STATE RIGHT-OF-WAY BACKFILL NOTES

Trench Backfill Material "A" Beach Sand, Earth, or Earth and Gravel. If Earth and Gravel used, the maximum shall contain not more than 50% by volume of rock particles. Maximum 8" loose fill per lift. Obtain 95% compaction for each lift.



Concrete

3000 psi compressive strength @ 3 days.

NOTE: Base Course \$ Sub-Base Course per 1994 State Standard Specifications for Highway Construction.

GENERAL NOTES

- 1. If trench is located on unpaved area, the Contractor shall replace 10" A.C. Base Course and 4" A.C. Pavement with Type "A" backfill material.
- 2. The Metal Detectable Red Plastic Warning Tape shall be a minimum 5 mils thick and 4" wide with a continuous metallic backing and corrosion resistant 1± mil thick foil core. The message on the tape shall read, "CAUTION - STATE TRAFFIC SIGNAL AND/OR HWY LIGHTING BURIED BELOW," utilizing 1½ inches series "C" black lettering. The message will be repeated with a 41/4" spacing between top line of message and start of next repeat.
- 3. The Contractor may begin backfilling the conduit trench when the concrete reaches 3000 psi compressive strength after 3 days.
- 4. Maximum four (4) Conduits per row for multiple conduit duct
- 5. For direct buried duct sections, the concrete jacket required at the conduit by-pass for various utilities, shall not be paid for separately but considered incidental to the direct buried conduits.
- 6. After installing all the traffic signal cables, the Contractor shall duct seal all conduits in the pullboxes, traffic signal standards and traffic signal controller cabinet concrete base. The duct seal material shall be approved by the Traffic Signal Inspector/Engineer and shall not be paid for separately but considered incidental to the direct buried and/or concrete encased conduits.

CAUTION-STATE TRAFFIC SIGNAL AND/OR HWY LIGHTING BURIED BELOW

11/5" series "C"

Black Letters

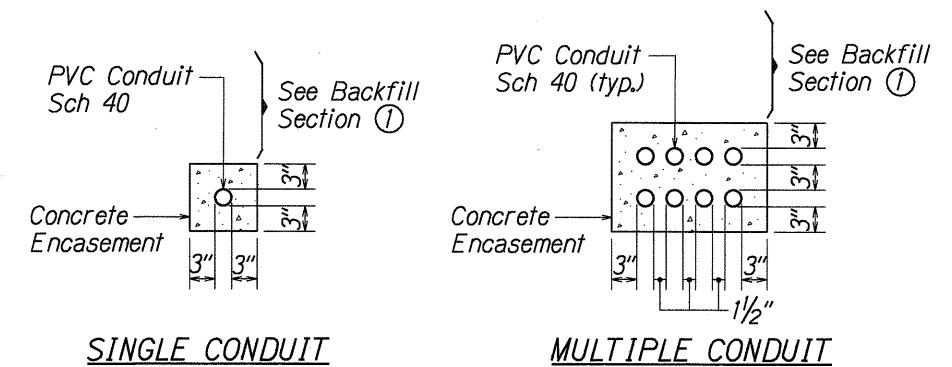
CAUTION-STATE TRAFFIC SIGNAL AND/OR HWY LIGHTING BURIED BELOW ∠5 mils thick (min.) Plastic Warning Tape

For additional information see note no. 2.

METAL DETECTABLE RED PLASTIC WARNING TAPE

Trench Width 12" -Sawcut through and remove Sawcut Prior all existing material bound by to Trenching asphalt or portland cement Sawcut through and remove Pav't. _ all existing material bound by asphalt or portland cement A.C. Base Course -Prime Coat * Minimum thickness or match existing whichever is greater Metal Detectable Red Plastic Warning Tape, See Note No. 2. O O, O O_ Concrete Encasement — Q 0 0 0 PVC Conduits Sch. 40 (typ.) Prior to installing Conduits, (See Duct Sect.) level ¢ compact bottom of trench to 95% compaction

