FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-0300(138)	2014	3	220

GENERAL NOTES

1. The project includes the installation of VMS, CCTV cameras, poles, footings and associated power and communication infrastructure on the H-1 and H-201 Freeways on the Island of Oahu and includes connecting the system to existing City and State fiber optic lines to provide communication to the H-3 Traffic Operations Center and City & County of Honolulu Traffic Management Center.

2. The Contractor's attention is directed to the following Sections of the Special Provisions : Subsection 107.06 - Contractor Duty Regarding Public Convenience; Subsection 107.11 - Safety: Accident Prevention; Subsection 107.12 - Protection of Persons and Property; Subsection 104.11 - Utilities and Services; and Section 645 -Traffic Control.

3. At the end of each day's work, the Contractor shall remove all equipment and other obstructions to permit free and safe passage of public traffic.

4. The existence and location of underground utilities, manholes, monuments and structures as shown on the plans are from the latest available data but the accuracy is not guaranteed. The encountering of other obstacles during the course of work is possible. The Contractor shall be held liable for any damages incurred to the existing facilities and/or improvements as a result of his operations.

5. The exact locations and limits or areas to be filled with leveling course, reconstructed and cold planed shall be determined in the field by the Engineer.

6. The Contractor shall notify in writing, the Oahu Transit Services, Inc. Roads Supervision Office, 811 Middle St., Hon., HI 96819 (ph. #848-4571) seven (7) days prior to any paving operations.

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

8. The Contractor shall remove and dispose of all existing raised pavement markers and traffic tapes prior to the overlaying of Asphalt Concrete. This work shall be considered incidental to the various contract items.

9. All holes, depressions and wheel ruts shall be filled and compacted with Asphalt Concrete Pavement, Mix No. V prior to resurfacing. This shall be considered incidental to the various contract items.

10. Smooth riding connections shall be constructed at all limits of resurfacing, including the beginning and end of project, connecting approaches, side streets and driveways as shown on the plans and/or as directed by the Engineer.

11. Dressing of shoulder, sidewalk and bus turnout shall consist of clearing, grubbing, grading, reshaping and compacting the unpaved shoulders with suitable material as shown on the plans and/or as directed by the Engineer. This work shall be considered incidental to the various contract items.

12. Existing drainage system will be functional at all times during construction. The Contractor is to furnish materials, equipment, labor, tools and incidentals necessary to maintain flow. This work shall be considered incidental to various contract items.

13. Earth swale shall be graded to drain. This work shall be considered incidental to the various contract items.

14. The contractor shall provide for access to and from all existing side streets at all times.

15. Contractor shall obtain a construction permit from the State's Highway District Engineer at 727 Kakoi Street, Honolulu, phone no. 831-6712, prior to commencement of work within State right-of-way.

16. The Contractor shall provide, install and maintain all necessary signs, lights, flares, barricades, markers, cones and other protective facilities and shall take all necessary precautions for the protection and for the convenience and safety of public traffic. All such protective facilities and precautions to be taken shall conform with the "Administrative Rules of Hawaii governing the use of traffic control devices at work sites on or adjacent to public streets and highways" adopted by the director of transportation, and the current U.S. Federal Highway Administration "Manual On Uniform Traffic Control Devices for Streets and Highways, 2003 Edition, Part 6 Temporary Traffic Control". If lane closures are required during construction, a traffic control plan shall be incorporated into the construction plans and must be approved by the division prior to the issuance of the permit.

17. Approval of State permit construction plans shall be valid for a period of one year thereof from the date of notification of approval to the applicant. In the event construction does not commence within this one-year period, the applicant will be required to submit his construction plans for division's review and approval.

18. The Contractor shall notify the Highway Lighting and Traffic Signal Supervisor, Department of Transportation (State) three (3) working days prior to commencing work in this area. See phone number under note No. 16.

19. Contractor shall inform the State Permit Office at least 2 days prior to closing any lanes. See phone numbers under note No. 16.

20. Minimum vertical and horizontal clearance between existing drainage facilities and other utilities shall be one foot and two feet, respectively.

WATER POLLUTION AND EROSION CONTROL NOTES

A. GENERAL:

1. See Section 209 - Temporary Water Pollution and Erosion Control. Section 209 describes but is not limited to: submittal requirements; scheduling of a water pollution and erosion control conference with the Engineer; construction requirements; method of measurement; and basis of payment. In addition, Appendix A lists potential pollutant sources and corresponding BMPs used to mitigate the pollutants.

2. Follow the guidelines in the current HDOT Construction Best Management Practices Field Manual in developing, installing and maintaining the Best Management Practices (BMP) for the project. For any conflicting requirements between the Manual and applicable bid documents, the applicable bid documents will govern. Should a requirement not be clearly described within the applicable bid documents, the Contractor shall notify the Engineer immediately for interpretation. For the purposes of clarification under Note A.2, "applicable bid documents" include the construction plans, standard specifications, Special Provisions, Permits, and the Storm Water Pollution Prevention Plan (SWPPP) when applicable.

3. Follow the guidelines in the Honolulu's City & County "Rules Relating to Soil Erosion Standards and Guidelines" along with applicable Soil Erosion Guidelines for projects on Maui, Molokai, Kauai, and Hawaii.

4. The Engineer may assess liquidated damages of up to $27,500 for non-compliance of each BMP requirement and each requirement stated in Section 209, for every day of non-compliance. There is no maximum limit on the amount assessed per day.

5. The Engineer will deduct the cost from the progress payment for all citations received by the Department for non-compliance, or the Contractor shall reimburse the State for the full amount of the outstanding cost incurred by the State.

6. If necessary, install a rain gage prior to any field work including the installation of any site-specific best management practices. The rain gage shall have a tolerance of at least 0.05 inches of rainfall. Install the rain gage on the project site in an area that will not deter rainfall from entering the gage opening. Do not install in a location where rain water may splash into rain gage. The rain gage installation shall be stable and plumbed. Do not begin field work until the rain gage is installed and site-specific best management practices are in-place.

7. Submit Site-Specific BMP Plan to the Engineer along with a completed Site-Specific BMP Review Checklist within 30 calendar days of contract execution. The Site-Specific BMP Review Checklist may be obtained from http://www.stormwaterhawaii.com.

