacts will be of the type and magnitude typical of construction projects. The contractor must comply with Chapter 11-46, HAR and obtain the appropriate noise-related permits from the IRHB when necessary.

3.11. Archaeological and Cultural Resources

The proposed projects are located in a highly altered urban environment; the property has been completely developed and consists entirely of hardscape. No archaeological or cultural resources are visible at the surface anywhere within the property.

The DLNR, State Historic Preservation Division maintains a list of significant historic, architectural, and cultural properties in the State. No listed historic places located in or adjacent to the property were identified on the *National and State Register of Historic Places* (SHPD [1], n.d.) or the *Recent Additions to the Hawaii Register of Historic Places* (SHPD [2], 2013).

Impacts and Mitigation Measures

No significant adverse impacts to archaeological or cultural resources will result from the proposed projects. Due to the highly altered urban environment and previous development at the property, it is unlikely that any subsurface archaeological resources will be encountered.

No culturally significant resources are known to be present within the project site and no traditional and cultural practices or beliefs are known to occur within the subject property.

3.12. Visual Resources

The structures and uses on the property are visually consistent with surrounding uses and structures, which consist primarily of warehouse-type storage buildings, office buildings, vehicle storage and parking. The property is not readily visible from any public roads or open spaces, as views of the property are obstructed by surrounding structures.

Impacts and Mitigation Measures

The proposed projects will not have significant adverse impacts on any visual resources. The property is not located adjacent to public rights-of-way and is not readily viewable from public spaces. The canopy extension and storage replacement are consistent with the urban character of the property and surrounding area. New structures will be constructed of ordinary materials (e.g., metal roofing and siding, concrete, steel, etc.) and will be visually consistent with existing structures at the property. The canopy extension and storage shed replacement will not be taller than existing structures, and no prominent or outstanding viewplanes will be obstructed by the proposed project.

3.13. Socio-Economic Characteristics

3.13.1. Existing Businesses and Surrounding Uses

Businesses in the immediate vicinity of the property include a bus depot, various construction supply shops, petroleum suppliers, a refuse transfer station, and various storage facilities.

Prior to preparation of this EA, recorded fee owners with properties neighboring the subject property were consulted regarding the proposed project. Details regarding this consultation are presented in **Section 7**.

Impacts and Mitigation Measures

The canopy extension and storage shed replacement projects will not have any long-term impacts on surrounding businesses or uses. There may be an increase in traffic to the property during construction. However, this increase will be only temporary and will not significant enough to have an adverse impact on surrounding properties.

3.13.2. Police, Fire and Ambulance Service

Police: The Honolulu Police Department (HPD) provides police services in the CCH. The property is located in HPD Patrol District 5, which spans the area from Nuuanu to Salt Lake. The administrative offices for District 5 are located in the Kalihi Police Station, located at 1865 Kamehameha IV Road. The Kalihi Police Station is approximately 1.5 miles northeast of the property.

Fire: The Honolulu Fire Department provides fire protection service in the CCH. The fire stations nearest the property are the Moanalua Fire Station, Kalihi Fire Station, and Kalihi Kai Fire Station. They are located approximately 0.7, 1.3, and 1.5 miles from the property, respectively.

Ambulance: The nearest emergency medical facility is located at the Kaiser Moanalua Medical Center, approximately 1.8 miles from the property.

Impacts and Mitigation Measures

The proposed projects will not impact the demand for or distribution of any emergency services.

3.14. Infrastructure and Utilities

The following section includes discussions regarding roadways and utility (water, drainage, wastewater and electrical) considerations.

3.14.1. Roadways and Traffic Considerations

The property is accessed through a driveway at the end of Kakoi Street, a two-lane street off of Nimitz Highway. Kakoi Street is within the CCH right-of-way.

Impacts and Mitigation Measures

The canopy extension and storage shed replacement building will not have significant adverse impacts on roadways and traffic. The structures will not result in increased traffic to the property and will not affect existing traffic patterns.

There may be an increase in traffic to the property during construction. However, this increase will be only temporary and will not be significant enough to have an adverse impact on surrounding properties.

3.14.2. Utilities

Water: Multiple small-diameter water lines are buried in the vicinity of the canopy extension project. The water lines are part of the distribution system that carries potable water to various buildings throughout the property. The Honolulu Board of Water Supply supplies potable water to the property.

The motorpool building is serviced by a 1.5-in water line, the alignment of which runs directly under the proposed canopy extension. The existing storage shed does not have water service.

Drainage: Gutters along the roof of the motorpool building collect stormwater from the building's roof. Stormwater collected in these gutters is discharged at the foot of the motorpool building onto the concrete pavement through a number of downspouts. There is one grated drain inlet located in the vicinity

of the motorpool building. This drain inlet feeds a 12-in underground drainage pipe, which carries stormwater in the direction of Moanalua Stream.

Drain inlets are also located inside of the motorpool building to collect stormwater that enters the building through its many large garage doors. However, this water is treated as wastewater and is discussed in the "Wastewater" section below.

Record drawings do not indicate a drainage system in the vicinity of the existing storage shed. Stormwater in that area likely sheetflows over paved surfaces toward Moanalua Stream.

Wastewater: Wastewater from the property is discharged to the CCH collection system and is subsequently taken to the Sand Island Wastewater Treatment Plant for treatment and disposal.

Currently, drain inlets on the floor inside the motorpool building collect any stormwater runoff that enters the building. This stormwater runoff is considered wastewater because petroleum products and other auto fluids that are leaked onto the floor of the motorpool building could contaminate the runoff. Stormwater collected by these drain inlets is treated by an oil-grease separator. The oil-grease separator – which removes oils and other suspended solids from the water prior to discharge into the CCH wastewater collection system – is buried in a paved area adjacent to the motorpool building. Pursuant to Article 14.5, Revised Ordinances of Honolulu (ROH), an Industrial Wastewater Discharge Permit (Permit No. 20100526) was obtained from the CCH Department of Environmental Services, granting the HDOT permission to discharge effluent from the oil-grease separator into the CCH wastewater collection system.

The existing storage shed does not have wastewater service.

Electrical: The property receives electrical service from Hawaiian Electric Company, Inc. Power is distributed to the motorpool building through overhead transmission lines.

The existing storage shed does not receive electricity.

Impacts and Mitigation Measures

Water: The proposed projects will not have any impact to water utilities. Construction of the canopy extension and storage shed replacement building will not result in a change of potable water demand. Potable water service to the Motorpool Building may be

interrupted while the 1.5-in waterline servicing the building is relocated. However, this interruption will only be temporary and water service will be resumed once the line has been relocated.

Drainage: The proposed projects will not have any significant adverse impacts to drainage utilities. The proposed project locations are covered by existing impervious surfaces; construction of the canopy extension and storage shed replacement will not result in additional impervious surfaces. As such, the proposed projects will not result in increased stormwater runoff to drainage structures at the property. In fact, the trench drain proposed as a part of the canopy extension project will divert some stormwater to the sanitary sewer system. However, the quantity of stormwater diverted in this manner will not be significant.

Wastewater: The proposed projects will not have any significant adverse impacts on wastewater utilities. As a part of the canopy extension project, the proposed trench drain will redirect some stormwater to an existing oil-grease separator, from which effluent is discharged to the CCH wastewater collection system. The oil-grease separator is large enough to handle the additional flow from the trench drain, and the CCH has approved discharges from the oil-grease separator into its wastewater collection system.

Electrical: The canopy extension and storage shed replacement projects do not involve any electrical work. There will be no impacts on electric utilities as a result of the proposed projects.

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4. RELATIONSHIP TO PLANS, POLICIES, AND CONTROLS

4.1. State Land Use District

The State Land Use Law (Chapter 205, Hawaii Revised Statutes [HRS]) is intended to preserve, protect, and encourage the development of lands in the State for uses which are best suited to the public health and welfare for Hawaii's people. All lands in the State are classified into four land use districts by the State of Hawaii, Land Use Commission: Urban, Agricultural, Conservation, and Rural. Urban areas are characterized by residential neighborhoods, commercial enterprises, industrial development, and community facilities including public buildings.

> Comment:
> The property is entirely located within the Urban district. The canopy extension and storage shed replacement are permitted uses within the Urban District.

4.2. Hawaii State Plan

The Hawaii State Plan, HRS Chapter 226, outlines broad goals, policies, and objectives to serve as guidelines for the future growth and development of the State. Objectives, policies, and priority guidelines relevant to the subject project are as follows:

§226-11 Objectives and policies for the physical environment – land-based, shoreline, and marine resources.

(a) Planning for the State's physical environment with regards to land based, shoreline, and marine resources shall be directed towards achievement of the following objectives:

(1) Prudent use of Hawaii's land-based, shoreline, and marine resources.

(b) To achieve the land-based, shoreline, and marine resources objectives, it shall be the policy of this State to:

(1) Exercise an overall conservation ethic in the use of Hawaii's natural resources.

(2) Ensure compatibility between land-based and water-based activities and natural resources and ecological systems.

(3) Take into account the physical attributes of areas when planning and designing activities and facilities.

(4) Manage natural resources and environs to encourage their beneficial and multiple use without generating costly or irreparable environmental damage.

§226-13 Objectives and policies for the physical environment – land, air, and water quality.

(a) Planning for the State's physical environment with regard to land, air, and water quality shall be directed towards achievement of the following objectives:
(1) Maintenance and pursuit of improved quality in Hawaii's land, air, and water resources.
(2) Greater public awareness and appreciation of Hawaii's environment resources.
(b) To achieve the land, air, and water quality objectives, it shall be the policy of this State to:
(6) Encourage design and construction practices that enhance the physical qualities of Hawaii's communities.
(7) Encourage urban developments in close proximity to existing services and facilities.

Note: http://www.capitol.hawaii.gov/hrscurrent/ accessed on 11/07/2013

Comment:
The canopy extension and storage shed replacement projects will be performed in a manner consistent with the relevant objectives of the Hawaii State Plan, as stated above. The proposed improvements and uses will be in areas in close proximity to similar uses. Construction of the proposed improvements will be performed in a manner that minimizes impacts to natural resources of the State.

4.3. City and County of Honolulu General Plan

The General Plan of the CCH sets forth broad statements of social, economic, environmental, and design objectives and policies which are desired over the long-term. The following policies and objectives are relevant to the subject project:

VII. Physical Development and Urban Design
Objective A To coordinate changes in the physical environment of Oahu to ensure that all new developments are timely, well-designed, and appropriate for the areas in which they will be located.
Policy 5: Provide for more compact development and intensive use of urban lands where compatible with the physical and social character of existing communities.
Policy 6: Encourage the clustering of developments to reduce the cost of providing utilities and other public services.
Policy 9: Exclude from residential areas, uses which are major sources of noise and air pollution.

Note: http://www.honoluludpp.org/Planning/GeneralPlan.aspx accessed on 11/07/2013

Comment:
The proposed projects are accessory to existing land uses at the property, which are consistent with the General Plan guidelines stated above. The uses are consistent with the industrial nature of the surrounding area.

4.4. Primary Urban Center Development Plan

The Island of Oahu is divided into eight planning areas as required by a 1973 City Charter. Each Development Plan and Sustainable Communities Plan implements the objectives and policies of the General Plan and serves as a guide for public policy, investment, and decision making within each respective region. Together with the General Plan, these documents guide population and land use growth over a 20- to 25-year time span.

The project site is located within the region encompassed by the Primary Urban Center Development Plan, which pertains to the area extending from Kahala to Pearl City across the valleys and plains of Oahu's southern coastline. Major industrial activities occur within the Primary Urban Center around Honolulu Harbor and west to Mapunapuna.

The plan includes the following policies and principles applicable to the subject property:

3.1 Protecting and Enhancing Natural, Cultural, and Scenic Resources
3.1.3 Guidelines
3.1.3.3 Urban Skyline and Mauka-Makai Views
- *Apart from Downtown and other central Honolulu locations, promote mid-rise or low-rise scale for new buildings.*

3.4 The Pacific's Leading City
3.4.2 Policies
3.4.2.4 Military, Airport, Harbor, and Industrial Areas
The following policies are intended to assure the long-term viability of military, transportation, and industrial functions:
- ***Support industrial uses in Kalihi-Palama industrial districts.*** *Commercial uses along the Nimitz, Dillingham, King, Kalihi, and Waiakamilo corridors should be recognized and encouraged. In industrial districts where residential uses have endured for many years – i.e., Kalihi Kai and Kapalama – such uses should be allowed to continue, and should be rehabilitated and improved.*
- ***Promote compatibility with the surrounding urban and natural environment.*** *Where industrial uses are mixed with or adjacent to*

residential communities or natural areas, mitigate visual, noise, and other environmental impacts by adopting performance standards.

Note: The Primary Urban Center Development Plan was adopted by Ord. 04-14 (Effective 6/21/04); Five-year review has been postponed indefinitely.

Comment:

The proposed projects are consistent with the development guidelines from the Primary Urban Center Development Plan guidelines stated above. The height of the canopy extension and storage shed replacement will not be taller than surrounding buildings, and the property is located within existing industrial district in the Mapunapuna area.

4.5. City and County of Honolulu Land Use Ordinance

The CCH Land Use Ordinance (Chapter 21, ROH) regulates land use in accordance with adopted land use policies, including the CCH General Plan and the Development/Sustainable Community Plans.

Comment:
The zoning designation for the property is I-2 Intensive Industrial District. Repair establishments and warehousing uses are permitted in the I-2 Intensive Industrial District.

4.6. State Coastal Zone Management Program

The State Coastal Zone Management (CZM) program, established pursuant to Chapter 205A, HRS, as amended, is administered by the OP. The program provides for the beneficial use, protection, and development of the State's coastal zone. Through the CZM program and pursuant to the Chapter 205A, HRS, all counties have enacted ordinances establishing a SMA. Development within the SMA, including most development proposed by the State, requires a SMA permit from the appropriate County. On Oahu, the SMA permit is administered by the CCH, Department of Planning and Permitting and acted upon by the City Council pursuant to Chapter 25, ROH.

Comment:
The property is located outside of the SMA, and is not subject to standards for development within the SMA.

5. ALTERNATIVES TO THE PROPOSED ACTION

5.1. No-Action Alternative

Under the no-action alternative, the canopy extension would not be constructed. The paved area outside of the motorpool building would remain uncovered, and would remain exposed to stormwater. Stormwater runoff would continue to carry away any pollutants that are leaked onto the exposed pavement.

The existing storage shed would continue to be used. The storage area would continue to be too small to meet HDOT needs, and would continue to be of substandard construction.

5.2. Alternatives Analysis

In addition to the proposed action, several alternatives were evaluated. The following identifies, evaluates, and examines design scenarios and the pros and cons of each project alternative.

5.2.1. Alternative – Alternate Storage Location

HDOT could use alternative locations to store equipment now stored in the storage shed. Because of the limited indoor space at the property, some of the equipment may have to be stored in office spaces or offsite. This would be an inconvenience to HDOT personnel. Due to the limited amount of covered space, the equipment may also be stored outdoors. This is not preferable due to the fact that much of the equipment could either be damaged by stormwater, or could contaminate stormwater runoff.

5.2.2. Alternative – Stormwater Treatment

The canopy extension is intended to prevent contamination of stormwater runoff by any contaminants that may be present on the exposed concrete. Alternately, additional oil-grease separators could be installed to treat the stormwater runoff from the area to be covered. However, trenching, installation of a collection system and maintenance of the oil-grease separator would be required for this alternative. This makes construction of a canopy a more cost-effective option than the installation of additional treatment.

5.3. Evaluation of Alternatives

While the no-action, alternate storage, and stormwater treatment alternatives may be viable, they are not preferable to the proposed projects due to the reasons stated above. Environmental impacts of the proposed projects will be minimal, and will only occur during construction. These impacts will be

mitigated to the extent practicable, and are justified by the benefits yielded by the canopy extension and storage shed replacement.

6. REQUIRED PERMITS AND APPROVALS

The following permits and approvals are anticipated for the proposed projects:

6.1. Federal Government of the United States of America

None

6.2. State of Hawaii

None

6.3. City and County of Honolulu

None

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7. PRE-ASSESSMENT CONSULTATION

Fifteen agencies, organizations, and individuals (indicated in ***bold-italic***) were consulted during the preparation of the Draft EA. A total of six of these parties formally replied during the pre-assessment period, as indicated by the "√" below. Four agencies sent unsolicited comments, as indicated by the "X" below.

Federal Agencies

Department of the Interior, U.S. Fish and Wildlife Service, Pacific Islands Fish and Wildlife Office

State of Hawaii

Department of Health

√ ***Department of Health, Clean Water Branch***

X Department of Health, Environmental Planning Office

Department of Health, Indoor and Radiological Health Branch

√ ***Department of Health, Office of Environmental Quality Control***

√ ***Department of Health, Solid & Hazardous Waste Branch***

X Department of Land and Natural Resources, Commission on Water Resource Management

X Department of Land and Natural Resources, Division of Aquatic Resources

√ ***Department of Land and Natural Resources, Division of Forestry and Wildlife***

X Department of Land and Natural Resources, Engineering Division

√ ***Department of Land and Natural Resources, Land Division***

√ ***Department of Land and Natural Resources, State Historic Preservation Division***

Office of Hawaiian Affairs

City and County of Honolulu

Department of Environmental Services

Department of Planning and Permitting

Neighboring Property Recorded Fee Owners

Robert's Tours & Trans. (TMK parcel 1-1-064:001)

State of Hawaii (TMK parcels 1-1-064:002, 025 & 027) [note: Point-of-contact is the State of Hawaii, Department of Land and Natural Resources

State of Hawaii, Department of Hawaiian Home Lands (TMK parcels 1-1-064:014, 015 & 016)

State of Hawaii, Department of Land and Natural Resources (TMK parcel 1-1-064:028)

Copies of all comment and response letters are provided in **Appendix E**.

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WRRC (3). Western Regional Climate Center. n.d. *Historical Climate Information, Climate Narrative of Hawaii*. Accessed: November 18, 2013. Available at: http://www.wrcc.dri.edu/narratives/HAWAII.htm

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APPENDIX A
Plans for Oahu District Office & Base Yard Canopy Extension Project

INDEX TO DRAWINGS		
NO.	SHEET	DESCRIPTION
1	T-1	TITLE SHEET
2	T-2	GENERAL NOTES
3	C-1	SITE UTILITY PLAN
4	C-2	DRAIN LINE PROFILE
5	C-3	MISCELLEANEOUS DETAILS
6	A-1	GENERAL NOTES AND SITE PLAN
7	A-2	FLOOR PLAN AND SECTION
8	A-3	ROOF PLAN AND DETAILS
9	A-4	ELEVATIONS
10	S-1	STRUCTURAL GENERAL NOTES
11	S-2	STRUCTURAL GENERAL NOTES
12	S-3	TYPICAL DETAILS
13	S-4	TYPICAL DETAILS
14	S-5	FOUNDATION PLAN
15	S-6	ROOF FRAMING PLAN
16	S-7	CANOPY SECTION
17	S-8	CANOPY DETAILS
18	S-9	CANOPY DETAILS
19	S-10	CANOPY DETAILS

FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	2012	1	19

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

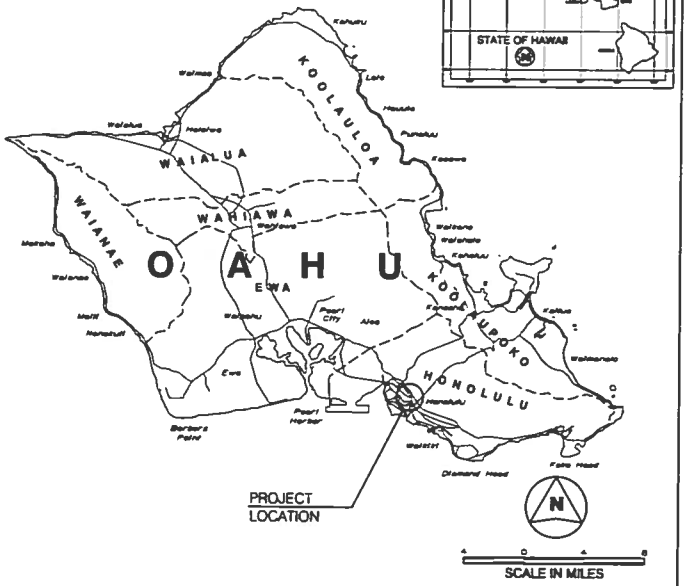
HONOLULU, HAWAII

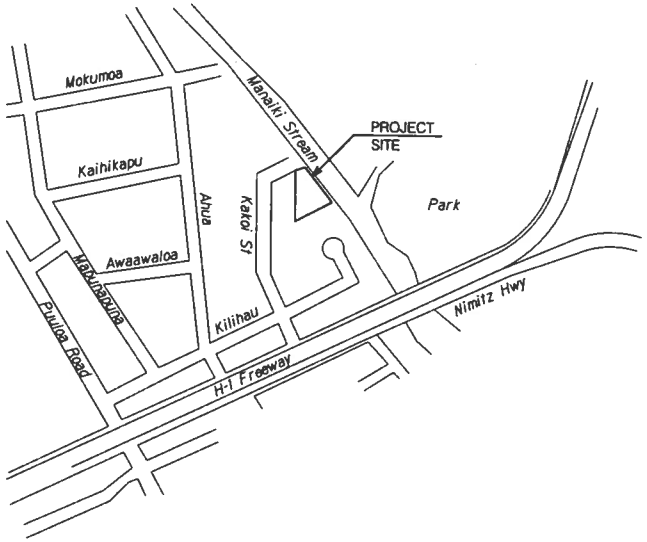
PLANS FOR

OAHU DISTRICT OFFICE & BASE YARD CANOPY EXTENSION PROJECT

DISTRICT OF HONOLULU

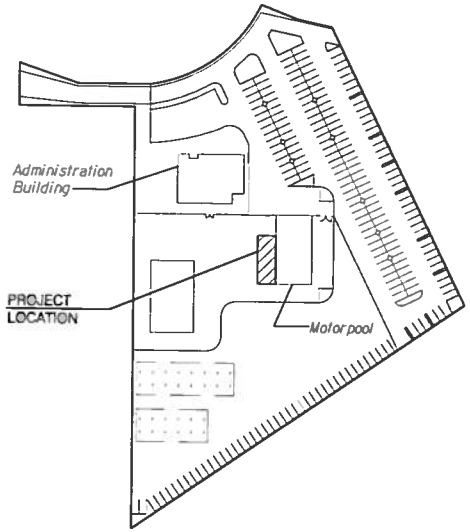
ISLAND OF OAHU





LOCATION MAP

NOT TO SCALE



SITE PLAN

NOT TO SCALE

NAGAMINE OKAWA ENGINEERS INC. DESIGNED BY

HWY-DD MANAGED BY

831-6792 PHONE

JUNE 2012 DATE

DEPARTMENT OF TRANSPORTATION STATE OF HAWAII	
APPROVED:	
DIR. OF TRANSPORTATION	DATE

FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	2012	2	19

GENERAL NOTES

1. The scope of work for this project consists of constructing a new structural steel canopy next to the existing motorpool building. Selective demolition of existing concrete pavement is required for new column footings.

2. Hawaii Standard Specifications for Road & Bridge Construction 2005 shall be complied with. For any conflict between the Standard Specifications and these drawings, the more stringent shall apply.

3. The Contractor shall conform to the requirements of Subsection 108.01 - Subletting of Contract, which requires work to be performed to be not less than 30 percent of the total contract cost less deductible items. Non-compliance with this Subsection may be grounds for rejection of bid.

4. Contractor shall obtain all necessary permits required to perform this work.

5. This project requires the implementation of an environmental management plan during all demolition and construction work to prevent and/or minimize environmental impacts during the construction activity. The plan shall address the use of dust and debris containment to minimize fugitive dust. Contractor's attention is directed to the requirements of Section 209 of the 2005 Standard Specifications.

6. The Contractor shall remove all silt and debris resulting from his work. The costs for any necessary remedial action by the Government shall be paid by the Contractor. Contractor shall protect all storm drains and deck openings to prevent the discharge of foreign materials to the water.

7. Wastewater from demolition work shall not be discharged into the sanitary sewer system, storm drainage system, or catch basin. The Contractor shall capture all pollutants and dispose of them off site.

8. The Contractor will be responsible for regulatory fines or penalties that may be imposed by environmental regulatory agencies (EPA and/or State DOH) from construction operations.

9. The Contractor's attention is directed to the following Sections of the Special Provisions: Subsection 104.11 - Utilities and Service; Subsection 105.09 - Coordination Between the Contractors; Subsection 105.10 - Construction Stakes, Lines, and Grades; Subsection 107.12 - Protection of Persons and Property; and Section 645 - Work Zone Traffic Control.

10. The Contractor shall notify the Engineer in writing, two (2) weeks prior to starting construction operations.

11. The Contractor shall indemnify and be solely responsible for the protection of adjacent properties, utilities and existing structures from damages due to construction. Repairing any damage shall be at the Contractor's own expense, to the satisfaction of the Engineer.

12. Smooth riding connections shall be constructed at all limits of project, as shown on the plans and/or as directed by the Engineer. This work shall be considered incidental and will not be paid for separately.

13. Removal and disposal of existing concrete pavement and any debris shall be considered incidental to their respective bid items.

ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE

GEORGE O. GUTIERREZ, JR. LICENSED PROFESSIONAL ENGINEER NO. 12187-E HAWAII, U.S.A. LICENSE EXPIRES 4/30/14

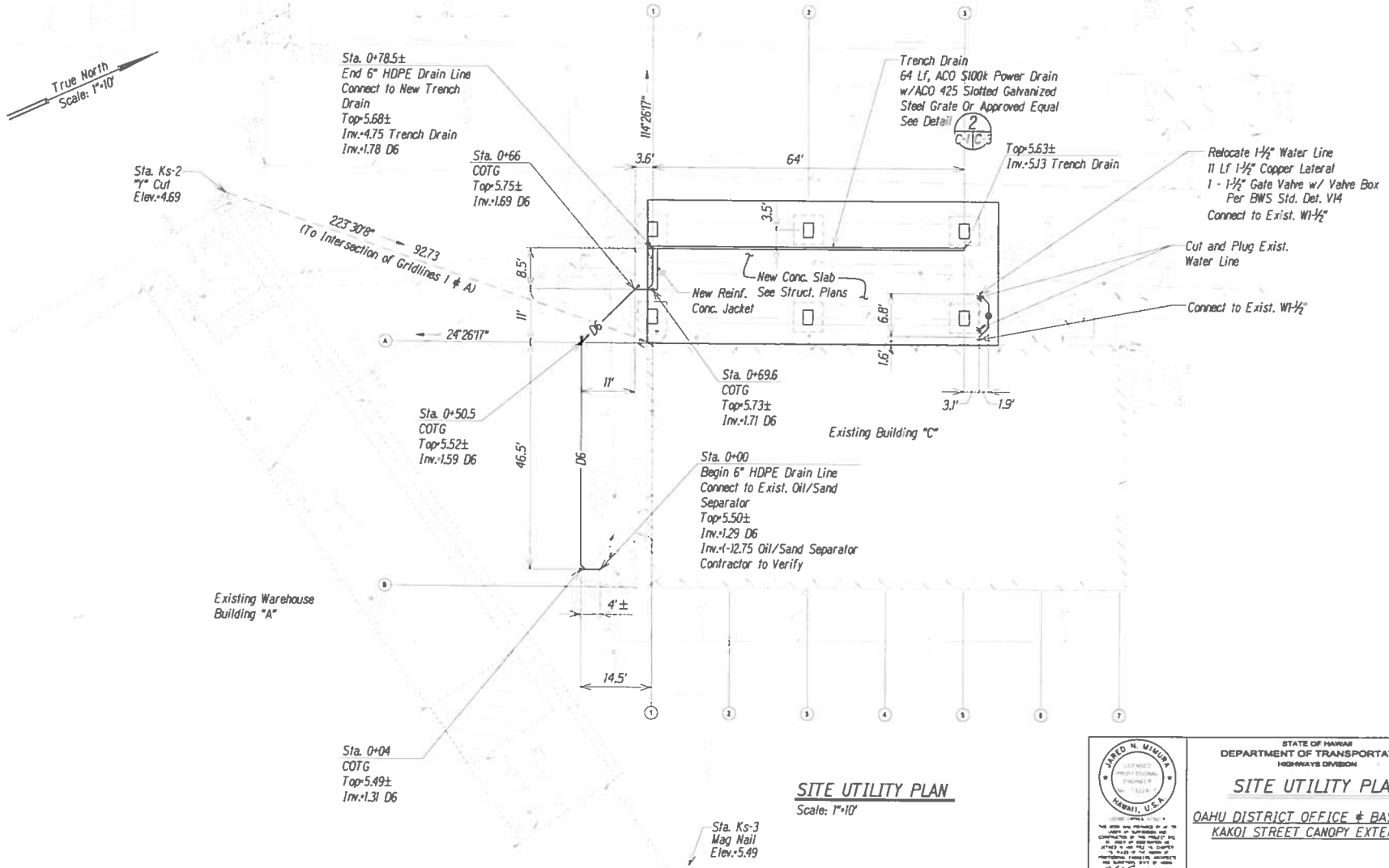
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES
OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET CANOPY EXTENSION

Scale: None Date: 09/21/12

SHEET No. T-2 OF 19 SHEETS

FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	HAW	2012	3	19



SITE UTILITY PLAN

Scale: 1"=10'

JARED N. MIMURA
LICENSED PROFESSIONAL ENGINEER
HAWAII, U.S.A.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

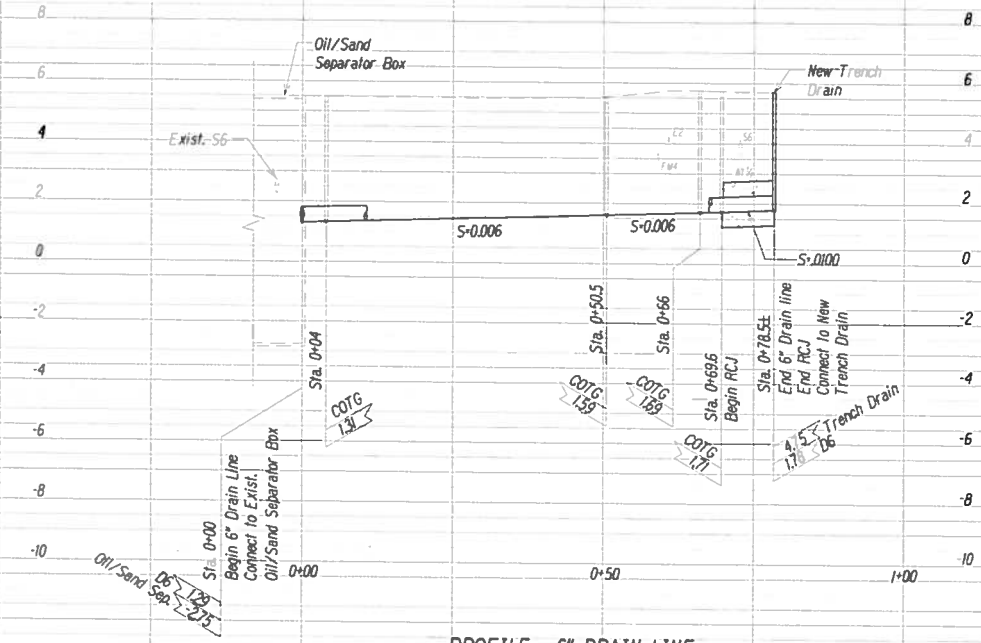
SITE UTILITY PLAN

OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET CANOPY EXTENSION

Scale: 1"=10' Date: 09/21/12

SHEET No. C1 OF 19 SHEETS

FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	2012	4	19



PROFILE - 6" DRAIN LINE

Scale: Horizontal 1"=10'
Vertical 1"=2'

JARED N. MIMURA
LICENSED PROFESSIONAL ENGINEER
No. 13224-C
HAWAII, U.S.A.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

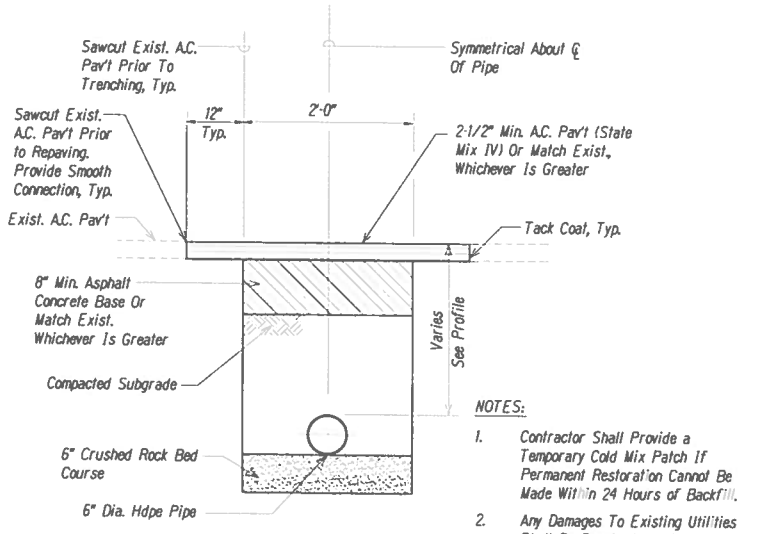
DRAIN LINE PROFILE

OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET CANOPY EXTENSION

Scale: As Shown Date: 09/21/12

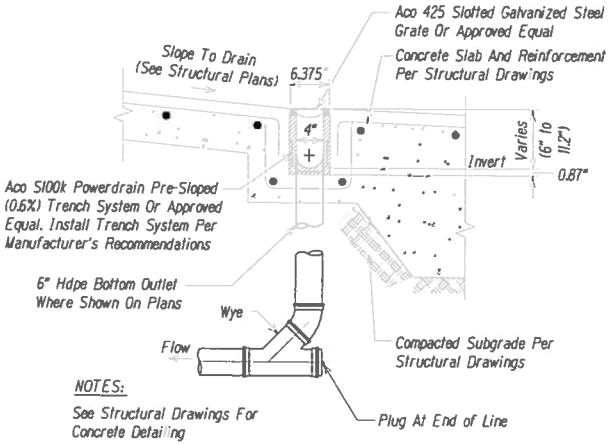
SHEET No. C-2 OF 19 SHEETS

FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HABAR	HAR	2012	5	19



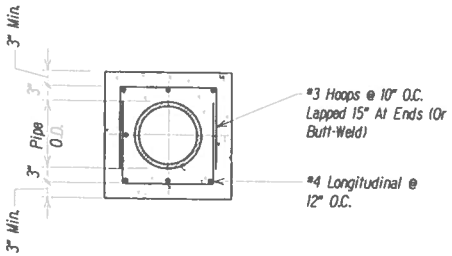
TYP. A.C. PAVEMENT TRENCH REPAIR SECTION 1 C-1 C-3

NOT TO SCALE



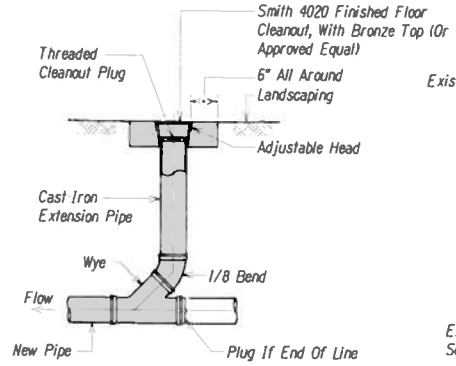
TRENCH DRAIN DETAIL 2 C-1 C-3

Not To Scale



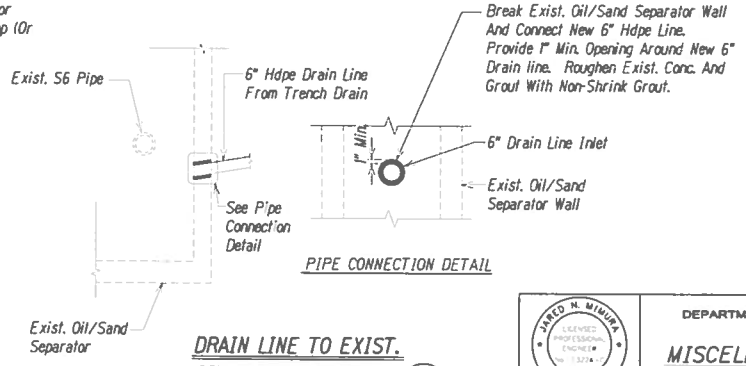
TYPICAL REINFORCED CONCRETE JACKET DETAIL 3 C-1 C-3

Not To Scale



CLEANOUT TO GRADE CONNECTION DETAIL 4 C-1 C-3

Not To Scale



DRAIN LINE TO EXIST. OIL/SAND SEPARATOR 5 C-1 C-3

Not To Scale

JARED N. MIMURA LICENSED PROFESSIONAL ENGINEER HAWAII, U.S.A.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MISCELLANEOUS DETAILS

OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET CANOPY EXTENSION

Scale: Not to Scale Date: 09/21/12

SHEET No. C-3 OF 19 SHEETS

FED ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	2012	5	19

General Notes

1. The Contractor shall conduct a field investigation of the project premises and verify all existing conditions affecting the work and to familiarize himself with the scope of work prior to commencing any work, all questions and discrepancies shall be directed to the Engineer.

