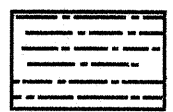
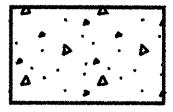


STATE RIGHT-OF-WAY BACKFILL NOTES



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.

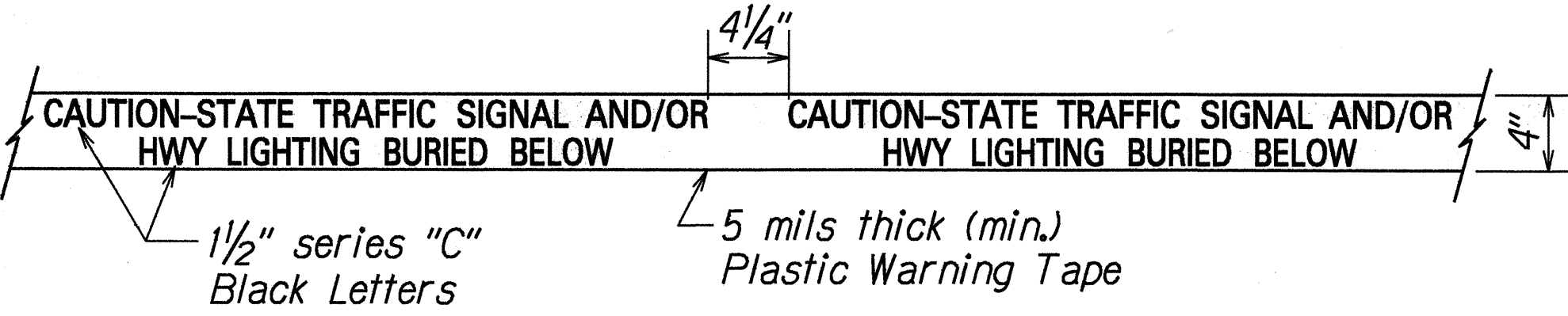


Concrete
3000 psi compressive strength
@ 3 days.

