

GENERAL NOTES

1. The scope of work for this project includes: design, construction and environmental/permitting services to install two-lane roadway and paved shoulders; perform mass grading for the new roadway; install new concrete bridge structure for Kauaula Stream Crossing; install an intersection for Hokiokio Place; install off-site and onsite drainage improvements; install retaining walls and sound walls as required; address mitigation of archaeological sites within the project limits; construct and remove temporary diversion roads; relocate underground and overhead utilities; install landscape planting and landscape irrigation system; install intersection lighting, installing surveying monuments; and perform other incidental work as required to complete the project. The new bridge structure, roadway, and other work required to complete the project shall meet current Federal, State, and County Standards.
2. The Contractor is reminded of the requirements of Subsection 108.01 - Subletting of Contract, which requires him to perform work amounting to 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.
3. The Contractor's attention is directed to the following Sections of the Special Provisions: Subsection 107.13 - Public Convenience and Safety; Subsection 107.21 - Contractor's Responsibility For Utility Property And Services; and Section 645 -Traffic Control.
4. 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.
5. 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.
6. Existing drainage system will be functional at all times during construction. The Contractor is to furnish all materials, equipment, labor, tools and incidentals necessary to maintain service. This work shall be considered incidental to various contract items.
7. The Contractor shall provide for free and safe access to and from all existing side streets at all times.
8. All saw cutting work shall be considered incidental to structural excavation or roadway excavation.
9. The location of 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 exercise extreme caution whenever construction crosses or is in close proximity of underground lines and shall maintain adequate clearance when operating equipment within or under any overhead lines.
10. The Contractor shall obtain an excavation permit from MECO's Engineering Department located at 210 Kamehameha Avenue, two weeks prior to starting construction.
11. The Contractor shall be liable for any damages to Maui Electric Co.'s Facilities and shall immediately report such damages to Maui Electric Co.'s Trouble Dispatcher at 871-7777.

12. The Contractor shall comply with the directives of the State of Hawaii Occupational Safety And Health Law (DOSH). Any citation (fine) received by the State for noncompliance by the Contractor shall be deducted from the progress payment.
13. For verifying the location of underground ductlines and for assistance in providing proper support and protection of the underground duct lines, the Contractor is to contact Maui Engineering Department at 871-2390 a minimum of 72 Hours in advance.
14. The Contractor shall coordinate the design and construction with all County projects within or adjacent to the construction area.
15. The Contractor shall exercise extreme caution when the excavation and construction crosses or is in close proximity of underground telephone and signal cable facilities and shall maintain adequate clearance for his equipment while working close to and/or under overhead facilities. Any damages to the existing underground facilities shall be repaired and paid for by the Contractor.
16. For field location of Verizon Facilities, contact Verizon Outside Plant Engineering Section, a minimum of 72 hours in advance, prior to start of excavation at 242-5105.
17. Should field conditions and construction procedures require that utility poles be braced, the Contractor shall contact the following person for pole bracing instructions a minimum of 72 hours in advance of actual required bracing - Verizon - Lynette Yoshida - Area Construction Supervisor at 242-5105.
18. When trench excavation is adjacent to existing structures or facilities, the Contractor is responsible for properly sheeting and bracing the excavation and stabilizing the existing ground to render it safe and secure from possible slides, cave-ins, and settlement, and facilities with beams, struts, or underpinning to fully protect it from damage. This work shall be considered incidental to various contract items.
19. The Contractor shall survey and stake out the State Highway right-of-way and install all appurtenances associated with the project within the State right-of-way or construction parcels as shown in the plans.
20. The term "Engineer for the Utility Companies" shall also mean his delegated Representative and/or the Utilities' Inspectors of Record.
21. The Contractor shall stake out all facilities for verification by the utility involved and/or affected.
22. The Contractor shall Give MECO forty (40) working days notice to proceed with it's portion of the work.
23. The Contractor will immediately report damages discovered or caused by his work to :
- a. Verizon

611 (24 Hours)  
242-5105 (M-F except Holidays)  
871-7777

b. MECO

847-4425 (ext. 838)

c. Oceanic/Time Warner
24. The Contractor is to stake out all temporary and permanent new pole locations so as not to conflict with any existing or proposed utility and obstruct any roadway sign. The Contractor shall be responsible for cost incurred by conflicting utilities.