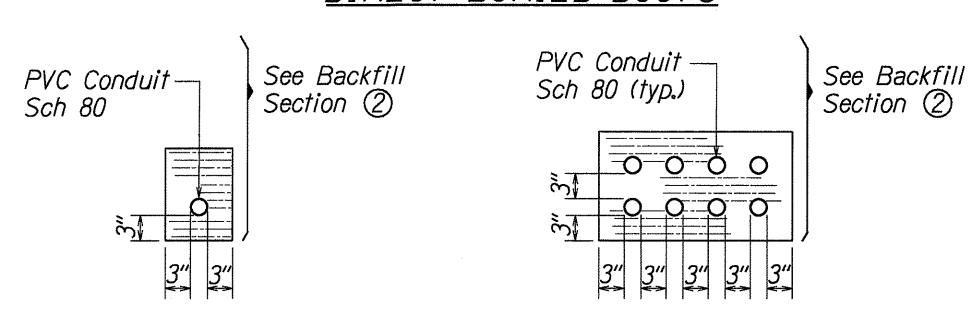
TYPICAL BACKFILL SECTION WITH CONCRETE ENCASED DUCTS



DUCT SECTIONS - CONC. ENCASED

FISCAL SHEET TOTAL YEAR NO. SHEETS FED. ROAD DIST. NO. 72C-01-00 2000 12 HAW. Trench Width -Sawcut through and Sawcut Prior remove all existing to Trenching material bound by asphalt or portland Sawcut through and Pav't. __ cement remove all existing material bound by asphalt or portland A.C. Base Prime Coat cement ~~~ * Minimum thickness or match existing Metal Detectable Red whichever is greater Plastic Warning Tape, See Note No. 2. 0 0 0 0 <u>-0-0-Q</u> 0_ Prior to installing Conduits, PVC Conduits Sch. 80 (typ.) level \$ compact bottom of (See Duct Sect.) trench to 95% compaction TYPICAL BACKFILL SECTION

DIRECT BURIED DUCTS

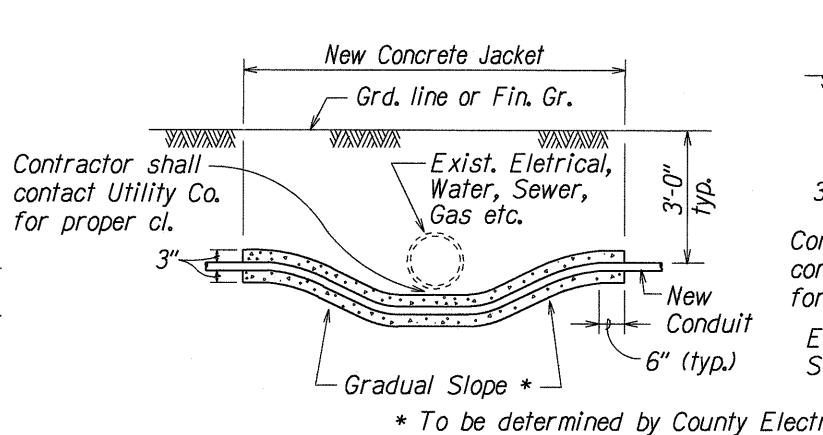


SINGLE CONDUIT

MULTIPLE CONDUIT

PROJ. NO.

DUCT SECTIONS - DIRECT BURIED



New Concrete Jacket — Grd. line or Fin. Gr. Contractor shall -New Conduit contact Utility Co. for proper clearance. -6" (typ.) Exist. Eletrical, Water,— Gradual Slope * Sewer, Gas etc.

* To be determined by County Electrical Inspector/Engineer CONDUIT BY-PASS DETAIL AT VARIOUS UTILITIES