ABBREVIATIONS

ABUT	Abutment
ø	Approximate
&	And
@	At
AC	Asphalt Concrete
℄	Baseline
BMP	Best Management Practices
CATV	Cable Television
CB	Catch Basin
CCTV	Closed Circuit Television
℄	Centerline
CLR.	Clear
CONC	Concrete
CONT	Continuation or Continuous
DET.	Detail
D.I.	Drain Inlet
D/L	Drain Line
DMS	Dynamic Message Sign
DMH	Drain Manhole
DWY. OR D/W	Driveway
EA	Each
EHH	Electric Handhole
ELEC.	Electric
ELEV. OR EL	Elevation
EX. or EXIST.	Existing
EP	Edge of Pavement
ETW	Edge Travel Way
FH	Fire Hydrant
FT	Feet
GA	Guy Anchor
GE	Gigabit Ethernet
GV	Gate Valve
HELCO	Hawaiian Electric Light CO.
HECO	Hawaiian Electric CO.
HT/HTCO	Hawaiian Telcom
IRR	Irrigation
LAT	Lateral
LP	Light Pole
MH	Manhole
MON	Monument
MIN	Minimum
NIC	Not In Contract
PAV'T	Pavement
PL.	Place
℞	Property Line
PP	Power Pole
RD.	Road
ROW	Right-Of-Way
SDMH	Storm Drain Manhole
SFP	Small Form Factor Pluggable
SHT.	Sheet
ST.	Street
STA.	Station
STD	Standard
S/W	Sidewalk
TBOX	Telephone Box
TCP	Traffic Control Plan
TMH	Telephone Manhole
TRANS	Transfomer
TYP.	Typical
UP	Utility Pole
VMS	Variable Message Sign
WM	Water Meter
WV	Water Valve

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CONSTRUCTION NOTES AND ABBREVIATIONS

Freeway Management System, Interstate H-1, H-2 & Moanalua Freeway (H-201) Phase IC, Part 2
Federal Aid Project No. IM-0300(138)

Scale: NTS Date: 8/7/14

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-0300(138)	2014	4	220

WATER POLLUTION AND EROSION CONTROL NOTES (CONT'D)

B. WASTE DISPOSAL:

1. Waste Materials
   Collect and store all waste materials in a securely lidded metal dumpster or roll off container with cover to keep rain out or loss of waste during windy conditions. The dumpster shall meet all local and State solid waste management regulations. Deposit all trash and construction debris from the site in the dumpster. Empty the dumpster weekly or when the container is two-thirds full, whichever is sooner. Do not bury construction waste materials onsite. The Contractor's supervisory personnel shall be instructed regarding the correct procedure for waste disposal. Post notices stating these practices in the office trailer, on a weatherproof bulletin board, or other accessible location acceptable to the Engineer. The Contractor shall be responsible for seeing that these procedures are followed. Submit the Solid Waste Disclosure Form for Construction Sites to the Engineer within 30 calendar days of contract execution. Provide a copy of all the disposal receipts from the facility permitted by the Department of Health to receive solid waste to the Engineer monthly. This should also include documentation from any intermediary facility where solid waste is handled or processed.

2. Hazardous Waste
   Dispose all hazardous waste materials in the manner specified by local or State regulations and by the manufacturer. The Contractor's site personnel shall be instructed in these practices and shall be responsible for seeing that these practices are followed.

3. Sanitary Waste
   Collect all sanitary waste from the portable units a minimum of once per week, or as required. Position sanitary facilities where they are secure and will not be tipped over or knocked down.

C. EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES:

1. For projects with an NPDES Permit for Construction Activities, inspect at the following intervals. For construction areas discharging to nutrient or sediment impaired waters, inspect all control measures at least once each week and within 24 hours of any rainfall event of 0.25 inches or greater within a 24 hour period. For construction areas discharging to waters not impaired for nutrient or sediments, inspect all control measures weekly. Inspections are only required during the project's normal working hours. The discharge point water classification may be found in the SWPPP.

2. For projects without an NPDES Permit for Construction Activities, inspect all control measures weekly.

3. Maintain all erosion and sediment control measures in good working order. If repair is necessary, initiate repair immediately and complete by the close of the next work day if the problem does not require significant repair or replacement, or if the problem can be corrected through routine maintenance. When installation of a new erosion or sediment control or a significant repair is needed, install the new or modified control or complete the repair no later than 7 calendar days from the time of discovery. "Immediately" means the Contractor shall take all reasonable measures to minimize or prevent discharge of pollutants until a permanent solution is installed and made operational. If a problem is identified at a time in the day in which it is too late to initiate repair, initiation of repair shall begin on the following work day.

4. Remove built-up sediment from silt fence when it has reached one-third the height of the fence. Remove sediment from other perimeter sediment control devices when it has reached one-half the height of the device.

5. Inspect silt screen or fence for depth of sediment, tears, to verify that the fabric is securely attached to the fence posts or concrete slab and to verify that the fence posts are firmly in the ground. Inspect and verify the bottom of the silt screen is buried a minimum of 6 inches below the existing ground.

6. Inspect temporary and permanent seeding and planting for bare spots, washouts and healthy growth.

7. Complete and submit to the Engineer a maintenance inspection report within 24 hours after each inspection.

8. Provide a stabilized construction entrance at all points of exit onto paved roads to reduce vehicle tracking of sediments. Include stabilized construction entrance in the Water Pollution,⅓Dust, and Erosion Control submittals. ⅓Minimum length should be 50 feet. ⅓Minimum width should be 30 feet. Minimum depth should be 12 inches or as recommended by the soils engineer and underlain with geo-textile fabric. ⅓If minimum dimensions cannot be met, provide other stabilization techniques that remove sediment prior to exit. ⅓Clean the paved⅓street adjacent to the site entrance daily or as required to remove any excess⅓mud, cold -planed materials, dirt or rock tracked from the site. Do not hose down the street without containing or vacuuming wash water. ⅓Cover dump trucks⅓hauling material from the construction site with a tarpaulin. Remove sediment tracked onto the street, sidewalk, or other paved area by the end of the day in which the track-out occurs.

9. Include designated Concrete Washout Area(s) in the Water Pollution, Dust, and Erosion Control submittals.

10. Submit the name of a specific individual designated responsible for inspections, maintenance and repair activities and filling out the inspection and maintenance report.

11. Personnel selected for the inspection and maintenance responsibilities shall receive training from the Contractor. They shall be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls used onsite in good working order.

12. Contain, remove, and dispose slurry generated from saw cutting of pavement in accordance with approved BMP practices. Do not allow discharge into the drainage system or State waters.

13. For projects with an NPDES Permit for Construction Activities, immediately initiate stabilizing exposed soil areas upon completion of earth-disturbing activities for areas where earth-disturbing activities have permanently or temporarily ceased. Earth-disturbing activities have permanently ceased when clearing and excavation within any area of the construction site that will not include permanent structures has been completed. Earth-disturbing activities have temporarily ceased when clearing, grading, and excavation within any area of the site that will not include permanent structures will not resume (i.e., the land will be idle) for a period of 14 or more calendar days, but such activities will resume in the future. For construction areas discharging into waters not impaired for nutrients sediments, complete initial stabilization within 14 calendar days after the temporary or permanent cessation of earth-disturbing activities. For construction areas discharging into nutrient or sediment impaired waters, complete initial stabilization within 7 calendar days after the temporary or permanent cessation of earth-disturbing activities. Classification of water at the discharge point may be found in the SWPPP.

D. GOOD HOUSEKEEPING BEST MANAGEMENT PRACTICES:

1. Materials Pollution Prevention Plan

   a. Applicable materials or substances listed below are expected to be present onsite during construction. Other materials and substances not listed below shall be added to the inventory.