2. The daily building functions and access to adjacent facilities will continue to be in operation during its normal operation hours and during services shall be dept to the minimum. Any outages affecting the operation of the building shall be requested in writing ten (10) working days prior to schedule affected dates and shall be coordinated with persons designated by the State.

   Work may have to be scheduled and accomplished during non-operational hours or specific building functions and/or during weekends.

   The Contractor shall include in his bid a stipulated sum for him and/or his sub contractor for work to be accomplished during non working hours and/or weekends prearranged with the State.

3. The Contractor shall install and maintain dustproof barriers necessary to isolated the construction area from the functional areas as not to interfere with the normal daily operations or contaminated the surrounding area.

   The Contractor shall remove and dispose all construction debris and keep the premises broom clean during constructions and at the end of each day.

   Removing of construction debris shall be in covered containers and the transporting of construction material to and from the building shall be by way of assigned path prearranged with the State.

4. The Contractor shall exercise extreme care in carrying out his duties and in the performance of his work so as to minimized damages to existing equipment, apparatus, wall and surfaces that are to remain. Should such items be damages, the Contractor shall replace the damaged items or perform the remedial work at no cost to the State.

5. Prior to the Contractor commencing any demolition work, the State will remove all stored items in the construction area.

6. The Contractor shall furnish all labor, materials, services, and equipment necessary to install and complete all the work specified and indicated on the drawings unless otherwise stipulated.

7. The Contractor shall pay for all permits and fees necessary to accomplish the work unless otherwise stipulated.

   The Contractor shall verify all dimensions and conditions at job site, and shall report any discrepancies to the Engineer before commencing any work.

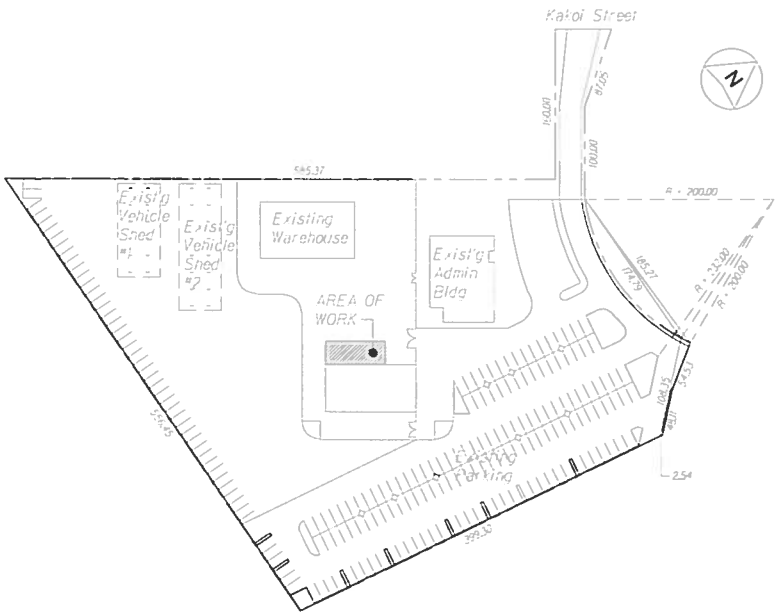
   Where is it necessary to cut open any existing surfaces to install electrical, mechanical, or any other work, the opening and adjacent surfaces shall be restored to its original condition and shall be air, light, and/or weather tight.

   Written dimensions shown on the drawing shall take precedence over scaling of drawings large scale details shall take precedence over general details.

   Codes and Standards: All work and materials shall conform to applicable portions of the following codes, most recent edition, unless noted otherwise, including but not limited to the following list:

   -IBC 2006
   -Uniform Plumbing Code
   -Uniform Mechanical Code
   -National Fir Protection Association NFPA 101 Life Safety Code 2000 Edition
   -State and Local Public Health Codes
   -Hawaii Planning and Zoning Codes
   -Underwriters Laboratories, Inc.

   This project shall be designed and constructed to conform with the accessibility requirements of the Americans With Disabilities Act.



SITE PLAN

Not To Scale

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

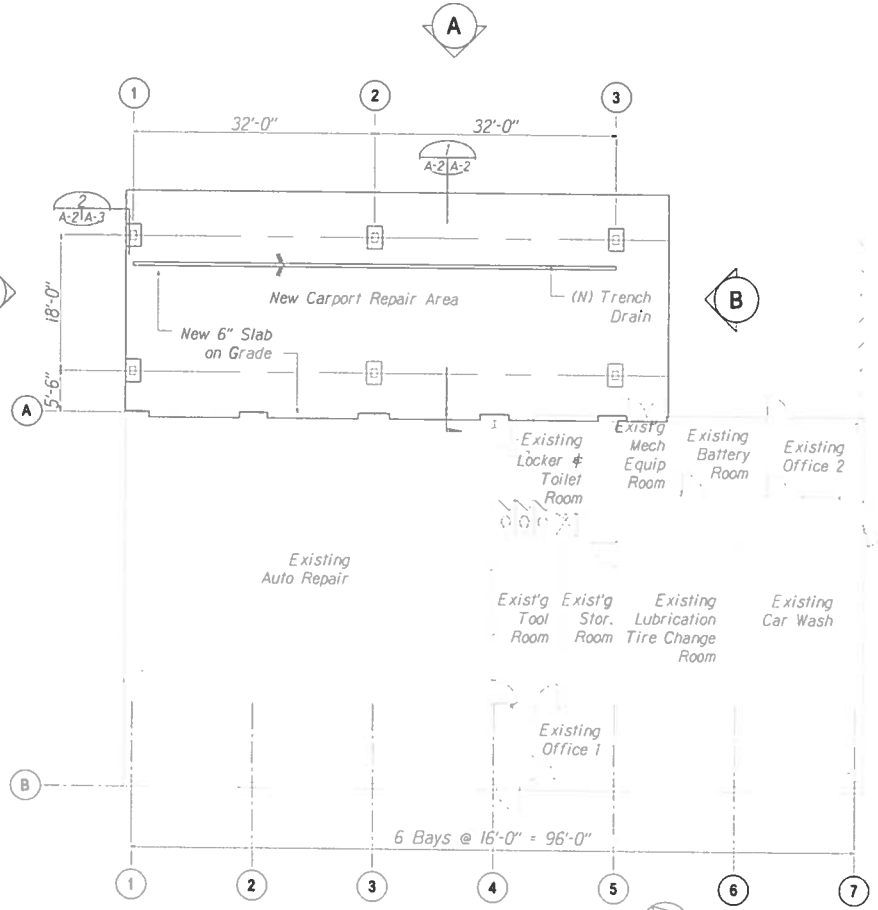
GENERAL NOTES AND SITE PLAN

OAHU DISTRICT OFFICE & BASE YARD
KAIOI STREET CANOPY EXTENSION

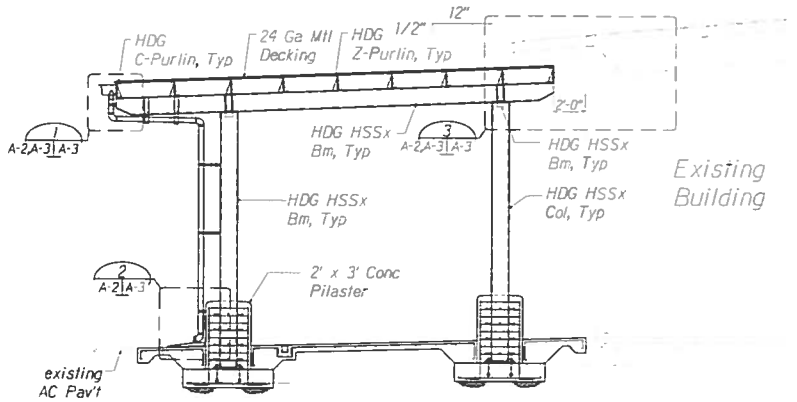
Scale: As Shown Date: 09/21/12

SHEET No. A-1 OF 19 SHEETS

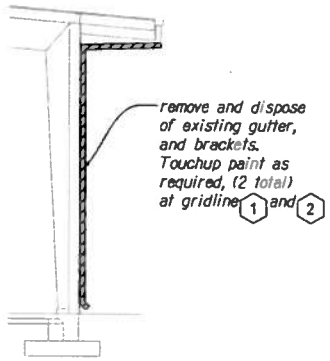
FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	2012	7	19



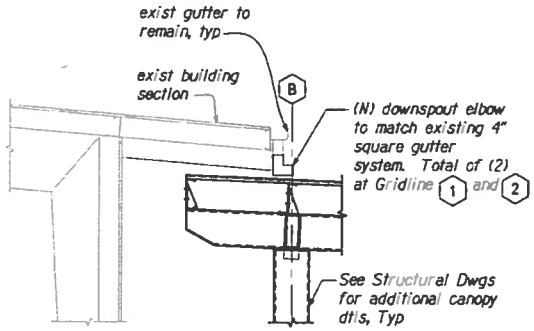
A A-2 A-2 MOTOR POOL FLOOR PLAN
SCALE: 1/8" = 1'-0"



1 A-2 A-2 SECTION
SCALE: 1/4" = 1'-0"



2 A-2 A-2 GUTTER REMOVAL
Scale: 1/4" = 1'-0"



3 A-2 A-2 EXIST DOWNSPOUT DETAIL
Scale: 1/2" = 1'-0"

GRAPHIC SCALE
0 1' 2' 4' 8' 16'
1/8"=1'-0"
0 1' 2' 4 8'
1/4"=1'-0"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

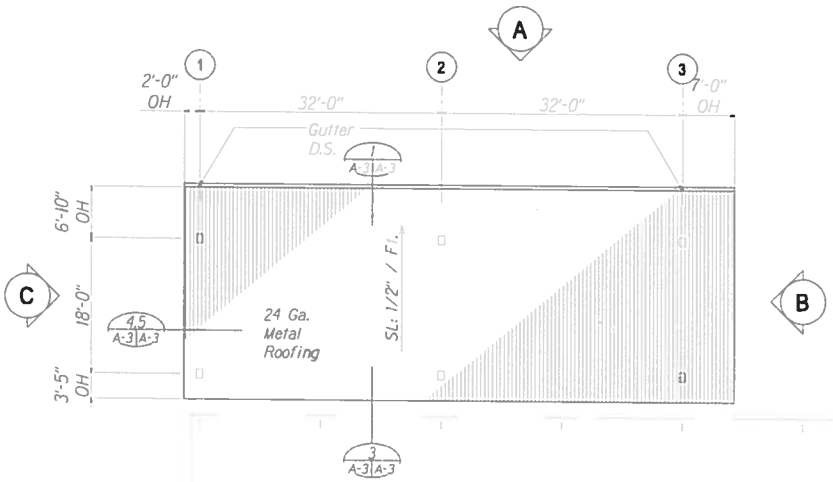
FLOOR PLAN AND SECTION

OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET CANOPY EXTENSION

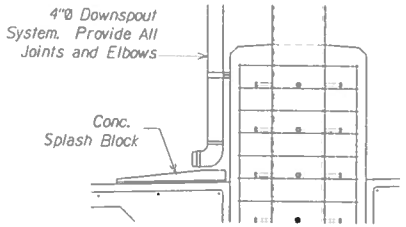
Scale: As Shown Date: 09/21/12

SHEET No. A-2 OF 19 SHEETS

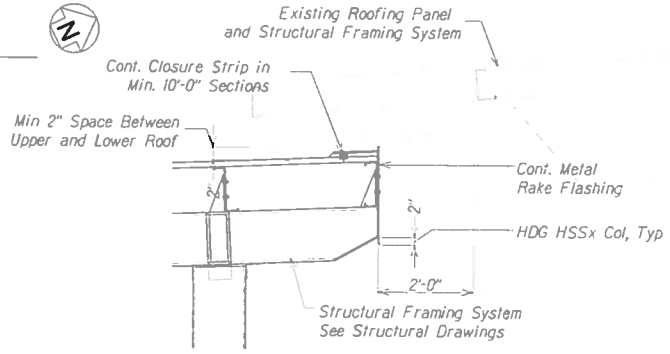
FED ROAD DIST NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	2012	3	19



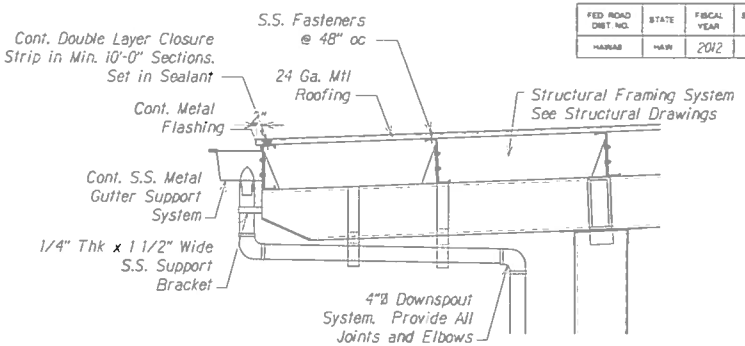
A A-3 A-3 MOTOR POOL ROOF PLAN
SCALE: 1/8" = 1'-0"



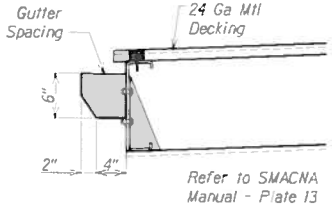
2 A-2 A-3 GUTTER DETAIL
SCALE: 3/4" = 1'-0"



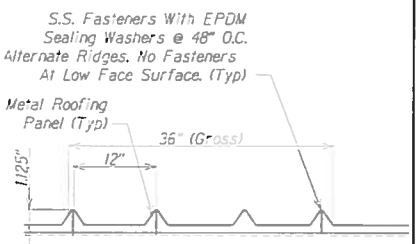
3 A-2,A-3 A-3 OVERLAP ROOFING FLASHING DETAIL
SCALE: 3/4" = 1'-0"



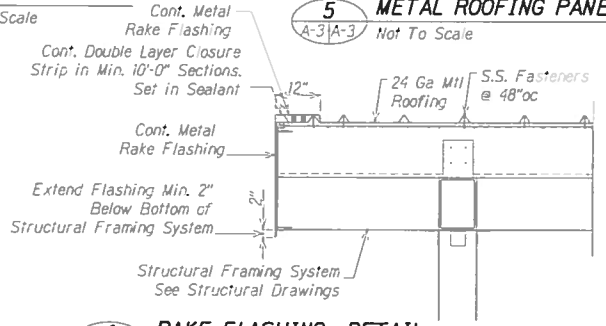
1 A-2,A-3 A-3 CONT. EDGE FLASHING/GUTTER/ROOFING DETAIL
SCALE: 3/4" = 1'-0"



6 A-3 A-3 GUTTER DETAIL
Not To Scale



5 A-3 A-3 METAL ROOFING PANEL PROFILE
Not To Scale



4 A-3 A-3 RAKE FLASHING DETAIL
SCALE: 3/4" = 1'-0"

GRAPHIC SCALE
0 1' 2' 4' 8' 16'
1/8"=1'-0"
0 1' 2' 4'
3/4"=1'-0"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

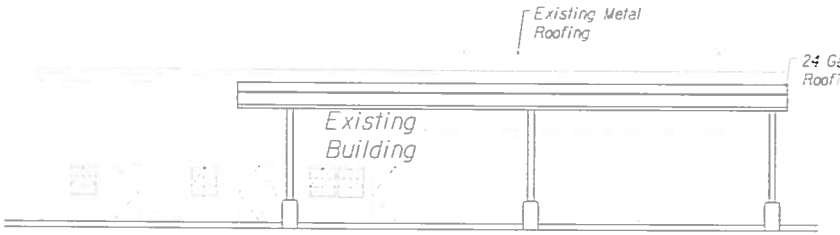
ROOF PLAN AND DETAILS

OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET CANOPY EXTENSION

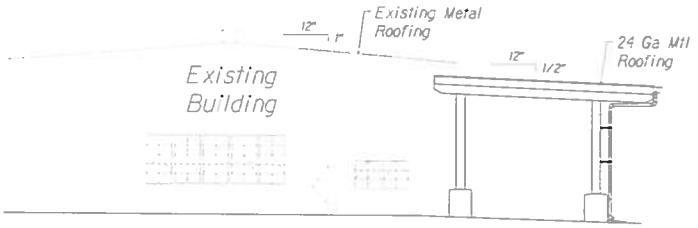
Scale: As Shown Date: 09/21/12

SHEET No. A-3 OF 19 SHEETS

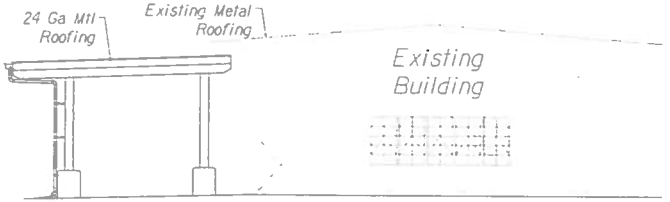
FED ROAD DIST NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	2012	9	19



A **WEST ELEVATION**
A-2,A-3,A-4 SCALE: 1/8" = 1'-0"



B **NORTH ELEVATION**
A-2,A-3,A-4 SCALE: 1/8" = 1'-0"



C **SOUTH ELEVATION**
A-2,A-3,A-4 SCALE: 1/8" = 1'-0"

GRAPHIC SCALE

0' 2' 4' 8' 16'
1/8"=1'-0"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ELEVATIONS

OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET CANOPY EXTENSION

Scale: As Shown Date: 09/21/12

SHEET No. A-4 OF 19 SHEETS

FED ROAD DIST NO	STATE	FISCAL YEAR	SHEET NO	TOTAL SHEETS
HAWAII	HAW.	2012	10	19

STRUCTURAL GENERAL NOTES

1. All materials shall conform to the drawings and specifications.
2. The Structural Drawings and Special Provisions represent the finished structure. They do not indicate the method of construction. The Contractor shall provide all measures necessary to protect the structure during construction. Such measures shall include, but not be limited to, bracing, shoring for loads due to construction equipment, wind, seismic, etc. Observation visits to the site by the Engineer shall not include inspection of the above items.
3. Refer to Architectural Plans to define detail configuration including, but not limited to, relative location, elevations, slopes, dimensions, etc.
4. The Contractor shall be solely responsible for all excavation procedures including lagging, shoring and protection of adjacent property structures, streets and utilities.
5. The Contractor shall be solely responsible for coordinating the work of all trades and shall check all dimensions. All discrepancies shall be called to the attention of the Engineer and be resolved before proceeding with the work.
6. Notes and details on Drawings shall take precedence over General Notes and Typical Details. Any discrepancies between specifications and drawings shall be brought to the attention of the Engineer. For any discrepancies the more stringent requirement shall apply.
7. Shop Drawings required by Special Provisions shall be submitted to Engineer for review prior to fabrication. Copies of construction documents are not acceptable.
8. See Civil Drawings for size and location of all openings required for pipes and pipe sleeves, electrical conduits and other items to be embedded in concrete or otherwise incorporated in structural work.
9. Construction materials shall be spread out if placed on roof. Load shall not exceed the design live load per square foot.
10. Design Criteria:
    - A. Codes
      1. 2006 International Building Code
      2. 2009 State Building Code
    - B. Design Live Loads
      Roof = 20 PSF (Reducible)
    - C. Wind = 110 MPH, Exposure C
    - D. Seismic
      Design Category = D
11. Special Inspection Requirements:
    - A. Concrete Slab on Grade = Not Required
    - B. Concrete Ftgs and Pilaster = Required
    - B. Reinforcing Steel = Required
    - C. Shop Welding = Not Required
      (All welds shall be done in an approved fabricator's shop)
    - D. Field Welding = Required
    - E. Anchor Bolts = Required
    - F. Epoxy
      Embedded Rods = Required
    - G. High-Strength Bolts = Required

    Special Inspection shall be provided by the Owner. Contractor shall hire and pay for testing services. See Special Provisions Section 601 for concrete testing requirements. Special Inspection shall not relieve the Contractor of his responsibilities to complete the Project in accordance with the Drawings and Special Provisions and to provide safety on site. Contractor shall notify Special Inspector at least 2 days in advance for work to be performed requiring Special Inspection.

FOUNDATION

1. Foundation design is based on Table 1804.2 of the 2006 International Building Code.
2. Allowable Bearing Pressures (D+L) = 1500 PSF
   Sliding Resistance = 130 PSF
   Passive Earth Pressure = 100 PCF
3. Contractor shall provide for de-watering of excavations from either surface water, ground water or seepage.
4. Contractor shall provide for design and installation of all cribbing, sheathing, and shoring necessary to safely retain excavations and earth banks.
5. Excavations for footings shall be approved by the Engineer prior to placing the concrete and reinforcing. Contractor shall notify Engineer when excavation is ready for inspection.
6. Footing backfill and utility trench backfill within building area shall be mechanically compacted in layers, to the approval of the Engineer.
7. Concrete slabs-on-grade and footings shall be underlain by a minimum of 4 inches of imported granular material. The granular material shall consist of crushed rock, such as ASTM C33, No. 67, compacted to a minimum of 95 percent as determined by ASTM D1557.
8. Imported granular structural fill shall be well-graded, non-expansive granular material. Maximum particle size shall be 1-1/2 inches and not more than 15 percent of soil by weight shall pass through #200 sieve. Plasticity index of soil passing the #40 sieve shall not be greater than 10. Fill shall be restricted to horizontal lifts of 8 inches of loose thickness and compacted to at least 95 percent as determined by ASTM D1557.
9. Subgrade below granular structural fill and aggregate base course shall be scarified to a depth of 6 inches, moistened to 2 percent above optimum moisture content, and compacted to a minimum of 95 percent compaction as determined by ASTM D1557. See Specification Section 304, Aggregate Base Course for additional information.
10. All excavations shall be properly backfilled. Contractor shall brace or protect structure from lateral loads until attaching floors are completely in place and have attained full design strength.
11. Footings shall be placed and estimated according to depths shown on drawings. Should soil encountered at these depths not be approved by the soils engineer, footing elevations will be altered as required by Engineer.
12. See Special Provisions for additional requirements not noted above.

CONCRETE

1. For additional requirements not noted below, see Special Provisions.
2. All concrete unless otherwise noted shall be regular weight hard rock type (150#/cu. ft.). Coarse aggregate shall be from basalt.
3. Schedule of structural concrete 28-day strength and types:

   Lean Concrete = 1500 PSI

   Foundations and Slab on Grade = 5000 PSI

   Pilasters = 5000 PSI

   Water/cement (w/c) ratio of foundation, slabs on grade, and pilaster concrete shall not exceed 0.40, see Specifications for additional information.
4. Portland cement shall conform to ASTM C150, Type I or II.
5. Concrete mixes shall be designed by a qualified testing laboratory and shall be submitted to the Engineer for review.
6. Clear coverage of concrete over outer reinforcing bars shall be as follows (UON):
   - A. Concrete poured directly against earth = 3" clear to reinf.
   - B. Pilasters:
     Formed and exposed to earth or weather = 2" clear to stirrups and ties
   - C. Slab on Grade:
     Exposed to weather = 1 1/2" clear at top
7. All reinforcing bars, anchor bolts and other concrete inserts shall be well secured in position prior to placing concrete.
8. Projecting corners of pilasters shall be formed with 3/4" chamfer, unless otherwise noted on Architectural Drawings.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRUCTURAL GENERAL NOTES
OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET CANOPY EXTENSION

Scale: None Date: 09/21/12

SHEET No. S-1 OF 19 SHEETS

FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	2012	11	19

CONCRETE (Cont.)

9. Provide sleeves for electrical openings in concrete before placing. Do not cut any reinforcing which may conflict. Coring in concrete is not permitted except as shown. Notify the Engineer in advance of conditions not shown on the Drawings.

10. Curing compounds: See Special Provisions.

11. Concrete admixtures containing chloride or chloride salts shall not be used.

12. All roughened surfaces in concrete shall be made with a minimum amplitude of 1/4".

13. Contractor shall provide two-week schedules showing expected concrete pour locations and times.

REINFORCING STEEL

1. Reinforcing bars shall conform to ASTM A615, Grade 60 requirements.

2. Anchor bolts, dowels and other embedded items shall be securely tied in place before concrete is poured.

3. All reinforcing bar bends shall be made cold.

STRUCTURAL STEEL

1. Structural steel shall be detailed, fabricated and erected in accordance with the "AISC Specification for the Design, Fabrication and Erection of Structural Steel for Buildings."

2. Structural steel sections shall conform to the following ASTM designations:

   Channels, Angles, Tees, Plates, Misc. Steel = A36

   Hollow Structural Sections (HSSx) = A500, Grade B

   Purlins = ASTM A1003 Gr 55

3. All bolts shall conform to ASTM A325N high strength bolts "twist off" type, unless otherwise noted.

4. Unless otherwise noted, anchor rods epoxy embedded shall conform to ASTM A36. Cast-in-place anchor rods shall conform to ASTM F1554 requirements (Grade 55).

5. Bolt holes in steel shall be 1/16" larger diameter than nominal size of bolt used, unless otherwise noted.

6. All structural steel surfaces that are encased in concrete or masonry shall be clean and left unpainted unless galvanized.

7. All welds shall be in conformity with the structural welding code AWS D1.1-04 of the American Welding Society; see Special Provisions.

8. Structural steel framing shall be equally spaced between column lines, ridge and eave lines, etc. UON.

9. The structural steel fabricator shall furnish shop drawings of all structural steel and metal roofing for Engineers review prior to fabrication.

10. All exposed structural steel, bolts and connections shall be hot-dip galvanized after fabrication. All welds after hot-dip galvanizing shall be coated with two coats of ZRC cold galvanizing.

11. All hot-dip galvanized structural steel shall be solvent cleaned per Special Provisions to SSPC-SP1 the coated with high performance coating system:

    Primer - Epoxy Polyamide MIL-DTL-24441
    3 - 4 Mils
    Top Coat - Fluorourethane AAMA 605.2
    2 - 3 Mils

    Coating system shall be provided by the same manufactuerer and shall be submitted to the Engineer for review.

    All colors shall match existing Motorpool building.

12. All grout (or drypack) below base plates, shall be non-shrink, non-staining, with f'c=8,900 PSI at 28 days. See Special Provisions Section 712.04A for additional information.

13. Purlins shall comply to ASTM A1003 requirements and shall have minimum Fy = 55 ksi. All purlins shall conform to the standards and sections properties established by the SSMA. Purlins shall be galvanized G90.

14. Welded studs shall be AASHTO M 169, Grade 1015 installed per Specification Section 713.02 Welded Stud Shear Connectors.

METAL ROOFING

1. See Arch'l drawings for metal roofing details.

2. Metal roofing shall be 24 Ga with a minimum Fy = 33 Ksi. Metal roofing shall span a minimum of three spans and be fasted at 48" O.C. Metal roofing shall have a minimum $Ix = 0.044\ in^4$ and a minimum $Sx = 0.1819\ in^3$.

1. For future additions, metal roofing shall not be used to support piping, electrical conduits, etc. Attachments shall be supported from Unistrut P1000 framing or equal attached to purlins or beams. Fittings and hardware shall be provided by same manufacturer as framing members. Framing members shall not be spaced more than 4'-0" apart in each direction. Each suspended load shall not exceed 300 lbs.

PRE-ENGINEERED SUBSTITUTION

1. A Pre-Engineered Metal Building Canopy complying with all project specifications may be submitted to the Engineer for review in accordance with Substitution request in Section 102 - Bidding Requirements and Conditions Part 102.14.

2. Project specifications include but are not limited to building size (width, length and height), coating, and design criteria.

3. Pre-Engineered Metal Building substitution shall include shop drawings and calculations signed and stamped by a licenced Structural Engineer in the State of Hawaii.

5. Pre-Engineered Metal Building (PEMB) design shall be provided by the Contractor. Drawings and calculations shall be stamped and signed by a Structural Engineer licensed in the State of Hawaii. Refer to design criteria in general notes on sheet S-1 and specifications for additional requirements.

6. Foundation system shown is based on layout of columns and lateral-force-resisting system indicated on drawings. Revision of column locations and lateral-force-resisting system location will require revision of foundation system and may affect footing sizes. Spread footing depths and sizes as shown on plans shall be minimum required for bidding purposes.

7. Contractor shall submit shop drawings and PEMB design calculations to Engineer for review prior to fabrication and construction of footings.

8. PEMB structure shall be designed for dead load (DL), live load (LL), wind (WL), and earthquake load (EQ), in accordance with governing building code.

9. All framing shall be provided by PEMB manufacturer and shall support all roof loads. in addition to loads from these elements, 2 psf collateral load shall be added. This includes future MEP. Purlins and girts shall have a minimum thickness of 18 gage.

10. All framing incidental to PEMB framing including but not limited to z-girt base angles, shall be provided by the PEMB manufacturer. Anchorage design of incidental framing shall be provided by pemb manufacturer.

11. Metal roofing shall not be used to support suspended loads. Metal roofing shall have a minimum thickness of 24 gage.

ABBREVIATIONS

AB	anchor bolt	ga	gage
add'l	additional	galv	galvanized
Arch'l	Architectural	(h), horiz	horizontal
bm	beam	Mech	Mechanical
CC	center to center	mtl	metal
CJ	construction joint	(N)	new
CL	center line	opng	opening
clr	clear	reinf	reinforcement
cont	continuous	sl	slope
ctrd	centered	TOF	top of footing
dia	diameter	TOS	top of slab
DO	ditto	TOC	top of curb
dwg(s)	drawing(s)	TOSS	top of structural steel
exist	existing		
Elec	Electrical	TOR	top of ridge
elev	elevation	typ	typical
EF	each face	UON	unless otherwise noted
EJ	expansion joint		
EW	each way	(v), vert	vertical
ftg	footing	WP	work point

LEGEND

Concrete

Steel Plate or Section

Brace

Turnbuckle

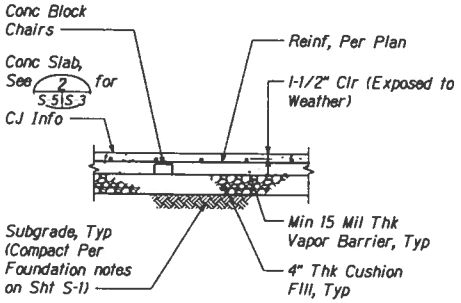
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRUCTURAL GENERAL NOTES
OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET CANOPY EXTENSION

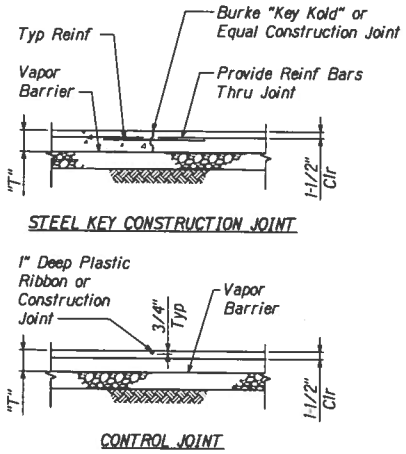
Scale: None Date: 09/21/12

SHEET No. S-2 OF 19 SHEETS

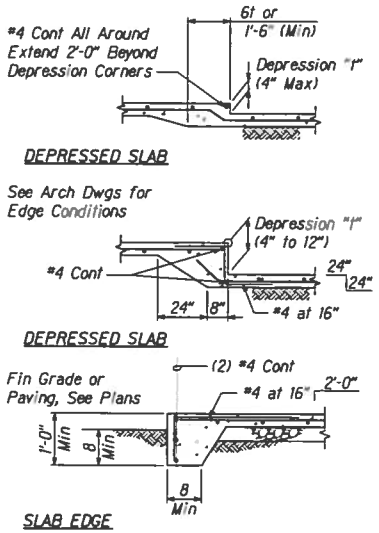
FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	2012	12	19



1 S-5 S-3 TYPICAL SLAB ON GRADE
Not to Scale

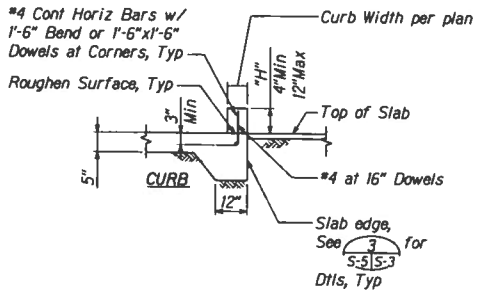


2 S-5 S-3 TYPICAL SLAB ON GRADE JOINTS
Not to Scale

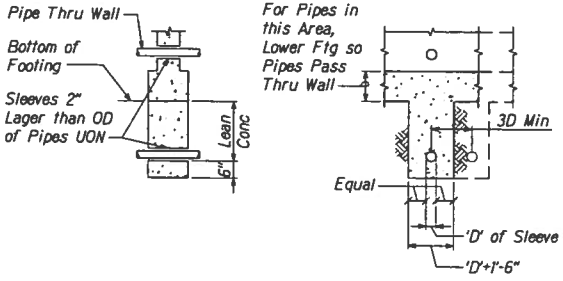


3 S-5 S-3 DEPRESSED SLAB AND SLAB EDGE
Not to Scale

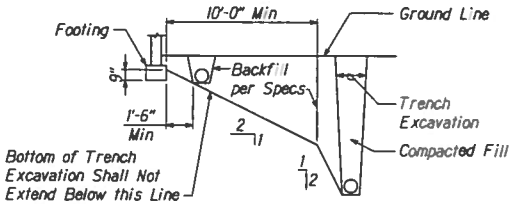
Notes:
1. See plan size and location of curbs.
2. Provide inserts as required by Civil dwgs.
3. See curb detail for #4 horiz bar requirements.



4 S-5 S-3 CONCRETE CURBS AND ISLANDS
Not to Scale



5 S-5 S-3 PIPE PERPENDICULAR TO FOOTING
Not to Scale



Note:
The contractor shall provide shoring, sheathing or otherwise maintaining the side of the excavation from cave-ins until all backfill is completed per specifications.

6 S-5 S-3 EXCAVATIONS PARALLEL TO FTG
Not to Scale

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL DETAILS

OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET CANOPY EXTENSION

Scale: As Shown Date: 09/21/12

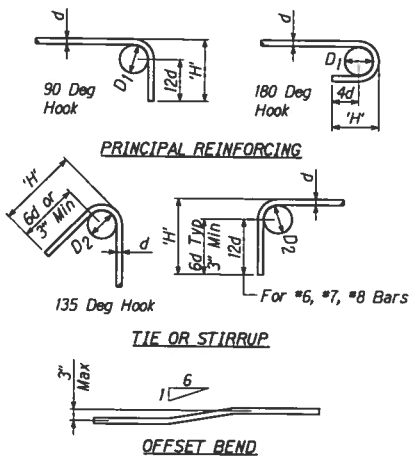
SHEET No. S-3 OF 19 SHEETS

FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	2012	13	19

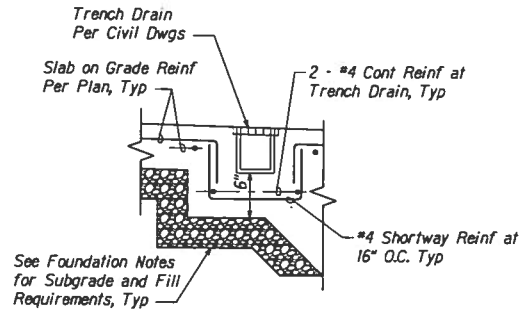
HOOK LENGTHS (H) (IN INCHES), UON

Bar Size	Standard Hooks		Stirrup or Tie Hook			
	90 Deg. Hook	180 Deg. Hook	90 Deg. Hook	135 Deg. Hook	D2	D1
#3	6	4	3-1/2	4	1-1/2	2-1/4
#4	8	4-1/2	4-1/2	4-1/2	2	3
#5	10	5	5-1/2	5-1/2	2-1/2	3-3/4
#6	12	6	12	7-1/2	4-1/2	4-1/2
#7	14	7	14	9	-	5-1/2
#8	16	8	-	-	-	6

Notes:
1. All bends shall be made cold.