LEGEND

- e — Existing Electrical Line
- ° pp Existing Power Pole
- ° abandon pp Abandoned Power Pole
- ° up Existing Utility Pole
- gw — Existing Guide Wire
- [ebx] Existing Electric Box
- [tebx] Existing Telephone Box
- [tvbx] Existing TV Cable Box
- W12 — Existing 12" Waterline
- TW8 — Existing Temporary 8" Waterline
- ° gv Existing Gate Valve
- ° wv Existing Water Valve Box
- [ivc] Existing Irrigation Control Valve Box
- \* spr Existing Sprinkler Head
- ◊ fh Existing Fire Hydrant
- S10 — Existing 10" Sewerline
- TS10 — Existing Temporary 10" Sewerline
- ⊙ smh Existing Sewer Manhole
- ⊙ mon. Existing Monument
- D24 — Existing 24" Drain Line
- == D24 == New 24" Drain Line
- D24 — Future 24" Drain Line
- [gdi] Existing Grated Drop Inlet
- [GDI] New Grated Drop Inlet
- [GD] Future Grated Drop Inlet
- ⊙ dmh Existing Storm Drain Manhole
- ⊙ DMH New Storm Drain Manhole
- ⊙ WQ New Water Quality Unit
- ~ Drainage Flow Arrow
- Psign Existing Traffic Sign
- Psign New Traffic Sign
- + + + — New Metal Guardrail
- gate Existing Gate Posts
- Existing Hogwire Fence



EXP. 4/30/10  
THIS WORK WAS PREPARED BY ME  
OR UNDER MY SUPERVISION AND  
CONSTRUCTION OF THIS PROJECT  
WILL BE UNDER MY OBSERVATION

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-030-K(38)	2010	3	213

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

ABBREVIATIONS, LEGEND &

GENERAL NOTES

HONOAPIILANI HIGHWAY REALIGNMENT, PHASE 1B-1  
Lahainaluna Rd. to Hokiokio Pl.

Federal Aid Project NO. NH-030-K(38)

Scale: None Date: November 23, 2009



GENERAL NOTES (Cont'd)

25. When excavating near utility poles, 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 costs associated to repair and/or straighten pole.
26. Where pedestrian walkways exist, they shall be maintained in a safe and passable condition, or other facilities for pedestrians shall be provided. Passages between walkways at intersections shall likewise be provided at all times.
27. The Contractor is responsible for hiring State of Hawaii licensed civil, structural, environmental, and electrical engineers to provide stamped shop drawings of a traffic control plan; a NPDES plan and erosion control plan; shop drawing details of the roadway, detour road, bridge and culvert structures, temporary structures, and all other temporary or permanent improvements required to complete the work. Only upon written approval by the State, shall the Contractor proceed with accepted portions of the proposed construction work.
28. HDOT is in the process of executing a Utility Agreement with Maui Electric, Verizon and Oceanic/Time Warner. HDOT assumes that power poles and underground conduits will need to be relocated, along with temporary relocation required to facilitate contractor's construction work.
29. Contractor shall exercise extreme caution and coordinate relocation of overhead Fiber Optic Cable with Oceanic/Time Warner Cable company. Contact Mr Bill Hanke at (808) 877-4425 ext. 838.
30. Smooth riding connections shall be constructed at all limits of project, including the beginning and end of project, connecting approaches, side streets, walkways and driveways as shown on the plans and/or as directed by the Engineer. This work shall be considered incidental to various contract items and will not be paid for separately.
31. Earth swales shall be graded to drain. This work shall be considered incidental to various contract items and will not be paid for separately.
32. All saw cutting work shall be considered incidental to structural excavation or roadway excavation and will not be paid for separately.
33. 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.
34. The contractor shall perform all applicable construction work in accordance with the standard details entitled "Hawaii Standard Specifications for Road and Bridge Construction, 2005" as amended for the State of Hawaii.
35. All dimensions and details shown on the drawings shall be checked and verified prior to the start of construction, and any discrepancies shall be immediately brought to the attention of the engineer for clarification.
36. All existing utilities, whether or not shown on the plans, shall be protected at all times by the contractor during construction, and any damage to them shall be repaired and paid for by the contractor.
37. When trench excavation is adjacent to or under existing structures or facilities, the contractor shall be responsible for properly sheeting and bracing the excavation and stabilizing the existing ground to render it safe and secure from possible slides, cave-ins and settlement, and for properly supporting existing structures and facilities with beams, struts or underpinnings to fully protect it from damage.