   Concrete
   Detergents
   Paints (enamel and latex)
   Metal Studs
   Tar
   Fertilizers
   Petroleum Based Products
   Cleaning Solvents
   Wood
   Masonry Block
   Herbicides and Pesticides
   Curing Compounds
   Adhesives

   b. Use Material Management Practices to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff. Make an effort to store only enough product as is required to do the job.

   c. Store all materials stored onsite in a neat, orderly manner in their appropriate containers and if possible under a roof or other enclosure.

   d. Keep products in their original containers with the original manufacturer's label.

   e. Do not mix substances with one another unless recommended by the manufacturer.

   f. Whenever possible, use a product up completely before disposing of the container.

   g. Follow manufacturer's recommendations for proper use and disposal.

   h. Conduct a daily inspection to ensure proper use and disposal of materials onsite.

2. Hazardous Material Pollution Prevention Plan

   a. Keep products in original containers unless they are not resealable.

   b. Retain original labels and Safety Data Sheets (SDS) formerly Material Safety Data Sheets (MSDS).

   c. Dispose of surplus products according to manufacturers' instructions and local and State regulations.

3. Onsite and Offsite Product Specific Plan
   The following product specific practices shall be followed onsite:

   a. Petroleum Based Products:
   Monitor all onsite vehicles for leaks and perform regular preventive maintenance to reduce the chance of leakage. Store petroleum products in tightly sealed containers which are clearly labeled. Apply asphalt substances used onsite according to the manufacturer's recommendation.

   b. Fertilizers:
   Apply fertilizers used only in the minimum amounts recommended by the manufacturer and federal, state, and local requirements. Avoid applying just before a heavy rain event. Apply at the appropriate time of year for the location, and preferably timed to coincide as closely as possible to the period of maximum vegetation uptake and growth. Once applied, work fertilizer into the soil to limit exposure to storm water. Do not apply to storm conveyance channels with flowing water. Storage shall be in a covered shed or in an area where fertilizer will not come into contact with precipitation or stormwater. Transfer the contents of any partially used bags of fertilizer to a sealable plastic bin to avoid spills.

   c. Paints:
   Seal and store all containers when not required for use. Do not discharge excess paint to the drainage system, sanitary sewer system, or State waters. Dispose properly according to manufacturers' instructions and State and local regulations.

   d. Concrete Trucks:
   Washout or discharge concrete truck drum wash water only at a designated site as far as practicable from storm drain inlets or State waters. Do not discharge water in the drainage system or State waters. Disposal by percolation is prohibited. Clean disposal site as required or as requested by the Engineer.

4. Spill Control Plan

   a. Post a spill prevention plan to include measures to prevent and clean up each spill.

   b. The Contractor shall be the spill prevention and cleanup coordinator. Designate at least three site personnel who shall receive spill prevention and cleanup training. These individuals shall each become responsible for a particular phase of prevention and cleanup. Post the names of responsible spill personnel in the material storage area on a weatherproof bulletin board or other accessible location acceptable to the Engineer and in the office trailer onsite.

   c. Clearly post manufacturers' recommended methods for spill cleanup. Make site personnel aware of the procedures and the location of the information and cleanup supplies.

   d. Keep ample materials and equipment necessary for spill cleanup in the material storage area onsite.

   e. Clean up all spills immediately after discovery.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
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CONSTRUCTION NOTES

Freeway Management System, Interstate H-1, H-2 & Moanalua Freeway (H-201)
Phase IC, Part 2
Federal Aid Project No. IM-0300(138)

Scale: NTS Date: 8/7/14

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WATER POLLUTION AND EROSION CONTROL NOTES (CONT'D)

f. Keep the spill area well ventilated. Personnel shall wear appropriate protective clothing to prevent injury from contact with a hazardous substance.

g. Report spills of toxic hazardous material to the appropriate State or local government agency, regardless of the size. Where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302 occurs during a 24-hour period, the Contractor shall notify the Engineer as soon as the Contractor has knowledge of the discharge. The Engineer will notify the National Response Center (NRC) at (800) 424-8802, the Clean Water Branch during regular business hours at 586-4309, and the Hawaii State Hospital Operator at 247-2191 and the Clean Water Branch (DOH-CWB) via email at cleanwaterbranch@doh.hawaii.gov during non-business hours immediately. The Contractor shall also provide to the Engineer, within 7 calendar days of knowledge of the release, a description of the release, the circumstances leading to the release, and the date of the release. The Engineer will provide this information to the DOH-CWB. The Engineer will provide information to the NRC if requested.

E. PERMIT REQUIREMENTS:

1. A National Pollutant Discharge Elimination System (NPDES) Permit for Construction Activities of one acre or more of disturbed area is required for this project. If the Contractor requires extra land disturbance, including staging and storage areas, that is not covered by the NPDES Permit obtained by the State, the Contractor shall be responsible for obtaining the required NPDES Construction Activities Permit to cover this additional disturbed area. See Hawaii Administrative Rules Chapter 11-55, Appendix C for definition of land disturbance. The Contractor's attention is directed to the applicable NPDES Permit documents on the bid package compact disc.

2. Comply with all applicable State and Federal Permit conditions. Permits may include but are not limited to the following:

   a. NPDES Permit for Construction Activities

   b. NPDES Permit for Construction Dewatering

   c. NPDES Permit for Hydrotesting Waters

   d. Water Quality Certification

   e. Stream Channel Alteration Permit

   f. Section 404 Army Corps of Engineer Permit

F. SITE SPECIFIC BMP REQUIREMENTS:

Each BMP below is referenced to the corresponding section of the current HDOT Construction Best Management Practices Field Manual and appropriate Supplemental Sheets. The Manual may be obtained from the HDOT Statewide Stormwater Management Program Website at http://www.stormwaterhawaii.com/resources under Construction Best Management Practices Field Manual. Supplemental BMP sheets are located at http://stormwaterhawaii.com/contractors/contractors_BMPmanual.aspx under Concrete Curing and Irrigation Water.

The requirements for Water Pollution, Dust, and Erosion Control submittals are included in Section 209 of the Hawaii Standard Specifications for Road and Bridge Construction dated 2005 and applicable Special Provisions. A list of pollutant sources and corresponding BMP used to mitigate the pollutants are included in Section 209 of the Special Provisions under Appendix A.

Follow the requirements below:

1. Protect all Drainage Inlets receiving runoff from disturbed areas (SC-2).

2. Contain on-site runoff using Perimeter Sediment Controls
   a. SC-1 Silt Fence
   b. SC-5 Vegetated Filter Strips and Buffers
   c. SC-8 Compost Filter Berm
   d. SC-13 Sandbag Barrier
   e. SC-14 Brush or Rock Filter

3. Control offsite runoff from entering construction area
   a. EC-8 Run-On Diversion
   b. SC-6 Earth Dike
   c. SC-7 Temporary Drains and Swales

4. Incorporate applicable Site Management BMP
   a. SM-1 Employee Training
   b. SM-2 Material Delivery and Storage
   c. SM-3 Material Use
   d. SM-4 Protection of Stockpiles
   e. SM-6 Solid Waste Management
   f. SM-7 Sanitary/Septic Waste Management
   g. SM-9 Hazardous Waste Management
   h. SM-10 Spill Prevention and Control
   i. SM-11 Vehicle and Equipment Cleaning
   j. SM-12 Vehicle and Equipment Maintenance
   k. SM-13 Vehicle and Equipment Refueling
   l. SM-14 Scheduling
   m. SM-15 Location of Potential Sources of Sediment
   n. SM-16 Preservation of Existing Vegetation
   o. SM-18 Dust Control

5. Contain pollutants within the Construction Staging/Storage Area BMP with applicable Perimeter Sediment Controls and Site Management BMP. Include a Stabilized Construction Entrance/Exit (EC-2) for all areas which exit onto a paved street. Restrict vehicle access to these points.