Not to Scale

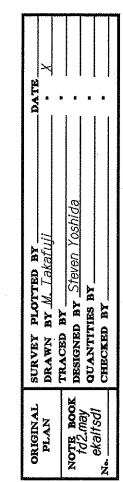
DEPARTMENT OF TRANSPORTATION

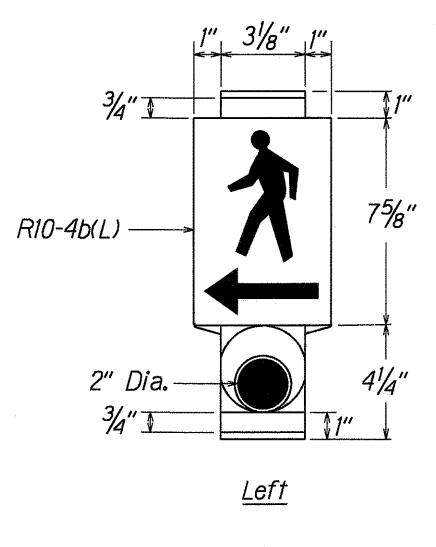
TRAFFIC SIGNAL DETAILS

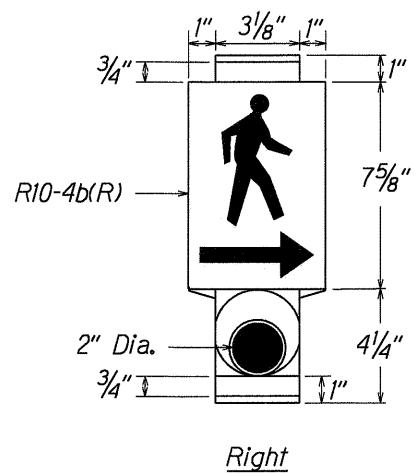
KALANIANAOLE HIGHWAY Installation of Traffic Signals at Analii Street Project No. 72C-01-00