38. The contractor shall restore all improvements damaged as a result of the construction to its original or better condition.
39. Design and construction of guardrail and guardrail end treatments shall conform to the latest edition of the AASHTO Roadside Design Guide, current National Cooperative Highway Research Program (NCHRP) 350 and HDOT requirements.
40. The Contractor is advised that in addition to other contractors working in the same areas, various utility companies (or their contractors) including Maui Electric Company, Verizon, Cable Television and Maui County Department of Wastewater Management may be performing work within the project area. The Contractor is to coordinate all work with other contractors in the area and to coordinate the design. In case of unreasonable conflict among contractors regarding access or work sites, the Engineer will make the final determination of priorities.
41. The Contractor shall obtain approval of lane closure hours and traffic control plans for all County streets from the Maui County, Division of Engineering.
42. A minimum 5 hazmat testing/sampling for area used by the contractor for baseyard or storage activities shall be performed when directed by HDOT.
43. Install permanent roadway monuments as required.
44. HDOT will not accept Mechanically Stabilized Earth (MSE) walls with a flapped geotextile facing. The MSE walls should have a masonry or concrete block facing with a positive mechanical connection between the facing and the geogrid.
45. The Contractor shall provide during the course of construction, a temporary 12-foot wide gravel access road at proposed agricultural under crossing. The Contractor shall insure that temporary access road shall be adequately protected from construction activities. The limits of access road shall be clearly marked by an orange safety fence and Type I Barricades with flashers.

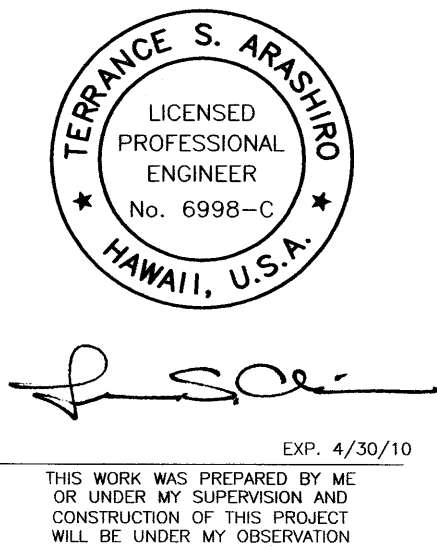
NOTES FOR CONSTRUCTION WITHIN STATE RIGHT-OF-WAY

1. The Contractor shall obtain a Permit to Perform Work Upon State Highway from the Maui District, State Highways, at 650 Palapala Drive, prior to commencement of work within the State highway right-of-way.
2. Construction and restoration of all existing highway facilities within State right-of-way shall be done in accordance with all applicable sections of the 1994 Standard Specifications for Road, Bridge and Public Works Construction, and the Specifications for Installation of Miscellaneous Improvements within State Highways of the State Highway Division.
3. Work may be performed only between the hours of 7:00 a.m. and 3:30 p.m., Monday through Friday, except holidays, unless otherwise permitted by the Engineer. Any work affecting County roadways will be subject to work hours permitted by the County of Maui.
4. The Contractor shall provide, install, and maintain all necessary signs, lights, flares , barricades, markers, cones, and other protective facilities, and shall take necessary precautions for the protection, 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, Part VI - Standards and Guides for Traffic Controls for Street and Highway Construction, Maintenance, Utility and Incident Management Operations" and NCHRP 350.
5. No material and/or equipment shall be stockpiled or otherwise stored within the highway right-of-way, except at locations designated in writing and approved by the Engineer.