6. Manage Concrete Waste including installing a Concrete Washout Area (SM-5) and properly disposing of Concrete Curing Water (California Stormwater BMP Handbook NS-12 Concrete Curing).

7. Remove saw cut slurry and hydrodemolition water from the site by vacuuming. Provide storm drain protection and/or perimeter sediment controls during saw cutting and hydrodemolition work.

TRAFFIC NOTES FOR WORK ON CITY AND COUNTY STREETS

1. A permit shall be obtained from the Department of Transportation Services before work on any portion of a public street or highway may begin. Construction traffic control plans approved by the Department of Transportation Services and/or the Department of Planning and Permitting must be approved when applying for the permit.

2. The Contractor shall provide, install and maintain all necessary signs and other protective facilities, which shall conform with the :Hawaii Administration Rules Governing the Use of Traffic Control Devices at Work Sites On or Adjacent to Public Streets and Highways" adopted by the Director of Transportation, and the current U.S. Federal Highway Administration's "Manual on Uniform Traffic Control Devices for Streets and Highways, Part VI - Traffic Controls for Street and Highway Construction and Maintenance Operations."

3. Work on any city street area may be performed only between the hours of 8:30 A.M. to 3:30 P.M., Monday through Friday, unless otherwise permitted by the Department of Transportation Services.

4. During working hours, the Contractor shall provide for through traffic. During non-working hours, all trenches shall be covered with safe non-skid bridging material and all lanes shall be open to traffic.

5. As required by the Department of Transportation Services, the Contractor shall provide off-duty police officers to control the flow of traffic.

6. Where pedestrian walkways exist, they shall be maintained in passable condition or other facilities for pedestrians shall be provided. Passage between walkways at intersections shall likewise be provided.

7. Driveways shall be kept open unless the owners of the property using these rights-of-way are otherwise provided for satisfactorily.

8. The Contractor shall reference to the approval of the Department of Transportation Services and the Department of Planning and Permitting, all existing traffic signs, posts and pavement markings prior to the commencement of construction. The Contractor shall replace or repair all traffic signs, posts and pavement markings disturbed by his activities.

9. The Contractor shall notify the Department of Planning and Permitting at 768-8084 one (1) week prior to any work to be done on signs, posts and pavement markings.

10. No equipment shall be stored within street rights-of-way except at locations designated win writing and approved by the Department of Transportation Services.

11. The department of Design and Construction shall ensure that the Contractor installs the construction traffic control devices in accordance with the MUTCD and the Hawaii Administration Rules as specified in the traffic note #2.

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STATE OF HAWAII
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CONSTRUCTION NOTES

Freeway Management System, Interstate
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Phase IC, Part 2
Federal Aid Project No. IM-0300(138)

Scale: NTS Date: 8/7/14

SHEET No. 5 OF 9 SHEETS

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-0300(138)	2014	6	220

HAWAIIAN ELECTRIC COMPANY NOTES

1. LOCATION OF HECO FACILITIES
The location of HECO'S overhead and underground facilities shown on the plans are from existing records with varying degrees of accuracy and are not guaranteed as shown. the Contractor shall verify in the field the locations of the facilities and shall exercise proper care in excavating and working in the area. wherever connections of new utilities to existing utilities and utility crossings are shown, the Contractor shall expose the existing lines at the proposed connections and crossings to verify the depths prior to excavation for the new lines. the Contractor shall be responsible for any damages to HECO'S facilities whether shown or not shown on the plans.

2. COMPLIANCE WITH HAWAII OCCUPATIONAL SAFETY AND HEALTH LAWS
The Contractor shall comply with the State of Hawaii's Occupational Safety and Health laws and regulations, including without limitation, those related to working on or near exposed or energized electrical lines and equipment.

3. EXCAVATION PERMIT
The Contractor shall obtain an excavation permit from HECO's the Planning and Design Section of the Customer Installations Department (543-5654) located at 820 Ward Avenue, 4th floor, a minimum of ten (10) working days prior to starting construction.

4. CAUTION!!! ELECTRICAL HAZARD!!!
Existing HECO overhead and underground lines are energized and will remain energized during construction unless prior special arrangements have been made with HECO. only HECO personnel are to handle these energized lines and erect temporary guards to protect these lines from damage. the Contractor shall work cautiously at all times to avoid accidents and damage to existing HECO facilities, which can result in electrocution.

5. OVERHEAD LINES
State law (OSHA 1910.269(k)(2b)) requires that a worker and the longest object he or she may contact cannot come closer than a minimum radial clearance of 10 feet when working close to or under any overhead lines rated 50kv and below. for each additional 10kv above 50kv, an additional 4 inches shall be added to the 10-foot clearance requirement. the preceding information on line clearance requirements is provided as a convenience and it is the contractor's responsibility to be informed of and comply with any revisions or amendments to the law.

Should the Contractor anticipate that his work will result in the need to encroach within the minimum required clearance at any time, the Contractor shall notify HECO at least four (4) weeks prior to the planned encroachment so that, if feasible, the necessary protections (e.g. relocate or de-energize HECO lines) can be investigated. HECO may also be able to blanket its distribution (12kv and below) lines to provide a visual aid in preventing accidental contact. HECO's cost of safeguarding or identifying its lines will be charged to the Contractor.

Contact HECO's Customer Installations Department at 543-7846 for assistance in identifying and safeguarding overhead power lines.

6. POLE BRACING
A minimum clearance of 10 feet must be maintained when excavating around utility poles and/or their anchor system to prevent weakening or pole support failure. should work require excavating within 10 feet of a pole and/or its anchor system, the Contractor shall protect, support, secure, and take all other precautions to prevent damage to or leaning of these poles. the Contractor is responsible for all pole bracing designs and structural calculations, as well as associated costs to brace, repair, or strengthen poles. all means of structural support for the pole and/or anchor system proposed by the Contractor shall be submitted to HECO's customer installation department (543-7846) for review a minimum of ten (10) working days prior to implementation. the cost of HECO's review/assistance in providing proper support and protection of its poles will be charged to the Contractor.

7. UNDERGROUND LINES
The Contractor shall exercise extreme caution whenever construction crosses or is in close proximity of underground lines. HECO's existing electrical cables are energized and will remain energized during construction. only HECO personnel are to break into existing HECO facilities, handle these cables, and erect temporary guards to protect these cables from damage. the cost of HECO's assistance in providing proper support and protection of its underground lines will be charged to the Contractor. for assistance/coordination in providing proper support and protection of these lines, the Contractor shall call HECO's Customer Installation Department at 543-7846 a minimum of ten (10) working days in advance.

Special precautions are required when excavating near HECO's 138kv underground lines (see HECO instructions to consultants/contractors on "excavation near HECO's underground 138kv lines" for detailed requirements).