1 / S-5 | S-4 BAR BEND AND HOOKS
Not to Scale



2 / S-7 | S-4 DETAIL - TRENCH DRAIN REINF
Scale: 1-1/2" = 1'-0"

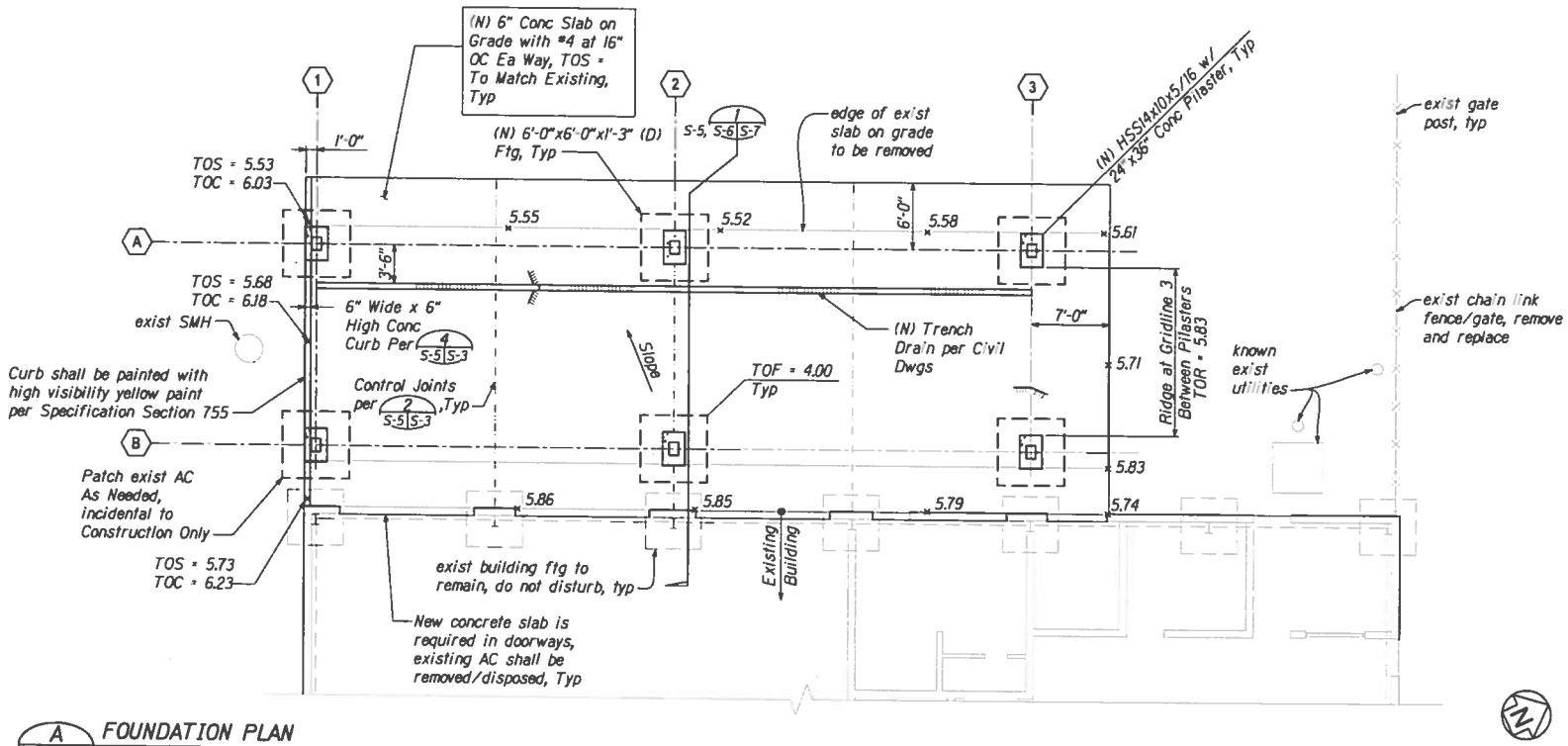
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL DETAILS
OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET CANOPY EXTENSION

Scale: As Shown Date: 09/21/12

SHEET No. S-4 OF 19 SHEETS

FED ROAD DIST NO	STATE	FISCAL YEAR	SHEET NO	TOTAL SHEETS
HAWAII	HAW	2012	14	19



A S-5 S-5 FOUNDATION PLAN

Scale: 3/16" = 1'-0"

Notes:

1. Refer to Architectural drawings for slope, dimensions, locations of openings and existing Information not shown on structural drawings.
2. All steel and structural connectors shall be hot-dipped galvanized.
3. Contractor shall field verify all dimensions prior to new construction. Any discrepancies shall be reported to the Engineer.
4. Contractor shall tone for known and unknown utilities prior to construction.
5. TOF = Top of Footing, TOS = Top of Slab, TOC = Top of Curb, TOR = Top of Ridge
6. Existing elevations shown (x Elev.). See benchmark locations on Sheet C-1 for additional information. Contractor shall field verify all dimensions prior to construction and report any discrepancies to the Engineer.

GRAPHIC SCALE

0 1' 2' 4' 8' 16'

3/16"=1'-0"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

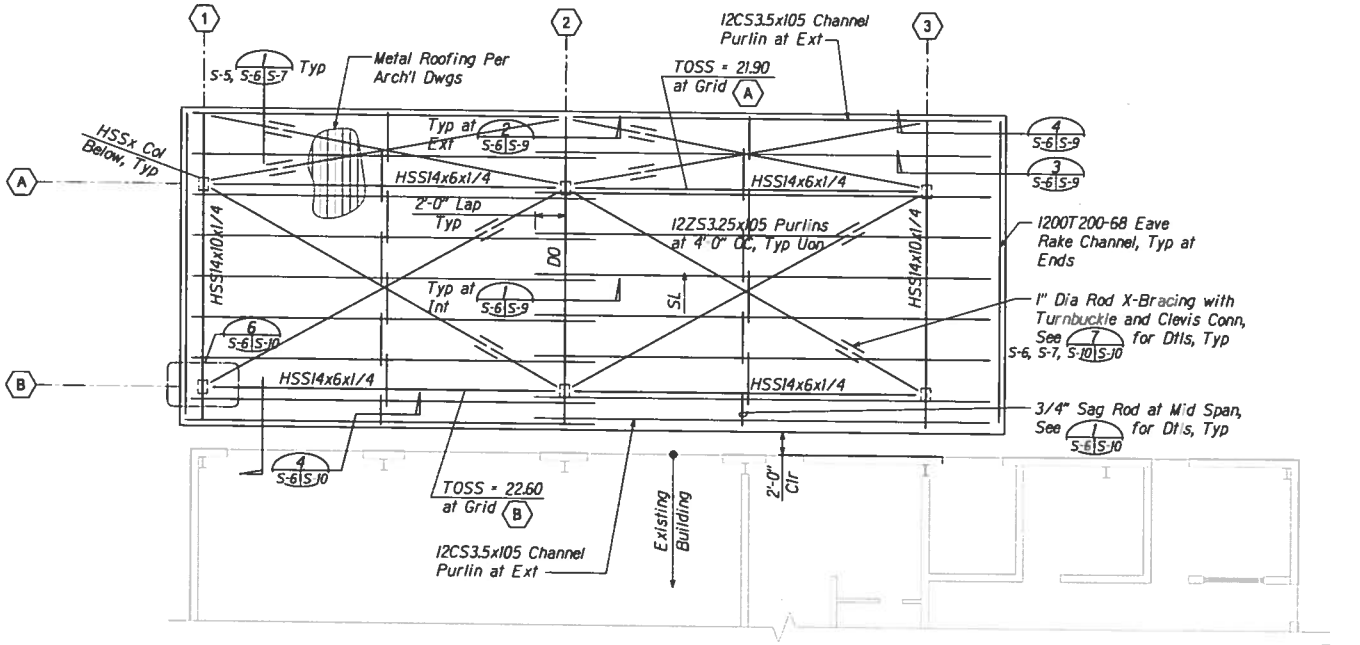
FOUNDATION PLAN

OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET CANOPY EXTENSION

Scale: As Shown Date: 09/21/12

SHEET No. S-5 OF 19 SHEETS

FED ROAD DIST NO	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	2012	15	19



A | S-6 | S-6 CANOPY ROOF FRAMING PLAN

Scale: 3/16" = 1'-0"

Notes:

1. Refer to Architectural drawings for slope, dimensions, locations of openings and existing information not shown on structural drawings.
2. All steel and structural connectors shall be hot-dipped galvanized.
3. Contractor shall field verify all dimensions prior to new construction. Any discrepancies shall be reported to the Engineer.
4. Z-Purlin and Channel designations per AISI Manual 2002, standard SSMA designations.

GRAPHIC SCALE

0 1' 2' 4' 8' 16'

3/16"=1'-0"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

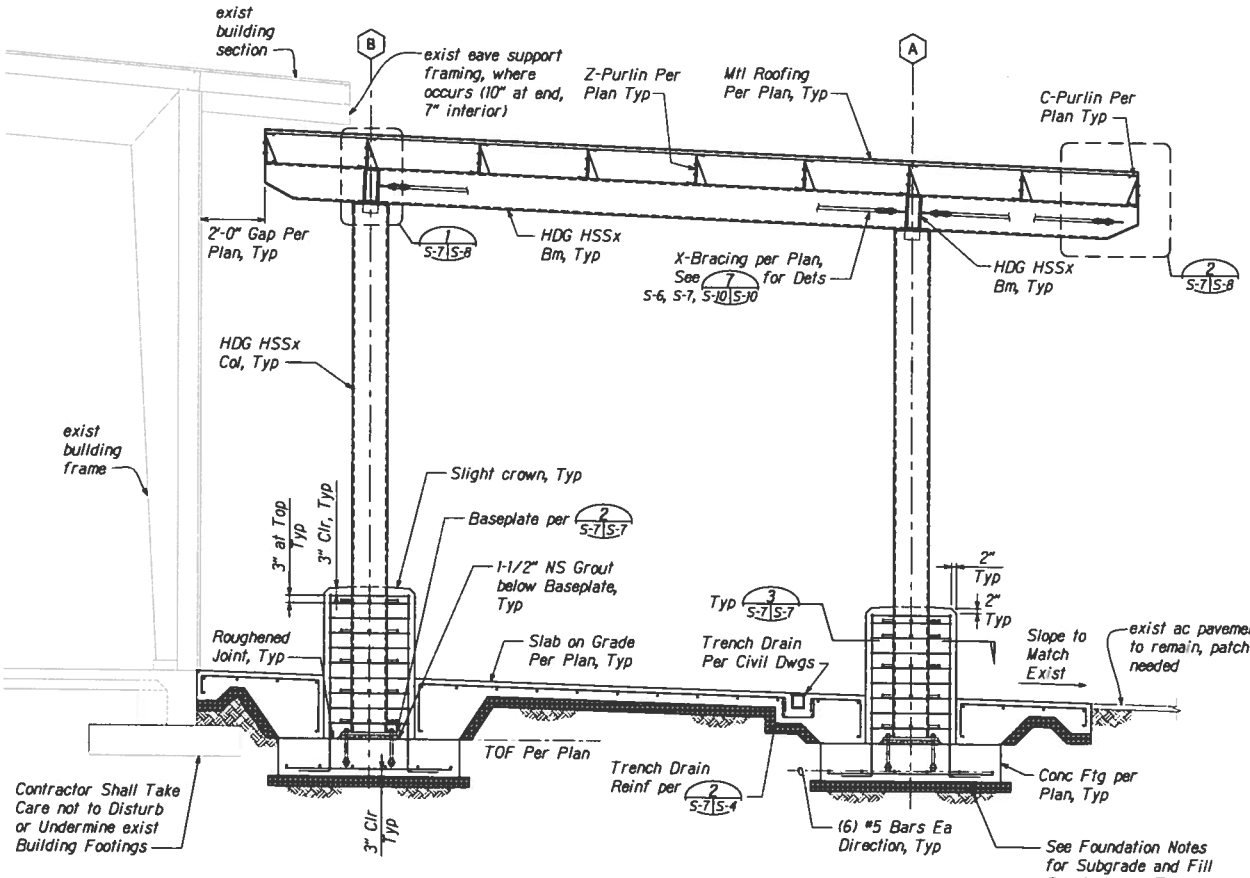
ROOF FRAMING PLAN

OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET CANOPY EXTENSION

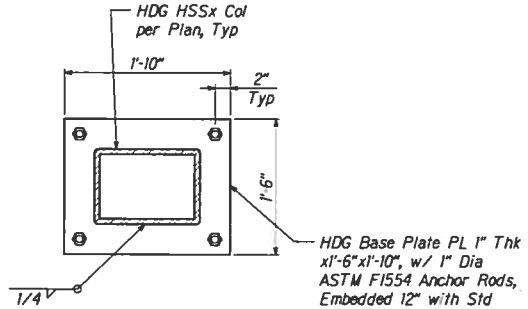
Scale: As Shown Date: 09/21/12

SHEET No. S-6 OF 19 SHEETS

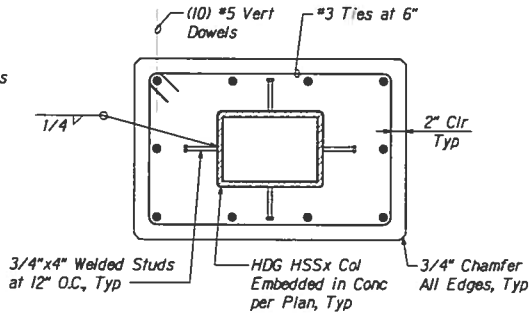
FED ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	2012	16	19



1 S-5, S-6 S-7 **CANOPY SECTION**
Scale: 1/2" = 1'-0"



2 S-7 S-7 **DETAIL - BASEPLATE**
Scale: 1-1/2" = 1'-0"



3 S-7 S-7 **DETAIL - PILASTER**
Scale: 1-1/2" = 1'-0"

GRAPHIC SCALE

0 1' 2' 4' 8' 16'
3/16"=1'-0"

0 3" 6" 1' 2'
1-1/2"=1'-0"

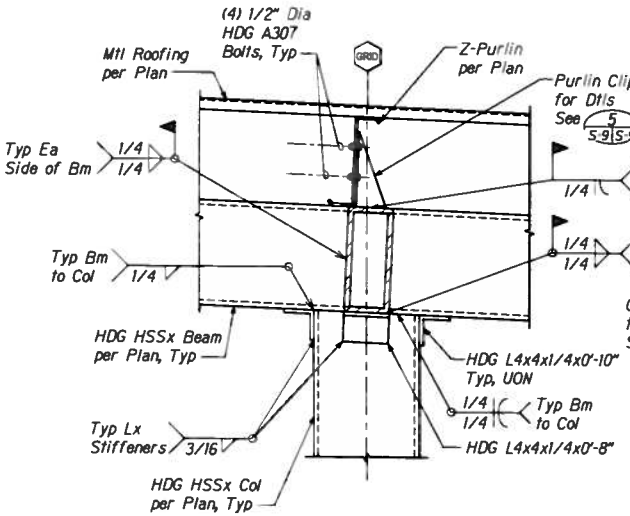
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CANOPY SECTION
OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET CANOPY EXTENSION

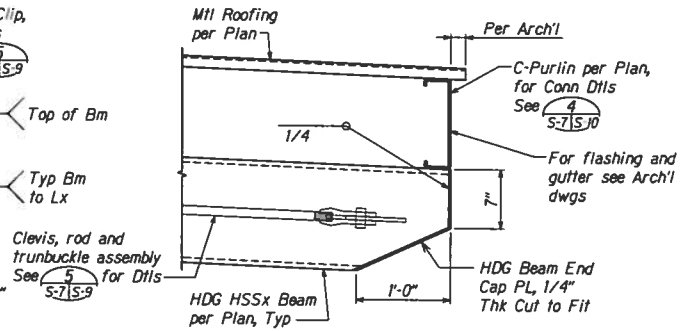
Scale: As Shown Date: 09/21/12

SHEET No. S-7 OF 19 SHEETS

FED ROAD DIST NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	2012	17	19



1 S-7 S-8 DETAIL - CONN
Scale: 1-1/2" = 1'-0"



2 S-7 S-8 DETAIL - END PLATE
Scale: 1-1/2" = 1'-0"

GRAPHIC SCALE
0 3" 6" 1' 2'
1-1/2"=1'-0"

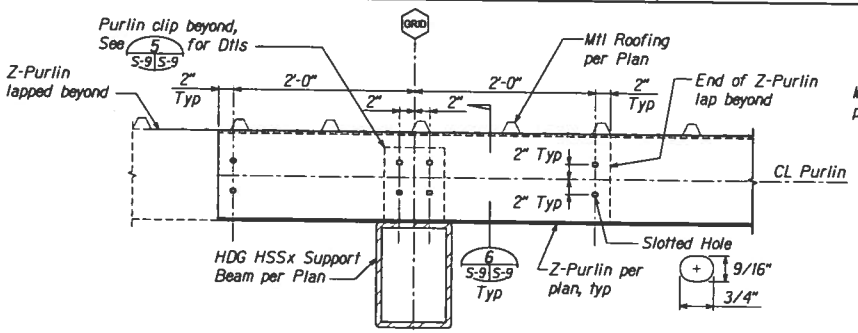
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CANOPY DETAILS
OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET CANOPY EXTENSION

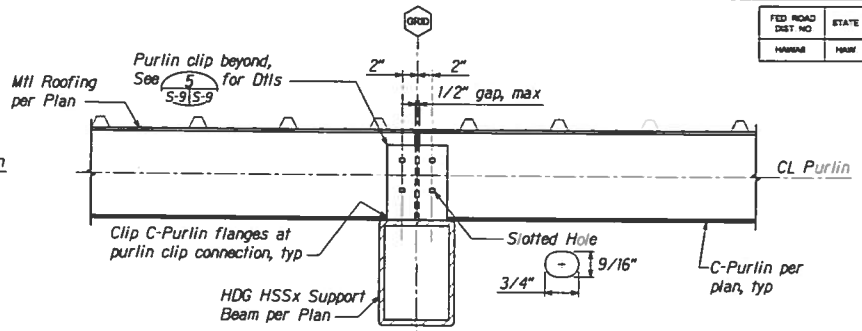
Scale: As Shown Date: 09/21/12

SHEET No. S-8 OF 19 SHEETS

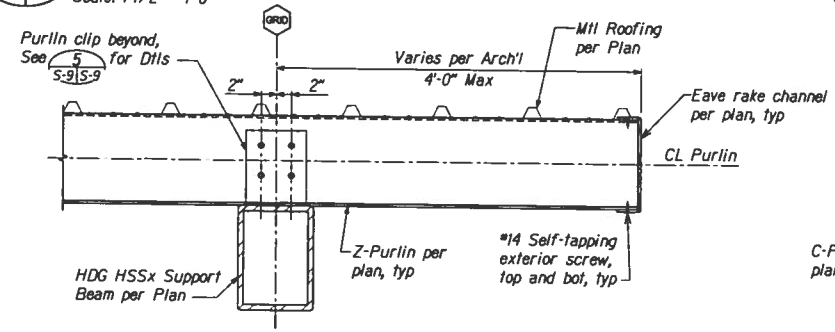
FED ROAD DIST NO	STATE	FISCAL YEAR	SHEET NO	TOTAL SHEETS
HAWAII	HAW	2012	18	19



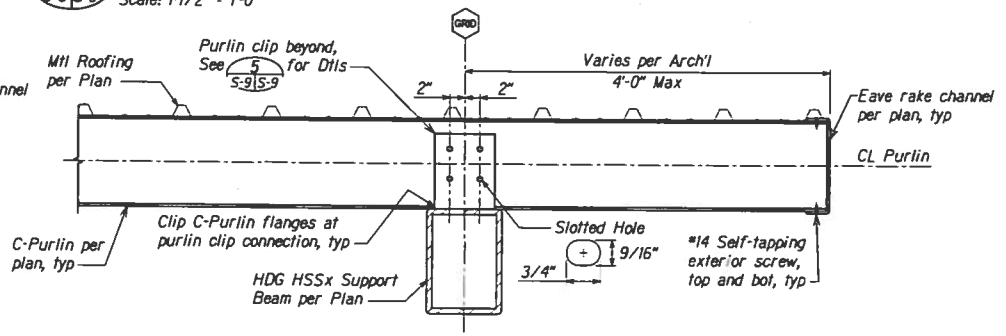
1 S-6|S-9 DETAIL - TYPICAL Z-PURLIN LAP AT INTERIOR
Scale: 1-1/2" = 1'-0"



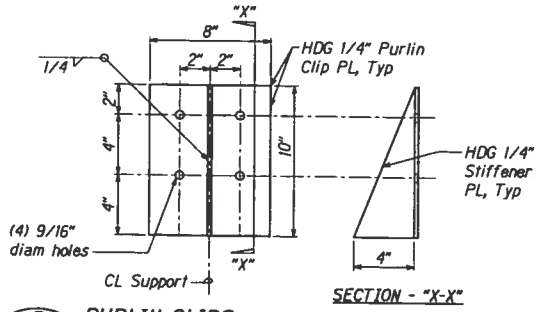
2 S-6|S-9 DETAIL - TYPICAL C-PURLIN CONN AT EXTERIOR
Scale: 1-1/2" = 1'-0"



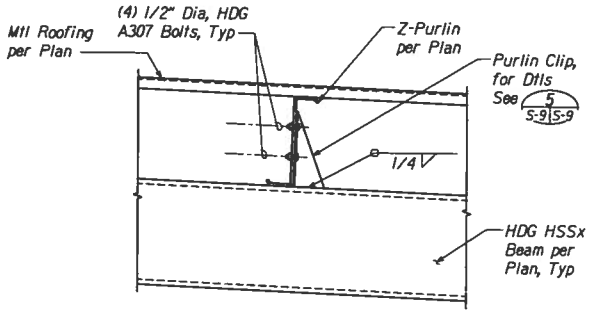
3 S-6|S-9 DETAIL - TYPICAL Z-PURLIN AT EAVE
Scale: 1-1/2" = 1'-0"



4 S-6|S-9 DETAIL - TYPICAL C-PURLIN AT EAVE
Scale: 1-1/2" = 1'-0"

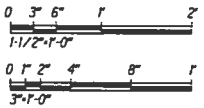


5 S-9|S-9 PURLIN CLIPS
Scale: 3" = 1'-0"



6 S-9|S-9 DETAIL - PURLIN CLIP CONNECTION
Scale: 1-1/2" = 1'-0"

GRAPHIC SCALE



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

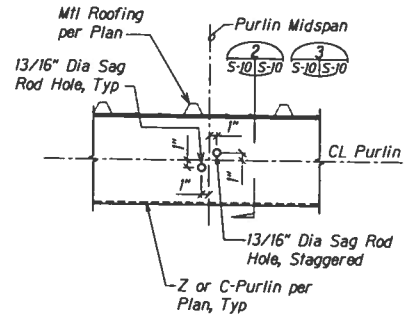
CANOPY DETAILS

OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET CANOPY EXTENSION

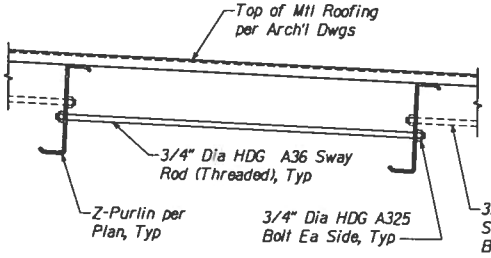
Scale: As Shown Date: 09/21/12

SHEET No. S-9 OF 19 SHEETS

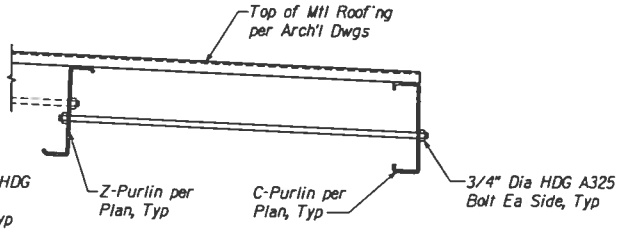
FED ROAD DIST NO	STATE	FISCAL YEAR	SHEET NO	TOTAL SHEETS
HAWAII	HAW	2012	19	19



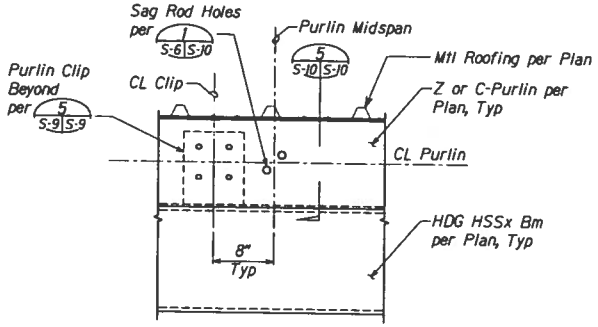
1 S-6 S-10 DETAIL - SWAY ROD
Scale: 1-1/2" = 1'-0"



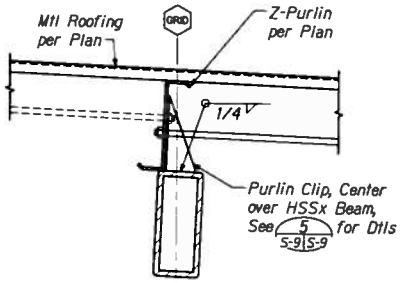
2 S-10 S-10 DETAIL - SWAY ROD
Scale: 1-1/2" = 1'-0"



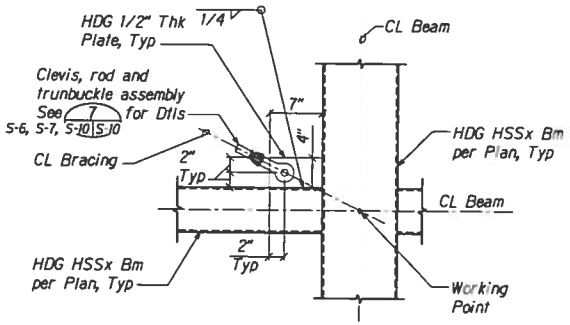
3 S-10 S-10 DETAIL - SWAY ROD
Scale: 1-1/2" = 1'-0"



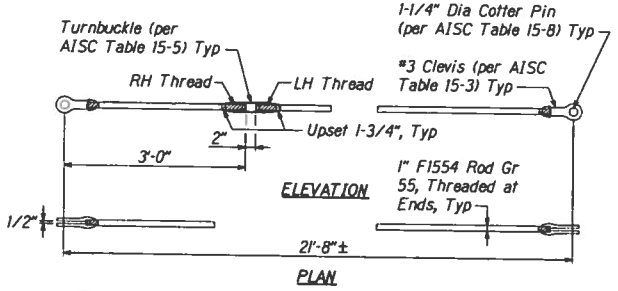
4 S-6 S-10 DETAIL - PURLIN CLIP AT BM
Scale: 1-1/2" = 1'-0"



5 S-10 S-10 SECTION - PURLIN CLIP AT BM
Scale: 1-1/2" = 1'-0"



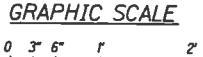
6 S-6 S-10 DETAIL - TYPICAL X-BRACING CONN
Scale: 1-1/2" = 1'-0"



7 S-6, S-7, S-10 S-10 DETAIL - NEW X-BRACE
Scale: 1" = 1'-0"

Notes:
1. Contractor shall field verify all dimensions in the field.
2. Clevis, turnbuckles, recessed pin nuts and rods shall have minimum capacities based on values listed in 13th Edition AISC Steel Construction Manual.
3. Clevis and turnbuckle connections shall be tightened to "snug tight" tension, do not overtighten.
4. All steel rods and connectors shall be HDG.

GRAPHIC SCALE



1-1/2"=1'-0"

1"=1'-0"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CANOPY DETAILS

OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET CANOPY EXTENSION

Scale: As Shown Date: 09/21/12

SHEET No. S 10 OF 19 SHEETS

APPENDIX B
PLANS FOR OAHU DISTRICT OFFICE & BASE YARD KAKOI STREET MAINTENANCE STORAGE BUILDING

INDEX TO DRAWINGS		
NO.	SHEET	DESCRIPTION
1	T-1	TITLE SHEET
2	T-2	GENERAL NOTES
3	A-1	ARCHTECTURAL GENERAL NOTES
4	A-2	FLOOR PLAN
5	A-3	REFLECTED CEILING PLAN
6	A-4	ROOF PLAN
7	A-5	EXTERIOR ELEVATIONS
8	A-6	SECTION
9	A-6	DETAILS
10	DS-1	DEMOLITION PLAN
11	S-1	STRUCTURAL GENERAL NOTES
12	S-2	STRUCTURAL GENERAL NOTES
13	S-3	TYPICAL DETAILS
14	S-4	TYPICAL DETAILS
15	S-5	FOUNDATION PLAN
16	S-6	PAVEMENT PATCHING REPAIR PLAN
17	S-7	ROOF FRAMING PLAN
18	S-8	ELEVATIONS
19	S-9	CANOPY SECTION
20	S-10	CANOPY DETAILS
21	S-11	GATE DETAILS

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

HONOLULU, HAWAII

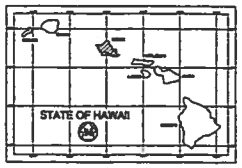
PLANS FOR

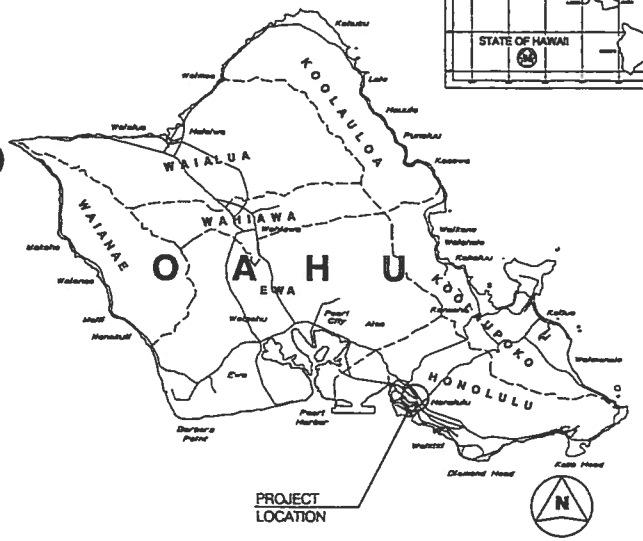
OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET
MAINTENANCE STORAGE BUILDING

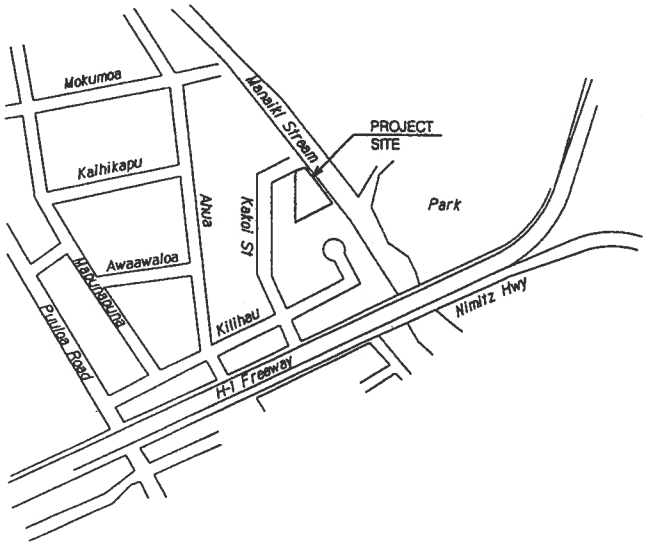
DISTRICT OF HONOLULU

ISLAND OF OAHU

FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HWY.	2013	1	21

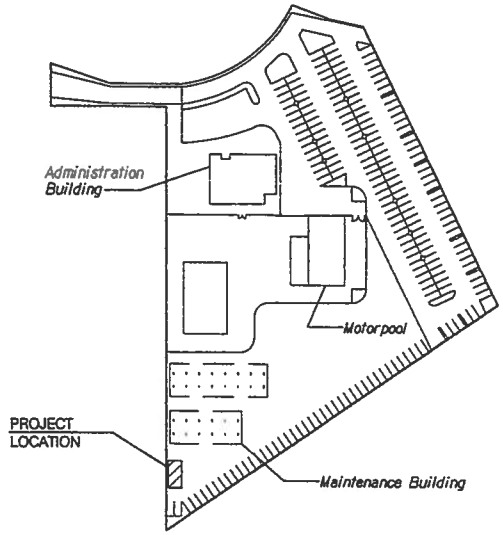






LOCATION MAP

NOT TO SCALE



SITE PLAN

NOT TO SCALE

NOT FOR CONSTRUCTION

DEPARTMENT OF TRANSPORTATION STATE OF HAWAII	
APPROVED:	
DIR. OF TRANSPORTATION	DATE

NAGAMINE OKAWA ENGINEERS INC. DESIGNED BY

HWY-DD MANAGED BY

831-6792 PHONE

APRIL 2013 DATE

FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	2013	2	21

GENERAL NOTES

1. The scope of work for this project consists of demolition of existing storage building and asphalt pavement and construction of new pre-engineered metal storage building.

2. Hawaii Standard Specifications for Road ⊄ Bridge Construction 2005 and Special Provisions for Oahu District Office and Base Yard Maintenance Storage Building FY 13 shall be complied with. For any conflict between the Standard Specifications and these drawings, the more stringent shall apply.

3. The Contractor shall conform to the requirements of Subsection 108.01 - Subletting of Contract, which requires work to be performed to be not less than 30 percent of the total contract cost less deductible items. Non-compliance with this Subsection may be grounds for rejection of bid.

4. Contractor shall obtain all necessary permits required to perform this work.

5. This project requires the implementation of an environmental management plan during all demolition and construction work to prevent and/or minimize environmental impacts during the construction activity. The plan shall address the use of dust and debris containment to minimize fugitive dust. Contractor's attention is directed to the requirements of Section 209 of the 2005 Standard Specifications.

6. The Contractor shall remove all silt and debris resulting from his work. The costs for any necessary remedial action by the Government shall be paid by the Contractor. Contractor shall protect all storm drains and deck openings to prevent the discharge of foreign materials to the water.

7. Wastewater from demolition work shall not be discharged into the sanitary sewer system, storm drainage system, or catch basin. The Contractor shall capture all pollutants and dispose of them off site.

8. The Contractor will be responsible for regulatory fines or penalties that may be imposed by environmental regulatory agencies (EPA and/or State DOH) from construction operations.

9. The Contractor's attention is directed to the following Sections of the Special Provisions: Subsection 104.11 - Utilities and Service; Subsection 105.09 - Coordination Between the Contractors; Subsection 105.10 - Construction takes, Lines, and Grades; Subsection 107.12 - Protection of Persons and Property.

10. The Contractor shall notify the Engineer in writing, two (2) weeks prior to starting construction operations.

11. The Contractor shall indemnify and be solely responsible for the protection of adjacent properties, utilities and existing structures from damages due to construction. Repairing any damage shall be at the Contractor's own expense, to the satisfaction of the Engineer.

12. Smooth pavement transitions shall be constructed at all limits of project, as shown on the plans and/or as directed by the Engineer.