6. The Contractor shall be required to provide adequate, safe, non-skid bridging material over any trench, including shoring, when trenching in pavement areas to handle all types of vehicular traffic. The use of steel plates shall not be used in the freeway travelway.
7. No trench shall be opened more than 200 feet in advance of the installed and tested pipe and/or ductline. No jumps or spaces will be permitted unless approved in writing by the Engineer.
8. Longitudinal drainage along the highway shall be maintained, at all times to allow freeflow.
9. All regulatory, guide and construction signs and barricades shall be high intensity reflective sheeting.
10. Stop work and contact the State Historic Prevention Division at (808) 692-8083 immediately should any unidentified archaeological site or remains (such as artifacts, shells, bones, charcoal deposits, road or coral alignments, pavings or walls) been countered during construction.
11. The Contractor shall inform the HDOT-Maui District Office at 873-3535 at least five (5) working days prior to any lane closures or changes to lane closures.
12. All signs, pavement markings, striping, etc. removed or damaged by the Contractor shall be replaced by the Contractor at no additional cost to the State.

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.



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HAWAII	HAW.	NH-030-11381	2010	4	213

1/18/10	△ Add Note 45
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
GENERAL & CONSTRUCTION NOTES	
HONOAPIILANI HIGHWAY REALIGNMENT, PHASE 1B-1 Lahainaluna Rd. to Hokiokio Pl. Federal Aid Project NO. NH-030-11381	
Scale: None	Date: November 23, 2009
SHEET No. 2 OF 5 SHEETS	



WATER POLLUTION AND EROSION CONTROL NOTES:

A. GENERAL:

- 1. See Section 209 - Water Pollution and Erosion Control, in the "Hawaii Standard Specifications for Road, Bridge and Public Works Construction". 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.
- 2. The Contractor shall follow the guidelines in the "Construction Best Management Practices Field Manual", dated January 2008 in developing, installing and maintaining the Best Management Practices (BMP) for the project.
- 3. The Contractor shall 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. For projects that require an NPDES Permit from the Department of Health, 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, and have an opening of at least one-inch in diameter. Install the rain gage on the project site in an area that will not deter rainfall from entering the gage opening. 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.

B. WASTE DISPOSAL:

- 1. Waste Materials  
All waste materials shall be collected and stored in a securely lidded metal dumpster. The dumpster shall meet all local and State solid waste management regulations. All trash and construction debris from the site shall be deposited in the dumpster. The dumpster shall be emptied a minimum of twice per week or as often as is deemed necessary. No construction waste materials shall be buried onsite. The Contractor's supervisory personnel shall be instructed regarding the correct procedure for waste disposal. Notices stating these practices shall be posted in the office trailer and the Contractor shall be responsible for seeing that these procedures are followed.
- 2. Hazardous Waste  
All hazardous waste materials shall be disposed of in the manner specified by local or State regulations or 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  
All sanitary waste shall be collected from the portable units a minimum of once per week, or as required.

C. EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES:

- 1. All control measures shall be inspected at least once each week and following any rainfall event of 0.5 inches or greater, within a 24 hour period.
- 2. All measures shall be maintained in good working order. If repair is necessary, it shall be initiated within 24 hours after the inspection.
- 3. Built-up sediment shall be removed from silt fence when it has reached one-third the height of the fence.
- 4. Silt screen or fence shall be inspected 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.
- 5. Temporary and permanent seeding and planting shall be inspected for bare spots, washouts and healthy growth.
- 6. A maintenance inspection report shall be made promptly after each inspection by the Contractor. The Contractor shall submit a copy of of the maintenance inspection report to the Engineer no later than one week from the date of the inspection.

- 7. The Contractor shall provide a stabilized construction entrance to reduce vehicle tracking of sediments. The stabilized construction entrance shall be included in the Water Pollution, Dust, and Erosion Control submittals. The minimum length shall be 50 feet. The minimum width shall be 30 feet. The minimum depth shall be 6 inches and underlain with geo-textile fabric. The Contractor shall clean the paved street adjacent to the site entrance daily or as required to remove any excess mud, cold planed materials, dirt or rock tracked from the site. Dump trucks hauling material from the construction site shall be covered with a tarpaulin.
- 8. Designated Concrete Washout Area(s) shall be included in the Water Pollution, Dust, and Erosion Control submittals.
- 9. The Contractor shall submit the name of a specific individual designated responsible for inspections, maintenance and repair activities and filling out the inspection and maintenance report.
- 10. 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.
- 11. Contain, remove, and dispose slurry generated from saw cutting of pavement in accordance with approved BMP practices. Payment for confinement, removal, and disposal of slurry shall be considered incidental to the various contract items.

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.