For verification of underground lines, the Contractor shall call the Hawaii One Call Center at 866-423-7287 minimum of five (5) working days in advance.

8. UNDERGROUND FUEL PIPELINES
The Contractor shall exercise extreme caution whenever construction crosses or is in close proximity of HECO's underground fuel oil pipelines. special precautions are required when excavating near HECO's underground fuel oil pipelines (see HECO instructions to consultants/contractors on "excavation near HECO's underground fuel pipelines" for detailed requirements).

9. EXCAVATIONS
When trench excavation is adjacent to or beneath HECO's existing structures or facilities, the Contractor is responsible for:

a. Arranging for HECO standby personnel to observe work at contractor's cost
b. Sheeting and bracing or otherwise the excavation and stabilizing the existing ground to render it safe and secure and to prevent possible slides, cave-ins, and settlements.
c. Properly supporting existing structures or facilities with beams, struts, or under-pinnings or other necessary methods to fully protect it from damage.
d. Backfilling with proper backfill material including special thermal backfill where existing (refer to engineering department for thermal backfill specifications).

10. RELOCATION OF HECO FACILITIES

Any work required to relocate or modify HECO facilities shall be done by HECO, or by the Contractor under HECO's supervision. the Contractor shall be responsible for all coordination, and shall provide necessary support for HECO's work, which may include, but not be limited to, staking of pole/anchor locations identifying right of way and property lines, excavation and backfill, permits and traffic control, barricading, and restoration of pavement, sidewalks, and other facilities.

All costs associated with any relocation or modification (either temporary or permanent) for the convenience of the Contractor, or to enable the Contractor to perform his work in a safe and expeditious manner in fulfilling his contract obligations shall be borne by the Contractor.

11. CONFLICTS
Any redesign or relocation of HECO's facilities not shown on the plans may be cause for lengthy delays. the Contractor acknowledges that HECO is not responsible for any delay or damage that may arise as a result of any conflicts discovered or identified with respect to the location or construction of HECO's electrical facilities in the field, regardless of whether the Contractor has met the requested minimum advance notices. in order to minimize any delay or impact arising from such conflicts, HECO should be notified immediately upon discovery or identification of such conflict.

12. DAMAGE TO HECO FACILITIES
The Contractor shall be responsible for the protection of all HECO surface and subsurface utilities and shall be responsible for any damages to HECO's facilities as a result of his operations. the Contractor shall immediately report such damages or any hazardous conditions related to HECO's line to HECO's trouble dispatcher at 548-7961. repair work shall be done by HECO or by the Contractor under HECO's supervision. costs for damages to HECO's facilities shall be borne by the Contractor.

In case of damage or suspected damage to HECO's fuel pipeline, the Contractor shall immediately notify HECO's Honolulu power plant shift supervisor at 533-2102 (a 24-hour number) so HECO personnel can secure the damaged section and report any oil spills to the proper authorities. in case of damage or suspected damage to the Waiau or Kahe fuel pipelines, the Contractor shall also notify chevron at 682-2227. all costs associated with the damage, repair, and oil spill cleanup shall be borne by the Contractor.

13. HECO STAND-BY PERSONNEL
The Contractor may request HECO to provide an inspector to stand-by during construction near HECO's facilities. the cost of such inspection will be charged to the Contractor.

The Contractor shall call the HECO's customer installations department at 543-7846 a minimum of five (5) working days in advance to arrange for HECO stand-by personnel.

ORIGINAL PLAN | NOTEBOOK No. ____
SURVEY PLOTTED BY ____ DATE
DRAWN BY ____ " "
TRACED BY ____ " "
DESIGNED BY ____ " "
QUANTITIES BY ____ " "
CHECKED BY ____ " "

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LINE IS 2 INCHES AT FULL SIZE
(if not 2 inches: scale accordingly)

NEAL H. KASAMOTO
LICENSED PROFESSIONAL ENGINEER
No. 6931-C
HAWAII, U.S.A.
LICENSE EXPIRES: 4/30/16
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CONSTRUCTION NOTES

Freeway Management System, Interstate H-1, H-2 & Moanalua Freeway (H-201) Phase IC, Part 2
Federal Aid Project No. IM-0300(138)

Scale: NTS Date: 8/7/14

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-0300(138)	2014	7	220

HAWAIIAN ELECTRIC COMPANY NOTES (CON'T)

14. CLEARANCES

The following clearances shall be maintained between HECO'S ductline and all adjacent structures (charted and uncharted) in the trench:

MINIMUM SEPARATION CLEARANCES TO EXISTING UNDERGROUND DUCTLINES HORIZONTAL (PARALLEL)

UTILITY BEING INSTALLED	EXIST. DIRECT BURIED CABLE	EXIST. DIRECT BURIED IN CONDUIT (NO CONC. ENCASEMENT)	EXIST. 3" CONC. ENCASEMENT	APPLICABLE NOTES:
HECO DB CONDUITS	12"	3"	0"	
HECO 3" ENCASEMENT	0"	0"	0"	
TELEPHONE/CATV DB	12"	12"	6"	
TELEPHONE/CATV DB DUCTS	12"	12"	6"	
TELEPHONE/CATV 3" ENCASEMENT	0"	0"	0"	5
TRAFFIC SIGNAL	12"	12"	12"	
WATER DB	36"	36"	36"	1, 4
WATER SERVICE LATERALS	12"	12"	12"	
WATER (CONCRETE JACKETED)	36"	36"	36"	1, 4
GAS DB	12"	12"	12"	1
GAS (CONCRETE JACKETED)	12"	12"	12"	1
SEWER DB	36"	36"	36"	1, 2
SEWER (CONCRETE JACKETED)	36"	36"	36"	1, 2
DRAIN	12"	12"	12"	1
FUEL PIPELINES	48"	48"	48"	3

NOTES:

1. WHERE SPACE IS AVAILABLE, PARALLEL CLEARANCE TO OTHER UTILITIES, OR FOREIGN STRUCTURES OTHER THAN COMMUNICATION OR TRAFFIC SIGNAL SHALL BE 36".
2. IF 36" CLEARANCE CANNOT BE MET:
   - IF CLEARANCE IS LESS THAN 12", JACKET SEWER LINE WITH REINFORCED CONCRETE (PER HECO'S STD. 30-1030) FOR A DISTANCE OF 5' PLUS PIPE DIAMETER.
   - IF CLEARANCE IS BETWEEN 12" AND 36", JACKET SEWER LINE WITH PLAIN CONCRETE.
3. ELECTRICAL CONDUIT CROSSINGS OF FUEL LINES SHOULD BE KEPT A MINIMUM OF 48" CLEAR BELOW FUEL LINE FOR THE FULL EASEMENT WIDTH. IF THE 48" CLEARANCE CANNOT BE MET BUT THERE IS A MINIMUM OF 24", THE FUEL LINE MUST BE ENCASED WITH 6" OF CONCRETE.
4. 5 FEET CLEAR TO WATER MAINS 16" AND LARGER.
5. FOR SITUATIONS WITH 0" MINIMUM SEPARATION, A 6" SEPARATION IS RECOMMENDED.
6. CLEARANCES MEASURED FROM OUTER EDGES OR DIAMETERS OF UTILITIES.