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

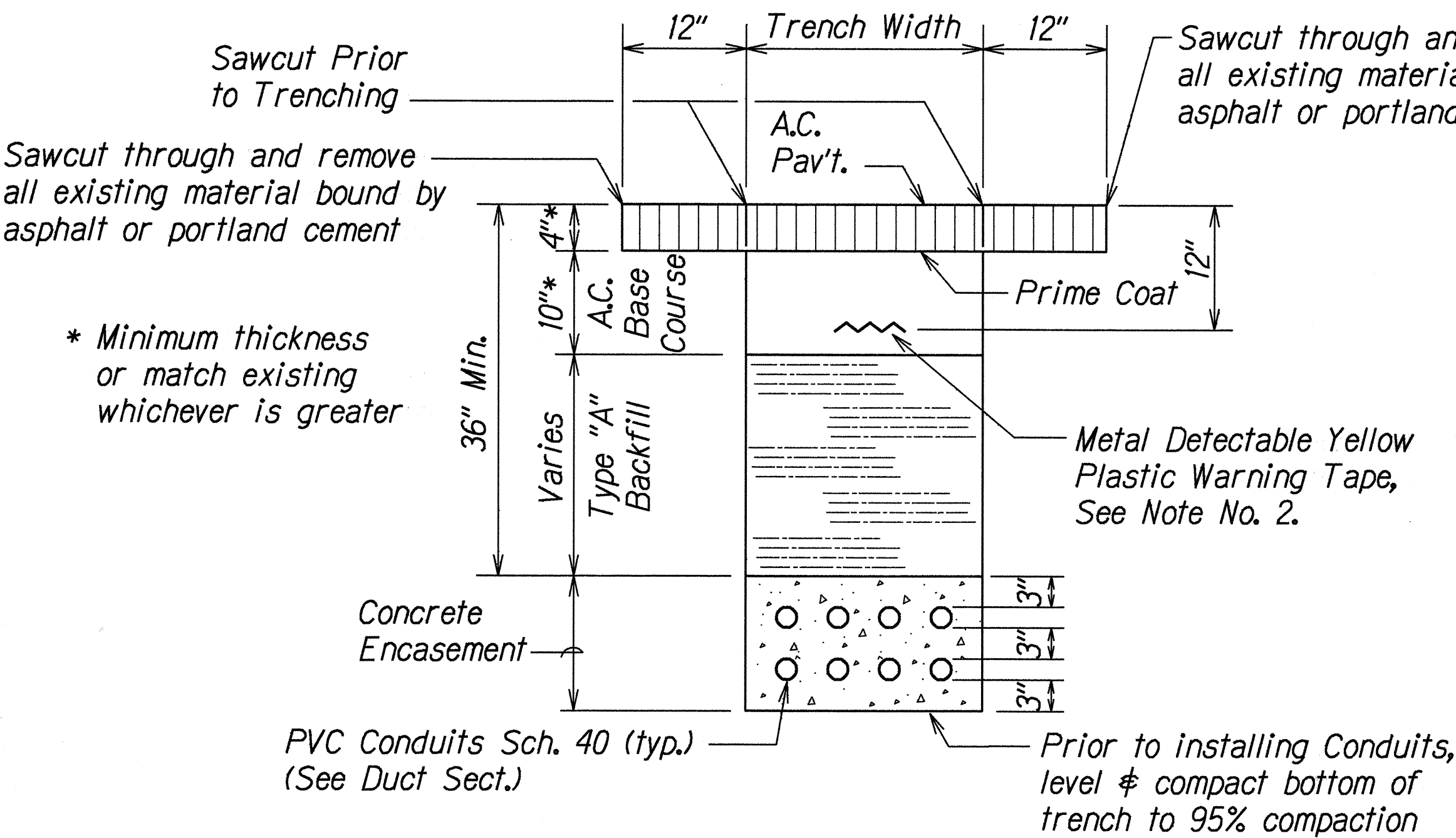
GENERAL NOTES

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 Yellow 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 4¼" 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 section.
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.

