

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-M-01-08	2010	2	17

GENERAL TRAFFIC SIGNAL NOTES:

- All Traffic Signal work shall conform to the requirements of the Manual on Uniform Traffic Control Devices for Streets and Highways, U.S. Department of Transportation, Federal Highways Administration, Latest Edition, and Amendments.
- The locations of the traffic signal standards, traffic signal standards with mast arm, traffic controller, transformer, pullboxes, conduits, & loop detectors shall be staked out in the field by the Contractor and locations accepted by the Engineer prior to construction and installation. Locations shown on plans shall be adjusted as necessary to prevent conflict with existing or new facilities.
- All direct-buried conduits shall be PVC Schedule 80.
- Loop detectors shall be installed according to Loop Detector Details shown on the Plans.
- Lead-in wires in pullbox near loops shall be tagged with Loop Number(s).
- Existing pavement shall be restored according to Restoration of Existing Pavement due to Trench Excavation detail shown on the Plans.
- Steel plates for covering trenches shall have skid resistant surface.
- All structures, pavements, utilities, landscaping, and other topographical features shown on the Plans are existing and shall remain unless noted or indicated otherwise. All grassed areas damaged by construction activities shall be top soiled and grassed.
- A solid #8 bare copper wire shall be pulled in all conduits with the traffic control cable for equipment ground.
- All splicing shall be done in the pullboxes.
- All traffic signal controller equipment shall be completely wired in the cabinet and shall control the traffic signal as called for in the Plans.
- The loop amplifier units furnished for this project shall be capable of operating the loop detector configurations shown on the Plans.
- The Contractor shall verify with the respective utility companies and government agencies, the locations of all electric, telephone, traffic signal, street light, cable television, fire alarm, gas, water, sewer, drain and other lines crossing the excavation path or in excavation areas.
- All work and materials for the traffic signal system shall conform to Special Provisions Section 623 - Traffic Signal System, except as otherwise provided on the Plans.
- Provide ground rod in all pullboxes, pullboxes adjacent to signal standards, pedestals, controller cabinets, and other locations ordered by the Engineer. Ground rod connectors shall be copper welded and shall meet ground to earth resistance as specified by the National Electric Code or local inspecting agency.

- Underground pipes, cables, or ductlines known to exist 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.
- During non-working hours, the Contractor shall provide two lanes for through traffic. On streets too narrow to make this practicable, the Contractor may work in one half of the roadway keeping one lane open to traffic and alternating the flow of traffic. During non-working hours, all trenches shall be covered with a safe, non-skid, traffic-bearing bridging material and all lanes shall be open to traffic.
- 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.
- Driveways shall be kept open unless the owners of the property using these rights-of-way are otherwise provided for satisfactorily.
- No material and/or equipment shall be stockpiled or otherwise stored within street rights-of-way except at locations designated in writing and accepted by the Engineer.
- Traffic Signal Supports and Foundations shall meet the requirements of "AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 4th Edition 2001."
- See sheet TS-4 for Trench Restoration Details and Typical Section for Permeable Base Course.
- Existing traffic signal standards to be replaced shall be removed together with its respective footing. The Contractor may elect to remove only the top portion of the footing. In such cases, the Contractor shall ensure that the remaining footing shall be 12 inches below the existing or finished grade.
- The existing traffic signal system, including interconnect, shall remain in operation until the new traffic signal system is put into service. The Contractor shall arrange his work accordingly to provide temporary relocations and wirings, as necessary.

TRAFFIC SIGNAL LEGEND AND ABBREVIATIONS:

	Conduits and Cables, Conduit Run X
	12" R-Y-↑ Traffic Signal Head
	12" R-Y-G Traffic Signal Head
	12" R-Y-← Traffic Signal Head
	Emergency Vehicle Preempt Receiver (Opticom Receiver)
	Signal Standard with Mast Arm Type II, or Type III L=Length of Mast arm, Pole X, Footing Type C
	Signal Standard Type I, Pole X, H=3', 7' or 10', Footing Type A
	Loop Detectors
	Pullbox Type A (Old Type "B")
	Pullbox Type B (Old Type "C")
	Pullbox Type C (Old Type "D")
	Traffic Controller Model 170E and 332A Cabinet with Type D Concrete Base for Controller Cabinet
	Street Sign Mounted to Mast Arm
	Horizontal Directional Drilling

DATE
DESIGNED BY
CHECKED BY
QUANTITIES BY
TRACED BY
DRAWN BY
ORIGINAL PLAN
NOTE BOOK
No.

LEGEND FOR AS-BUILT POSTINGS	
	Squiggly line for as-built deletion
	Double line for as-built deletion
Roadway	Text for as-built posting

	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
	TRAFFIC SIGNAL NOTES AND LEGEND
	HANA HIGHWAY TRAFFIC OPERATIONAL IMPROVEMENTS AT WAKEA AVENUE
	PROJECT NO. HWY-M-01-08 Scale: None Date: May, 2010