NOT FOR CONSTRUCTION

GEORGE D. GUTIERREZ JR. LICENSED PROFESSIONAL ENGINEER NO. 12187-S HAWAII, U.S.A.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES
OAHU DISTRICT OFFICE ⊄ BASE YARD
KAKOI STREET
MAINTENANCE BUILDING STORAGE

Scale: None Date: 04/24/2013

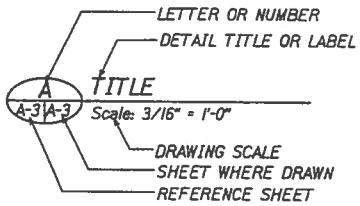
SHEET No. T-2 OF 21 SHEETS

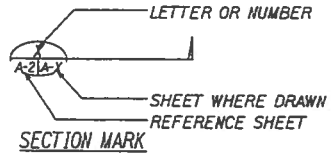
ABBREVIATIONS

AB	ANCHOR BOLT
ABV	ABOVE
AC	ASPHALT CONCRETE
A/C	AIR CONDITIONING
&	AND
@	AT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
ALUM	ALUMINUM
ANOD	ANODIZED
APPROX	APPROXIMATE
BD	BOARD
BLDG	BUILDING
BLKG	BLOCKING
BOT	BOTTOM
BS	BOTH SIDES
B/W	BETWEEN
CJ	CONTROL JOINT
℄	CENTERLINE
CLR	CLEAR
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUOUS
Ø OR DIA	DIAMETER
DET	DETAIL
DIM	DIMENSION
DISP	DISPENSER
DN	DOWN
DR	DOOR
DS	DOWNSPOUT
DWGS	DRAWINGS
EFS	EXTERIOR FINISH SYSTEM
ELEC	ELECTRICAL
EQUIP	EQUIPMENT
EX, EXIST	EXISTING
EXP	EXPANSION, EXPANDED
EXT	EXTERIOR
FA	FIRE ALARM
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FLOOR
FFE	FINISH FLOOR ELEVATION
FIN	FINISH
FLR	FLOOR
FRP	FIBERGLASS REINFORCED PLASTIC
GA	GAUGE
GALV	GALVANIZED
GRD	GROUND
GYP	GYPSUM
HB	HOSE BIBB
H	HIGH, HEIGHT
HOR, HORIZ	HORIZONTAL
HP	HIGH POINT
HT	HEIGHT
INSUL	INSULATION
INT	INTERIOR
JT	JOINT
MANUF	MANUFACTURER
MAX	MAXIMUM
MET, MTL	METAL
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MTD	MOUNTED
#	NUMBER, POUND
NIC	NOT IN CONTRACT
NO	NUMBER
OC	ON CENTER
OD	OUTSIDE DIAMETER
OPG	OPENING
OPP	OPPOSITE
OEM	ORIGINAL EQUIPMENT MANUFACTURER
%	PERCENT
PERP	PERPENDICULAR
PF	PREFINISHED
PL	PLATE
PRE-FAB	PREFABRICATED
PS	POLYMER SURFACE
PT	PAINT
R	RADIUS
REINF	REINFORCEMENT
REQ'D	REQUIRED
RF	ROOF
RM	ROOM
RO	ROUGH OPENING
SCHED	SCHEDULED
SF	SQUARE FEET
SHT	SHEET
SIM	SIMILAR
SL	SLOPE
SPECS	SPECIFICATIONS
SQ	SQUARE
SST	STAINLESS STEEL
ST	STAIN
STD	STANDARD
STL	STEEL
STO	STORAGE
STRUCT	STRUCTURAL
SUSP	SUSPENDED
THK	THICK
THRES	THRESHOLD
THRU	THROUGH
TYP	TYPICAL
VERT	VERTICAL
VEST	VESTIBULE
VTR	VENT THRU ROOF
W/	WITH
W/O	WITHOUT
WD	WOOD
WDW	WINDOW
WP	WATERPROOF

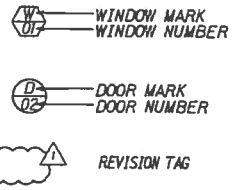
SYMBOLS LEGEND

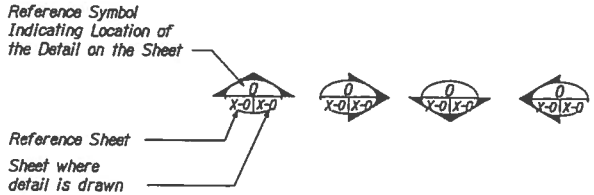
FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	2013	3	21





SECTION MARK





EXTERIOR ELEVATION SYMBOLS

NOT FOR CONSTRUCTION

GRAPHIC SCALE

0 1' 2' 4' 8' 16'

3/16"=1'-0"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

JOHN ALLAN ADVERSALO
LICENSED PROFESSIONAL ARCHITECT
No. 5705
HAWAII, U.S.A.

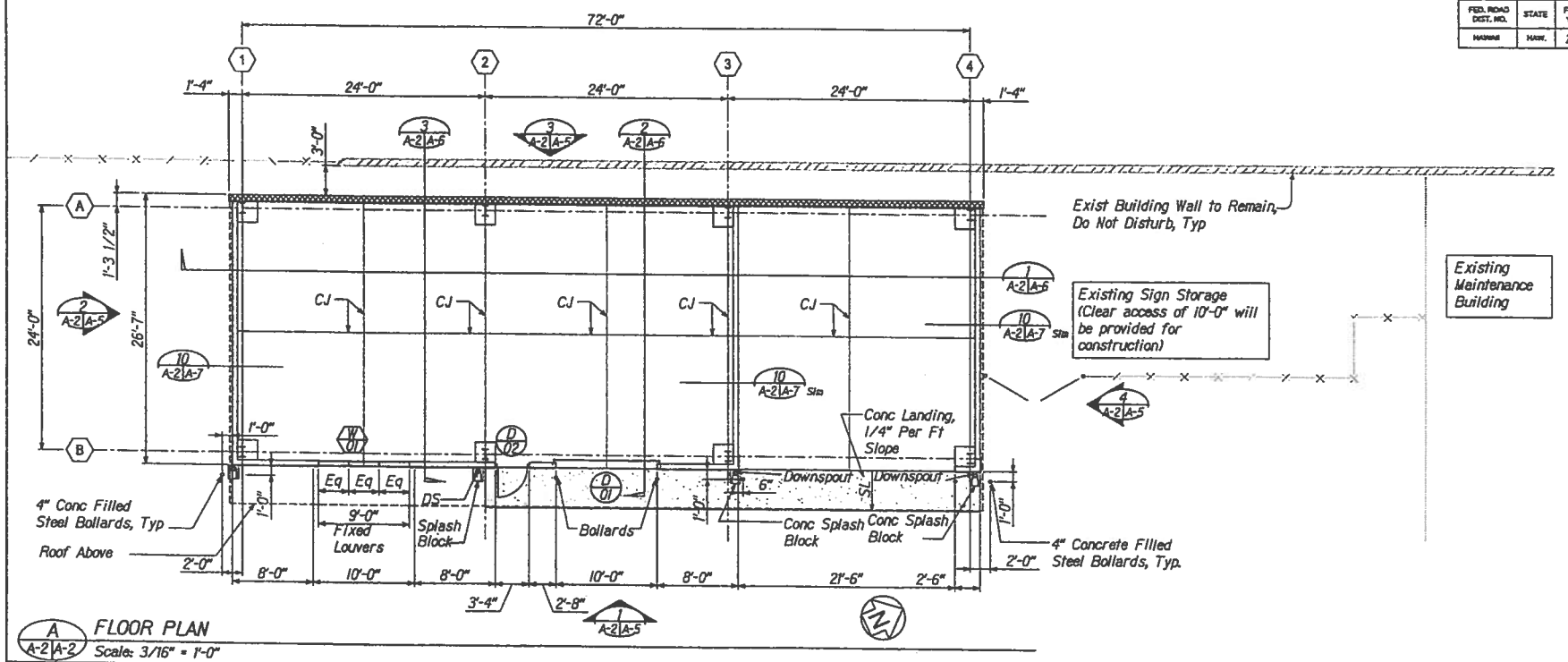
ROOF PLAN

OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET
MAINTENANCE BUILDING STORAGE

Scale: As Shown Date: 04/24/2013

SHEET No. A-1 OF 21 SHEETS

FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	2013	4	21



A A-2|A-2 FLOOR PLAN
Scale: 3/16" = 1'-0"

DOOR SCHEDULE

Door Number	Size (WxH)	Thickness	Door Type	Door Construction	Frame Construction	Door Finish	Frame Finish	Hardware Group	Details: Head	Details: Jamb	Details: Threshold	Remarks
D01	10'-0" x 10'-0"	3/16"	A		STL	PC	MP	–	4/A-7	6/A-7	5/A-7	Door Hood is Galvanized (G90) Factory finished
D02	3'-0" x 4'-0"	1 3/4"	B		STL	MP	MP	*	7/A-7	8/A-7	9/A-7	* See Specifications for Hardware (Section 794.05)

DOC

Door Construction:
STL - Steel, galvanized

Frame Construction:
STL - Steel, galvanized

Door Finish:
MP - Metal, Painted
PC - Powder Coat (Factory Finish)

Frame Finish:
MP - Metal, Painted

GRAPHIC SCALE
0 1' 2' 4' 8' 16'
3/16"=1'-0"

NOT FOR CONSTRUCTION

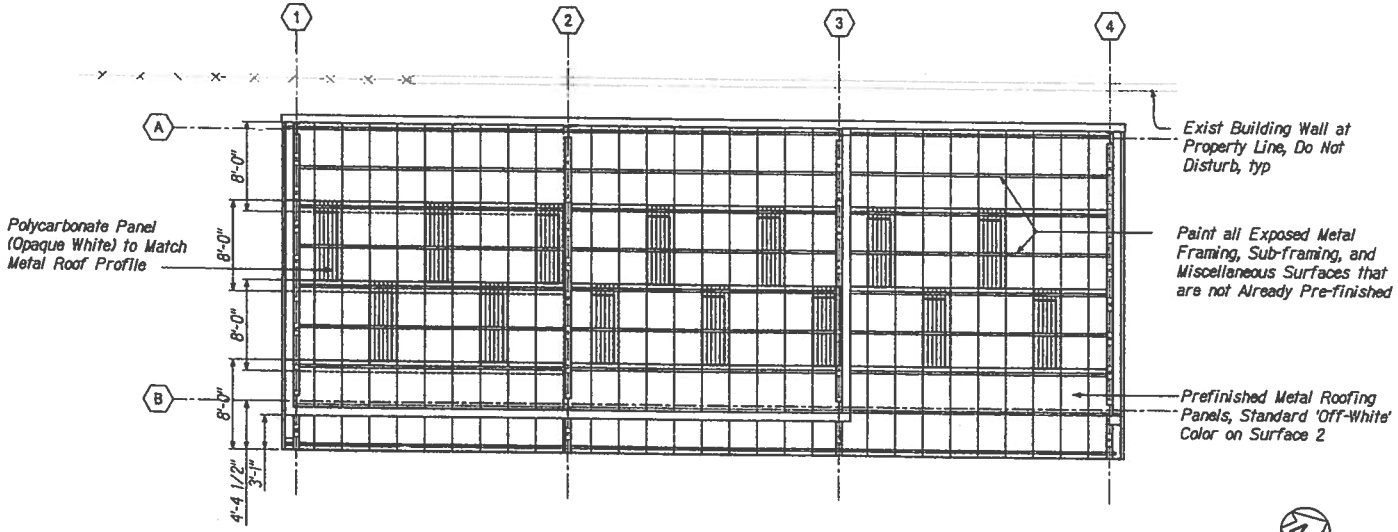
JOHN ALLAN ADAMSON LICENSED PROFESSIONAL ARCHITECT No. 5706 HAWAII, U.S.A.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

FLOOR PLAN
OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET
MAINTENANCE BUILDING STORAGE

Scale: As Shown Date: 04/24/2013
SHEET No. A-2 OF 21 SHEETS

FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HI0008	HAW.	2013	5	21



A / A-3 | A-3 REFLECTED CEILING PLAN
Scale: 3/16" = 1'-0"

WINDOW/LOUVER SCHEDULE

Window/Louver Number	Size (WxH)	Assembly Depth	Louver Type	Window/Louver Construction	Frame Construction	Window/Louver Finish	Frame Finish	Birdscreen/Insect Screen	Details				Remarks
									Head	Jamb	Sill	Mullion	
W/01	9'-0" x 7'-3"	5"	A	EA	EA	FP	FP	Y / Y	11/A-7	14/A-7	12/A-7	13/A-7	

WINDOW/LOUVER NOTES

Window /Louver Construction:
EA - Extruded Aluminum

Frame Construction:
EA - Extruded Aluminum

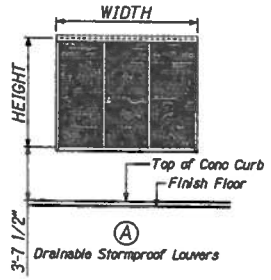
Window/Louver Finish:
FP - Fluoropolymer (Kynar 500 Factory Finish)

Frame Finish:
FP - Fluoropolymer (Kynar 500 Factory Finish)

Birdscreen/Insect Screen (Per Specs):
Y - Yes
N - No

WINDOW/LOUVER TYPES

Scale: 1/4" = 1'-0"



A Drainable Stormproof Louvers

GRAPHIC SCALE
0 1' 2' 4' 8' 16'
3/16"=1'-0"

NOT FOR CONSTRUCTION

JOHN ALLAN ADAMCHAK LICENSED PROFESSIONAL ARCHITECT No. 3788 HAWAII, U.S.A.

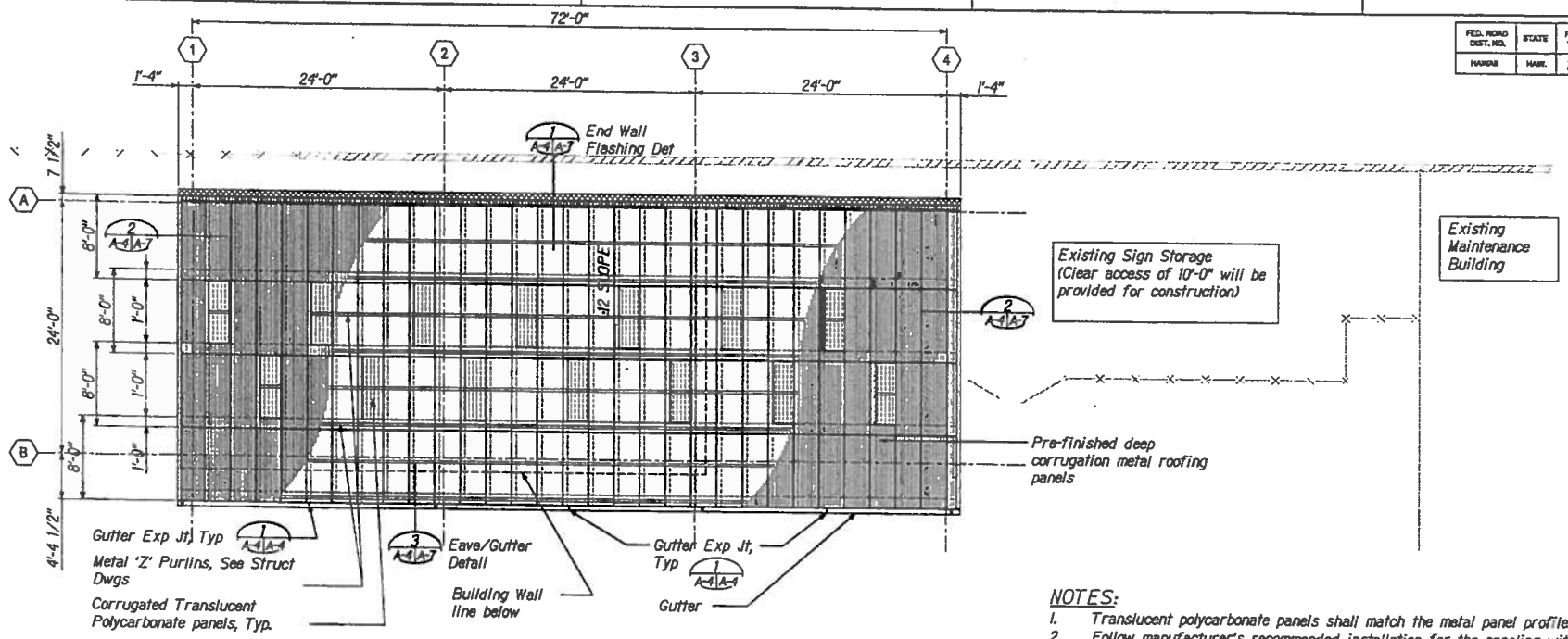
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

REFLECTED CEILING PLAN
OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET
MAINTENANCE BUILDING STORAGE

Scale: As Shown Date: 04/24/2013

SHEET No. A-3 OF 21 SHEETS

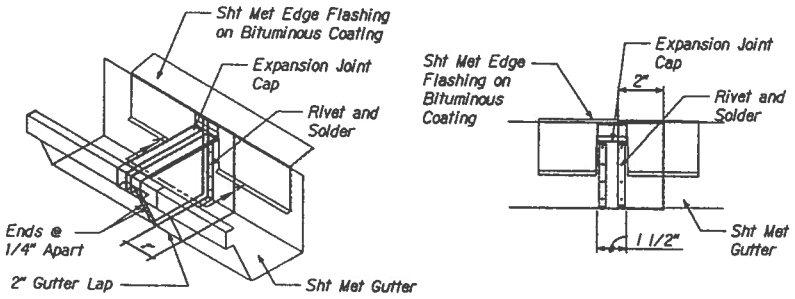
FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	2013	6	21



A ROOF PLAN
A-4 | A-4
Scale: 3/16" = 1'-0"

NOTES:

1. Translucent polycarbonate panels shall match the metal panel profile.
2. Follow manufacturer's recommended installation for the paneling with respect to the prevailing winds.
3. Provide minimum 12" top and bottom endlaps, 2 corrugations at sidelaps.
4. Provide double bead of lap sealant for top and bottom endlaps, seal sidelaps with sealant tape.
5. Location of the polycarbonate panels shown are approximate to show intent.



ISOMETRIC VIEW

SECTION A-A

1 GUTTER EXPANSION JOINT DETAIL
A-4 | A-4
Scale: None

NOT FOR CONSTRUCTION

GRAPHIC SCALE
0 1' 2' 4' 8' 16'
3/16"=1'-0"

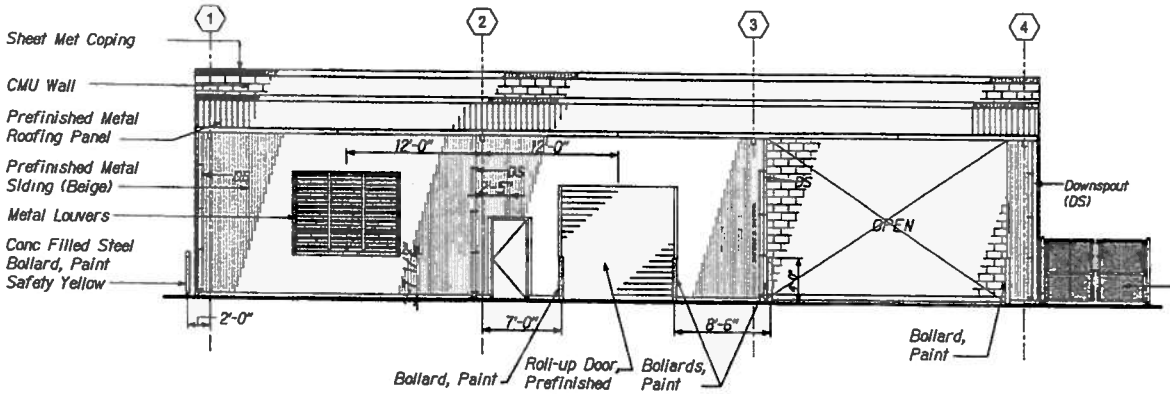
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROOF PLAN
OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET
MAINTENANCE BUILDING STORAGE

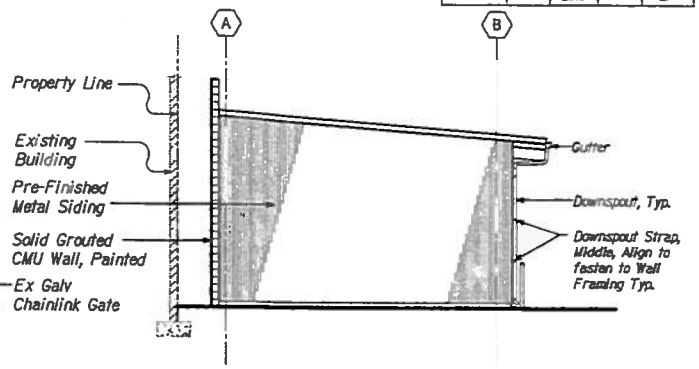
Scale: As Shown Date: 04/24/2013

SHEET No. A-4 OF 21 SHEETS

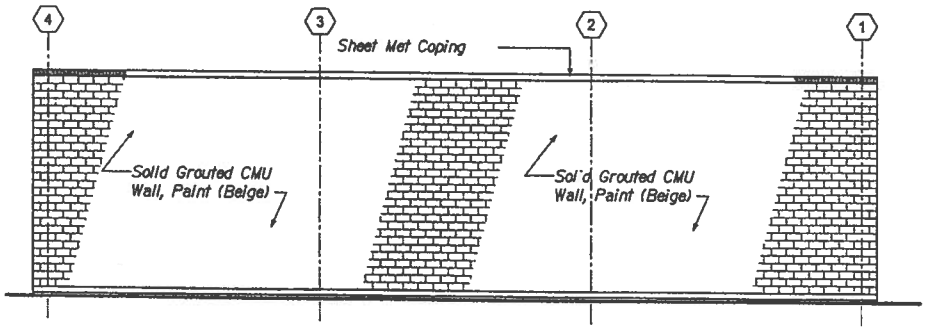
FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	2013	7	21



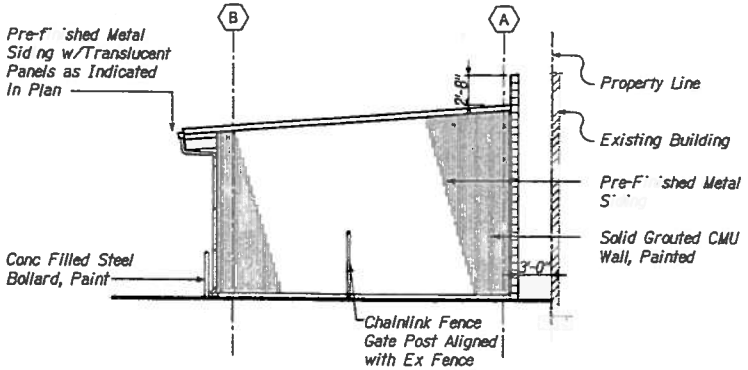
1 A-2 A-5 EAST ELEVATION
Scale: 3/16" = 1'-0"



2 A-2 A-5 SOUTH ELEVATION
Scale: 3/16" = 1'-0"



3 A-2 A-5 WEST ELEVATION
Scale: 3/16" 1'-0"



3 A-2 A-5 NORTH ELEVATION
Scale: 3/16" = 1'-0"

NOT FOR CONSTRUCTION

GRAPHIC SCALE
0 1' 2' 4' 8' 16'
3/16"=1'-0"

JOHN ALLAN ADVERSALO LICENSED PROFESSIONAL ARCHITECT No. 5758 HAWAII, U.S.A.

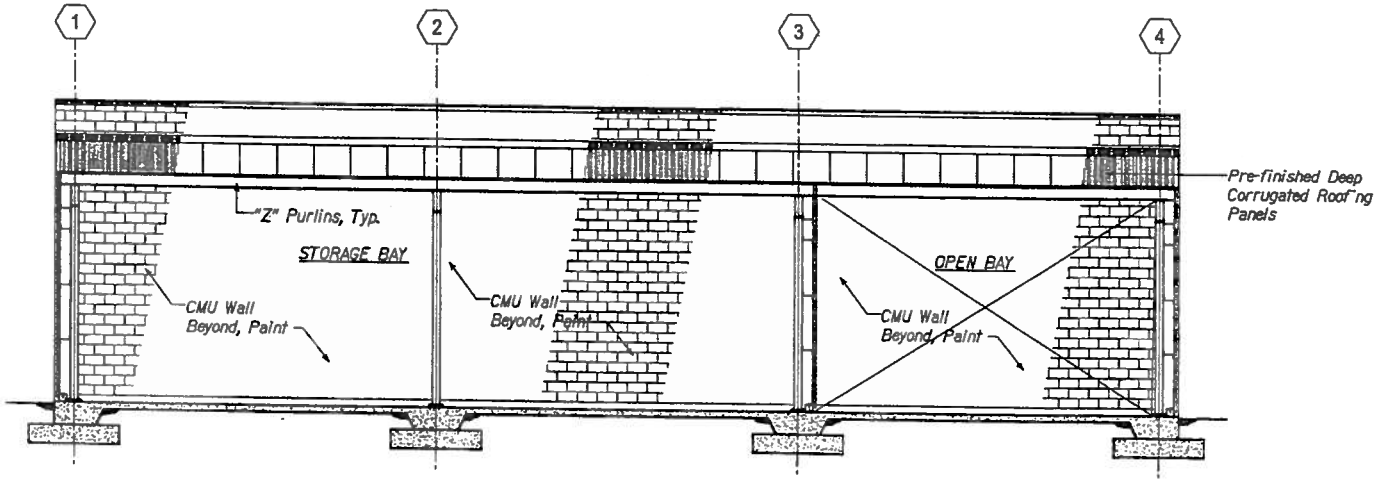
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EXTERIOR ELEVATIONS
OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET
MAINTENANCE BUILDING STORAGE

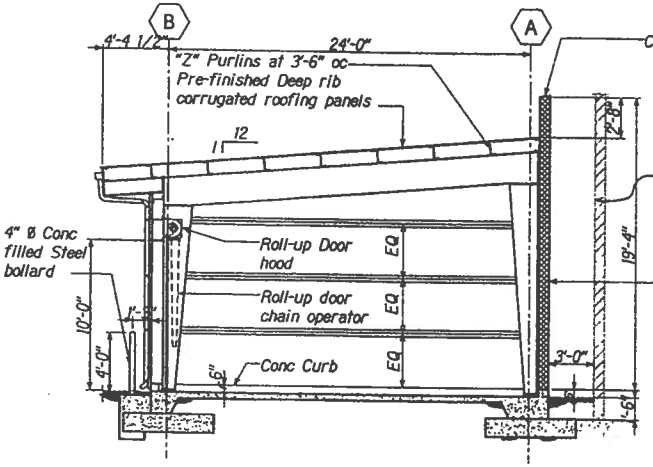
Scale: As Shown Date: 04/24/2013

SHEET No. A-5 OF 21 SHEETS

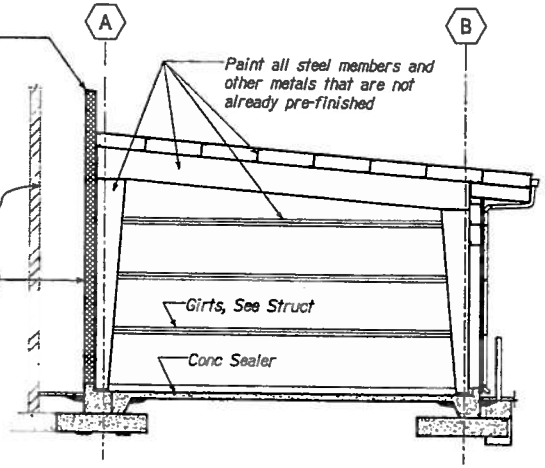
FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	2013	8	21



1 A-2 A-6 SECTION
Scale: 1/4" = 1'-0"



2 A-2 A-6 SECTION
Scale: 1/4" = 1'-0"



3 A-2 A-6 SECTION
Scale: 1/4" = 1'-0"

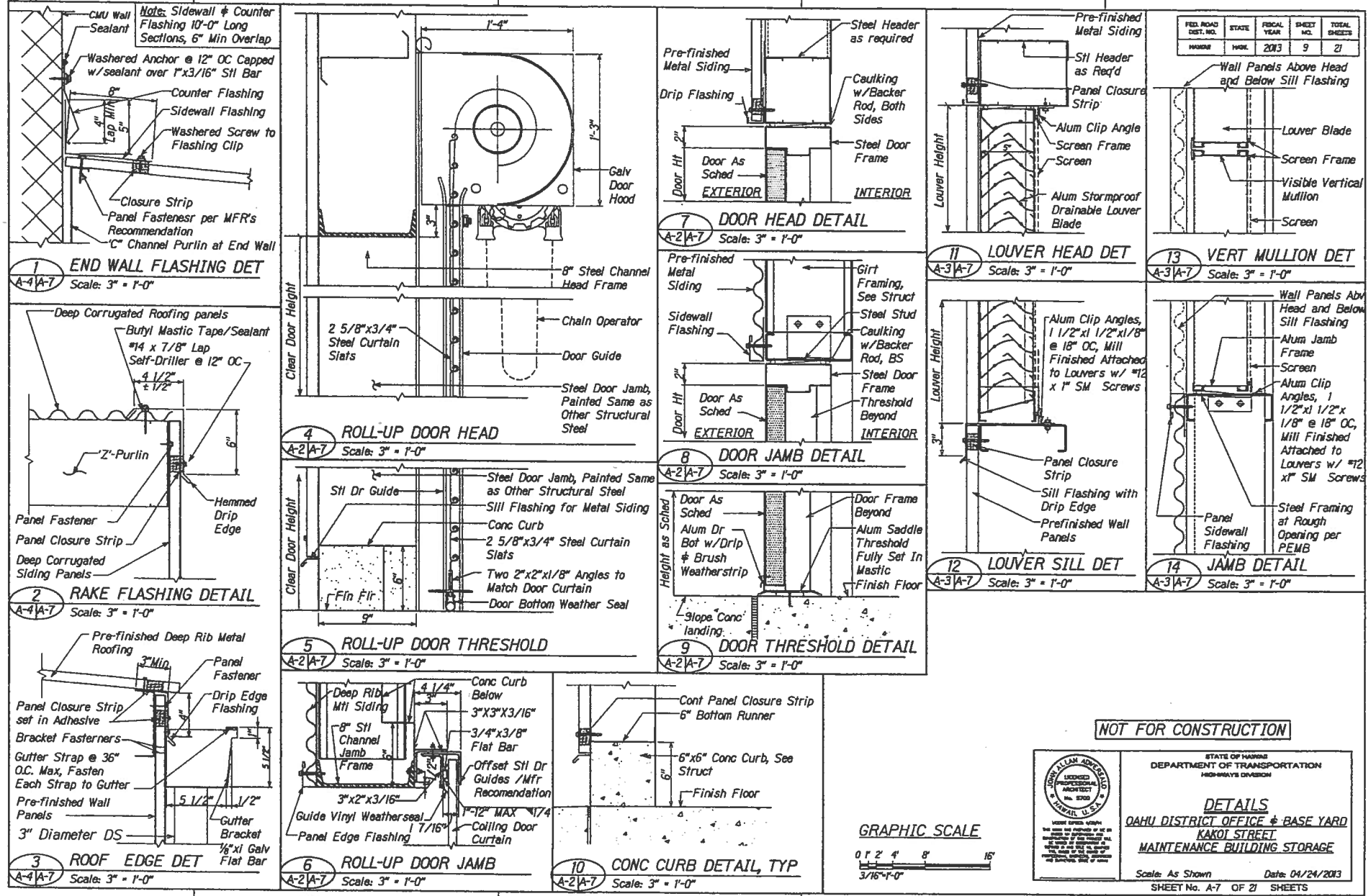
GRAPHIC SCALE
0 1' 2' 4' 8' 16'
3/16"=1'-0"

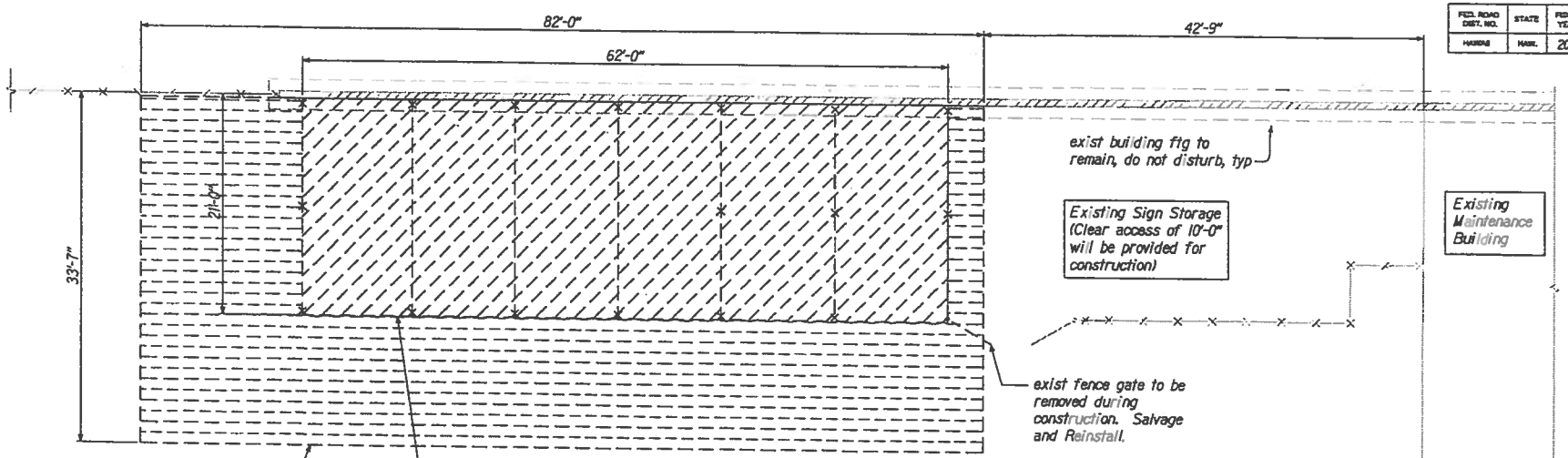
JOHN ALLAN ADAMSON LICENSED PROFESSIONAL ARCHITECT No. 5709 HAWAII U.S.A.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SECTION
OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET
MAINTENANCE BUILDING STORAGE

Scale: As Shown Date: 04/19/2013
SHEET No. A-6 OF 21 SHEETS


CMU Wall
Sealant
Note: Sidewall & Counter Flashing 10'-0" Long Sections, 6" Min Overlap
Washered Anchor @ 12" OC Capped w/sealant over 1"x3/16" Stl Bar
8"
4" Lap Min
5"
Counter Flashing
Sidewall Flashing
Washered Screw to Flashing Clip
Closure Strip
Panel Fastenesr per MFR's Recommendation
'C' Channel Purlin at End Wall
1 END WALL FLASHING DET
A-4 A-7 Scale: 3" = 1'-0"
Deep Corrugated Roofing panels
Butyl Mastic Tape/Sealant
#14 x 7/8" Lap Self-Driller @ 12" OC
4 1/2" ± 1/2"
6"
'Z'-Purlin
Panel Fastener
Panel Closure Strip
Deep Corrugated Siding Panels
Hemmed Drip Edge
2 RAKE FLASHING DETAIL
A-4 A-7 Scale: 3" = 1'-0"
Pre-finished Deep Rib Metal Roofing
3" Min
Panel Fastener
Drip Edge Flashing
Panel Closure Strip set in Adhesive
4"
1"
Bracket Fasterners
Gutter Strap @ 36" O.C. Max, Fasten Each Strap to Gutter
5 1/2"
Pre-finished Wall Panels
5 1/2"
1/2"
3" Diameter DS
Gutter Bracket
1/8"x1 Galv Flat Bar
3 ROOF EDGE DET
A-4 A-7 Scale: 3" = 1'-0"
1'-4"
1'-3"
Galv Door Hood
3"
8" Steel Channel Head Frame
Clear Door Height
2 5/8"x3/4" Steel Curtain Slats
Chain Operator
Door Guide
Steel Door Jamb, Painted Same as Other Structural Steel
4 ROLL-UP DOOR HEAD
A-2 A-7 Scale: 3" = 1'-0"
Stl Dr Guide
Steel Door Jamb, Painted Same as Other Structural Steel
Sill Flashing for Metal Siding
Conc Curb
2 5/8"x3/4" Steel Curtain Slats
Clear Door Height
Fin Flr
6"
Two 2"x2"x1/8" Angles to Match Door Curtain
Door Bottom Weather Seal
9"
5 ROLL-UP DOOR THRESHOLD
A-2 A-7 Scale: 3" = 1'-0"
Deep Rib Mtl Siding
4 1/4"
Conc Curb Below
3"X3"X3/16"
8" Stl Channel Jamb Frame
3/4"x3/8" Flat Bar
Offset Stl Dr Guides /Mfr Recomendation
3"x2"x3/16"
Guide Vinyl Weatherseal
1'-12" MAX
1/4
7/16"
Coiling Door Curtain
Panel Edge Flashing
6 ROLL-UP DOOR JAMB
A-2 A-7 Scale: 3" = 1'-0"
Steel Header as required
Pre-finished Metal Siding
Drip Flashing
Caulking w/Backer Rod, Both Sides
Steel Door Frame
Door Ht
2"
Door As Sched
EXTERIOR
INTERIOR
7 DOOR HEAD DETAIL
A-2 A-7 Scale: 3" = 1'-0"
Pre-finished Metal Siding
Girt Framing, See Struct
Steel Stud
Sidewall Flashing
Caulking w/Backer Rod, BS
Steel Door Frame
Door Ht
2"
Door As Sched
Threshold Beyond
EXTERIOR
INTERIOR
8 DOOR JAMB DETAIL
A-2 A-7 Scale: 3" = 1'-0"
Height as Sched
Door As Sched
Door Frame Beyond
Alum Dr Bot w/Drip & Brush Weatherstrip
Alum Saddle Threshold Fully Set In Mastic
Finish Floor
Slope Conc landing
9 DOOR THRESHOLD DETAIL
A-2 A-7 Scale: 3" = 1'-0"
Cont Panel Closure Strip
6" Bottom Runner
6"x6" Conc Curb, See Struct
6"
Finish Floor
10 CONC CURB DETAIL, TYP
A-2 A-7 Scale: 3" = 1'-0"
Pre-finished Metal Siding
Stl Header as Req'd
Panel Closure Strip
Louver Height
Alum Clip Angle
Screen Frame
Screen
Alum Stormproof Drainable Louver Blade
11 LOUVER HEAD DET
A-3 A-7 Scale: 3" = 1'-0"
Louver Height
Alum Clip Angles, 1 1/2"x1 1/2"x1/8" @ 18" OC, Mill Finished Attached to Louvers w/ #12 x 1" SM Screws
3"
Panel Closure Strip
Sill Flashing with Drip Edge
Prefinished Wall Panels
12 LOUVER SILL DET
A-3 A-7 Scale: 3" = 1'-0"
Wall Panels Above Head and Below Sill Flashing
Louver Blade
Screen Frame
Visible Vertical Mullion
Screen
13 VERT MULLION DET
A-3 A-7 Scale: 3" = 1'-0"
Wall Panels Abv Head and Below Sill Flashing
Alum Jamb Frame
Screen
Alum Clip Angles, 1 1/2"x1 1/2"x 1/8" @ 18" OC, Mill Finished Attached to Louvers w/ #12 x1" SM Screws
Panel Sidewall Flashing
Steel Framing at Rough Opening per PEMB
14 JAMB DETAIL
A-3 A-7 Scale: 3" = 1'-0"
FED. ROAD DIST. NO. | STATE | FISCAL YEAR | SHEET NO. | TOTAL SHEETS
HAWAII | HWY. | 2013 | 9 | 21
NOT FOR CONSTRUCTION
JOHN ALLAN ADDERALD LICENSED PROFESSIONAL ARCHITECT No. 5700 HAWAII, U.S.A.
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
DETAILS
OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET
MAINTENANCE BUILDING STORAGE
Scale: As Shown
Date: 04/24/2013
SHEET No. A-7 OF 21 SHEETS
GRAPHIC SCALE
0 1' 2' 4' 8' 16'
3/16"=1'-0"



FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HWY.	2013	10	21

A S-5 DS-1 DEMOLITION PLAN

Scale: 3/16" = 1'-0"

Notes:

1. Based on a Hazardous Materials Study performed, Lead Based Paint (LBP) and Lead Containing Paint (LCP) were found in various locations within the existing structure to be removed. Locations inlcude:
   a. Maroon paint on the interior concrete footings. (LBP - 0.83% by weight)
   b. Remnant white and yellow paint (spillage) on the floor. (LBP - 1.2% by weight)
   c. Beige paint at existing CMU backwall (LCP - 0.016% by weight)

   The Contractor shall follow the HIOSH Lead In Construction Standards (Health Standards, Title 12, Subtitle 8, Part 3, Chapter 148J) for protection of workers during demolition. Any debris generated from materials and surfaces containing LBP that are removed or impacted during demolition must be disposed in accordance with applicable regulatory requirements, including undergoing Toxicity Characteristic Leaching Procedure (TCLP) Lead analysis prior to disposal or acceptance by the landfill.
2. See asphalt pavement patching plan for additional information regarding extents of asphalt pavement removal.
3. The DOT will remove all stored contents prior to demolition. The contractor shall notify the DOT 14 days in advance of demolition.
4. The Contractor shall take care not to disturb adjacent building, building footings and chainlink fencing. Any damage as a result of demolition shall be repair by the Contractor at the sole discretion of the Engineer.