MINIMUM SEPARATION CLEARANCES TO EXISTING UNDERGROUND DUCTLINES VERTICAL (CROSSINGS)

UTILITY BEING INSTALLED	EXIST. DIRECT BURIED CABLE	EXIST. DIRECT BURIED IN CONDUIT (NO CONC. ENCASEMENT)	EXIST. 3" CONC. ENCASEMENT	APPLICABLE NOTES:
HECO DB CONDUITS	6"	3"	0"	
HECO 3" ENCASEMENT	0"	0"	0"	
TELEPHONE/CATV DB	12"		6"	
TELEPHONE/CATV DB DUCTS	12"	12"	6"	
TELEPHONE/CATV 3" ENCASEMENT	0"	0"	0"	5
TRAFFIC SIGNAL	12"	12"	6"	
WATER DB	6"	6"	6"	2
WATER SERVICE LATERALS	6"	6"	6"	
WATER (CONCRETE JACKETED)	6"	6"	6"	2
GAS DB	12"	12"	12"	
GAS (CONCRETE JACKETED)	12"	12"	12"	
SEWER DB	24"	24"	24"	1
SEWER (CONCRETE JACKETED)	24"	24"	24"	1
DRAIN	12"	12"	12"	
FUEL PIPELINES	48"	48"	48"	3

NOTES:

1. IF 36" CLEARANCE CANNOT BE MET:
   - IF CLEARANCE IS LESS THAN 12", JACKET SEWER LINE WITH REINFORCED CONCRETE (PER HECO'S STD. 30-1030) FOR A DISTANCE OF 5' PLUS PIPE DIAMETER.
   - IF CLEARANCE IS BETWEEN 12" AND 24", JACKET SEWER LINE WITH PLAIN CONCRETE.
2. 12" VERTICAL CLEARANCE FOR PIPE DIAMETERS GREATER THAN 16".
3. ELECTRICAL CONDUIT CROSSINGS OF FUEL LINES SHOULD BE KEPT A MINIMUM OF 48" CLEAR BELOW FUEL LINE FOR THE FULL EASEMENT WIDTH. IF THE 48" CLEARANCE CANNOT BE MET BUT THERE IS A MINIMUM 24", THE FUEL LINE MUST BE ENCASED WITH 6" OF CONCRETE.
4. 5 FEET CLEAR TO WATER MAINS 16" AND LARGER.
5. FOR SITUATIONS WITH 0" MINIMUM SEPARATION, A 6" SEPARATION IS RECOMMENDED.
6. CLEARANCES MEASURED FROM OUTER EDGES OR DIAMETERS OF UTILITIES.

The Contractor shall notify the construction manager & HECO of any heat sources (power cable duct bank, steamline, etc.) encountered that are not properly identified on the drawing.

15. INDEMNITY

The Contractor shall indemnify, defend and hold harmless HECO from and against all losses, damages, claims, and actions, including but not limited to reasonable attorney's fees and costs based upon or arising out of damage to property or injuries to persons, or other tortuous acts caused or contributed to by contractor or anyone acting under its direction or control or on its behalf; provided contractor's indemnity shall not be applicable to any liability based upon the sole negligence of HECO.

CATV NOTES

1. The Contractor shall procure and pay for all licenses and permits and shall give all notices necessary and incident to the due and lawful prosecution of the work.
2. The Contractor shall take necessary precaution not to damage existing cables or ducts. Any work involving existing cables or ducts shall be done in the presence of the Oceanic Cable/Time Warner inspector or his representative.
3. The Contractor shall notify the Oceanic Cable/Time Warner inspector 48 hours prior to the start of pullbox adjustments.
4. Contractor shall provide all materials and furnish all labor and equipment necessary to re-adjust the pullbox height.
5. The location of CATV facilities shown on plans are from existing records with varying degrees of accuracy as to its actual fixed location. The Contractor shall use extreme caution when working in close proximity of CATV facilities.
6. The Contractor shall obtain excavation permit clearance from Oceanic Cable/Time Warner's Engineering Section located at 200 Akamainui St., Mililani Tech Park
7. Any work required to relocate CATV facilities shall be done by Oceanic Cable/Time Warner and the Contractor shall be responsible for all coordination requirements and associated costs.
8. Any damage to Oceanic Cable/Time Warner's facilities shall be reported to OCI's Repair Dispatch Department at 625-8282 or 625-8666.
9. At no time shall cement mortar, wood, or any other material be used between precast sections. Leveling or raising of boxes to grade must be done by brickwork section using cement mortar. The permanent installation of wooden wedges to accomplish this purpose will not be accepted.
10. Trenching to be by hand digging near and across existing utility lines.
11. For underground cable locating and parking, five (5) working days advance notice is required. Three (3) working days advance notice is required for any inspection by a designated representative. Contractor shall take necessary precaution not to damage any existing cables or ducts. Oceanic Cable/Time Warner's inspector or designated representative is required to be at any job site whenever there will be a breakage into or entry into any structure that contain Oceanic Cable/Time Warner's facilities.

SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE
ORIGINAL PLAN
NOTEBOOK
No.

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NEAL H. KASAMOTO
LICENSED PROFESSIONAL ENGINEER
No. 6931-C
HAWAII, U.S.A.
LICENSE EXPIRES: 4/30/16
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LINE IS 2 INCHES AT FULL SIZE
(if not 2 inches: scale accordingly)

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CONSTRUCTION NOTES

Freeway Management System, Interstate H-1, H-2 & Moanalua Freeway (H-201) Phase IC, Part 2
Federal Aid Project No. IM-0300(138)

Scale: NTS Date: 8/7/14

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-0300(138)	2014	8	220

WATER NOTES

1. Unless otherwise specified, all materials and construction of water system facilities and appurtenances shall be in accordance with the City and County of Honolulu Board of Water Supply's "Water System" dated 2002, the "Water System External Corrosion Control Standards," volume 3, dated 1991, and all subsequent amendments and additions.
2. All plans approved by the Board of Water Supply's are based solely on the adequacy of the water supply. All other features on the water system, such as lines, grades, fittings, drainage, etc., and other features of improvements shall not be the responsibility of the Board of Water Supply.
3. The Contractor shall notify the City and County of Honolulu Board of Water Supply Capital Projects Division, Construction Section in writing, one week prior to commencing work on the water system.
4. The existence and location of underground utilities and structures as shown on the plans are from the latest available data but are not guaranteed as to the accuracy of encountering of other obstacles during the course of the work. The Contractor shall be responsible and pay for all damages to existing utilities. The Contractor shall not assume that where no utilities are shown, that none exist.
5. Re-approval shall be required if this project is not under construction within a period of two years.
6. The Contractor shall be responsible for the protection of all water lines during construction. The Contractor shall be especially careful when excavating behind water lines, tees, and bends wherever there is a possibility of water line movement due to the removal of the supporting earth beyond the existing reaction blocks. The Contractor shall take whatever measures necessary to protect the water lines, such as constructing special reaction blocks (with the Board of Water Supply approval) and/or modifying his construction method.
7. Prior to any excavating, the Contractor shall verify in the field the location of existing water mains and appurtenances.
8. The Contractor shall adjust all manhole frames/valve boxes/meter boxes within the project limits. The Contractor shall be responsible for "referencing" these manholes/valve boxes/meter boxes to facilitate the adjustments.
9. At the electrical/signal ductline water crossings, adjust all electrical/signal ductline elevations to maintain 6" vertical clear separation from all waterlines (12" clear for all electrical/signal ductline structures larger than 16") at no cost to the Board of Water Supply.
10. Maintain 3'-0" min. horizontal clear separation between all waterline systems and nearest electrical/signal ductlines paralleling the water system at no cost of to the Board of Water Supply.
11. Maintain a 3'-0" horizontal clear separation between street light/traffic signal, standards (including any modular units) and the nearest water system. Contractor shall field verify for any conflicts at each street/traffic signal standard location. Where conflicts occur, the Contractor shall coordinate with the project engineer to revise the street light/traffic signal standard to provide the required clearances at no cost to the Board of Water Supply.
12. The Contractor shall verify all existing service lateral locations whether shown or not shown on plans prior to commencing with any of the work and shall not assume that where no services are shown none exist.