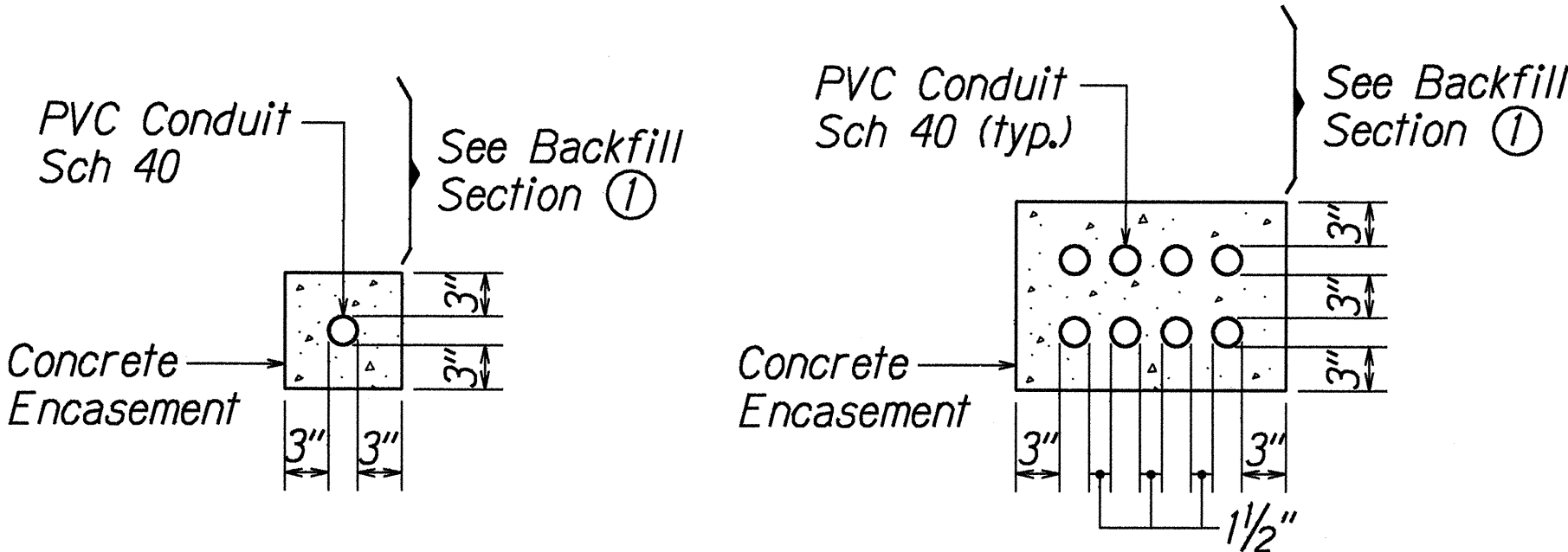


For additional information see note no. 2.

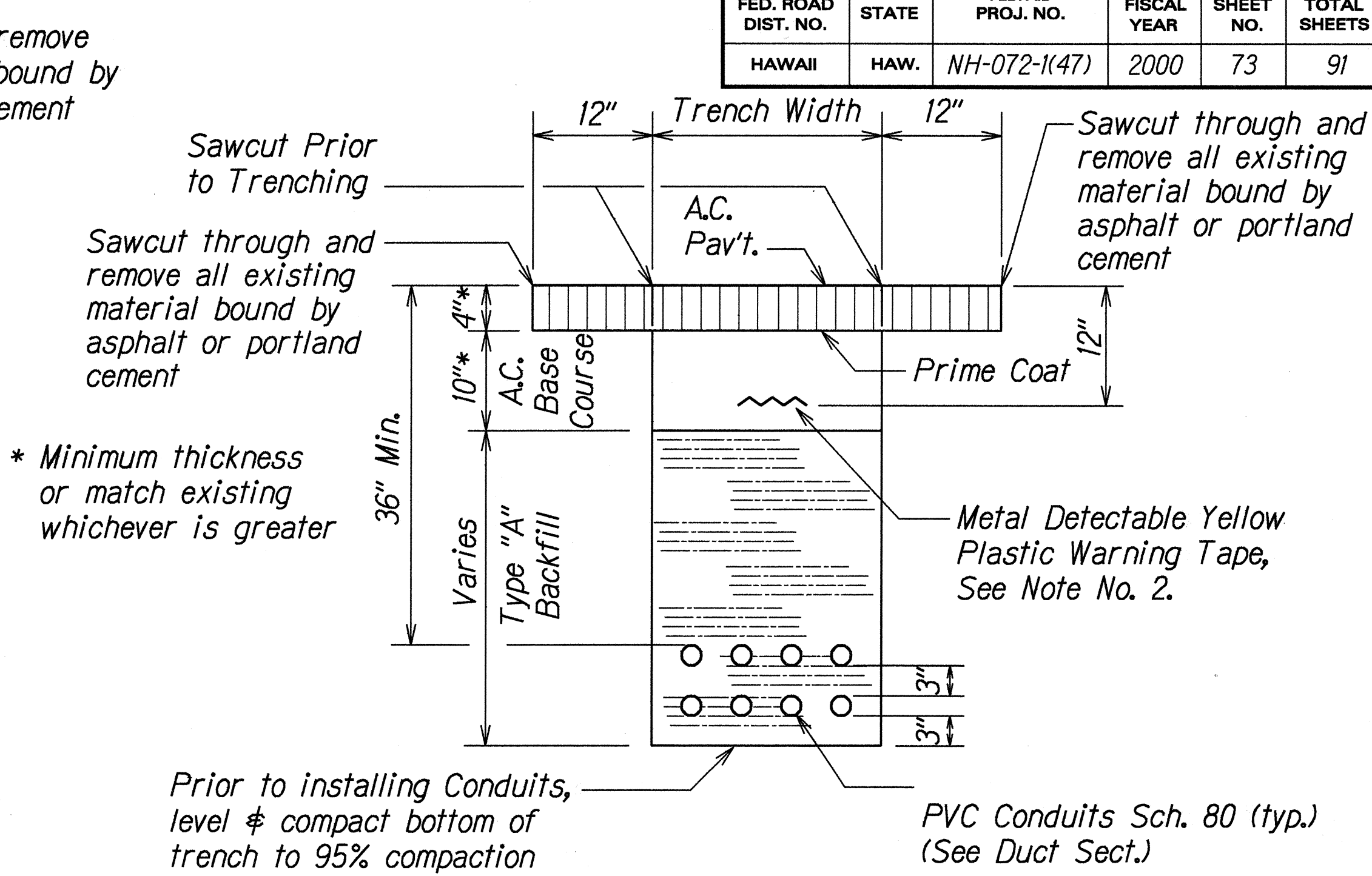
METAL DETECTABLE YELLOW PLASTIC WARNING TAPE