GRAPHIC SCALE

0 1' 2' 4' 8' 16'

3/16"=1'-0"

NOT FOR CONSTRUCTION

GEORGE D. CUTTLEMOD JR. LICENSED PROFESSIONAL ENGINEER NO. 12107-E HAWAII, U.S.A.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DEMOLITION PLAN
OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET
MAINTENANCE BUILDING STORAGE

Scale: As Shown Date: 04/24/2013

SHEET No. DS-1 OF 21 SHEETS

FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	2013	11	21

STRUCTURAL GENERAL NOTES

1. All materials shall conform to the drawings and specifications.

2. The Structural Drawings and Special Provisions represent the finished structure. They do not indicate the method of construction. The Contractor shall provide all measures necessary to protect the structure during construction. Such measures shall include, but not be limited to, bracing, shoring for loads due to construction equipment, wind, seismic, etc. Observation visits to the site by the Engineer shall not include inspection of the above items.

3. Refer to Architectural Plans additional information including, but not limited to, relative location, slopes, dimensions, etc.

4. The Contractor shall be solely responsible for all excavation procedures including lagging, shoring and protection of adjacent property structures, utilities, etc.

5. The Contractor shall be solely responsible for coordinating the work of all trades and shall check all dimensions. All discrepancies shall be called to the attention of the Engineer and be resolved before proceeding with the work.

6. Notes and details on Drawings shall take precedence over General Notes and Typical Details. Any discrepancies between specifications and drawings shall be brought to the attention of the Engineer. For any discrepancies the more stringent requirement shall apply.

7. Shop Drawings required by Special Provisions shall be submitted to Engineer for review prior to fabrication. Copies of construction documents are not acceptable.

8. Construction materials shall be spread out if placed on roof. Load shall not exceed the design live load per square foot.

9. Design Criteria:

   A. Codes
      1. 2006 International Building Code
      2. 2009 State Building Code

   B. Design Live Loads
      Roof = 20 PSF (Reducible)

   C. Wind = 110 MPH, Exposure C

   D. Seismic
      Design Category = D

10. Special Inspection Requirements:

    A. Concrete Slab on Grade = Not Required

    B. Concrete Ftgs and Pilaster = Required

    C. Reinforcing Steel = Required

    D. Shop Welding = Not Required
       (All welds shall be done in an approved fabricator's shop)

    E. Field Welding = Required

    F. Anchor Bolts = Required

    G. Epoxy
       Embedded Rods = Required

    H. High-Strength Bolts = Required

    Special Inspection shall be provided by the Owner. Contractor shall hire and pay for testing services. See Special Provisions Section 601 for concrete testing requirements. Special Inspection shall not relieve the Contractor of his responsibilities to complete the Project in accordance with the Drawings and Special Provisions and to provide safety on site. Contractor shall notify Special Inspector and testing agency at least 2 days in advance for work to be performed requiring Special Inspection.

FOUNDATION

1. Foundation design is based on Table 1804.2 of the 2006 International Building Code.

2. Allowable Bearing Pressures (D+L) = 1500 PSF
   Sliding Resistance = 130 PSF
   Passive Earth Pressure = 100 PCF

3. Contractor shall provide for de-watering of excavations from either surface water, ground water or seepage.

4. Contractor shall provide for design and installation of all cribbing, sheathing, and shoring necessary to safely retain excavations and earth banks.

5. Excavations for footings shall be approved by the Engineer prior to placing the concrete and reinforcing. Contractor shall notify Engineer when excavation is ready for inspection.

6. Footing backfill and utility trench backfill within building area shall be mechanically compacted in layers, to the approval of the Engineer.

7. Concrete slabs-on-grade and footings shall be underlain by a minimum of 4 inches of imported granular material. The granular material shall consist of crushed rock, such as ASTM C33, No. 67, compacted to a minimum of 95 percent as determined by ASTM D1557.

8. Imported granular structural fill shall be well-graded, non-expansive granular material. Maximum particle size shall be 1-1/2 inches and not more than 15 percent of soil by weight shall pass through #200 sieve. Plasticity index of soil passing the #40 sieve shall not be greater than 10. Fill shall be restricted to horizontal lifts of 8 inches of loose thickness and compacted to at least 95 percent as determined by ASTM D1557.

9. Subgrade below granular structural fill and aggregate base course shall be scarified to a depth of 6 inches, moistened to 2 percent above optimum moisture content, and compacted to a minimum of 95 percent compaction as determined by ASTM D1557. See Specification Section 304, Aggregate Base Course for additional information.

10. All excavations shall be properly backfilled. Contractor shall brace or protect structure from lateral loads during construction.

11. Footings shall be placed and estimated according to depths shown on drawings. Should soil encountered at these depths not be approved by the soils engineer, footing elevations will be altered as required by Engineer.

12. See Special Provisions Oahu District Office and Base Yard Maintenance Storage Building FY 13 for additional requirements not noted above.

CONCRETE

1. For additional requirements not noted below, see Special Provisions.

2. All concrete unless otherwise noted shall be regular weight hard rock type (150#/cu. ft.). Coarse aggregate shall be from basalt.

3. Schedule of structural concrete 28-day strength and types:

   Foundations and
   Slab on Grade = 5000 PSI

   Water/cement (w/c) ratio of foundation, slabs on grade, and pilaster concrete shall not exceed 0.40, see Specifications for additional information.

4. Portland cement shall conform to ASTM C150, Type I or II.

5. Concrete mixes shall be designed by a qualified testing laboratory and shall be submitted to the Engineer for review.

6. Clear coverage of concrete over outer reinforcing bars shall be as follows (UON):

   A. Concrete poured
      directly against earth = 3" clear to reinf.

   B. Slab on Grade:
      Exposed to weather = 1 1/2" clear at top

7. All reinforcing bars, anchor bolts and other concrete inserts shall be well secured in position prior to placing concrete.

8. Curing compounds: See Special Provisions.

9. Concrete admixtures containing chloride or chloride salts shall not be used.

10. All roughened surfaces in concrete shall be made with a minimum amplitude of 1/4".

11. Contractor shall provide two-week schedules showing expected concrete pour locations and times.

NOT FOR CONSTRUCTION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRUCTURAL GENERAL NOTES
OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET
MAINTENANCE BUILDING STORAGE

Scale: None Date: 04/24/2013

SHEET No. S-1 OF 21 SHEETS

FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	2013	12	21

REINFORCING STEEL

1. Reinforcing bars shall conform to ASTM A615, Grade 60 requirements.
2. Anchor bolts, dowels and other embedded items shall be securely tied in place before concrete is poured.
3. All reinforcing bar bends shall be made cold.

CONCRETE MASONRY (CMU)

1. Concrete block shall be hollow load-bearing concrete masonry unit conforming to ASTM C90 grade N-II units, normal weight, f'm = 1,500 psi.
2. All walls shall be constructed with type M mortar. Mortar shall attain compressive strength of 2,500 psi at 28 days.
3. Grout shall flow into all joints of the masonry without segregation. Compressive strength at 28 days = 2,500 psi.
4. Reinforcing bars - see note under reinforcing steel for requirements.
5. Provide a minimum of 1/2" grout between main reinforcing and masonry units.
6. Grout solid all cells in concrete block.
7. If block is layed to a height exceeding 5'-4" for each grout lift, provide cleanout at base for cell containing reinforcing.
8. Cell shall be in vertical alignment. Dowels in footing shall be set to align with cores containing reinforcing steel. Secure vertical bars with positioners at 8'-0" max.
9. Concrete surfaces shall be cleaned of all laitance prior to setting blocks.
10. Unless noted otherwise, all walls shall be constructed in conventional running bond. Refer to architectural drawings for surface texture and height of units, laying pattern and joint type.

PRE-ENGINEERED METAL BUILDING

1. A Pre-Engineered Metal Building (PEMB) complying with all project specifications shall be provided by the Contractor including all structural and non-structural components.
2. Project specifications include but are not limited to building size (width, length and height), coating, and design criteria.
3. Pre-Engineered Metal Building substitution shall include shop drawings and calculations signed and stamped by a licensed Structural Engineer in the State of Hawaii.
5. Pre-Engineered Metal Building design shall be provided by the Contractor. Drawings and calculations shall be stamped and signed by a Structural Engineer licensed in the State of Hawaii. Refer to design criteria in general notes on sheet S-1 and specifications for additional requirements.
6. Foundation system shown is based on layout of columns and lateral-force-resisting system indicated on drawings. Revision of column locations and lateral-force-resisting system location will require revision of foundation system and may affect footing sizes. Spread footing depths and sizes as shown on plans shall be minimum required for bidding purposes.
7. Contractor shall submit shop drawings and PEMB design calculations to Engineer for review prior to fabrication and construction of footings.
8. PEMB structure shall be designed for dead load (DL), live load (LL), wind (WL), and earthquake load (EQ), in accordance with governing building code. PEMB shall provide lateral out of plane support to the CMU wall on Grid (A) at roof level.
9. All framing shall be provided by PEMB manufacturer and shall support all roof loads. In addition to loads from these elements, 2 psf collateral load shall be added. This includes future MEP. Purlins and girts shall have a minimum thickness of 18 gage.
10. All framing incidental to PEMB framing including but not limited to z-girt base angles, shall be provided by the PEMB manufacturer. Anchorage design of incidental framing shall be provided by PEMB manufacturer.
11. Metal roofing shall not be used to support suspended loads. Metal roofing shall have a minimum thickness of 24 gage. See Architectural Drawings for Roofing Details.
12. For future additions, metal roofing shall not be used to support piping, electrical conduits, etc. Attachments shall be supported from Unistrut P1000 framing or equal attached to purlins or beams. Fittings and hardware shall be provided by same manufacturer as framing members. Framing members shall not be spaced more than 4'-0" apart in each direction. Each suspended load shall not exceed 300 lbs.

EPOXY MATERIAL

1. Refer to drawings for areas which require epoxy embedded bolts and dowels.
2. Epoxy adhesive products for non-overhead applications into solid material shall be noted in the following or approved equal:
   A. Hilti HIT HY150 MAX by Hilti Corporation
   B. Sikadur HI-Mod by Sika Corporation
   C. Simpson Epoxy Tie-Set by Simpson Strong-Tie for concrete
   D. Simpson Epoxy Tie-Set by Simpson Strong-Tie for CMU
3. Contractor to locate existing steel reinforcing by non-destructive testing prior to drilling all holes for epoxy embed connections. Existing reinforcing shall not be cut or damaged.
4. Clean holes with motor driven compressed air and wire brush off all dust prior to epoxy installation.
5. All epoxy embedded dowels shall have periodic special inspection.

ABBREVIATIONS

AB	anchor bolt	ga	gage
add'l	additional	galv	galvanized
Arch'l	Architectural	(h), horiz	horizontal
bm	beam	Mech	Mechanical
CC	center to center	mtl	metal
CJ	construction joint	(N)	new
CL	center line	opng	opening
clr	clear	reinf	reinforcement
cont	continuous	sl	slope
ctrd	centered	TOF	top of footing
dia	diameter	TOS	top of slab
DO	ditto	TOC	top of curb
dwg(s)	drawing(s)	TOSS	top of structural steel
exist	existing		
Elec	Electrical	TOR	top of ridge
elev	elevation	typ	typical
EF	each face	UON	unless otherwise noted
EJ	expansion joint	(v), vert	vertical
EW	each way	WP	work point
ftg	footing		

LEGEND

- Concrete
- Steel Plate or Section
- Brace
- Turnbuckle

NOT FOR CONSTRUCTION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

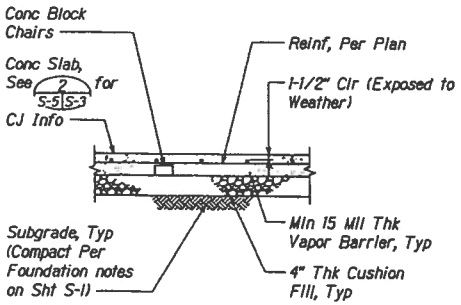
STRUCTURAL GENERAL NOTES

OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET
MAINTENANCE BUILDING STORAGE

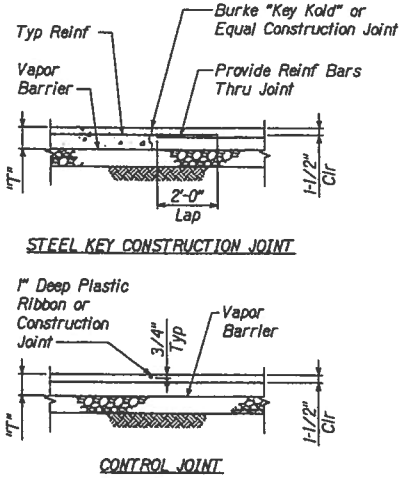
Scale: 2 Date: 04/24/2013

SHEET No. S-2 OF 21 SHEETS

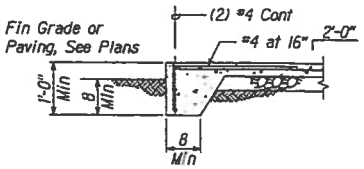
FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	2013	13	21



1 S-5 S-3 TYPICAL SLAB ON GRADE
Not to Scale



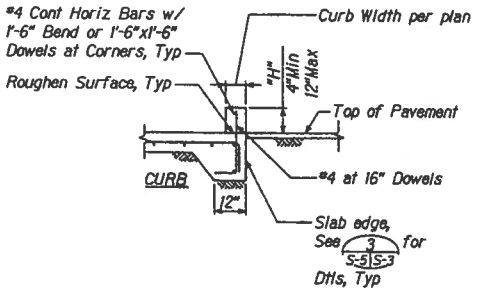
2 S-5 S-3 TYPICAL SLAB ON GRADE JOINTS
Not to Scale



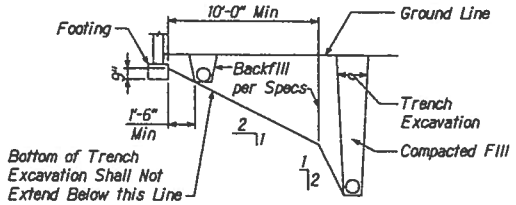
3 S-5 S-3 SLAB EDGE
Not to Scale

Notes:

1. See plan for size and location of curbs.



4 S-5 S-3 CONCRETE CURBS
Not to Scale



Note:
The contractor shall provide shoring, sheathing or otherwise maintaining the side of the excavation from cave-ins until all backfill is completed per specifications.

5 S-5 S-3 EXCAVATIONS PARALLEL TO FTG
Not to Scale

NOT FOR CONSTRUCTION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL DETAILS
OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET
MAINTENANCE BUILDING STORAGE

Scale: 3 Date: 04/24/2013

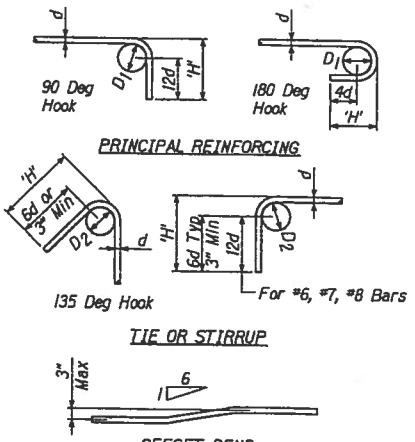
SHEET No. S-3 OF 21 SHEETS

FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	2013	14	21

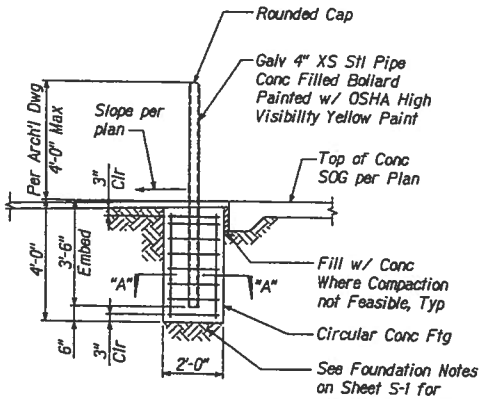
HOOK LENGTHS (H) (IN INCHES), UON

Bar Size	Standard Hooks		Stirrup or Tie Hook			
	90 Deg. Hook	180 Deg. Hook	90 Deg. Hook	135 Deg. Hook	D2	D1
#3	6	4	3-1/2	4	1-1/2	2-1/4
#4	8	4-1/2	4-1/2	4-1/2	2	3
#5	10	5	5-1/2	5-1/2	2-1/2	3-3/4
#6	12	6	12	7-1/2	4-1/2	4-1/2
#7	14	7	14	9	-	5-1/2
#8	16	8	-	-	-	6

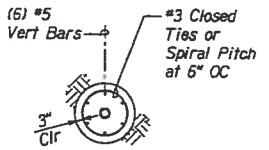
Notes:
1. All bends shall be made cold.



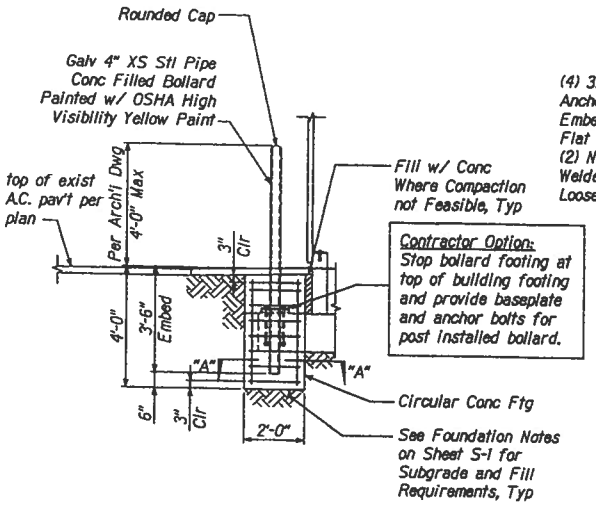
1 S-5 | S-4 BAR BEND AND HOOKS
Not to Scale



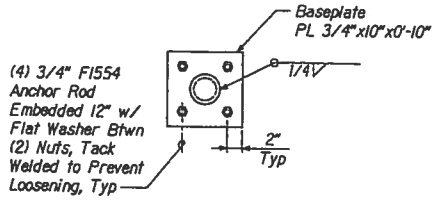
2 S-5 | S-4 DETAIL - PIPE BOLLARD
Not to Scale



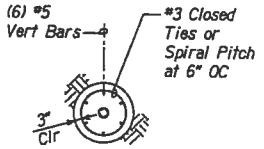
SECTION "A-A"



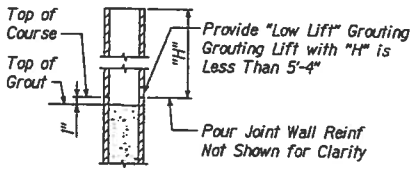
3 S-5 | S-4 DETAIL - PIPE BOLLARD AT FTG
Not to Scale



CONTRACTOR OPTION
BASEPLATE



SECTION "A-A"



4 S-5 | S-4 HORIZ CONSTRUCTION JOINT IN MASONRY WALL
Not to Scale

NOT FOR CONSTRUCTION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

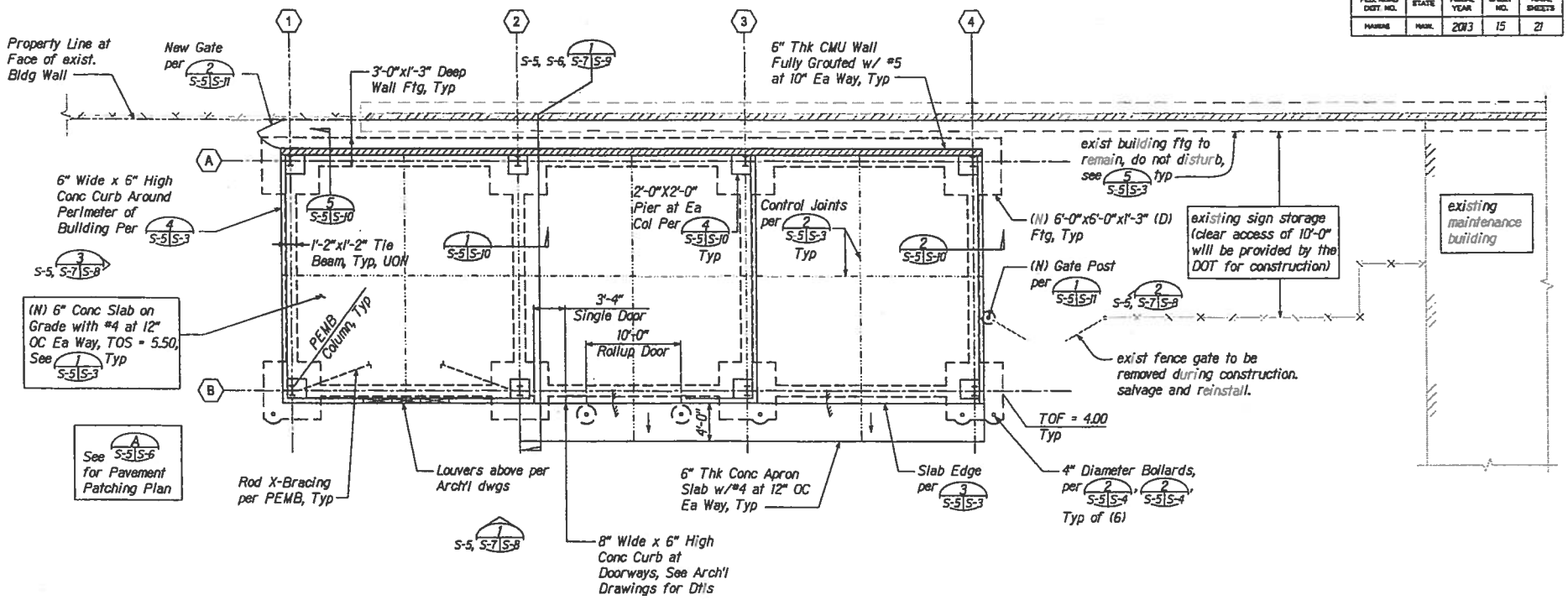
TYPICAL DETAILS

OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET
MAINTENANCE BUILDING STORAGE

Scale: As Shown Date: 04/24/2013

SHEET No. S-4 OF 21 SHEETS

FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	2013	15	21



Stat 24
Mag Nail w/Shiner
Elev = 5.31

A S-5 S-5 FOUNDATION PLAN

Scale: 3/16" = 1'-0"

N

Notes:

- See General Notes on sheets S-1 and S-2 and Typical Details on sheets S-3 and S-4 for additional information.

1. Refer to Architectural drawings for slope, dimensions, locations of openings and existing information not shown on structural drawings.
2. Contractor shall field verify all dimensions prior to new construction. Any discrepancies shall be reported to the Engineer.
3. Contractor shall tone for known and unknown utilities prior to construction. Based on available plans and survey no utilities are expected.

Legend:

TOF = Top of Footing

TOS = Top of Slab

GRAPHIC SCALE

0 1' 2' 4' 8' 16'

3/16"=1'-0"

NOT FOR CONSTRUCTION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

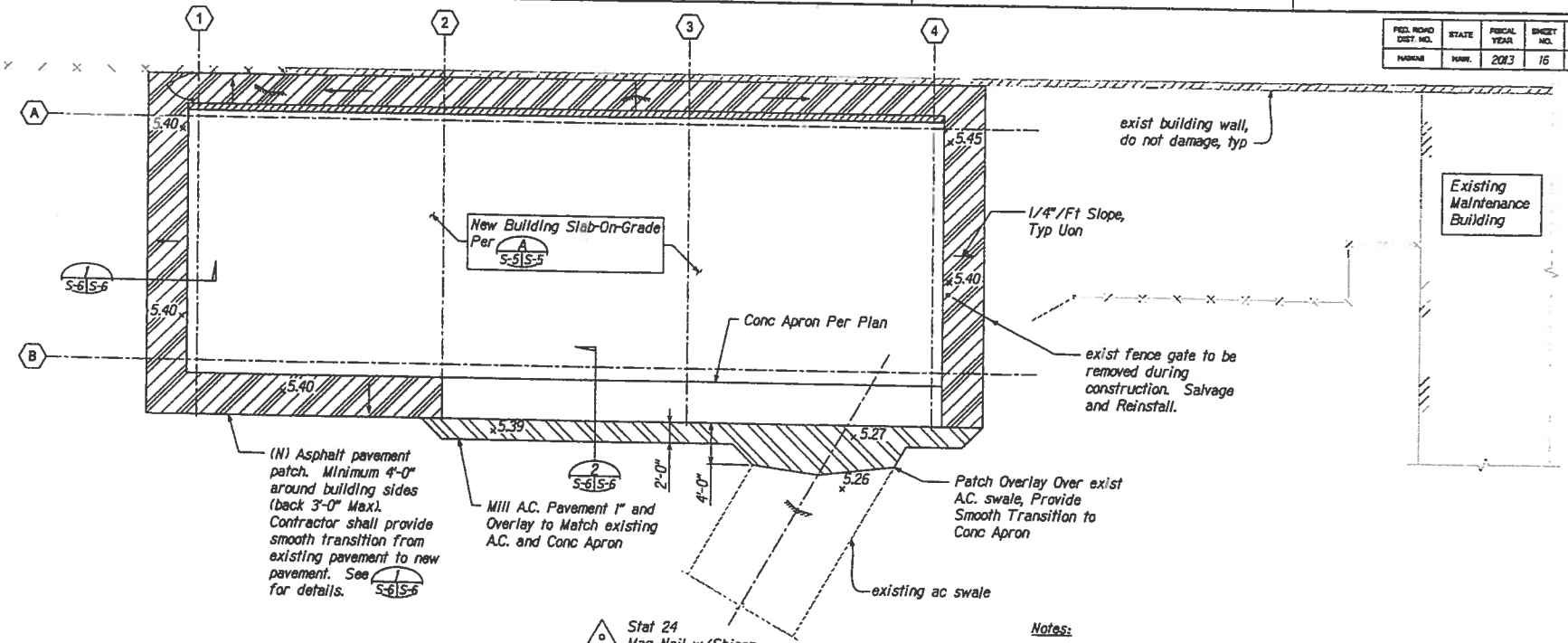
FOUNDATION PLAN

OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET
MAINTENANCE BUILDING STORAGE

Scale: As Shown Date: 04/24/2013

SHEET No. S-5 OF 21 SHEETS

FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	2013	16	21

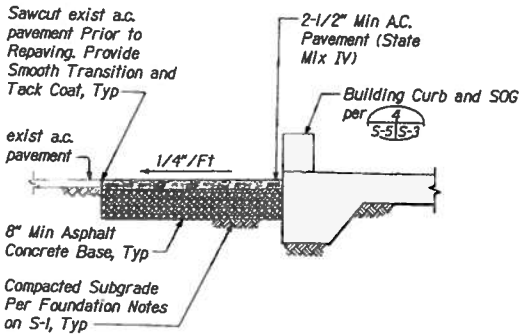


A S-5 | S-5 ASPHALT PAVEMENT PATCHING PLAN

Scale: 3/16" = 1'-0"

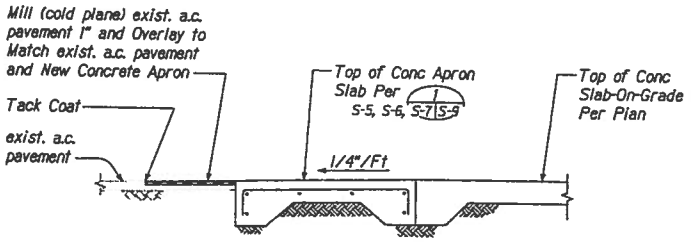
Notes:

1. Existing elevations shown (× Elev.). Benchmark location Stat 24 provided for elevation reference. Contractor shall field verify all dimensions prior to construction and report any discrepancies to the Engineer.



1 S-6 | S-6 Detail

Scale: 3/4" = 1'-0"



2 S-6 | S-6 Detail

Scale: 3/4" = 1'-0"

GRAPHIC SCALE

0 1' 2' 4' 8' 16'
3/16"=1'-0"

0 6" 1' 2' 4'
3/4"=1'-0"

NOT FOR CONSTRUCTION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

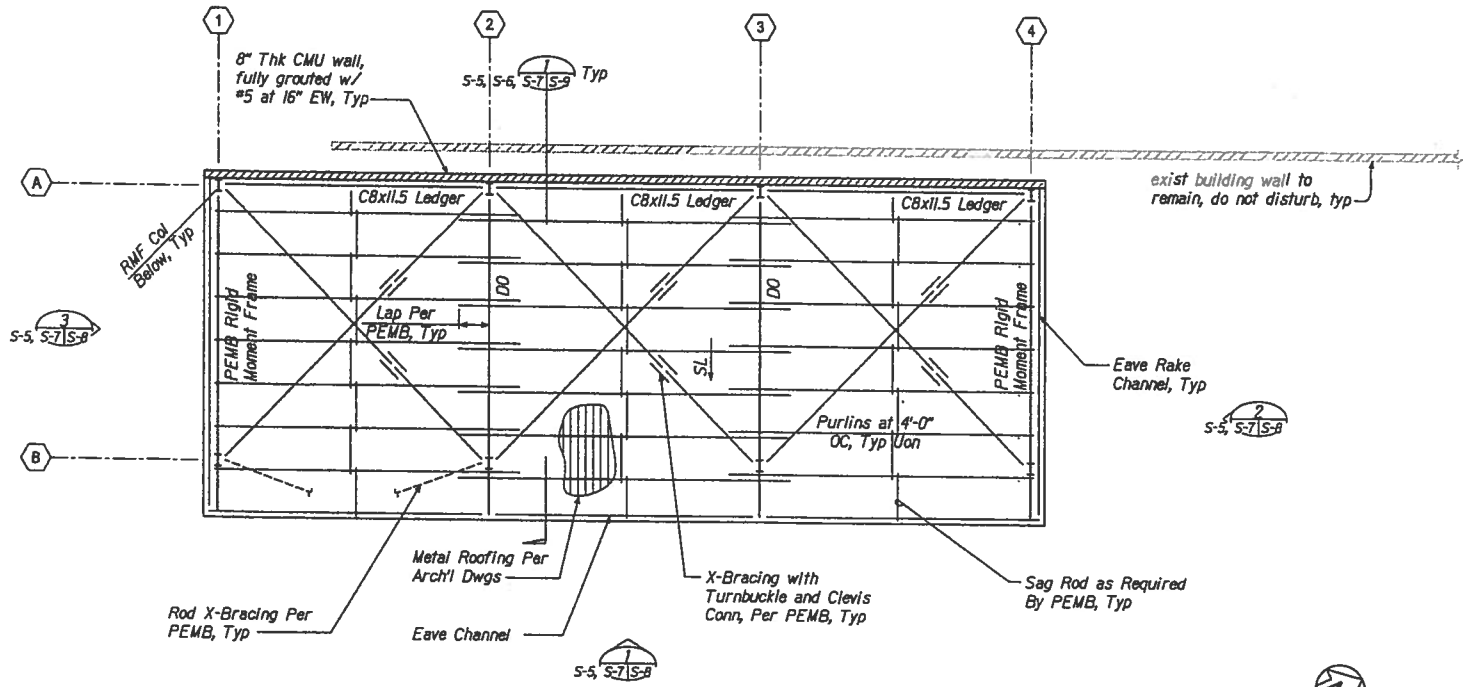
PAVEMENT PATCHING PLAN

OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET
MAINTENANCE BUILDING STORAGE

Scale: As Shown Date: 04/24/2013

SHEET No. S-6 OF 21 SHEETS

FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	2013	17	21



A S-7 S-7 ROOF FRAMING PLAN

Scale: 3/16" = 1'-0"

Notes:

- See General Notes on sheets S-1 and S-2 and Typical Details on sheets S-3 and S-4 for additional information.

1. Refer to Architectural drawings for slope, dimensions, locations of openings and existing information not shown on structural drawings.
2. Contractor shall field verify all dimensions prior to new construction. Any discrepancies shall be reported to the Engineer.
3. Contractor shall tone for known and unknown utilities prior to construction. Based on available plans and survey no utilities are expected.