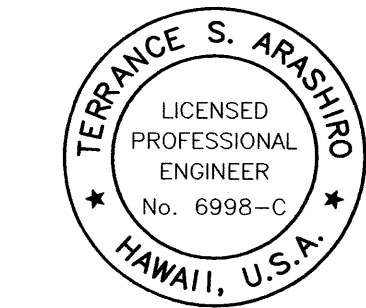
Concrete  
Detergents  
Paints (enamel and latex)  
Metal Studs  
Tar

Fertilizers  
Petroleum Based Products  
Cleaning Solvents  
Wood  
Masonry Block
  - b. Material Management Practices shall be used to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff. An effort shall be made to store only enough product as is required to do the job.
  - c. All materials stored onsite shall be stored in a neat, orderly manner in their appropriate containers and if possible under a roof or other enclosure.
  - d. Products shall be kept in their original containers with the original manufacturer's label.
  - e. Substances shall not be mixed with one another unless recommended by the manufacturer.
  - f. Whenever possible, a product shall be used up completely before disposing of the container.
  - g. Manufacturer's recommendations for proper use and disposal shall be followed.
  - h. The Contractor shall conduct a daily inspection to ensure proper use and disposal of materials onsite.
- 2. Hazardous Material Pollution Prevention Plan
  - a. Products shall be kept in original containers unless they are not resealable.
  - b. Original labels and material safety data sheets (MSDS) shall be retained.
  - c. Surplus products shall be disposed of according to manufacturers' instructions or local and State recommended methods.
- 3. Onsite and Offsite Product Specific Plan  
The following product specific practices shall be followed onsite:
  - a. Petroleum Based Products:  
All onsite vehicles shall be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products shall be stored in tightly sealed containers which are clearly labeled. Any asphalt substances used onsite shall be applied according to the manufacturer's recommendation.
  - b. Fertilizers:  
Fertilizers used shall be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer shall be worked into the soil to limit exposure to storm water. Storage shall be in a covered shed. The contents of any partially used bags of fertilizer shall be transferred to a sealable plastic bin to avoid spills.

- c. Paints:  
All containers shall be tightly sealed and stored when not required for use. Excess paint shall not be discharged to the highway drainage system but shall be properly disposed of according to manufacturers' instructions or State and local regulations.
  - d. Concrete Trucks:  
Wash Out or discharge concrete truck drum wash water only at a designated site. Do not discharged water in the highway drainage system or waters of the United States. The Contractor shall contact Drinking Water Branch, Department of Health at 586-4258 to receive permission to designate a disposal site. The Contractor shall clean disposal site as required or as requested by the Owner's representative.
4. Spill Control Plan
- a. A spill prevention plan shall be posted to include measures to prevent and clean up each spill.
  - b. The Contractor shall be the spill prevention and cleanup coordinator. The Contractor shall 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. The names of responsible spill personnel shall be posted in the material storage area and in the office trailer onsite.
  - c. Manufacturers' recommended methods for spill cleanup shall be clearly posted and site personnel shall be made aware of the procedures and the location of the information and cleanup supplies.
  - d. Materials and equipment necessary for spill cleanup shall be kept in the material storage area onsite.
  - e. All spills shall be cleaned up immediately after discovery.
  - f. The spill area shall be kept well ventilated and personnel shall wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
  - g. Spills of toxic hazardous material shall be reported to the appropriate State or local government agency, regardless of the size.

E. PERMIT REQUIREMENTS:

- 1. If a National Pollutant Discharge Elimination System (NPDES) Permit is required for Construction Activities of one acre or more, the Contractor shall submit to the Engineer six sets of the Water Pollution and Erosion Control Submittals as detailed in Subsection 209.03 of the Specifications.
- 2. If an NPDES Permit for Construction Dewatering is required, the Contractor shall be responsible to obtain the Permit from the Department of Health, Clean Water Branch.
- 3. The Contractor shall 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



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

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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

WATER POLLUTION AND  
EROSION CONTROL NOTES

HONOAPIILANI HIGHWAY REALIGNMENT, PHASE 1B-1  
Lahainaluna Rd. to Hokiokio Pl.  
Federal Aid Project NO. NH-030-(K38)

Scale: None      Date: November 23, 2009



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-030-1(38)	2010	6	213

## 7. UNDERGROUND LINES

The Contractor shall exercise extreme caution whenever construction crosses or is in close proximity of underground lines. MECO's existing electrical cables are energized and will remain energized during construction. Only MECO personnel are to break into existing MECO facilities, handle these cables, and erect temporary guards to protect these cables from damage. The cost of MECO's assistance in providing proper support and protection of its underground lines will be charged to the Contractor.

