

BACKFILL NOTES: (WITHIN STATE RIGHT-OF-WAY)

TRENCH BACKFILL MATERIAL "B"
1. SAND EQUIVALENT ≥ 2
2. 8" MAX. LIFT
3. 95% COMPACTION

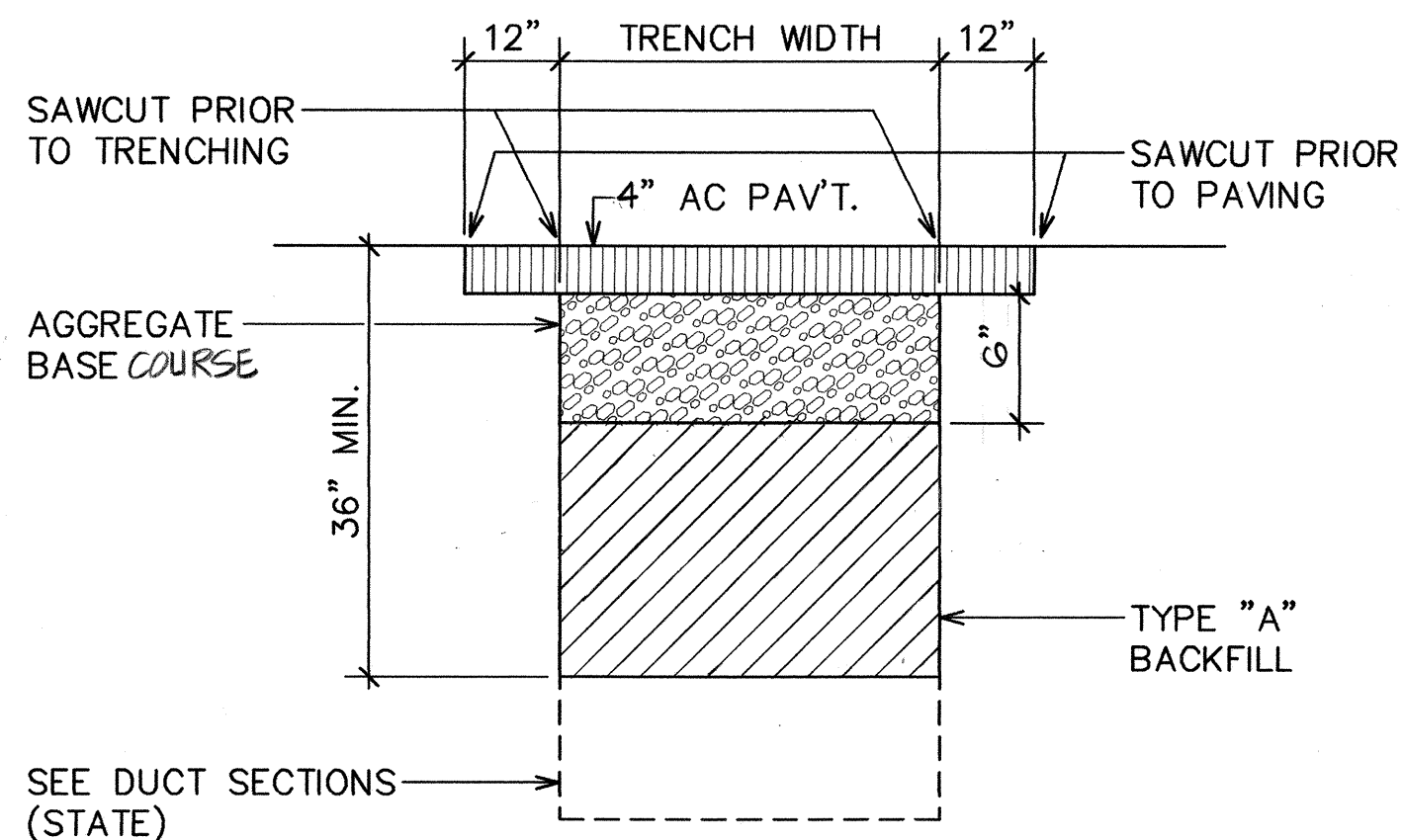
TRENCH BACKFILL MATERIAL "A"
1. SAND EQUIVALENT ≥ 20
2. 8" MAX. LIFT
3. 95% COMPACTION