GRAPHIC SCALE

0 1' 2' 4' 8' 16'

3/16"=1'-0"

NOT FOR CONSTRUCTION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

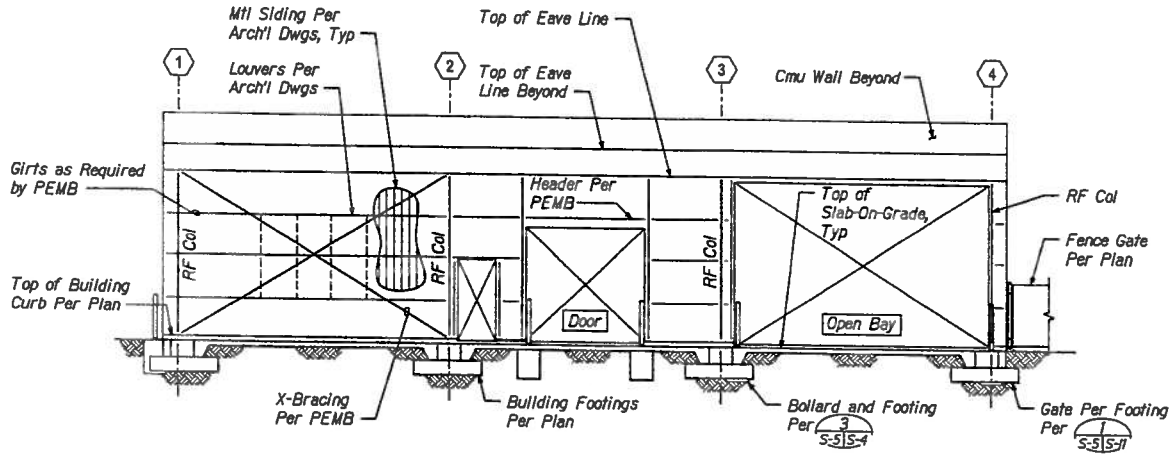
ROOF FRAMING PLAN
OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET
MAINTENANCE BUILDING STORAGE

Scale: As Shown Date: 04/24/2013

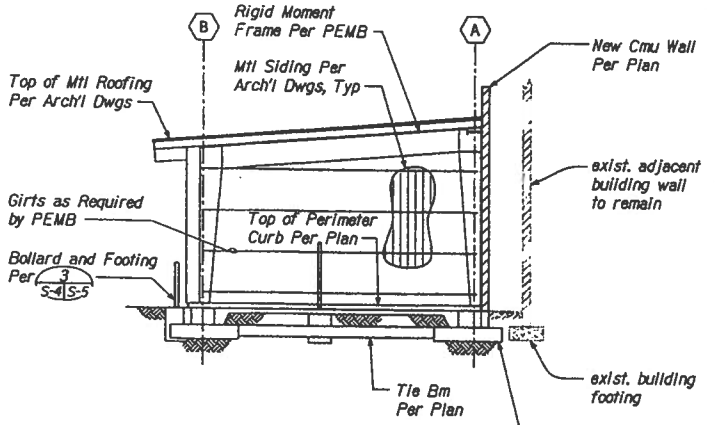
SHEET No. S-7 OF 21 SHEETS

17

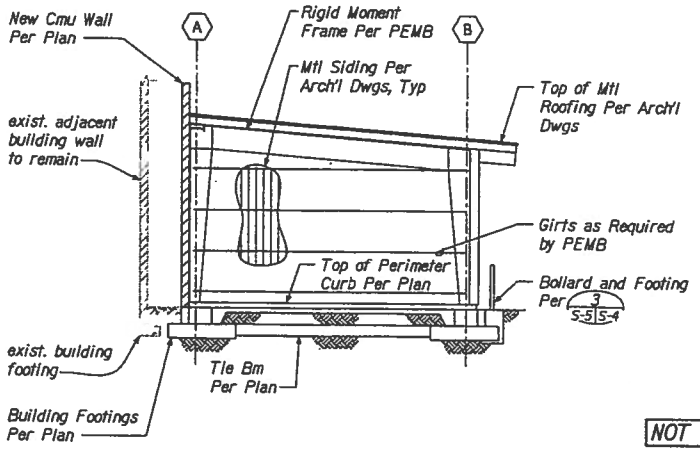
FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	2013	18	21



1 EAST ELEVATION
S-5, S-7 S-8 Scale: 3/16" = 1'-0"



2 NORTH ELEVATION
S-5, S-7 S-8 Scale: 3/16" = 1'-0"



3 SOUTH ELEVATION
S-5, S-7 S-8 Scale: 3/16" = 1'-0"

NOT FOR CONSTRUCTION

GRAPHIC SCALE
0 1' 2' 4' 8' 16'
3/16"=1'-0"

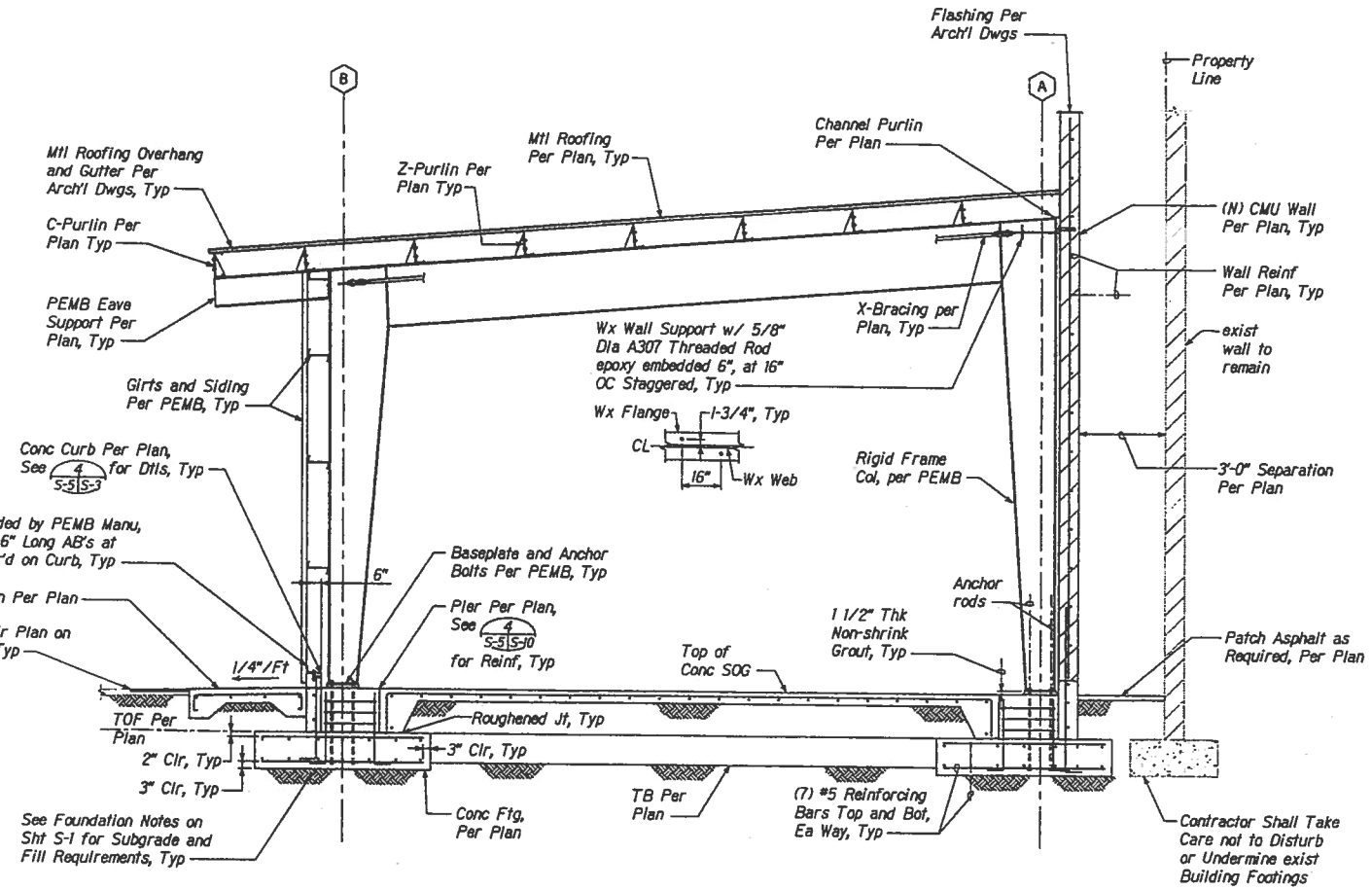
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ELEVATIONS
OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET
MAINTENANCE BUILDING STORAGE

Scale: As Shown Date: 04/24/2013

SHEET No. S-8 OF 21 SHEETS

FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	2013	19	21



1 BUILDING SECTION
S-5, S-6, S-7 S-9 Scale: 1/2" = 1'-0"

NOT FOR CONSTRUCTION

GRAPHIC SCALE
0 6" 1' 2' 4' 6'
1/2"=1'-0"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

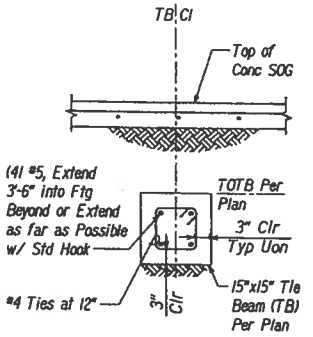
CANOPY SECTION
OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET
MAINTENANCE BUILDING STORAGE

Scale: As Shown Date: 04/24/2013

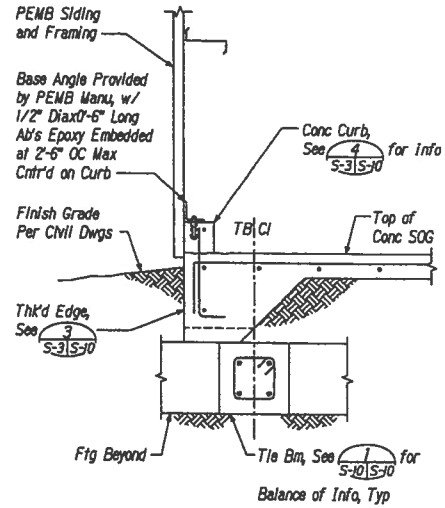
SHEET No. S-9 OF 21 SHEETS

19

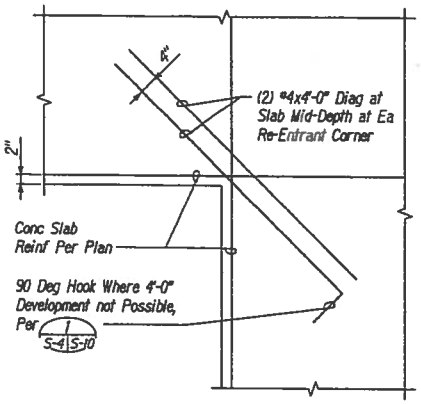
FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HWY.	2013	20	21



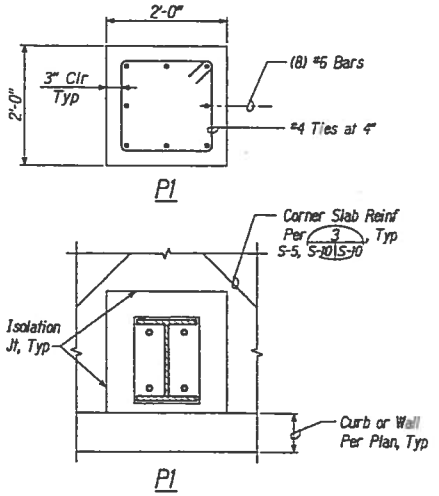
1 S-5 S-10 DETAIL - TIE BEAM
Scale: 1" = 1'-0"



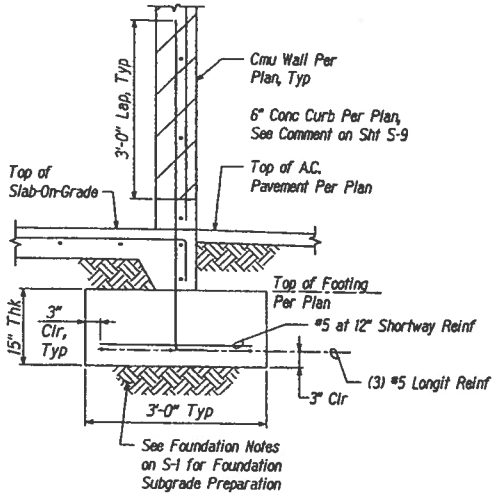
1 S-5 S-10 DETAIL - TIE BEAM
Scale: 1" = 1'-0"



3 S-5 S-10 CORNER REINFORCEMENT
Not To Scale



4 S-5 S-10 DETAIL - PIER
Not To Scale



5 S-5 S-10 DETAIL - WALL FOOTING
Scale: 1" = 1'-0"

NOT FOR CONSTRUCTION

GRAPHIC SCALE
0 3" 6" 1' 2' 3'
1"=1'-0"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

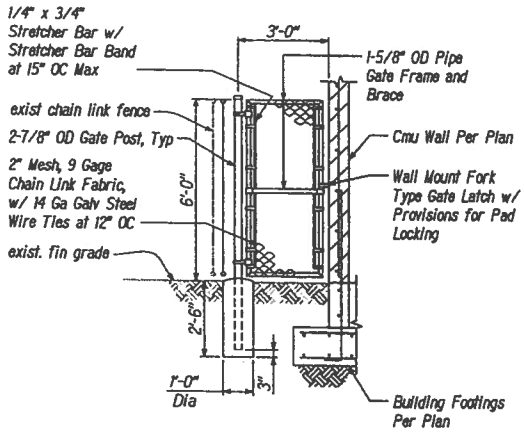
CANOPY DETAILS
OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET
MAINTENANCE BUILDING STORAGE

Scale: As Shown Date: 04/24/2013

SHEET No. S-10 OF 21 SHEETS

20

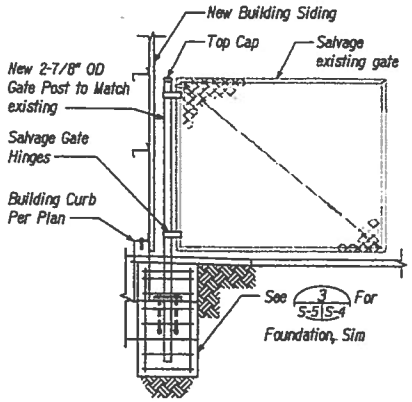
FED. ROAD DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	2013	21	21



Notes:

1. All fencing material including gate hardware shall be galvanized steel.
2. Posts, braces and gate frames shall be schedule 40 (Std Wt) pipe. Sizes specified are outside diameter.
3. Gate shall be provided with latching mechanism and provisions for padlocking.
4. Corner fittings for gate frames may be used in lieu of welding.
5. Gate shall have knuckled selvage top and bottom.
6. Top of concrete footing shall be crowned to shed water.

1 / S-5 | S-11 DETAIL - GATEPOST
Scale: 1/2" = 1'-0"



Notes:

1. All fencing material including gate hardware shall be galvanized steel.
2. Posts, braces and gate frames shall be schedule 40 (Std Wt) pipe. Sizes specified are outside diameter.
3. Top of concrete footing shall be crowned to shed water.

2 / S-5 | S-11 DETAIL - GATEPOST
Scale: 1/2" = 1'-0"

NOT FOR CONSTRUCTION

GRAPHIC SCALE
0 6" 1' 2' 4' 6'
1/2"=1'-0"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GATE DETAILS
OAHU DISTRICT OFFICE & BASE YARD
KAKOI STREET
MAINTENANCE BUILDING STORAGE

Scale: As Shown Date: 04/24/2013

SHEET No. S-11 OF 21 SHEETS

APPENDIX C
FOUNDATION INVESTIGATION, DEPARTMENT OF TRANSPORTATION OAHU DISTRICT WAREHOUSE BUILDING

FOUNDATION INVESTIGATION
DEPARTMENT OF TRANSPORTATION
OAHU DISTRICT WAREHOUSE BUILDING
HONOLULU, HAWAII
TMK: 1-1-64: 26

for

LOU CHAN & ASSOCIATES, INC.

ERNEST K. HIRATA & ASSOCIATES, INC.
W.O. 99-3136
April 23, 1999

ERNEST K. HIRATA & ASSOCIATES, INC.

Geotechnical Engineering

99-1433 Koaha Place • Aiea, Hawaii 96701-3279
Phone: (808) 486-0787 • Fax: (808) 486-0870
E-mail: eha@aloha.net

ERNEST K. HIRATA, P.E.
PAUL S. MORIMOTO, P.E.
DAVID M. KITAMURA, P.E.
JUNG K. KIM, P.E.
CON C. TRUONG, P.E.

April 23, 1999
W.O. 99-3136

Mr. Lou Chan
Lou Chan & Associates, Inc.
725 Kapiolani Boulevard, Suite C-207
Honolulu, Hawaii 96813

Dear Mr. Chan:

Our report, "Foundation Investigation, Department of Transportation, Oahu District Warehouse Building, Honolulu, Hawaii, TMK: 1-1-64: 26," dated April 23, 1999, our Work Order 99-3136 is enclosed. This investigation was conducted in general conformance with the scope of work presented in our proposal dated October 3, 1997.

Conventional spread footings founded on the medium stiff, surface silty clay with sand and gravel may be used to support the proposed structures. However, due to the soft and compressible lagoonal deposits which underlie the site, a relatively low allowable bearing value is recommended in order to reduce the potential for excessive settlement.

We also recommend as a precautionary measure, that all building slabs-on-grade be underlain by at least 12 inches of imported granular fill. The standard gravel cushion placed directly below slabs can be considered part of the 12-inch granular fill layer.

The following is a summary of our geotechnical recommendations. This summary is not intended to be a substitute for our report which includes more detailed explanations of our recommendations, as well as additional requirements.

- Allowable bearing value = 2000 psf
- Coefficient of friction = 0.4
- Passive earth pressure = 300 pcf

We appreciate this opportunity to be of service. Should you have any questions concerning this report, please feel free to call on us.

Very truly yours,

ERNEST K. HIRATA & ASSOCIATES, INC.

Ernest K. Hirata

Ernest K. Hirata President

EKH:ph

TABLE OF CONTENTS

APPENDIX

FOUNDATION INVESTIGATION
DEPARTMENT OF TRANSPORTATION
OAHU DISTRICT WAREHOUSE BUILDING
HONOLULU, HAWAII
TMK: 1-1-64: 26

INTRODUCTION

This report presents the results of our foundation investigation performed for the proposed improvements to the Oahu District Baseyard in Mapunapuna. Our work scope for this study included the following:

- A visual reconnaissance of the site and its vicinity to observe existing conditions which may affect the project. The general location of the project site is shown on the enclosed Location Map, Plate 1.
- A review of available soils information pertinent to the site and the proposed project.
- Drilling and sampling six exploratory borings and one probe hole to depths ranging from about 10 to 15.5 feet. The soils encountered are described on the Boring Logs, Plates B1 through B7. The approximate exploratory boring locations are shown on the enclosed Boring Location Plan, Plate 2.
- Laboratory testing of selected soil samples. Testing procedures are presented in the Description of Laboratory Testing, Pages 1 through 3 in the Appendix, and test results are shown in the Description of Laboratory Testing, on the Boring Logs, and on Plates C1 through C3, D1 through D3, E, and F.
- Engineering analyses of the field and laboratory data.
- Preparation of this report presenting geotechnical recommendations for the design of foundations, slabs-on-grade, resistance to lateral pressures, and site preparation.

borings and probe hole varied in depth from about 10 to 15.5 feet. The soils were continuously logged by our field technician and classified by visual examination in accordance with the Unified Soil Classification System. A Boring Log Legend is presented on Plate A1; the Unified Soil Classification System is shown on Plate A2. The approximate boring locations are shown on Plate 2, and the soils encountered are logged on Plates B1 through B7.

Representative soil samples were recovered from the borings for selected laboratory testing and analyses. Representative samples were obtained by driving a 3-inch O.D. thin-walled split tube sampler with a 140-pound hammer from a height of 30 inches. The blow counts required for 12 inches of penetration are shown at the appropriate depths on the enclosed Boring Logs.

SOIL CONDITIONS

The surface soil was classified as fill consisting of mottled grayish brown silty clay mixed with sand and gravel. The silty clay was in a medium stiff condition and extended to depths ranging from about 3.5 to 6.5 feet. Underlying the surface fill was a layer of tan silty sand with coral fragments. The tan silty sand was in a dense condition and ranged from about 2 to 5 feet in thickness.

Soft and loose lagoonal deposits were encountered below the tan silty sand at depths ranging from about 6.5 to 9 feet. The lagoonal deposits consisted of dark gray sandy silts and silty sands in a highly compressible condition. The soft deposits extended to the maximum depths drilled.

Groundwater was encountered in all our test borings at depths ranging from about 4.4 to 4.6 feet. Variation in the depth to groundwater can be expected with tidal fluctuations.

Design of the proposed building addition should include expansion joints between the new and existing structures. Consideration should be given to doweling reinforcing steel between the new and existing concrete slabs-on-grade to reduce differential movement.

Lateral Design

The bearing value indicated above is for the total of dead and frequently applied live loads, and may be increased by one-third for short duration loading which includes the effect of wind and seismic forces. Resistance to lateral loading may be provided by friction acting at the base of foundations and by passive earth pressure acting on the buried portions of foundations.

An allowable coefficient of friction of 0.4 may be used with the dead load forces. Passive earth pressure may be computed as an equivalent fluid having a density of 300 pounds per cubic foot with a maximum earth pressure of 3000 pounds per square foot. Unless covered by pavement or concrete slabs, the upper 12 inches of soil should not be considered in computing lateral resistance.

For active earth pressure considerations, equivalent fluid pressures of 40 and 55 pounds per cubic foot may be used for freestanding and restrained conditions, respectively. To prevent buildup of hydrostatic pressures, weepholes or subdrains should be included in the design of all retaining structures.

Slabs-on-Grade

Laboratory testing performed on samples of the surface silty clay indicate that the soil is slightly expansive. Due to the heavier than normal loading of warehouse slabs, we recommend as a precautionary measure, that all slabs-on-grade be underlain by at least 12 inches of imported granular fill.

necessary to slightly above optimum moisture content, and compacted to a minimum 90 percent compaction as determined by ASTM D 1557.

The onsite silty clay with sand and gravel may be reused in compacted fills except in the 12-inch granular fill section recommended below slabs-on-grade. All rock and coral fragments larger than three inches in maximum dimension should be removed from the onsite soils prior to reuse.

Imported granular structural fill should be well-graded, non-expansive granular material. Specifications for granular structural fill should indicate a maximum particle size of 3 inches, and state that not more than 20 percent of soil by weight shall pass the #200 sieve. In addition, the plasticity index (P.I.) of that portion of the soil passing the #40 sieve shall not be greater than 10.

Fill consisting of cohesive soils, such as the onsite silty clay, shall be placed in horizontal lifts restricted to eight inches in loose thickness and compacted to a minimum 90 percent compaction as determined by ASTM D 1557. Granular fill should also be placed in 8-inch loose lifts, but compacted to at least 95 percent compaction as determined by ASTM D 1557.

Fill placed in areas which slope steeper than 5:1 (horizontal to vertical), should be continually benched as the fill is brought up in lifts.

ADDITIONAL SERVICES

We recommend that we perform a general review of the pre-final design plans and specifications. This will allow us to verify that the foundation design and earthwork

recommendations, and to revise or verify them in writing before proceeding with construction.

Our recommendations and conclusions are based upon the site materials observed, the preliminary design information made available, the data obtained from our site exploration, our engineering analyses, and our experience and engineering judgement. The conclusions and recommendations are professional opinions which we have strived to develop in a manner consistent with that level of care, skill, and competence ordinarily exercised by members of the profession in good standing, currently practicing under similar conditions. No other warranty is expressed or implied.

Respectfully submitted,

ERNEST K. HIRATA & ASSOCIATES, INC.

Paul S. Morimoto, P.E.

This work was prepared by
me or under my supervision

DESCRIPTION OF LABORATORY TESTING

CLASSIFICATION

Field classification was verified in the laboratory in accordance with the Unified Soil Classification System. Laboratory classification was determined by both visual examination and Atterberg Limit tests performed in general accordance with ASTM D 4318. Atterberg tests performed on a sample obtained from boring B2 at 2 feet resulted in a Liquid Limit of 59 and a Plasticity Index (P.I.) of 34. The final classifications are shown at the appropriate locations on the Boring Logs, Plates B1 through B7.

MOISTURE-DENSITY

Representative samples were tested for field moisture content and dry unit weight. The information was useful in providing a gross picture of the soil consistency between borings and any local variations. The dry unit weight was determined in pounds per cubic foot while the moisture content was determined as a percentage of dry weight. Samples were obtained using a 3-inch O.D. split tube sampler. Test results are shown at the appropriate depths on the Boring Logs, Plates B1 through B7.

CONSOLIDATION

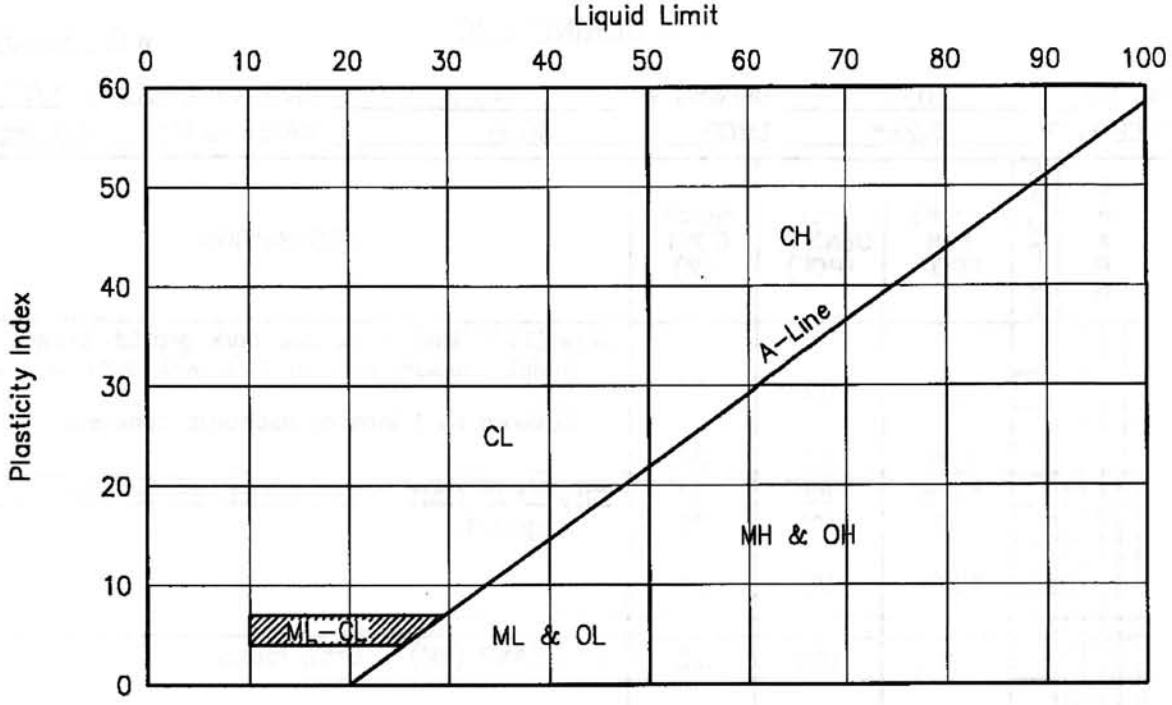
Settlement predictions of the soil's behavior under load were made on the basis of consolidation test results. Test samples were 2.42 inches in diameter and 1 inch high. Porous stones were placed in contact with the top and bottom of test samples to permit addition and release of pore fluid. Loads were then applied in several increments in a geometric progression, and the resulting deformations recorded at selected time intervals. Results of tests on representative samples are plotted on the Consolidation Test Reports, Plates C1 through C3.

percent density. The test was performed in general accordance with ASTM D 1557. Results are shown on Plate E.

CALIFORNIA BEARING RATIO TESTS

A CBR test was performed on a bulk sample to evaluate the relative quality of the subgrade soils to be used in the design of flexible pavements. The test was performed in general accordance with ASTM D 1883. Results are shown on Plate F.

PLASTICITY CHART



GRADATION CHART

COMPONENT DEFINITIONS BY GRADATION	
COMPONENT	SIZE RANGE
Boulders	Above 12 in.
Cobbles	3 in. to 12 in.
Gravel Coarse gravel Fine gravel	3 in. to No. 4 (4.76 mm) 3 in. to 3/4 in. 3/4 in. to No. 4 (4.76 mm)
Sand Coarse sand Medium sand Fine sand	No. 4 (4.76 mm) to No. 200 (0.074 mm) No. 4 (4.76 mm) to No. 10 (2.0 mm) No. 10 (2.0 mm) to No. 40 (0.42 mm) No. 40 (0.42 mm) to No. 200 (0.074 mm)
Silt and clay	Smaller than No. 200 (0.074 mm)

W.O. 99-3136	DOT - Oahu District Warehouse Building
Ernest K. Hirata & Associates, Inc.	UNIFIED SOIL CLASSIFICATION SYSTEM Plate A2

ERNEST K. HIRATA & ASSOCIATES, INC.

Geotechnical Engineering

BORING LOG

W.O. 99-3136

BORING NO. B2 DRIVING WT. 140 lb. DATE OF DRILLING 1/27/99

SURFACE ELEV. 5.4± DROP 30 in. WATER LEVEL 4.5 feet

DEPTH	GRAPH	SAMPLE	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
0						
			20	82	41	Silty CLAY (MH) – Mottled dark grayish brown, moist, medium stiff to stiff, with sand and gravel. (Fill) Covered by 3 inches of asphaltic concrete over 2 inches of coralline base course material. Sandy from 2.5 feet.
			31	100	20	
▽ 5			23	92	23	Dark gray sandy silt at 4 feet.
			19/6"			
			36/6"	100	25	Silty SAND (SM) – Tan, dense to medium dense, with coral fragments.
10			4	72	48	Sandy SILT (SM) – Dark gray, soft.
15			6	77	48	
						End boring at 15.5 feet.
20						
25						
30						

Plate B2

ERNEST K. HIRATA & ASSOCIATES, INC.

Geotechnical Engineering

BORING LOG

W.O. 99-3136

BORING NO. B4 DRIVING WT. 140 lb. DATE OF DRILLING 1/27/99

SURFACE ELEV. 4.9± DROP 30 in. WATER LEVEL 4.6 feet

DEPTH	GRAPH	SAMPLE	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
0						Silty CLAY (MH) – Mottled dark grayish brown, moist, medium stiff to stiff, with sand and gravel. (Fill) Covered by 1 inch of asphaltic concrete.
			43	93	23	
			19	91	30	Fuel odor at 3 feet.
▽ 5			71	89	30	Silty SAND (SM) – Tan, dense, with coral fragments.
			36	92	29	
10			3	91	41	Sandy SILT (SM) – Dark gray, soft.
15			5	81	47	
						End boring at 15.5 feet.
20						
25						
30						

Plate B4

ERNEST K. HIRATA & ASSOCIATES, INC.