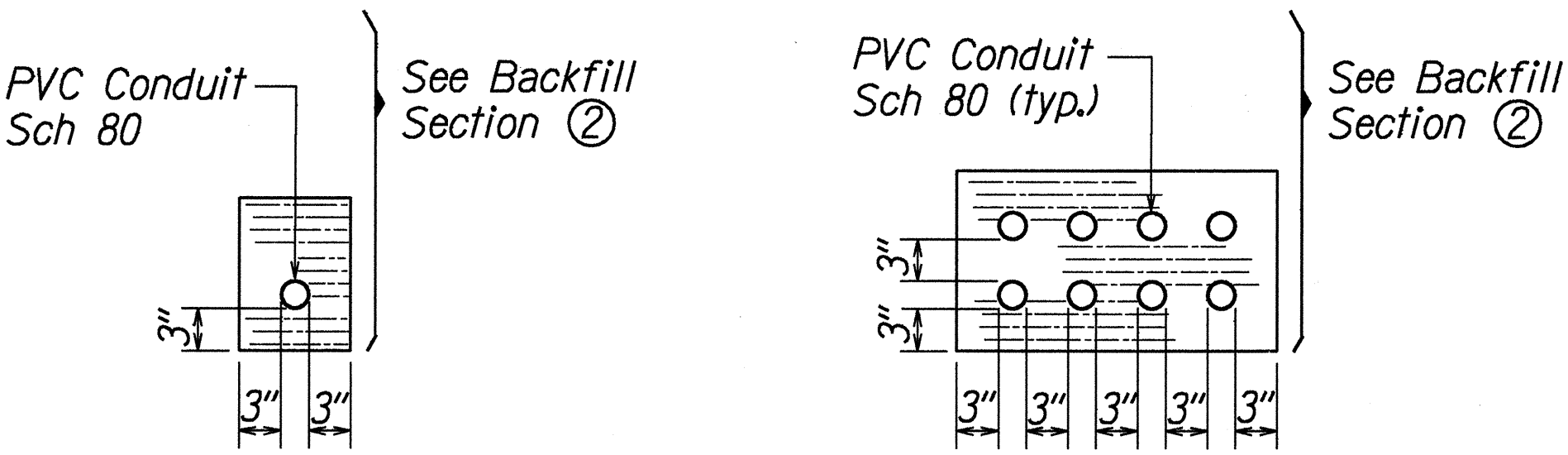
① TYPICAL BACKFILL SECTION
WITH CONCRETE ENCASED DUCTS



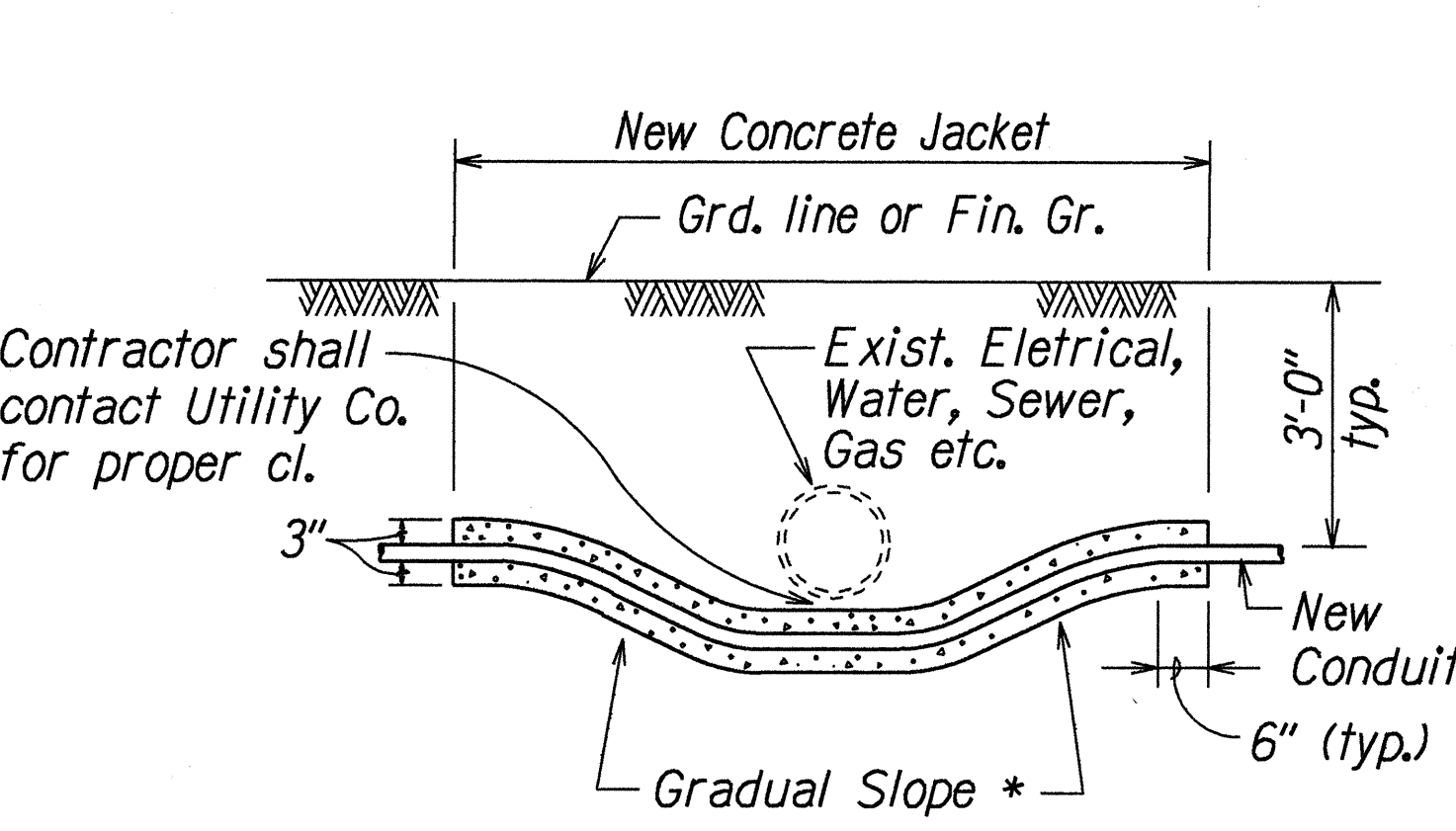
SINGLE CONDUIT MULTIPLE CONDUIT
DUCT SECTIONS - CONC. ENCASED



② TYPICAL BACKFILL SECTION
DIRECT BURIED DUCTS



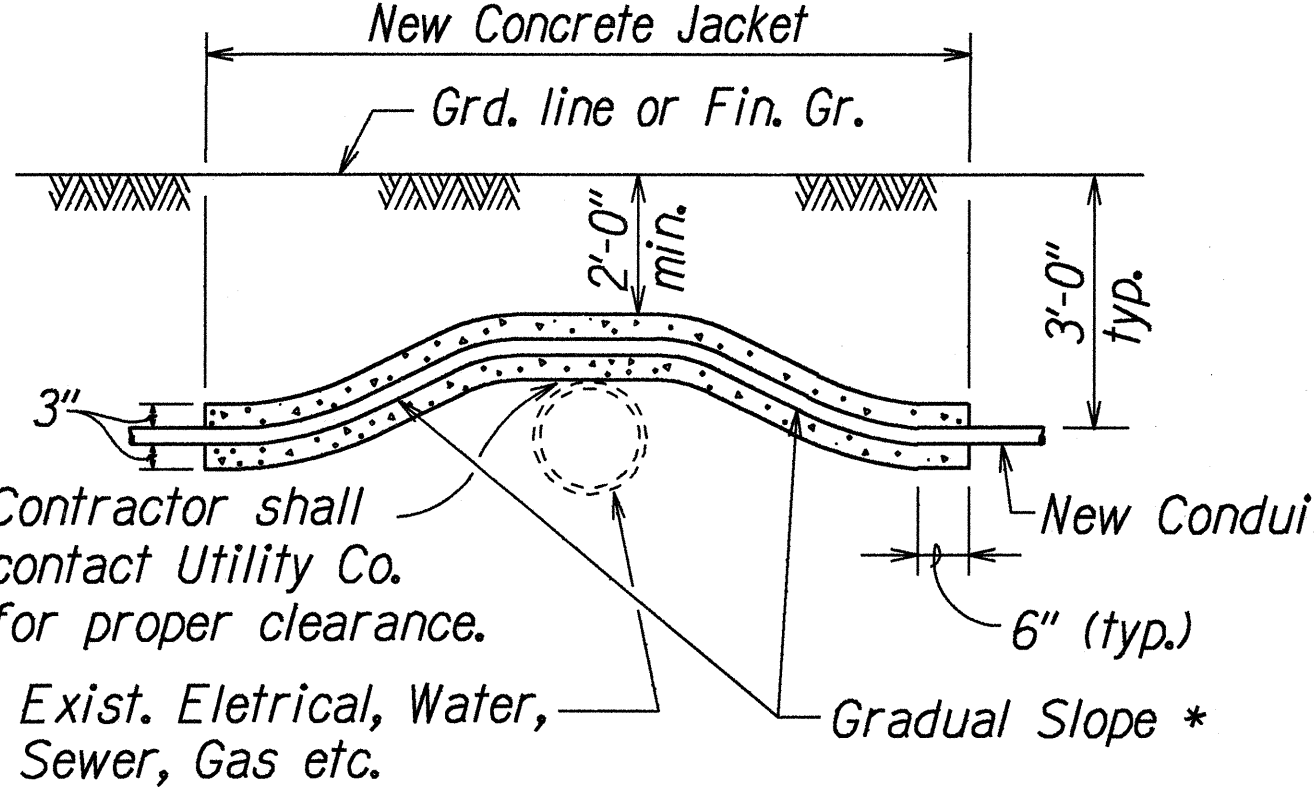
SINGLE CONDUIT MULTIPLE CONDUIT
DUCT SECTIONS - DIRECT BURIED



* To be determined by County Electrical Inspector/Engineer

CONDUIT BY-PASS DETAIL AT VARIOUS UTILITIES

Not to Scale



Contractor shall contact Utility Co. for proper clearance.

Exist. Electrical, Water, Sewer, Gas etc.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**TRAFFIC SIGNAL
SYSTEM DETAILS**
KALANIANA'OLE HIGHWAY RESURFACING
Ainakoa Avenue to West Hind Drive
Federal Aid Project No. NH-072-1(47)
Not to Scale Date: June, 1999
SHEET No. T22 OF 23 SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY M. Tazaki	...
DESIGNED BY Steven Yoshida	...
QUANTITIES BY	...
CHECKED BY	...
ORIGINAL PLAN	
NOTE BOOK	
10/2/99	
NO. 0215302	

R7/10/98