HAWAIIAN TELCOM NOTES

1. The Contractor shall procure and pay for all licenses and permits and shall give all notices necessary and incident to the due and lawful prosecution of the work.
2. The Contractor shall obtain an excavation permit and toning request from Hawaiian Telcom's Excavation Permit Section, located at 1177 Bishop Street, two weeks prior to the start of construction. Hours of business are 8:00 AM. to 11:00 AM. and 12:00 AM. to 3:00 PM. Monday through Friday, except holidays.
3. Prior to the excavation of the ductline, the Contractor shall request Hawaiian Telcom to locate existing ductline wherever required. For underground cable locating and marking, five (5) working days advance notice is required. Three (3) working days advance notice is required for any inspection by a designated representative.
4. The locations of existing utilities are approximate only. The Contractor shall exercise extreme caution and shall maintain proper clearances whenever construction crosses or is in close proximity of Hawaiian Telcom facilities. The Contractor shall verify their locations and shall be liable for any damages to Hawaiian Telcom facilities. Any damages shall be reported immediately to Hawaiian Telcom's Repair Section at #611 (24 hours) or to the Excavation Permit Section at 840-1444 (normal working hours, Monday through Friday, except holidays). As a result of his operations, adjustments to the new ductline alignment, if required, shall be made to provide the required clearances.
5. The Contractor shall take necessary precaution not to damage existing cables or ducts. A Hawaiian Telcom inspector or designated representative is required to be at any job site whenever there will be a breakage into or entry into any structure that contains Hawaiian Telcom facilities. Temporary cable and duct supports shall be provided wherever necessary.
6. The Contractor shall notify Hawaiian Telcom's inspector or designated representative a minimum of 72 hours prior to excavation, bracing, or backfilling of Hawaiian Telcom's structures or facilities.
7. All applicable construction work shall be done in accordance with the "Hawaiian Telcom Standard Specifications for Placing Underground Telephone Systems" dated January 2007 and all subsequent amendments and additions, and all other pertinent standards for telephone construction. Contractor shall familiarize his personnel by obtaining applicable specifications.
8. When excavation is adjacent to or beneath Hawaiian Telcom's existing structures or facilities, the Contractor shall: A) sheet and/or brace the excavation to prevent slides, cave-ins, or settlements to ensure no movement to Hawaiian Telcom's structures or facilities. B) protect existing structures and/or facilities with beams, struts, or underpinning while excavating beneath them to ensure no movement to Hawaiian Telcom's structures or facilities.
9. The Contractor shall brace all poles or light standards near the new ductline, manhole, or handhole during his operations.

HAWAIIAN TELCOM NOTES, (CONT'D)

10. The Contractor shall saw-cut A.C. pavement and concrete gutter wherever new manholes, handholes, or ductlines are to be placed and shall restore to existing condition or better.
11. The Contractor shall comply with the policy adopted by the Department of Design and Construction, City and County of Honolulu, concerning the replacement of concrete sidewalks after excavation work.
12. The underground pipes, cables, or ductlines known to exist by the Engineer from his search of records are indicated on the plans. The Contractor shall verify the locations and depths of the facilities and exercise proper care in excavating in the area. Wherever connections of new utilities to existing utilities are shown on the plans, the Contractor shall expose the existing lines at the proposed connections to verify their locations and depths prior to excavation for the new lines.
13. Wherever connections to existing utilities are shown on the plans, the contractor shall expose the existing lines prior to excavation of the main trenches to verify their locations and depths.
14. The Contractor, at his own expense, shall keep the project free from dust nuisance. The cost for supplementary measures, which will be require by the City and County, shall be borne by the Contractor.
15. The Contractor shall pump all manholes dry during final inspection.
16. The Contractor shall notify Hawaiian Telcom inspector 72 hours prior to the pouring of concrete or backfilling.
17. When connecting to manhole walls, all existing reinforcing bars shall be left intact. Ducts shall be adjusted in the field in order to clear reinforcing.
18. The Contractor shall be responsible for laying out all required lines and grades and shall preserve all bench marks and working points necessary to lay out the work correctly. The new ductline shall be adjusted by the Contractor to suit the existing conditions and the details as described in the plans.
19. Minimum concrete strength shall be: For ductline 2500 PSI at 28 days For manhole 3000PSI at 28 days or as specified in design notes.
20. Bends in the duct alignment, due to changes in grade shall have a minimum radius of 25 feet. All 90 degree c-bends at a pole or at the 18. Slab penetration, shall have a bend radius of ten times the diameter of the duct or greater.
21. After ductline has been completed, a mandrel with a square front not less than 12" long and having a diameter of 1/4" less than the inside diameter of the duct, shall be pulled through each duct after which a brush with stiff bristles shall be pulled through to make certain that no particles of earth, sand, or gravel have been left inside. Ducts shall be completely dry and clean.
22. All ducts and conduits shall have an 1800# polyester mule-tape (neptco, wp1800p, Hawaiian Telcom material code no. 571154) installed throughout its entire length. All ducts shall be capped to prevent entry of foreign material during construction and at the completion of installation.

CONSTRUCTION NOTES FOR GAS FACILITIES

1. The Gas Company gas pipelines in the project area are plastic coated and cathodically protected. The contractor shall be extremely careful when working near these gas pipelines.
2. Written clearances must be obtained from the Gas Company, Maps and Records Department, 515 Kamakee Street, at least five (5) working days prior to starting excavation near these gas pipelines.
3. Since gas line locations on field maps are approximate, the contractor, after obtaining written clearance, shall call Hawaii One Call Center a minimum of five (5) working days before starting excavation to arrange for field location of the existing gas pipelines. The telephone number is 1-866-423-7287.
4. The contractor shall excavate and backfill around gas pipelines in the presence of a representative of the gas company. All backfill within six inches of any gas pipeline shall be select cushion material approved by the Gas Company.
5. For relocation of any gas pipeline, the Contractor shall notify the Gas Company five (5) working days before starting work. The telephone number is 594-5574. The Contractor shall provide the necessary excavation and backfill, obtain traffic permits, and restore pavement, sidewalks, and other facilities. Any relocation of gas facilities shall be done by the Gas Company and paid for by the Contractor.
6. The Contractor shall notify the Gas Company immediately after any damage has been caused to existing gas pipelines, coatings, or its cathodic protection devices. The telephone number is 535-5933, 24 hours a day. The Contractor shall be liable for any damage to the Gas Company facilities. Repair work on such damage shall be done by the Gas Company with payment for this work to be borne by the contractor.
7. Minimum vertical and horizontal clearance between the gas pipelines and other pipelines, conduits, ductlines, or other facilities shall be 12 inches. Adequate support and protection for gas pipelines exposed in the trench shall be provided by the Contractor and approved by the Gas company.
8. The Contractor shall work in an expeditious manner in order to keep the uncovered gas pipelines exposed for as short a period of time as possible.