Geotechnical Engineering

BORING LOG

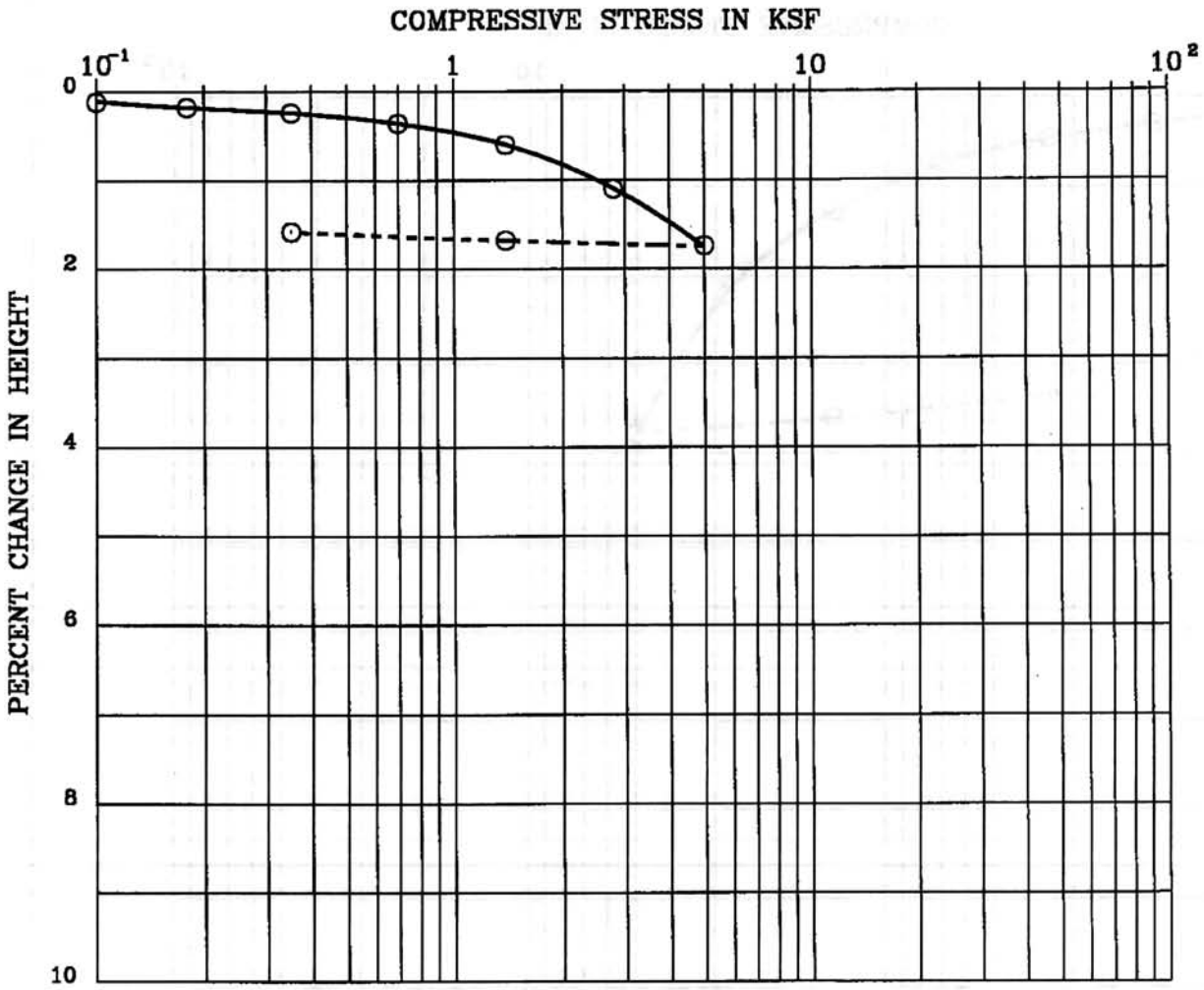
W.O. 99-3136

BORING NO. B6 DRIVING WT. 140 lb. DATE OF DRILLING 1/28/99

SURFACE ELEV. 5.6± DROP 30 in. WATER LEVEL 4.4 feet

DEPTH	GRAPH	SAMPLE	BLOWS PER FOOT	DRY DENSITY (PCF)	MOIST. CONT. (%)	DESCRIPTION
0						
			29	89	19	Silty CLAY (MH) – Mottled dark grayish brown, moist, stiff, with sand and gravel. (Fill) Covered by 3 inches of asphaltic concrete over 2 inches of coralline base course material.
			16	84	29	Medium stiff from 2.5 feet.
5			10	74	35	Sandy at 4 feet.
			61	91	33	Silty SAND (SM) – Tan, dense, with coral fragments.
10			3	102	28	Silty SAND (SM) – Dark gray, loose.
			3	108	22	
						End boring at 12 feet.
15						
20						
25						
30						

Plate B6

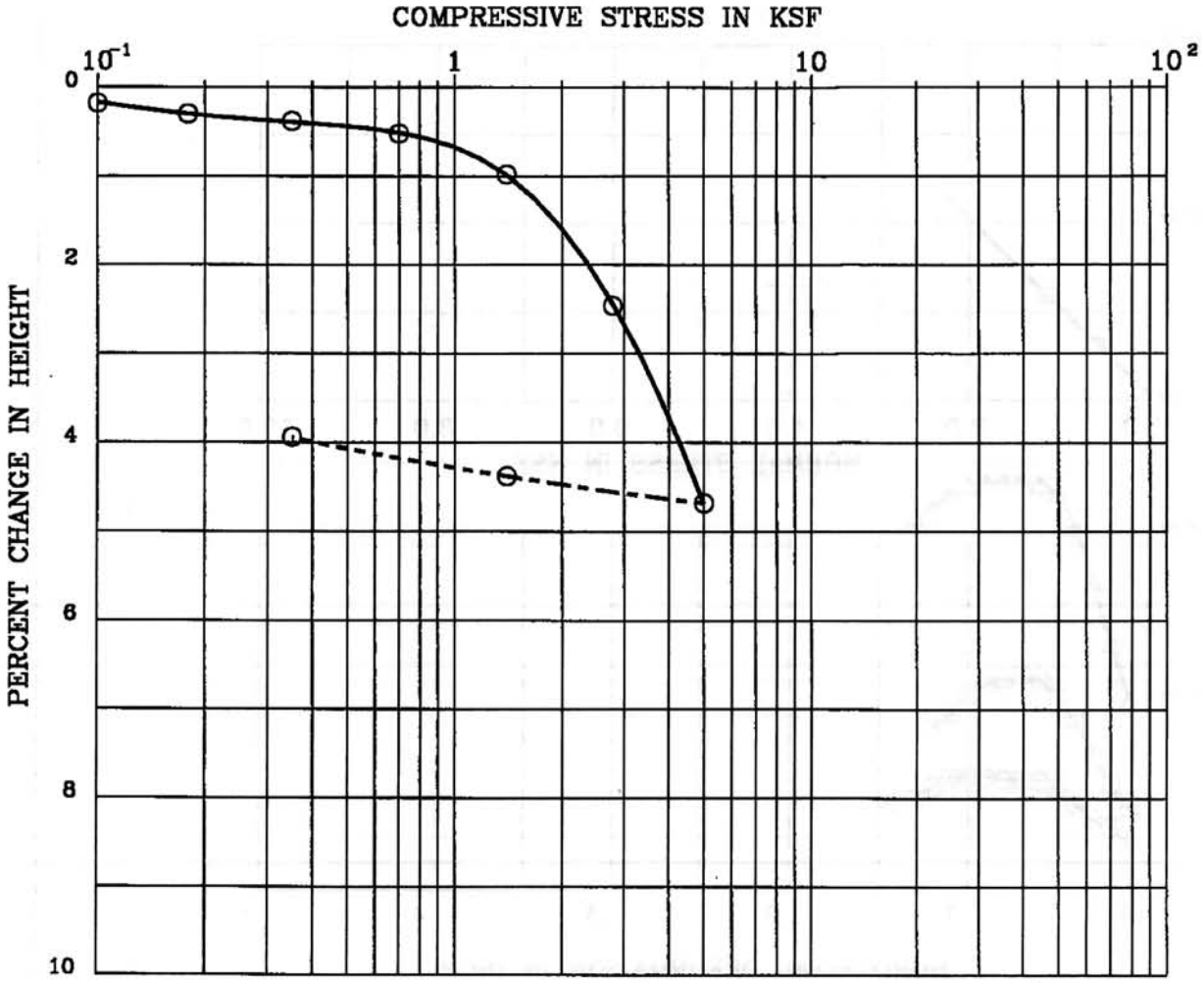


BORING	: B1	DESCRIPTION	: Gray silty sand
DEPTH (ft)	: 7	LIQUID LIMIT	:
SPEC. GRAVITY	:	PLASTIC LIMIT	:

	MOISTURE CONTENT (%)	DRY DENSITY (pcf)
INITIAL	25.6	100.3
FINAL	23.7	101.9

Remark : Date: 2/12/99 Water added at 90 psf

W.O. 99-3136	DOT – Oahu District Warehouse Building
Ernest K. Hirata & Associates, Inc.	CONSOLIDATION TEST Plate C1



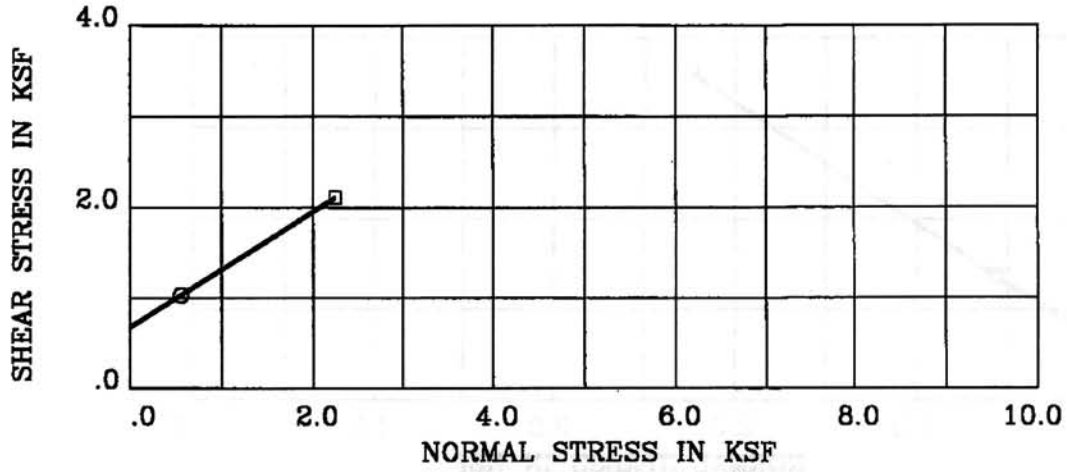
BORING : B7
DEPTH (ft) : 4
SPEC. GRAVITY :

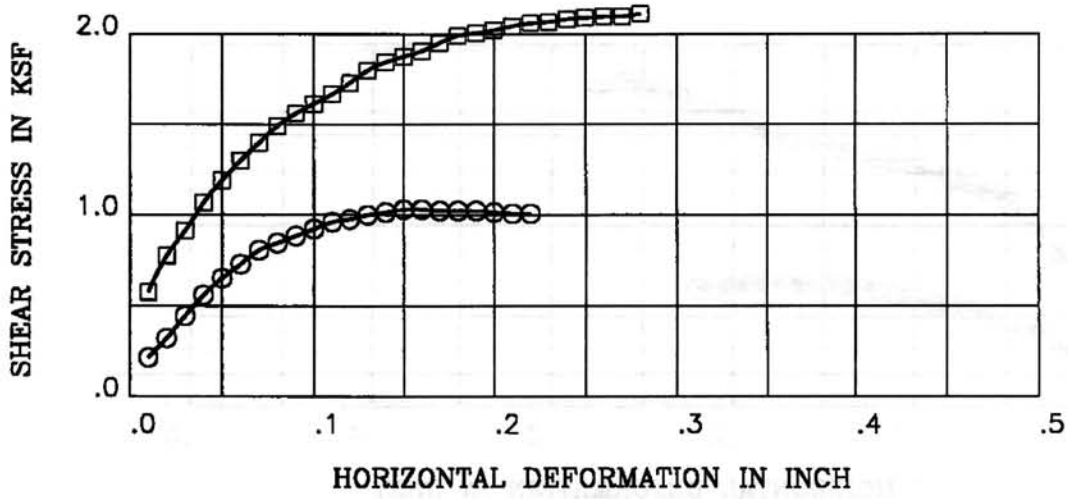
DESCRIPTION : Mottled dark grayish brown silty clay
LIQUID LIMIT :
PLASTIC LIMIT :

	MOISTURE CONTENT (%)	DRY DENSITY (pcf)
INITIAL	26.1	90.3
FINAL	26.0	93.9

Remark : Date: 2/12/99 Water added at 90 psf

W.O. 99-3136	DOT – Oahu District Warehouse Building
Ernest K. Hirata & Associates, Inc.	CONSOLIDATION TEST Plate C3



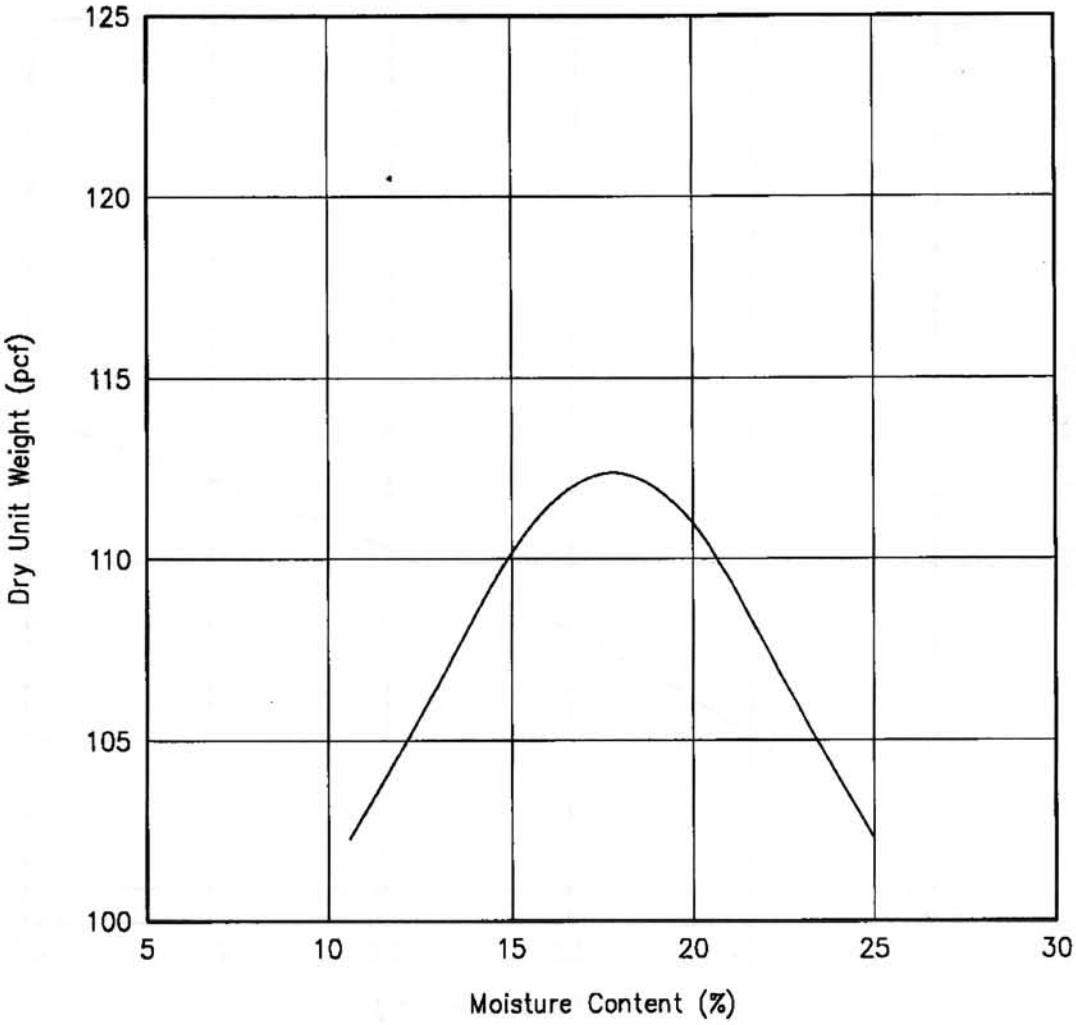


BORING/SAMPLE : B4 DEPTH (ft) : 2.5
DESCRIPTION : Mottled dark grayish brown silty clay
STRENGTH INTERCEPT (C) : .671 KSF (PEAK STRENGTH)
FRICTION ANGLE (PHI) : 32.8 DEG (PEAK STRENGTH)

SYMBOL	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	VOID RATIO	NORMAL STRESS (ksf)	PEAK SHEAR (ksf)	RESIDUAL SHEAR (ksf)
O	30.2	90.6	.859	.56	1.03	1.01
□	30.2	90.6	.859	2.24	2.11	2.11

Remark : Date: 2/10/99

W.O. 99-3136	DOT – Oahu District Warehouse Building
Ernest K. Hirata & Associates, Inc.	DIRECT SHEAR TEST Plate D2



Soil Data

Location: Boring B2 at 2 feet

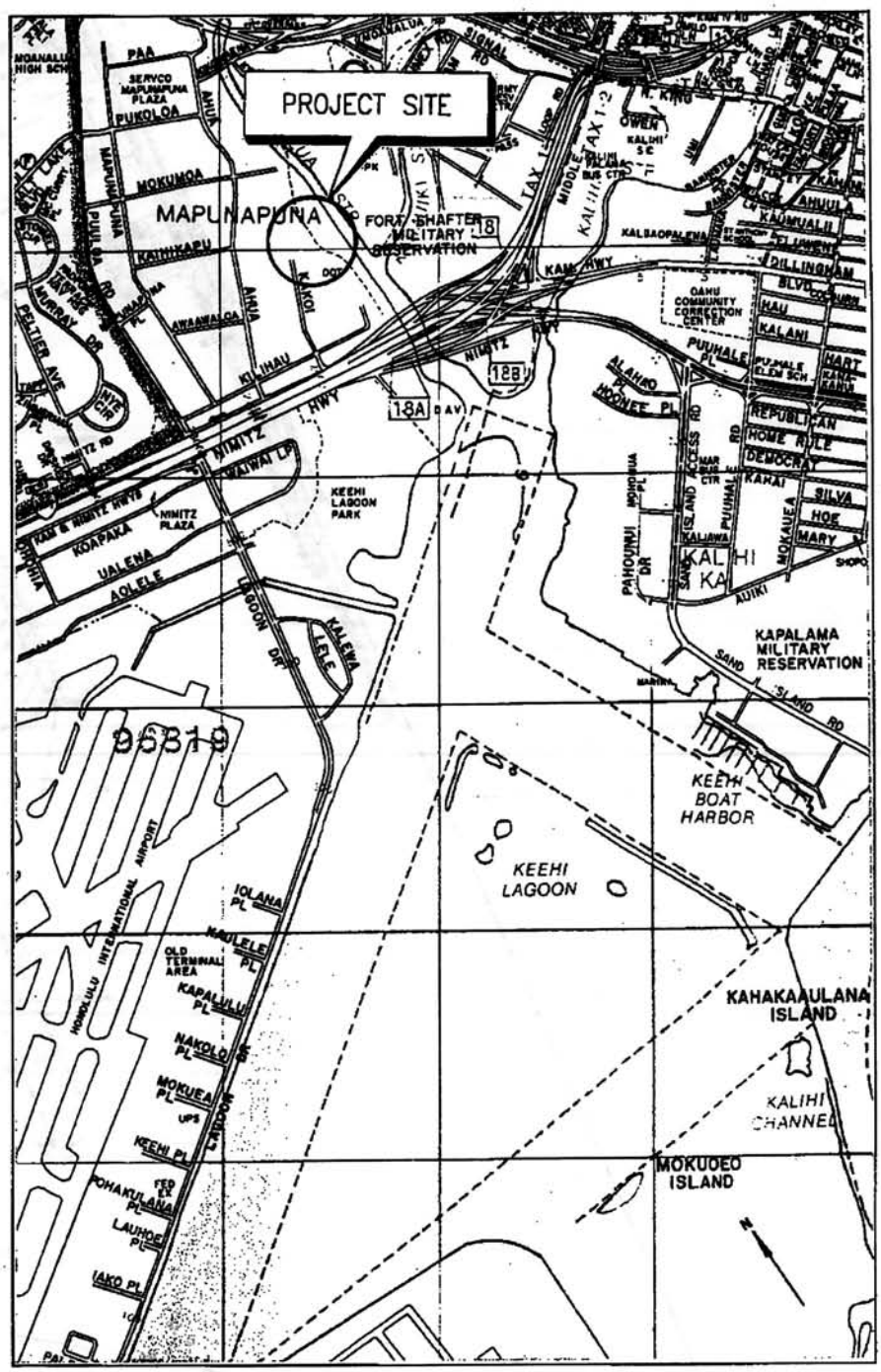
Description: Mottled dark grayish brown silty clay with sand and gravel

Test Results

Maximum Dry Density: 112.5 pcf

Optimum Moisture Content: 18%

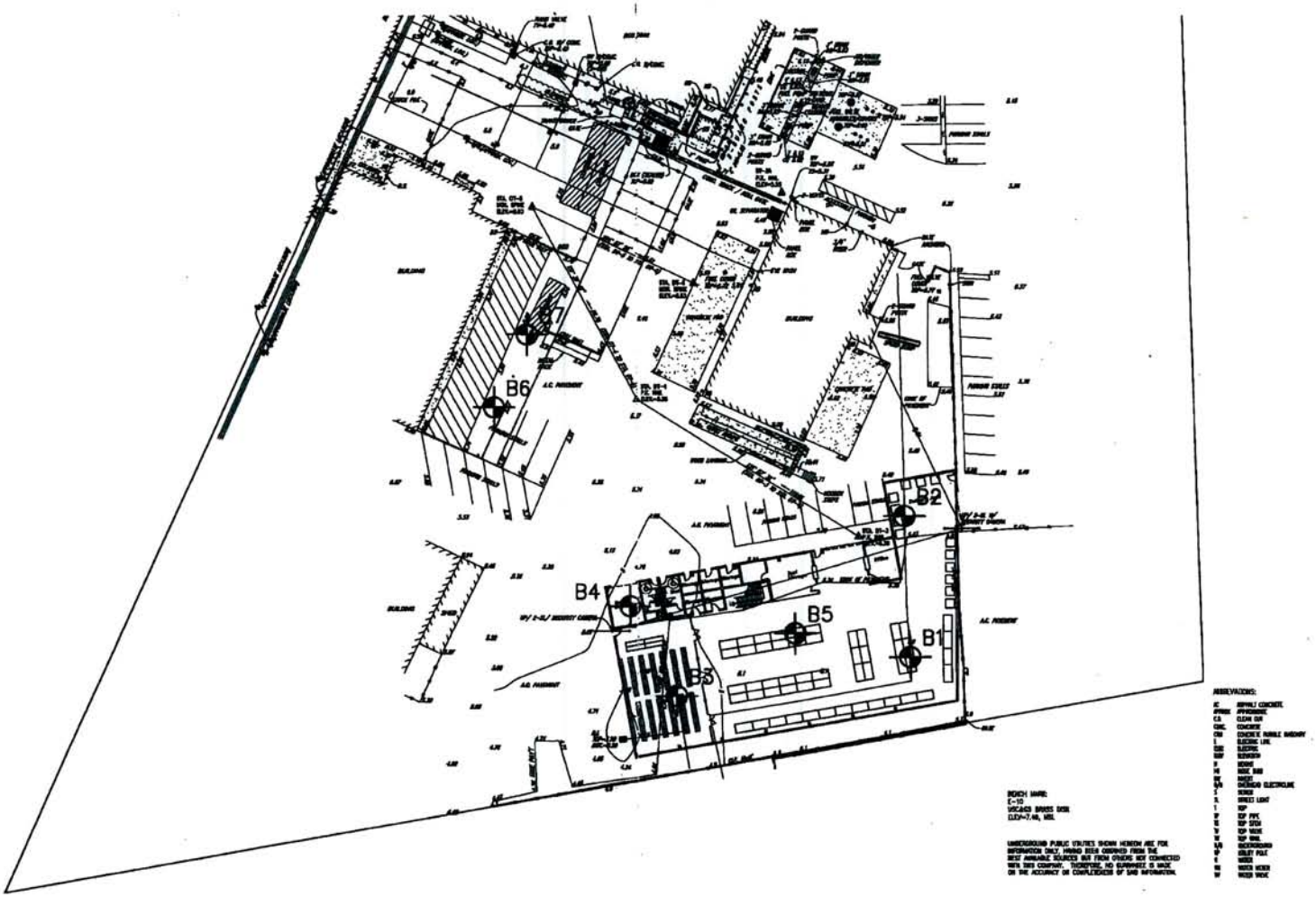
W.O. 99-3136	DOT - Oahu District Warehouse Building
Ernest K. Hirata & Associates, Inc.	MODIFIED PROCTOR CURVE Plate E



Reference: Bryan's Sectional Maps, 1999 Edition
(Copyright J.R. Clere, used with permission)

Scale: 1:24,000

W.O. 99-3136	DOT - Oahu District Warehouse Building
Ernest K. Hirata & Associates, Inc.	**LOCATION MAP** Plate 1



LEGEND:

Approximate location of borings

Reference: Topographic Survey Map prepared by ControlPoint Surveying, Inc., dated January 6, 1999.

GRAPHIC SCALE:

0 25 50 100FT.

1" = 50'

W.O. 99-3136	DOT – Oahu District Warehouse Building
Ernest K. Hirata & Associates, Inc.	BORING LOCATION PLAN
	Plate 2

APPENDIX D
FEMA FIRM COMMUNITY PANEL NUMBER 15003C 0353G & CITY AND COUNTY OF HONOLULU MAP 19: AIRPORT (INSET 2) TSUNAMI EVACUATION MAP

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' Local Tidal Datum. Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Hawaii State Plane Zone 3 (FIPSZONE 5103). The **horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the Local Tidal Datum. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. No conversion factor is needed to compare Local Tidal Datum to the National Geodetic Vertical Datum of 1929; therefore Local Tidal Datum is equivalent to the National Geodetic Vertical Datum of 1929. For more information, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit its website at http://www.ngs.noaa.gov.

Base map information shown on this FIRM was derived from mosaicked 2-foot ground resolution satellite imagery that meets 1:12,000 scale horizontal accuracy standards provided by DigitalGlobe and the United States Department of Agriculture Natural Resources Conservation Service. This information was collected between April 2005 and July 2006.

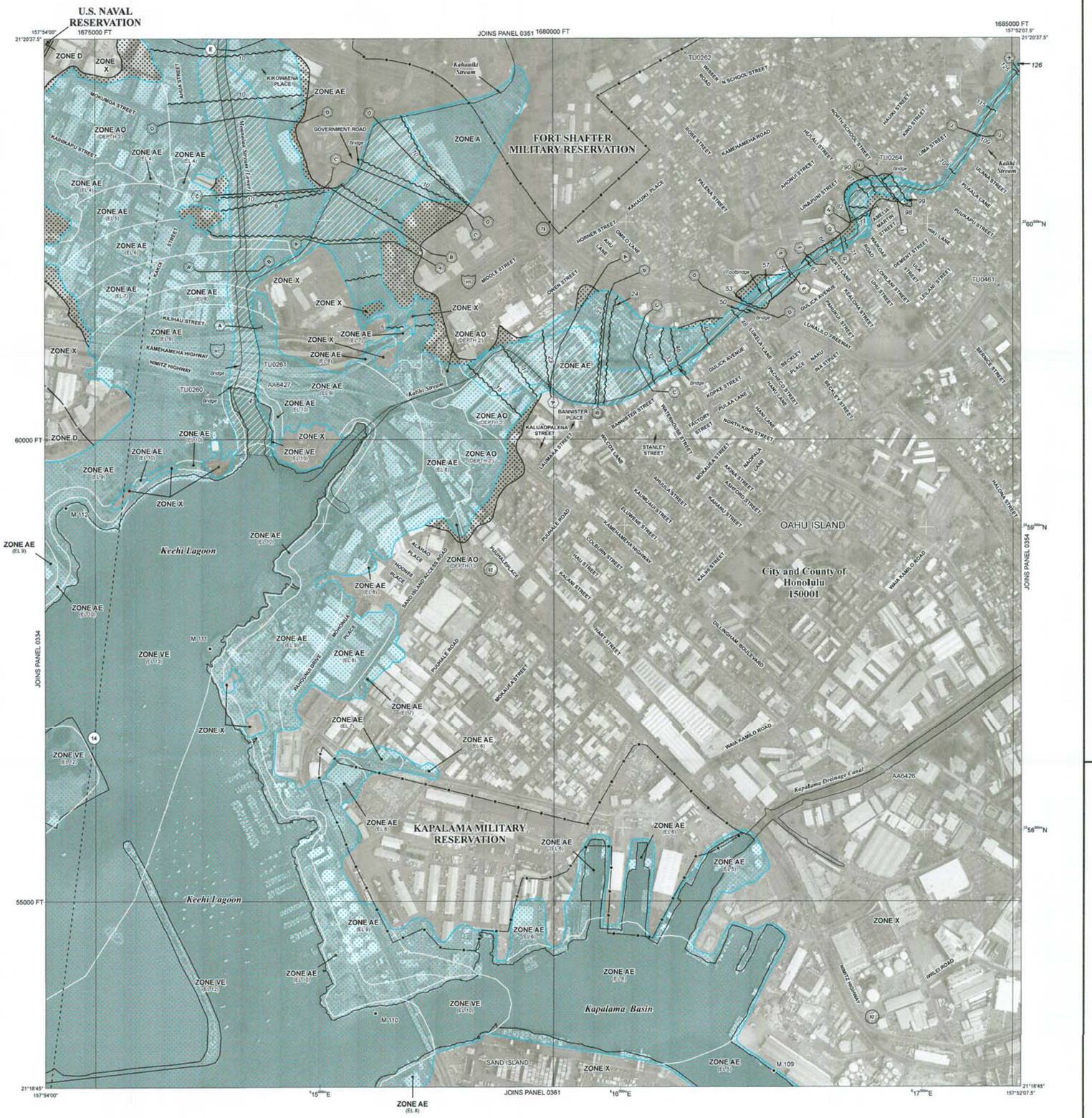
This map may reflect more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

For information on available products associated with this FIRM visit the **Map Service Center (MSC)** website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have **questions about this map**, how to order products or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange (FMIX) at **1-877-FEMA-MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/business/nfip.



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equalled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X — Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- Limit of Moderate Wave Action
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the LOCAL TIDAL DATUM

- Cross section line
- Transect line
- Culvert, Flume, Penstock or Aqueduct
- Road or Railroad Bridge
- Footbridge
- 87°07'45", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 3976000mN — 1000-meter Universal Transverse Mercator grid values, zone 4
- 600000 FT — 5000-foot grid values: Hawaii State Plane coordinate system, zone 3 (FIPSZONE 5103), Transverse Mercator projection
- DX5510 × — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
November 20, 2000

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
September 30, 2004 - January 19, 2011: to change Base Flood Elevations, to add and change Special Flood Hazard Areas, to incorporate coastal hurricane storm surge and wave height analysis, and to incorporate previously issued Letters of Map Revision.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

250 0 500 1000 FEET
150 0 150 300 METERS

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0353G

FIRM
FLOOD INSURANCE RATE MAP

CITY AND COUNTY OF HONOLULU, HAWAII

PANEL 353 OF 395

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
HONOLULU, CITY AND COUNTY OF	150001	0353	G

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
15003C0353G

MAP REVISED
JANUARY 19, 2011

Federal Emergency Management Agency

Map 19: Airport (Inset 2)

0 300 600 1,200

Scale in Feet

Prepared by: DPP (Holis)

Data Source: City and County of Honolulu GIS

Note: Data represented on this map is not intended to replace site survey.

Date Prepared: Apr. 12, 2010

Legend

- Tsunami Evacuation Line
- Tsunami Evacuation Zone
- Fire Station
- Ambulance
- Hospital
- Police
- Sewer Pump Station
- Sewer Treatment Plant
- Public and Private School
- Shopping Malls
- Major Streets
- Street Centerlines
- Beach Park

Notes:

Remain at least 100 feet away from inland waterways and marinas connected to the ocean due to wave surges and possible flooding.

If possible, remove or deploy vessels to deep water (at least 200 fathoms).

Structural steel or reinforced concrete buildings of six or more stories provide increased protection on or above the third floor.

The evacuation zone is a guideline and should be considered the minimum safe evacuation distance.

These maps do not consider the destructive effects of a locally generated tsunami. If you feel shaking, move inland immediately, well away from the evacuation zone.

APPENDIX E
PRE-ASSESSMENT CONSULTATION CORRESPONDENCE

NEIL ABERCROMBIE
GOVERNOR

SAMPLE CONSULTATION LETTER

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

GLENN M. OKIMOTO
DIRECTOR

Deputy Directors
JADE T. BUTAY
FORD N. FUCHIGAMI
RANDY GRUNE
JADINE URASAKI

IN REPLY REFER TO:
HWY-OM 2.13-1119

October 3, 2013

TO: THE HONORABLE JOBIE MASAGATANI
CHAIRPERSON
DEPARTMENT OF HAWAIIAN HOME LANDS

FROM: GLENN M. OKIMOTO, PH.D.
DIRECTOR OF TRANSPORTATION

SUBJECT: CHAPTER 343, HAWAII REVISED STATUTES (HRS) CONSULTATION
OAHU DISTRICT OFFICE AND BASEYARD MAINTENANCE STORAGE BUILDING AND CANOPY EXTENSION PROJECTS AT
727 KAKOI STREET, HONOLULU, OAHU, HAWAII
PROJECT NOS. HWY-O 2014M AND HWY-O 2015S

In accordance with State of Hawaii (State) guidelines for preparing environmental review documents, the State Department of Transportation (DOT), Highways Division is consulting with agencies or individuals having jurisdiction and expertise for the subject project, and DOT has identified your agency to consult with.

The DOT is planning the *Oahu District Office and Baseyard Canopy Extension Project* and *Oahu District Office and Baseyard Kakoi Street Maintenance Storage Building* projects. Both improvements will take place at the DOT Oahu District office and baseyard, located at 727 Kakoi Street, Honolulu, Hawaii (Figure 1). The project will be entirely State funded.

The DOT will prepare an Environmental Assessment in compliance with Chapter 343, HRS. At this time we request that you review the following information regarding the proposed improvements. Please provide any comments or concerns to us within 30 days of the receipt of this letter.

Overview of Proposed Projects

Both improvements will take place within DOT property boundaries at 727 Kakoi Street, Honolulu, Hawaii, (Tax Map Key Parcel [1]1-1-064:026).

The *Oahu District and Baseyard Canopy Extension Project* will add an approximately 2,000 square foot (sf) overhead canopy attached to an existing motor pool building. The canopy will be approximately 20 feet (ft) high and will consist of galvanized metal roofing and steel columns and framing. Work associated with construction of the canopy extension includes: demolition of existing concrete pavement, laying a new concrete slab and column footings, construction of

SAMPLE CONSULTATION LETTER

the steel columns and framing, construction of the corrugate metal canopy, relocation of a 1.5 inch water line to avoid conflicts with the canopy footing, installation of a 64 linear foot trench drain, and installation of a 6 inch drain line which will convey runoff from the trench drain to an existing oil/sand separator which discharges into the City and County of Honolulu sewer system.

The *Oahu District Office and Baseyard Kakoi Street Maintenance Storage Building* project will replace an existing 1,302 sf storage building with a new storage building. The new building will be approximately 2,200 sf in area and approximately 20 ft high. It will consist of a concrete masonry unit back (west) wall, pre-finished metal side and front walls, and pre-finished metal roofing panels. Work associated with construction of the storage building includes demolition of the existing storage building, removal of existing asphalt pavement, and construction of the new pre-engineered storage building. A hazardous materials study indicated the presence of lead based paints and lead containing paints in various locations within the existing storage building.

Request for Comments

We welcome any comments you have on the proposed projects. We're particularly interested in any information you may have on the historic and cultural sites that have been recorded in the area or any other historic or cultural sites about which you may have knowledge. In addition, if you are acquainted with any persons or organization that is knowledgeable about the proposed project area, or any descendants with ancestral lineal or cultural ties to or cultural knowledge or concerns for, and cultural or religious attachment to the proposed project area, we would appreciate receiving their names and contact information

We would appreciate a written response within 30 days from date of receipt via email at charles.lee@hawaii.gov, or by US Postal Service to:

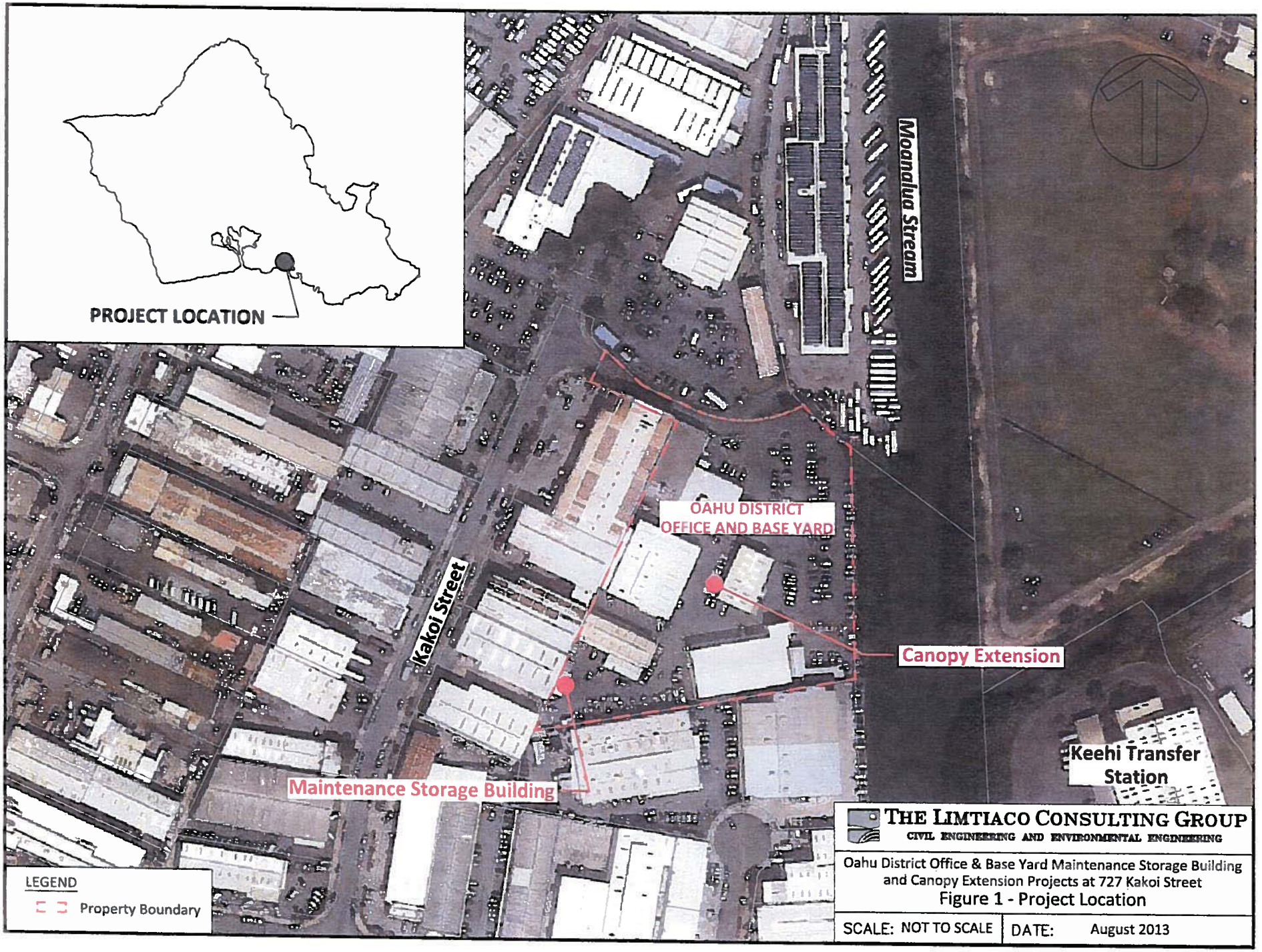
State of Hawaii
Department of Transportation
Highways Division
Oahu District
727 Kakoi Street
Honolulu, Hawaii 96819
Attn: Mr. Charles Lee

Should you have further questions, please contact Mr. Charles Lee, Facilities Engineer of our Maintenance Engineering Section at our Oahu District Office at (808) 831-6792. Thank you for your assistance.

Enclosure

CL:dm

bc: DIR , DEP-P, HWY, -O, -DE, The Limtiaco Consulting Group (Jason Nakata)
EnviroServices and Training Center (Brant Tanaka)



NEIL ABERCROMBIE
GOVERNOR OF HAWAII

WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

October 29, 2013

State of Hawaii, Department of Transportation
Highways Division, Oahu District
Attn: Mr. Charles Lee
727 Kakoi Street
Honolulu, Hawaii 96819

via email: charles.lee@hawaii.gov

Dear Mr. Lee,

SUBJECT: Chapter 343, Hawaii Revised Statutes (HRS) Consultation, Oahu District Office and Baseyard Maintenace Storage Building and Canopy Extension Projects at 727 Kakoi Street, Honolulu, Oahu, Hawaii; Project Nos. HWY-O 2014M and HWY-O 2015S

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

At this time, enclosed are comments from (1) Land Division – Oahu District; (2) Division of Forestry & Wildlife; (3) Engineering Division; (4) Division of Aquatic Resources; and (5) Commission on Water Resource Management. No other comments were received as of our suspense date. Should you have any questions, please feel free to call Supervising Land Agent Steve Molmen at 587-0439. Thank you.