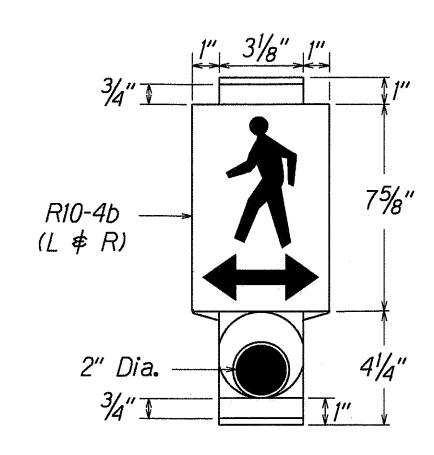
Not to Scale Date: Jan., 2000

SHEET No. / OF 2 SHEETS





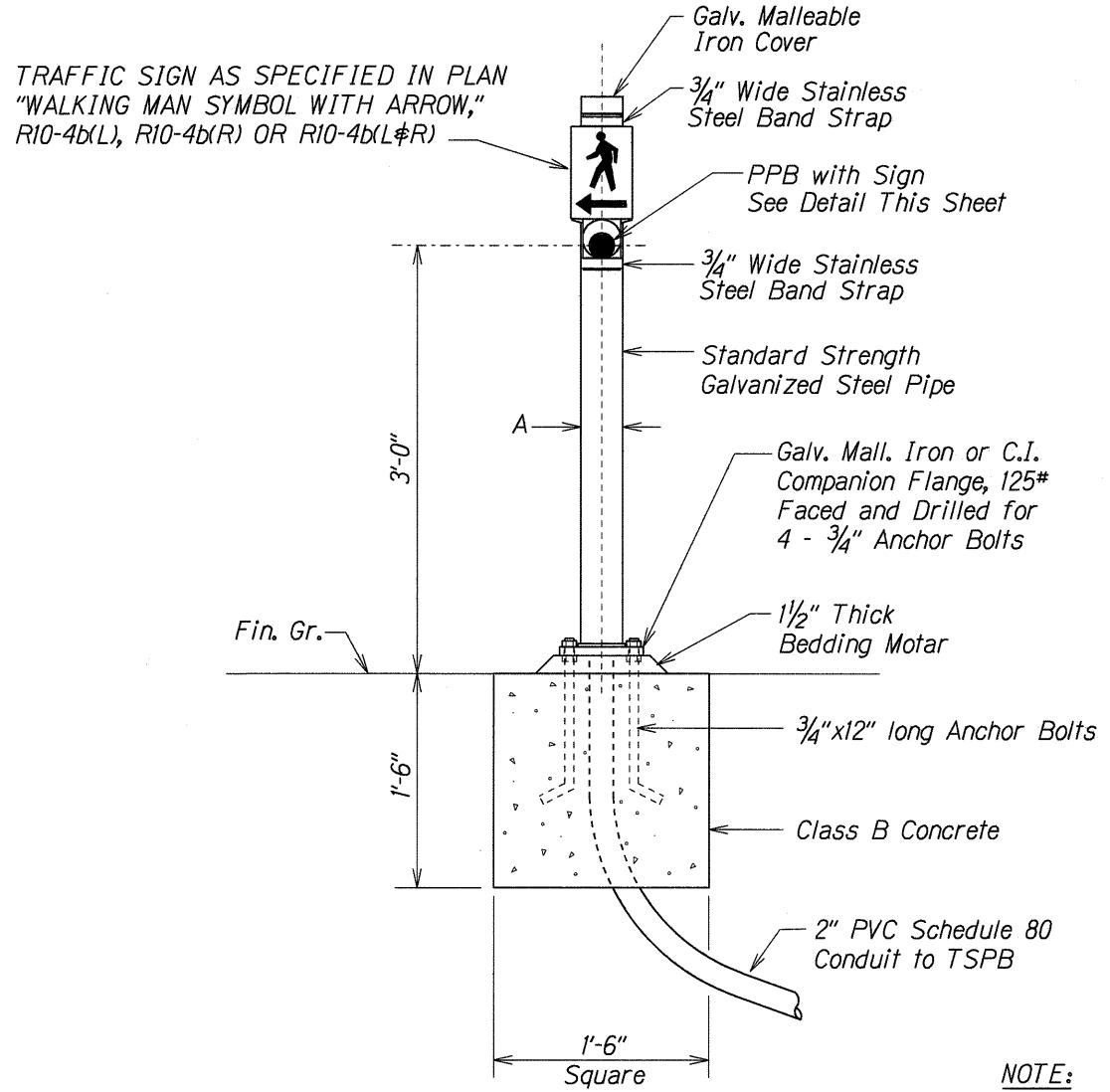




<u>Left **¢** Right</u>

PEDESTRIAN PUSH BUTTON WITH SIGN

Man, Arrow ♦ Push Button - White Background - Black

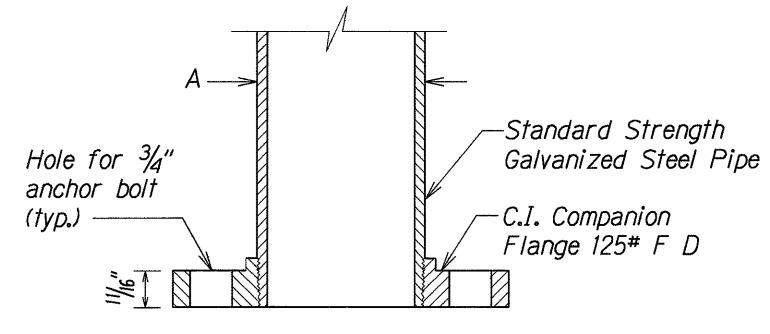


PPB POST AND FOOTING DETAIL

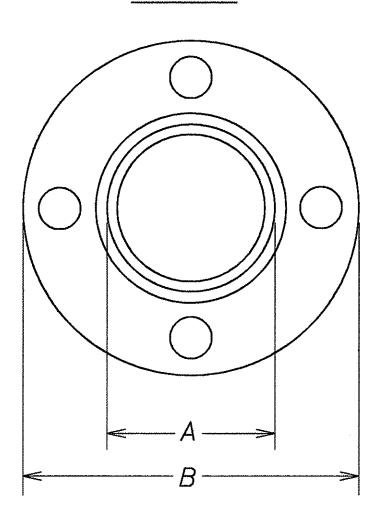
DATA TABLE FOR PPB POST					
AMOUNT OF PPB	DIMENSIONS				
AWOOW OF THE	Α	В			
1	3½"	8"			
2→3	41/2"	9"			

- 1. Conduits shall protrude 2" max. above finished surface of foundation.
- 2. Conduits shall slope away from post foundation.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	72C-01-00	2000	13	16



SECTION



TOP VIEW FLANGE DETAIL

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION TRAFFIC SIGNAL DETAILS PEDESTRIAN PUSHBUTTON DETAILS KALANIANAOLE HIGHWAY

Installation of Traffic Signals at Analii Street Project No. 72C-01-00

Date: Jan., 2000 Scale: Not to scale SHEET No. 2 OF 2 SHEETS