ORIGINAL PLAN | NOTEBOOK | No. ____ | SURVEY PLOTTED BY ____ DATE ____ | DRAWN BY ____ | TRACED BY ____ | DESIGNED BY ____ | QUANTITIES BY ____ | CHECKED BY ____

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CONSTRUCTION NOTES

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CONTRACTOR'S RESPONSIBILITY FOR EXISTING UTILITY LINES, PIPES AND SERVICES

1. The Contractor shall notify the Hawaii One Call Center (HOCC) at 1-866-423-7287 for excavation or drilling at least five (5) working days, but not more than twenty-eight (28) calendar days prior to commencing excavation or drilling work, in accordance with Hawaii Revised Statutes Chapter 269e. The Contractor shall provide the HOCC, a description of the site, that includes the county and address or description of where the excavation or drilling will take place, including but not limited to the nearest intersecting street, side street, or other tie-in measurements as needed. The Contractor shall not begin excavation or drilling operations without prior clearances from the HOCC.

2. Information regarding the site of the work given on the drawings or specifications has been obtained by the Engineer and is believed to be reasonably correct; however, it is the responsibility of the Contractor to verify all such information. The Contractor shall tone the area to be excavated to ascertain the location of uncharted utilities.

3. Any utilities that the Contractor encounters during the progress of the work, such as telephone ducts, electric ducts, water lines, sewer lines, electric lines and drainage pipes, whether shown or not on the contract plans, shall not be disturbed or damaged unless otherwise instructed in the plans and specifications.

4. In the event the utilities are damaged or disturbed by the Contractor, the Contractor shall be held liable for the damaged or disturbed utilities.

5. The Contractor shall repair the damaged or disturbed utilities to the existing condition at no cost to the owner. Any damage claims due to the disruption of service caused by the utilities being damaged shall be paid by the Contractor, who shall save harmless the owner and on account of such damages.

6. In the event utilities which were not shown on the plans and specifications are damaged or disturbed by the Contractor, the Contractor shall be held liable. The Contractor shall contact all utility companies and expose all utility lines prior to any excavation and/or installation of lines.

PUBLIC HEALTH, SAFETY AND CONVENIENCE

1. The Contractor shall observe and comply with all Federal, State and Local laws required for the protection of public health and safety and environmental quality.

2. The Contractor, at his own expense, shall keep the project and its surrounding areas free from dust nuisance. The work shall be in conformance with the Air Pollution Standards and Regulations of the State Department of Health.

3. The Contractor shall be responsible for the cleaning and removal of all silt and debris generated by his work and deposited and accumulated within downstream waterways, ditches and drain pipes and on public and private roadways. The Contractor agrees to reimburse the State or City and County of Honolulu, the costs expended in performance of the above work if required for public health and safety, or made necessary by non-performance by the Contractor.

4. The Contractor shall submit a noise pollution control plan when applying for a construction permit.

GENERAL NOTES FOR TRAFFIC CONTROL PLANS

1. The Permittee shall make minor adjustments at intersections, driveways, bridges, structures, etc., to fit field conditions.

2. Cones or delineators shall be extended to a point where they are visible to approaching traffic.

3. Traffic control devices shall be installed such that the sign or device farthest from the work area is placed first. The others shall then be placed progressively toward the work area.

4. Regulatory and warning signs within the construction zone that are in conflict with the traffic control plans shall be removed or covered.

5. The Permittee shall install a flashing arrow signal as shown on the traffic control plans.

6. All traffic lanes shall be a minimum of 10 feet wide.

7. All construction warning signs shall be promptly removed or covered whenever the message is applicable or not in use.

8. The backs of all signs used for traffic control shall be appropriately covered to preclude the display of inapplicable sign messages (i.e., when signs have messages on both faces.)

9. Lane closure shall be limited only to the extent of accomplishing each day's work. As soon as each day's work is completed, the permittee shall remove all traffic control devices no longer needed to permit free and safe passage of public traffic. Removal shall be in the reverse order of installation. Existing faded or obliterated pavement markings that are necessary for safe traffic flow in the construction area shall be replaced with temporary or permanent markings before opening the roadway to public traffic each day.

10. Flaggers and/or police officers shall be in sight of each other or in direct communication at all times.

11. Permanent pavement markings and traffic signs shall be replaced upon completion of each phase of work.

12. Cones and delineators shall be spaced at a maximum distance of 20 feet apart. A minimum of six channelizing devices shall be used for each taper length.

13. "No Parking" signs shall be posted within any work area and for the buffer and taper areas approaching the work area.

14. See Section 645 of the Special Provisions for allowable closure times and other requirements.

15. Driveways shall be kept open unless the owners of the property using the right-of-way are otherwise provided for satisfactorily. Further, the permittee shall control traffic going in and out of driveways.

16. Buffer and taper areas on approach to any work area shall be kept clear of vehicles and equipment.

17. A high level warning device (flag tree) shall be installed on approach to all work areas.

18. Traffic control plans shall be approved for work on any city street area requiring 24 hour closure.

19. All traffic control devices shall meet NCHRP 350 Standards.

SOLID WASTE CONSTRUCTION NOTES

1. The Contractor is responsible for the proper handling, storage and/or disposal of all waste generated by the construction including grubbing and excess excavated material, including obtaining all permits for the types of materials accepted at solid waste receiving facilities.

2. Any material brought to the City and County landfills will be subjected to the instituted tipping fee system, with no exceptions or exemptions.

3. The Contractor shall provide copies of all solid waste disposal receipts to the Engineer.

SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

ORIGINAL PLAN
NOTEBOOK
No.

FN:\\96-46\96-46-27\DWG\T-9 NOTES-9.DWG Oct 13, 2014--10:13 AM

NEAL H. KASAMOTO
LICENSED PROFESSIONAL ENGINEER
No. 6931-C
HAWAII, U.S.A.
LICENSE EXPIRES: 4/30/16
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION AS DEFINED IN HAR TITLE 16, CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII

0 1 2
LINE IS 2 INCHES AT FULL SIZE
(if not 2 inches: scale accordingly)

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CONSTRUCTION NOTES AND ABBREVIATIONS

Freeway Management System, Interstate H-1, H-2 & Moanalua Freeway (H-201)
Phase IC, Part 2
Federal Aid Project No. IM-0300(138)

Scale: NTS Date: 8/7/14

SHEET No. 9 OF 9 SHEETS

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