Sincerely,

Russell Y. Tsuji
Land Administrator

Enclosure(s)

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

October 2, 2013

MEMORANDUM

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

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Chapter 343, Hawaii Revised Statutes (HRS) Consultation, Oahu District Office and Baseyard Maintenance Storage Building and Canopy Extension Projects at 727 Kakoi Street, Honolulu, Oahu, Hawaii, Project Nos. HWY-O 2014M and HWY-O 2015S
LOCATION: 727 Kakoi Street, Honolulu, Oahu, Hawaii
APPLICANT: State Department of Transportation (DOT), Highways Division

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

Please submit any comments by October 28, 2013. If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

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

Signed: T Chee
Print Name: Tiffany Chee
Date: October 4, 2013

c: Central Files

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

October 2, 2013

RECEIVED
LAND DIVISION
2013 OCT -4 PM 2:31
DEPT. OF LAND & NATURAL RESOURCES STATE OF HAWAII

MEMORANDUM

~~TO:~~ From

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

~~FROM~~: To:
Russell Y. Tsuji, Land Administrator

SUBJECT: Chapter 343, Hawaii Revised Statutes (HRS) Consultation, Oahu District Office and Baseyard Maintenance Storage Building and Canopy Extension Projects at 727 Kakoi Street, Honolulu, Oahu, Hawaii, Project Nos. HWY-O 2014M and HWY-O 2015S

LOCATION: 727 Kakoi Street, Honolulu, Oahu, Hawaii

APPLICANT: State Department of Transportation (DOT), Highways Division

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

Please submit any comments by October 28, 2013. If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

RECEIVED
2013 OCT -3 A11 :13
FORESTRY & WILDLIFE
STATE OF HAWAII

c: Central Files

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

Signed: Nelson L. Ayers for RHT
Print Name: Nelson L. Ayers
Date: 10/3/2013

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

RECEIVED
LAND DIVISION
2013 OCT -8 PM 2:43
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

RECEIVED
2013 OCT 03 AM 10:02 ENGINEERING

WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

October 2, 2013

MEMORANDUM

TO: FR:

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

TO:
FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Chapter 343, Hawaii Revised Statutes (HRS) Consultation, Oahu District Office and Baseyard Maintenance Storage Building and Canopy Extension Projects at 727 Kakoi Street, Honolulu, Oahu, Hawaii, Project Nos. HWY-O 2014M and HWY-O 2015S
LOCATION: 727 Kakoi Street, Honolulu, Oahu, Hawaii
APPLICANT: State Department of Transportation (DOT), Highways Division

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

Please submit any comments by October 28, 2013. If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

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

Signed: _____
Print Name: Carty S. Chang, Chief Engineer
Date: 10/7/13

c: Central Files

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/SteveMolmen
Ref.:DOTOahuOffice&MaintStorageBuilding
Oahu.935

COMMENTS

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

(X) Please take note that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Zone AE. The National Flood Insurance Program regulates developments within Zone AE as indicated in bold letters below.

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

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

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

(X) Mr. Mario Siu Li at (808) 768-8098 or Ms. Ardis Shaw-Kim of the City and County of Honolulu, Department of Planning and Permitting.

( ) Mr. Frank DeMarco at (808) 961-8042 of the County of Hawaii, Department of Public Works.

( ) .Ms. Carolyn Cortez at (808) 270-7813 of the County of Maui, Department of Planning.

( ) Mr. Stanford Iwamoto at (808) 241-4884 of the County of Kauai, Department of Public Works.

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

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

( ) Additional Comments:_____

_____

( ) Other: _____

_____

Should you have any questions, please call Ms. Suzie S. Agraan of the Planning Branch at 587-0258.

Signed: _____
CARTY S. CHANG, CHIEF ENGINEER

Date: 10/7/13

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

RECEIVED
LAND DIVISION
2013 OCT 15 AM 9:44
DEPT OF LAND & NATURAL RESOURCES
STATE OF HAWAII

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
POST OFFICE BOX 621
HONOLULU, HAWAII 96809

DAR 4862

October 2, 2013

RECEIVED
OCT 3 - 2013
AQUATIC RESOURCES

MEMORANDUM

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

JK✓
DG✓

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Chapter 343, Hawaii Revised Statutes (HRS) Consultation, Oahu District Office and Baseyard Maintenance Storage Building and Canopy Extension Projects at 727 Kakoi Street, Honolulu, Oahu, Hawaii, Project Nos. HWY-O 2014M and HWY-O 2015S
LOCATION: 727 Kakoi Street, Honolulu, Oahu, Hawaii
APPLICANT: State Department of Transportation (DOT), Highways Division

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

Please submit any comments by October 28, 2013. If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

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

Signed: [signature]
Print Name: MCGILRAY
Date: 10-10-13

c: Central Files

10/22/13

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

RECEIVED
LAND DIVISION
2013 OCT 28 PM 2:41
DEPT OF LAND & NATURAL RESOURCES STATE OF HAWAII

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
POST OFFICE BOX 621
HONOLULU, HAWAII 96809

October 2, 2013

2013 OCT -3 PM 3:01

MEMORANDUM

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

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Chapter 343, Hawaii Revised Statutes (HRS) Consultation, Oahu District Office and Baseyard Maintenance Storage Building and Canopy Extension Projects at 727 Kakoi Street, Honolulu, Oahu, Hawaii, Project Nos. HWY-O 2014M and HWY-O 2015S
LOCATION: 727 Kakoi Street, Honolulu, Oahu, Hawaii
APPLICANT: State Department of Transportation (DOT), Highways Division

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

Please submit any comments by October 28, 2013. If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

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

Signed: [signature]
Print Name: Dean Uyeno
Date: 10/18/2013

c: Central Files

FILE ID: RPD.3861.3
DOC ID: 11263

NEIL ABERCROMBIE
GOVERNOR

GLENN M. OKIMOTO
DIRECTOR

Deputy Directors
FORD N. FUCHIGAMI
RANDY GRUNE
AUDREY HIDANO
JADINE URASAKI

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

IN REPLY REFER TO:

HWY-OM 2.14-0037

01-30-14P02:11 RCVD

January 17, 2014

TO: THE HONORABLE WILLIAM J. AILA
CHAIRPERSON
DEPARTMENT OF LAND AND NATURAL RESOURCES

ATTN: RUSSELL Y. TSUJI
ADMINISTRATOR
LAND DIVISION

FROM: GLENN M. OKIMOTO, Ph.D.
DIRECTOR OF TRANSPORTATION

SUBJECT: CHAPTER 343, HAWAII REVISED STATUTES
RESPONSE TO COMMENTS FOR OAHU DISTRICT OFFICE AND BASEYARD MAINTENANCE STORAGE BUILDING AND CANOPY EXTENSION PROJECTS AT 727 KAKOI STREET, HONOLULU, OAHU, HAWAII
PROJECT NOS. HWY-O 2014M AND HYW-O 2015S

Thank you for your response letter regarding consultation for the State of Hawaii, Department of Transportation (DOT) *Oahu District Office and Baseyard Canopy Extension Project and Oahu District Office and Baseyard, Kakoi Street Maintenance Storage Building* projects.

We acknowledge that the Land Division, Division of Forestry and Wildlife, Division of Aquatic Resources, and Commission on Water Resource Management have no comments on the subject projects at this time.

With regards to comments provided by the Engineering Division, we acknowledge that the Flood Insurance Rate Map shows the project sites within Zone AE. The proposed projects are designed according to DOT standards for development within the flood hazard district. We acknowledge your comment that local flood ordinance may prove to be more restrictive than the minimum National Flood Insurance Program standard. However, the proposed projects do not seek any building permit from the City and County of Honolulu and thus the projects have no nexus for County review.

Should you have further questions please contact Mr. Charles Lee, Facilities Engineer of our Maintenance Facilities Section at our Oahu District Office at (808) 831-6792. Thank you for your assistance.

JN/CL:dm
bc: DIR, DEP-P, -O, -DE, HWY, The Limtiaco Consulting Group (J. Nakata)

HISTORIC PRESERVATION DIVISION
DEPARTMENT OF LAND AND NATURAL RESOURCES

601 Kamokila Boulevard, Suite 555
Kapolei, HI 96806

November 22, 2013

Mr. Charles Lee
State of Hawaii, Department of Transportation
Highways Division, Oahu District
727 Kakoi Street
Honolulu, Hawaii 96819

LOG NO: 2013.5732
DOC NO: 1311GC04
Architecture, Archaeology

Dear Mr. Lee:

SUBJECT: Chapter 6E-8 Historic Preservation Review –
Oahu District Office and Baseyard Maintenance Storage Building and Canopy Extension
Project Nos. HWY-O 2014M and HWY-O 2015S
Honolulu Ahupua'a, Honolulu (Kona District), Island of O'ahu
TMK: (1) 1-1-064:026

Thank you for the opportunity to review this State Department of Transportation (DOT) Highways Division project at the DOT Oahu District Office and baseyard at 727 Kakoi Street, Honolulu. The project area consists of 4.751 acres and the project will be entirely state funded. We received this submittal on October 3, 2013.

This DOT project involves replacing an existing storage building and installing a canopy extension on the existing motor pool building. This work includes pavement demolition and replacement, relocation of a 1.5-inch water line, installation of a 64-linear foot runoff drain and a 6-inch runoff drain line, and construction of the new pre-engineered storage building.

Architecture
Eligibility: Based on the information received, this property is not currently eligible for the State Register of Historic Places.

Determination: *No Historic Property Affected.*

Please contact A. Megan Borthwick at (808) 692-8028 or at Anna.M.Borthwick@hawaii.gov if you have any questions regarding architectural resources.

Archaeology
In a previous review of our records, SHPD indicated that "Kaihikapu Fishpond is buried either partially at this parcel or nearby" and that without further information, it was not possible to determine whether this historic property might be affected by the proposed removal of underground storage tanks on the DOT property (January 20, 1994; Log No. 10596, Doc. No. 9401TD14). In our review of a subsequent maintenance yard resurfacing project involving only shallow subsurface disturbance, we determined that "no historic properties will be affected" because of prior alteration of the property by development and grubbing and grading activities (February 19, 2003; Log No. 31734, Doc. No. 0302EJ25).

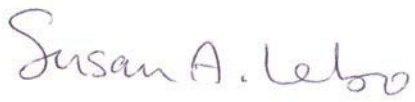
We believe no historic properties will be affected by the proposed project which will involve ground disturbance of less than 3 feet below grade within the footprint of existing pavement, base course, and fill deposits.

Please attach the following to the permit: In the event that historic resources, including human skeletal remains, cultural layers, cultural deposits, features, artifacts, or sinkholes, lava tubes or lava blisters/bubbles are identified during construction activities, all work should cease in the immediate vicinity of the find, the find should be

protected from additional disturbance, and the State Historic Preservation Division should be contacted immediately at (808)692-8015.

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

Aloha,



Susan A. Lebo, PhD
Oahu Lead Archaeologist

NEIL ABERCROMBIE
GOVERNOR

GLENN M. OKIMOTO
DIRECTOR

Deputy Directors
FORD N. FUCHIGAMI
RANDY GRUNE
AUDREY HIDANO
JADINE URASAKI

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

IN REPLY REFER TO:
HWY-OM 2.14-0026

January 15, 2014

TO: THE HONORABLE WILLIAM J. AILA, JR.
CHAIRPERSON
DEPARTMENT OF LAND AND NATURAL RESOURCES

ATTN: SUSAN A. LEBO, PH.D.
OAHU LEAD ARCHAEOLOGIST
STATE HISTORIC PRESERVATION DIVISION

FROM: GLENN M. OKIMOTO, PH.D.
DIRECTOR OF TRANSPORTATION

SUBJECT: CHAPTER 343, HAWAII REVISED STATUTES (HRS) AND
CHAPTER 6E-8, HRS HISTORIC PRESERVATION REVIEW
FOR OAHU DISTRICT OFFICE AND BASEYARD MAINTENANCE STORAGE
BUILDING AND CANOPY EXTENSION PROJECTS AT 727 KAKOI STREET,
HONOLULU, OAHU, HAWAII
PROJECT NOS. HWY-O 2014M AND HWY-O 2015S

Thank you for your response letter dated November 22, 2013, regarding consultation for the State of Hawaii, Department of Transportation (HDOT) *Oahu District Office and Baseyard Canopy Extension Project* and *Oahu District Office and Baseyard, Kakoi Street Maintenance Storage Building* projects. We have the following responses to the State Historic Preservation Division's (SHPD) comments.

Architecture

We acknowledge that, based on information the HDOT provided to the SHPD, the property is not eligible for the State Register of Historic Places and no historic property will be affected by the proposed projects.

Archaeology

We acknowledge that the Kaihikapu Fishpond is buried either partially at this parcel or nearby and that, without further information, it is not possible to determine whether this historic property might be affected by the proposed projects. Based on your input, we will require from the construction contractor that "in the event historic resources, including human skeletal remains, cultural layers, cultural deposits, features, artifacts, or sinkholes, lava tubes or lava blisters/bubbles are identified during construction activities, all work should cease in the immediate vicinity of the find, the find should be protected from additional disturbance, and the State Historic Preservation Division should be contacted immediately at (808) 692-8015."

Should you have further questions please contact Mr. Charles Lee, Facilities Engineer of our Maintenance Facilities Section, Oahu District Office at (808) 831-6792. Thank you for your assistance.

JN\CL:ksy

bc: DIR
DEP-P
HWY-O
HWY-DE
HWY
The Limtiaco Consulting Group (J. Nakata)

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

LORETTA J. FUDDY, A.C.S.W., M.P.H.
DIRECTOR OF HEALTH

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

In reply, please refer to:
EMD/CWB

10032PGH.13

October 9, 2013

Mr. Charles Lee
Highways Division
Department of Transportation
727 Kakoi Street
Honolulu, Hawaii 96819

Dear Mr. Lee:

SUBJECT: Comments on Chapter 343, Hawaii Revised Statues (HRS) Consultation, Oahu District Office and Baseyard Maintenance Storage Building and Canopy Extension Projects at 727 Kakoi Street, Honolulu, Oahu, Hawaii
Project Nos. HWY-O 2014M and HWY-O 20I5S

The Department of Health (DOH), Clean Water Branch (CWB), acknowledges receipt of your letter, dated October 1, 2013, requesting comments on your project. The DOH-CWB has reviewed the subject document and offers these comments. Please note that our review is based solely on the information provided in the subject document and its compliance with the Hawaii Administrative Rules (HAR), Chapters 11-54 and 11-55. You may be responsible for fulfilling additional requirements related to our program. We recommend that you also read our standard comments on our website at: http://health.hawaii.gov/epo/files/2013/05/CWB-standardcomment.pdf.

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

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

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

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

2. You may be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for discharges of wastewater, including storm water runoff, into State surface waters (HAR, Chapter 11-55). An application for an NPDES individual permit must be submitted at least 180 calendar days before the commencement of the discharge. To request NPDES permit coverage, you must submit the CWB

Individual NPDES Form through the e-Permitting Portal and the hard copy certification statement with $1,000 filing fee. Please open the e-Permitting Portal website at: https://eha-cloud.doh.hawaii.gov/epermit/View/home.aspx. You will be asked to do a one-time registration to obtain your login and password. After you register, click on the Application Finder tool and locate the "CWB Individual NPDES Form." Follow the instructions to complete and submit this form.

3. If your project involves work in, over, or under waters of the United States, it is highly recommend that you contact the Army Corp of Engineers, Regulatory Branch (Tel: 438-9258) regarding their permitting requirements.

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

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

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

Sincerely,

Darryl Lum TH for AW

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

GH:rh

NEIL ABERCROMBIE
GOVERNOR

GLENN M. OKIMOTO
DIRECTOR

Deputy Directors
FORD N. FUCHIGAMI
RANDY GRUNE
AUDREY HIDANO
JADINE URASAKI

IN REPLY REFER TO:

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

HWY-OM 2.14-0038

January 17, 2014

TO: THE HONORABLE GARY GILL
ACTING DIRECTOR OF HEALTH

ATTN: ALEC WONG, P.E.
CHIEF
CLEAN WATER BRANCH

FROM: GLENN M. OKIMOTO, Ph.D.
DIRECTOR OF TRANSPORTATION

SUBJECT: CHAPTER 343, HAWAII REVISED STATUTES
RESPONSE TO COMMENTS FOR OAHU DISTRICT OFFICE AND BASEYARD MAINTENANCE STORAGE BUILDING AND CANOPY EXTENSION PROJECTS AT 727 KAKOI STREET, HONOLULU, OAHU, HAWAII
PROJECT NOS. HWY-O 2014M AND HYW-O 2015S

Thank you for your response letter regarding consultation for the State of Hawaii, Department of Transportation (DOT) *Oahu District Office and Baseyard Canopy Extension Project* and *Oahu District Office and Baseyard, Kakoi Street Maintenance Storage Building* projects. We have the following responses to the Clean Water Branch's (CWB) comments:

1. We acknowledge that any project and its potential impacts must meet the anti-degradation policy, designated uses, and water quality criteria outlined in the State of Hawaii (State) Water Quality Standards (Chapter 11-54, Hawaii Administrative Rules). Nearby State waters include Moanalua Stream and Keehi Lagoon, which are "class 2" inland and "class A" marine waterbodies respectively.

   The proposed projects may result in minor and temporary water quality impacts of the type and scale typical of small construction projects which include limited amounts of ground disturbance. To mitigate this impact, the *Hawaii Standard Specifications for Road and Bridge Construction, 2005* states that the contractor must submit "written site-specific Best Management Practices (BMP) describing activities to minimize water pollution and soil erosion into State waters" to the DOT for approval. Once constructed, the proposed projects will work to improve quality of storm water runoff from the property.

The proposed projects will conform with the general policy of water quality anti-degradation (§11-54-1.1, Hawaii Administrative Rules) and will not endanger the designated uses of nearby waterbodies (§11-54-3, Hawaii Administrative Rules). Implementation of BMPs during construction will mitigate possible impacts to the water quality criteria (§11-54-4, Hawaii Administrative Rules).

2. We acknowledge that a National Pollutant Discharge Elimination System (NPDES) permit must be obtained for discharges of wastewater, including storm water runoff, into State surface waters. It is our understanding that possible NPDES triggers for the subject project include a disturbed area greater than 1 acre (for storm water runoff related to construction activities) and dewatering discharges (due to the shallow depth to groundwater). Because of the relatively minor nature of the proposed projects, it is unlikely either trigger for an NPDES permit will be met. As such we anticipate that an NPDES permit will not be needed for the proposed projects. An NPDES permit will be obtained prior to construction if it is later found that one is required.

3. The proposed projects do not involve work in, over, or under waters of the United States. If it is later found that such work is required, we understand that additional permit requirements may be triggered pursuant to Sections 401 and 404 of the Clean Water Act and Section 10, Rivers and Harbors Act. If such work is required, we will consult with the United States Army Corps of Engineers.

4. We acknowledge that all discharges related to the project must comply with the State water quality standards, regardless of whether or not a CWB permit is required. We understand that noncompliance may be subject to penalties of $25,000.00 per day per violation.

Should you have further questions please contact Mr. Charles Lee, Facilities Engineer of our Maintenance Facilities Section at our Oahu District Office at (808) 831-6792. Thank you for your assistance.

JN/CL:dm

bc: DIR
DEP-P
HWY
HWY-DE
HWY-O
The Limtiaco Consulting Group (J. Nakata)

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

LORETTA J. FUDDY, A.C.S.W., M.P.H.
DIRECTOR OF HEALTH

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

In reply, please refer to:
File:

13-190
HWY-OM 2.13-1128

October 14, 2013

TO: Charles Lee
Department of Transportation, Highway Division

FROM: Laura McIntyre, Manager
Department of Health, Environmental Planning Office

SUBJECT: CHAPTER 343, HAWAII REVISED STATUTES (HRS) CONSULTATION, OAHU DISTRICT OFFICE AND BASEYARD MAINTENANCE STORAGE BUILDING AND CANOPY EXTENSION PROJECTS AT 727 KAKOI STREET, HONOLULU, OAHU, HAWAII PROJECT NOS. HWY-O 2014M AND HWY-O 2015S

The Department of Health (DOH), Environmental Planning Office (EPO), acknowledges receipt of your letter dated September 27, 2013. Thank you for allowing us to review and comment on the subject document. The document was routed to the Indoor & Radiological Health Branch. They will provide specific comments to you if necessary. EPO recommends that you review the Standard Comments (www.health.hawaii.gov/epo/ under the land use tab). You are required to adhere to all Standard Comments specifically applicable to this application.

EPO suggests that you examine the many sources available on strategies to support the sustainable design of communities, including the following:
State of Hawaii, Office of Planning: www.planning.hawaii.gov and the new 2013 ORMP;
U.H., School of Ocean and Earth Science and Technology: www.soest.hawaii.edu;
U.S. Environmental Protection Agency's sustainability programs: www.epa.gov/sustainability; and
U.S. Green Building Council's LEED program: www.usgbc.org/leed.

The DOH encourages everyone, to apply these sustainability strategies and principles early in the planning and review of projects. We also request that for future projects you consider conducting a Health Impact Assessment (HIA). More information is available at www.cdc.gov/healthyplaces/hia.htm. We request you share all of this information with others to increase community awareness on sustainable, innovative, inspirational, and healthy community design.

We require a written response confirming receipt of this letter and any other letters you receive from DOH in regards to this submission. You may mail your response to 919 Ala Moana Blvd., Ste. 312, Honolulu, Hawaii 96814. However, we would prefer an email submission to epo@doh.hawaii.gov. We anticipate that our letter(s) and your response(s) will be included in the final document. If you have any questions, please contact me at (808) 586-4337.

NEIL ABERCROMBIE
GOVERNOR

GLENN M. OKIMOTO
DIRECTOR

Deputy Directors
FORD N. FUCHIGAMI
RANDY GRUNE
AUDREY HIDANO
JADINE URASAKI

IN REPLY REFER TO:

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

HWY-OM 2.14-0035

January 17, 2014

TO: THE HONORABLE GARY GILL
ACTING DIRECTOR OF HEALTH

ATTN: LAURA MCINTYRE, MANAGER
ENVIRONMENTAL PLANNING OFFICE

FROM: GLENN M. OKIMOTO, PH.D.
DIRECTOR OF TRANSPORTATION

SUBJECT: CHAPTER 343, HAWAII REVISED STATUTES RESPONSE TO COMMENTS FOR OAHU DISTRICT OFFICE AND BASEYARD MAINTENANCE STORAGE BUILDING AND CANOPY EXTENSION PROJECTS AT 727 KAKOI STREET, HONOLULU, OAHU, HAWAII
PROJECT NOS. HWY-O 2014M AND HWY-O 2015S

Thank you for your response letter dated October 14, 2013 regarding consultation for the State of Hawaii, Department of Transportation (DOT) *Oahu District Office and Baseyard Canopy Extension Project* and *Oahu District Office and Baseyard, Kakoi Street Maintenance Storage Building* projects. We have the following responses to the Environmental Planning Office's comments:

We have reviewed the standard comments of the Clean Air Branch, Clean Water Branch, Hazard Evaluation and Emergency Response Office, Noise Radiation and Indoor Air Quality Branch, Safe Drinking Water Branch, Solid and Hazardous Waste Branch, and Wastewater Branch. Applicable comments have been incorporated into the draft environmental assessment.

Thank you for providing information on various reference materials from the State Office of Planning, University of Hawaii School of Ocean and Earth Science and Technology, United States Environmental Protection Agency, United States Green Building Council, and Centers for Disease Control and Prevention. Although designs for the subject projects have already been completed, the DOT will take these resources into consideration for future projects.

Your comments and this response letter will be included in the draft and final environmental assessments.

Should you have further questions please contact Mr. Charles Lee, Facilities Engineer of our Maintenance Facilities Section, Oahu District Office at (808) 831-6792. Thank you for your assistance.

JN/CL:dm

bc: DIR
DEP-P
HWY-O
HWY-DE
HWY
The Limtiaco Consulting Group (J. Nakata)

NEIL ABERCROMBIE
GOVERNOR

GENEVIEVE SALMONSON
INTERIM DIRECTOR

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

October 8, 2013

TO: GLENN M. OKIMOTO, PH.D.
DIRECTOR OF TRANSPORTATION

ATTN: CHARLES LEE
FACILITIES ENGINEERING, HIGHWAYS DIVISION, OAHU DISTRICT

FROM GENEVIEVE SALMONSON, INTERIM DIRECTOR Genevieve Salmonson

SUBJECT: CHAPTER 343, HAWAI'I REVISED STATUTES (HRS) CONSULTATION, O'AHU DISTRICT OFFICE AND BASEYARD MANTENANCE STORAGE BUILDING AND CANOPY EXTENSION PROJECTS AT 727 KAKOI STREET, HONOLULU, O'AHU, HAWAI'I PROJECT NOS. HWY-O 2014M AND HWY-O 2015S

Aloha. This responds to your October 1, 2013 memo, consulting with the Office of Environmental Quality Control, for comments regarding the subject project. Your project will include demolition, grading/trenching, and construction activities. After review of the memo and project location picture with the O'ahu map inset, OEQC offers these comments:

1. The geographic feature that jumps out at first glance is the site proximity to Moanalua Stream. Please address the project's impacts on water quality and describe best management practices identified to mitigate any adverse water quality impacts, including management of hazardous wastes and any fluids from utility vehicles.
2. Please discuss the flooding issue at the site and mitigation for the project, including the flood zone rating and base floor elevation.
3. Refer to the Hawaii Administrative Rules Section 11-200-10 for the content requirements of an environmental assessment.
4. Finally, visit the OEQC home page - http://health.hawaii.gov/oeqc/ - for more information about document submittal for publication in The Environmental Notice or contact Herman Tuiolosega at (808) 586-4185 for further questions.

Thank you.

NEIL ABERCROMBIE
GOVERNOR

GLENN M. OKIMOTO
DIRECTOR

Deputy Directors
FORD N. FUCHIGAMI
RANDY GRUNE
AUDREY HIDANO
JADINE URASAKI

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

IN REPLY REFER TO:

HWY-OM 2.14-0039

January 24, 2014

TO: THE HONORABLE GARY GILL
ACTING DIRECTOR OF HEALTH

ATTN: DIRECTOR
OFFICE OF ENVIRONMENTAL AND QUALITY CONTROL

FROM: GLENN M. OKIMOTO, PH.D.
DIRECTOR OF TRANSPORTATION

SUBJECT: CHAPTER 343, HAWAII REVISED STATUTES (HRS) RESPONSE TO COMMENTS FOR OAHU DISTRICT OFFICE AND BASEYARD MAINTENANCE STORAGE BUILDING AND CANOPY EXTENSION PROJECTS AT 727 KAKOI STREET, HONOLULU, OAHU, HAWAII PROJECT NOS. HWY-O 2014M AND HWY-O 2015S

Thank you for your response letter regarding consultation for the State of Hawaii, Department of Transportation (DOT) *Oahu District Office and Baseyard Canopy Extension Project* and *Oahu District Office and Baseyard, Kakoi Street Maintenance Storage Building* projects. We have the following responses to the Office of Environmental and Quality Control's (OEQC) comments:

1. Specific Best Management Practices (BMP) and waste handling practices will be determined by the contractor, who is yet to be identified. However, the DOT will require that the contractor comply with relevant Federal, State, and local regulations regarding water quality. The *Hawaii Standard Specifications for Road and Bridge Construction, 2005* requires the contractor to submit "written site-specific BMP describing activities to minimize water pollution and soil erosion into State waters" to the DOT for approval prior to construction.

2. The project sites are located within Flood Zone AE with a base flood elevation of seven feet. However, both the canopy extension and storage shed replacement building are unoccupied accessory structures that will have no electrical or mechanical components. As such, the structures are considered to have a low potential for flood damage.

3. The draft environmental assessment will be prepared in accordance with Chapter 343, HRS and Chapter 11-200, Hawaii Administrative Rules.

4. Thank you for providing reference to document submittal information available at the OEQC website. We will submit the draft and environmental assessment in accordance with OEQC policies and procedures.

Should you have further questions please contact Mr. Charles Lee, Facilities Engineer of our Maintenance Facilities Section at our Oahu District Office at (808) 831-6792. Thank you for your assistance.

JN/CL:dm

bc: DIR
DEP-P
HWY
HWY-DE
HWY-O
The Limtiaco Consulting Group (J. Nakata)

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

LORETTA J. FUDDY, A.C.S.W., M.P.H.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
ENVIRONMENTAL MANAGEMENT DIVISION
SOLID AND HAZARDOUS WASTE BRANCH
919 ALA MOANA BOULEVARD, #212
HONOLULU, HAWAII 96814

In reply, please refer to:
EMD/SHWB

November 12, 2013

S1108LO

Mr. Charles Lee
Highways Division, Oahu District
Department of Transportation
727 Kakoi St.
Honolulu, Hawaii 96819

Dear Mr. Lee:

SUBJECT: Pre-Consultation on Draft Environmental Assessment
Oahu District Office and Baseyard Maintenance Storage Building and Canopy Extension Projects at 727 Kakoi St., Honolulu
TMK No.: 1st, 1-1-064:026

Thank you for the opportunity to review and provide comments on the subject document. The document was reviewed by the Solid Waste, Underground Storage Tank, and Hazardous Waste Sections, as well as the Office of Solid Waste Management (OSWM) of the Solid and Hazardous Waste Branch of the Department of Health (DOH). The OSWM offers the following comments on the document:

The October 1, 2013 request for consultation requested review and comments for two proposed projects. One project will add an approximately 2,000 square foot (sf) overhead canopy to an existing motor pool building. The second project involves the replacement of an existing 1,302 sf storage building with a new similar structure approximately 2,200 sf. Both demolition and new construction activities are anticipated based on the potential scope of both projects. Therefore, we offer the following comments:

1. The generator of the waste must determine if any demolition building components contain hazardous waste. Please refer to Attachment 1.

2. Any non-hazardous lead-based paint waste must be disposed of at DOH-permitted disposal facilities and not recycled. Please refer to Attachment 2.

3. Please inquire as to possible arrangements with DOH-permitted recovery facilities such as Alakona Corporation, Grace Pacific Corporation, Tajiri Lumber, Ltd. or West Oahu Aggregate Co., Inc. for the potential disposition of unpainted, uncontaminated concrete (no asbestos, lead-based paint or other types of contamination accepted) from either demolition or new construction. Please be aware that most of these businesses may choose to accept unpainted, uncontaminated concrete from their own jobs only. Concrete or other wastes that fail the TCLP test for hazardous waste must be managed as hazardous waste.

4. Non-hazardous concrete with lead-based paint must, prior to demolition, be separated from concrete intended for recycling and sent to DOH-permitted disposal facilities. If the project requires abatement of lead-based paint or asbestos activities, then the applicant needs to contact Mr. Robert Lopes of the Indoor and Radiological Health Branch at (808) 586-4700 as to when such activities will actually occur.

5. If on-site reuse of concrete is intended, then the uncontaminated concrete must also meet the state's definition of "inert fill material" defined as:

   Section 342H-1, Hawaii Revised Statutes Definition

   "Inert fill material" means earth, soil, rocks, rock-like material such as cured asphalt, brick, and clean concrete less than eight inches in diameter, except as specified by a licensed soils engineer with no exposed steel reinforcing rod. The fill material shall not contain vegetation or organic material, or other solid waste.

   The fill material shall be clean and uncontaminated. We typically utilize the Environmental Action Levels (EALs) for residential usage as well as the most stringent water quality standards for unrestricted use as a basis of determining whether fill is contaminated or not. The EALs may be found at: http://eha-web.doh.hawaii.gov/eha-cma/Leaders/HEER/environmental-hazard-evaluation-and-environmental-action-levels.

6. Dispose of new construction gypsum and plaster. Currently, no recycling facility on Oahu is permitted to accept gypsum board from demolition projects.

7. We assume that any wood waste from new construction is of the treated variety. Such wood waste must be disposed of at DOH-permitted disposal facilities, not recycled. Currently, there are no DOH-permitted facilities that accept treated lumber for recycling.

8. Dispose of non-reusable glass at DOH-permitted disposal facilities. We encourage the reuse of glass, if in a reusable form. Permitted glass recyclers on Oahu presently only accept glass bottles for recycling.

9. Please send any greenwaste to DOH-permitted composting facilities such as Menehune Green, LLC dba Hawaiian Earth Products, Ltd., or Windward Green Management, Ltd. Whenever feasible, we also encourage on-site reuse of any trees planned for removal.

10. Please send any ferrous scrap or non-reusable appliances or "white goods" that do not contain refrigeration units to permitted scrap metal facilities such as Lenox Resources, Inc. or Schnitzer Steel Hawaii Corporation. In addition, Refrigerant Recycling, Inc. accepts and removes fluids/freon from white goods with refrigeration units.

11. Please send any non-ferrous scrap to DOH-permitted facilities such as C.M. Recycling, LLC; Depot Metal Recycling, LLC; Island Recycling, Inc.; Lenox Resources, Inc.; Okuda Metals, Inc.; or any of the various Reynolds Recycling, Inc. locations on Oahu.

Please be reminded that the applicant's submittal was reviewed with respect to solid waste management and disposal issues only. We do recommend that the applicant obtain approval from other agencies such as Occupational Safety and Health Administration that may be involved in the oversight and implementation of various aspects of their proposed action.

If you have any questions or comments, please contact Mr. Lane Otsu of our Office of Solid Waste Management at (808) 586-4226.

Sincerely,

STEVEN Y.K. CHANG, P.E., CHIEF
Solid and Hazardous Waste Branch

Enclosures: Attachment 1, Hawaii Department of Health – Construction and Demolition (C and D) Waste Disposal General Guidance
Attachment 2, Disposal of Lead-Based Paint Waste

NEIL ABERCROMBIE
GOVERNOR

GLENN M. OKIMOTO
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

IN REPLY REFER TO:

HWY-OM 2.14-0036

January 17, 2014

TO: THE HONORABLE GARY GILL
ACTING DIRECTOR OF HEALTH

ATTN: STEVEN Y. K. CHANG, P.E., CHIEF
SOLID AND HAZARDOUS WASTE BRANCH

FROM: GLENN M. OKIMOTO, Ph.D.
DIRECTOR OF TRANSPORTATION

SUBJECT: CHAPTER 343, HAWAII REVISED STATUTES (HRS)
RESPONSE TO COMMENTS FOR OAHU DISTRICT OFFICE AND BASEYARD MAINTENANCE STORAGE BUILDING AND CANOPY EXTENSION PROJECTS AT 727 KAKOI STREET, HONOLULU, OAHU, HAWAII
PROJECT NOS. HWY-O 2014M AND HYW-O 2015S

Thank you for your response letter regarding consultation for the State of Hawaii, Department of Transportation (DOT) *Oahu District Office and Baseyard Canopy Extension Project and Oahu District Office and Baseyard, Kakoi Street Maintenance Storage Building projects.* We have the following responses to the Solid and Hazardous Waste Branch's comments:

The DOT will characterize all materials in accordance with Chapter 11-261, Hawaii Administrative Rules. We acknowledge that concrete or other wastes that fail the Toxicity Characteristic Leaching Procedure test must be managed as hazardous waste. Any waste that is determined to be hazardous waste will be disposed of in accordance with all applicable Federal, State and local regulations.

Non-hazardous lead-based paints will be disposed of at Department of Health (DOH)-permitted facilities and will not be recycled. We acknowledge that non-hazardous concrete with lead-based paint must be separated from concrete that will be recycled. The separated non-hazardous concrete with lead-based paint will be sent to a DOH-permitted disposal facility.
We acknowledge that any concrete intended for on-site reuse must qualify as "inert fill material" pursuant to §342H-1, HRS. We understand notification must be given to the Indoor and Radiological Health Branch prior to any activities that require abatement of lead-based paint or asbestos.

We acknowledge that there are no DOH-permitted disposal facilities that accept gypsum board and treated lumber for recycling.

The contractor, who is yet to be determined, will make all material disposal and recycling decisions. However, the DOT will require the contractor to comply with all relevant Federal, State, and local regulations.

Should you have further questions please contact Mr. Charles Lee, Facilities Engineer of our Maintenance Facilities Section at our Oahu District Office at (808) 831-6792. Thank you for your assistance.

JN/CL:dm

bc: DIR
DEP-P
HWY-DE
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HWY
The Limtiaco Consulting Group (J. Nakata)