*For verification of underground lines, the Contractor shall call MECO's Engineering Department at 871-2390 a minimum of 72 hours in advance.*

*For assistance in providing proper support and protection of these lines, the Contractor shall call MECO's Engineering Department at 871-2390, a minimum of two (2) weeks in advance.*

## 8. EXCAVATIONS

*When trench excavation is adjacent to or beneath MECO's existing structures or facilities, the Contractor is responsible for:*

- a) *Sheeting and bracing the excavation and stabilizing the existing ground to render it safe and secure and to prevent possible slides, cave-ins, and settlements.*
- b) *Properly supporting existing structures or facilities with beams, struts, or under-pinnings to fully protect it from damage.*
- c) *Backfilling with proper backfill material including special thermal backfill where existing (refer to Engineering Department for thermal backfill specifications).*

## 9. RELOCATION OF MECO FACILITIES

Any work required to relocate or modify MECO facilities shall be done by MECO, or by the Contractor under MECO's supervision. The Contractor shall be responsible for all coordination, and shall provide necessary support for MECO's work, which may include, but not to be limited to, excavation and backfill, permits and traffic control, barricading, and restoration of pavement, sidewalk 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 born by the Contractor.

## 10. CONFLICTS

*Any design or relocation of MECO's facilities not shown on the plans may be cause for lengthy delays. The Contractor acknowledges that MECO 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 MECO'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, MECO should be notified immediately upon discovery or identification of such conflict.*

## 11. DAMAGE TO MECO FACILITIES

*The Contractor shall be responsible for the protection of all MECO surface and subsurface utilities and shall be responsible for any damages to MECO's facilities as a result of his operations. The Contractor shall immediately report such damages to MECO's Trouble Dispatcher at 871-7777. Repair work shall be done by MECO or by the Contractor under MECO's Supervision. Costs for damages to MECO facilities shall be borne by the Contractor.*

## 2. MECO STAND-BY PERSONNEL

### 13. CLEARANCES

STRUCTURE TYPE	MINIMUM CLEARANCE (INCHES)
Water Lines, parallel	36
Water Lines, crossing	12 (A)
Sewer Lines, parallel	36 (B)
Sewer Lines, crossing	24 (C)
Drain Lines, parallel	12
Drain Lines, crossing	6 (D)
Electrical and Gas Lines, parallel	12
Electrical and Gas Lines, crossing	12
Telephone Lines, parallel	6 (D)
Telephone Lines, crossing	6 (D)
Chevron Oil Lines, parallel	36
Chevron Oil Lines, crossing	48 below oil line (E)

- A. *The minimum vertical clearances to water lines crossing electrical ductlines can be reduced to 6 inches if the electrical ductline structure is smaller than 16 inches, is concrete encased, and is below the water line.*
- B. *A minimum horizontal clearance of 36 inches is required between new handholes and existing sewer laterals.*
- C. *The minimum horizontal clearances to sewer pipes crossing electrical ductlines can be reduced to 12 inches if the sewer pipe is jacketed in concrete.*
- D. *The minimum clearances shall be increased to 12 inches if the electrical ductline is direct buried.*
- E. *The minimum vertical clearances to oil lines crossing electrical ductlines can be reduced to 24 inches below oil lines if the crossings are encased in 6 inches of concrete.*
- F. *The Contractor shall notify the Construction Manager & MECO of any heat sources (power cable duct bank, streamline, etc.) encountered that are not properly identified on the drawing*

The Contractor shall indemnify, defend and hold harmless MECO 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 tortious acts caused or contributed to by the Contractor or anyone acting under its direction or control or on behalf; provided Contractor's indemnity shall not be applicable to any liability based upon the sole negligence of MECO.

MAUI ELECTRIC COMPANY \_\_\_\_\_ DATE \_\_\_\_\_



EXP. 4/30/11

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

## UTILITY NOTES

HONOAPIILANI HIGHWAY REALIGNMENT, PHASE 1B-1  
Lahainaluna Rd. to Hokiokio Pl.  
Federal Aid Project NO. NH-030-1(38)

Scale: None Date: November 23, 2009

SHEET No. 4 OF 5 SHEETS



MAUI ELECTRIC COMPANY NOTES-CONT.

15. SCHEDULE  
Contractor shall furnish his construction schedule at least 60 working days prior to starting work on MECO facilities. Contractor shall give MECO, in writing, forty (40) working days notice to proceed with MECO's portion of work.
16. AUTHORITY  
All construction, restoration work and inspection shall be subject to whichever governmental agency has authority over the work.
17. SPECIFICATION  
Construction of MECO's underground facilities shall be constructed in accordance with the latest revisions of MECO Specifications CS7001, CS7003, CS7202, CS9301, and CS9401 and applicable MECO standards.
18. CONSTRUCTION  
Contractor shall furnish all labor, materials, equipment, and services to properly perform and fully complete all work shown on the contract, drawings, and specifications. All materials shall be new and manufactured in the United States of America. All manhole, handhole, and ductline installations shall be inspected and approved by MECO prior to excavation and prior to placing concrete. Contractor shall notify MECO's Engineering Department at 871-2390 at least 48 hours prior to placing concrete.
19. STAKEOUT  
The Contractor shall stakeout all proposed MECO facilities within the project area so as to not conflict with any utility (existing or proposed) and any proposed construction or improvement work for verification by MECO before proceeding with MECO work.
20. DUCTLINES  
All ductlines installations shall be PVC schedule 40 encased in concrete, unless otherwise noted. All completed ductlines shall be mandrel tested by the Contractor in the presence of MECO's inspector using MECO's standard practice. The Contractor shall install a 1/8" polyolefin pull line in all completed ductlines after mandrel testing is complete.
21. JOINT POLE REMOVAL  
The last joint pole occupant off the poles shall remove the poles.

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. 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.
5. 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.

HIGHWAY LIGHTING NOTES

1. The Contractor shall notify Electrical Maintenance Section Department of Transportation, State Highway Division 72 hours in advance before commencing installation of temporary highway lighting system. Phone: 873-3535
2. All luminaires shall be high pressure sodium type with wattage and I.E.S. type light distribution as shown on the approved plans.
3. The Contractor shall have one set of approved plans at job site at all times during the construction work and record all changes occur on construction of Highway Lighting System.
4. The Contractor to stencil date of installation at the bottom of photocell. One photocell only is required as indicated on plan.
5. Final acceptance and inspection will be undertaken only after all work has been completed.
6. The Contractor shall measure and record ground resistance at each standard and submit recorded ground resistance to Traffic Section, and Maui District Maintenance Section, Department of Transportation, State Highway. The Contractor's electrical engineer shall certify all electrical tests, including but not limited to: Continuity Test and the Ground Rod Resistant Test prior to submission to the District Engineer.
7. Construction work shall be scheduled in such a manner that street lighting is provided during all hours of darkness either with new or existing luminaires or a combination thereof temporary connections shall be made to accomplish this end. The continuity of series street lighting circuits shall be maintained until the existing series street lighting fixtures are ready for removal.
8. The Contractor shall at his expense keep the project and surrounding area free from dust nuisance and shall be responsible for cleaning and removal of all silt and debris generated by the excavation work and deposited and accumulated within downstream waterways, ditches, drain pipes and on public roadways. Any citations (fines) received by the State for the Contractor's non-compliance of any Department of Health regulations shall be deducted from the progress payment.
9. Illumination shall be provided along the new bypass highway where the following occurs: merging traffic area onto the mainline roadway, temporary or permanent intersections along the mainline roadway or ramps with other County roadways, areas where there are significant horizontal curves or vertical curves and lighting is needed for sight distance purposes, off-ramp loop, temporary detour road, and Lahainaluna Grade Separation Structure.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-030-I(38)	2010	7	213

APPROVED:

MAUI ELECTRIC COMPANY DATE



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

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

UTILITY NOTES

HONOAPIILANI HIGHWAY REALIGNMENT, PHASE 1B-1  
Lahainaluna Rd. to Hokiokio Pl.  
Federal Aid Project NO. NH-030-I(38)

Scale: None Date: November 23, 2009

SHEET No. 5 OF 5 SHEETS