IF MATERIAL BELOW DUCT IS NOT EQUIVALENT TO BACKFILL MATERIAL "A", EXCAVATE MATERIAL & PROVIDE 3" BACKFILL MATERIAL "A". SEE ABOVE

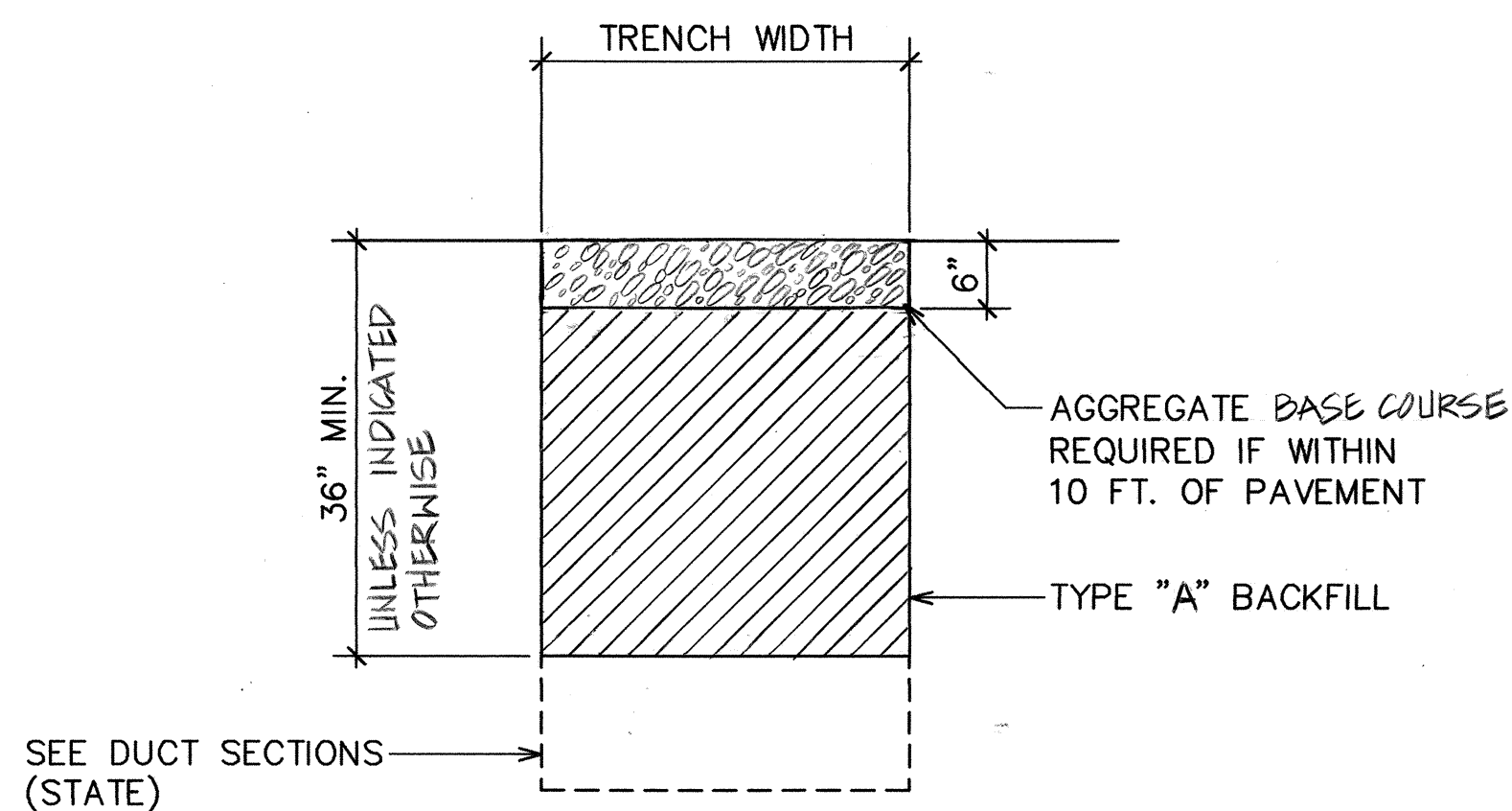
CONCRETE - 3" ENCASEMENT, 2500 PSI COMPRESSIVE STRENGTH @ 28 DAYS.

NOTE: BASE COURSE & SUB-BASE COURSE PER 1985 STATE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

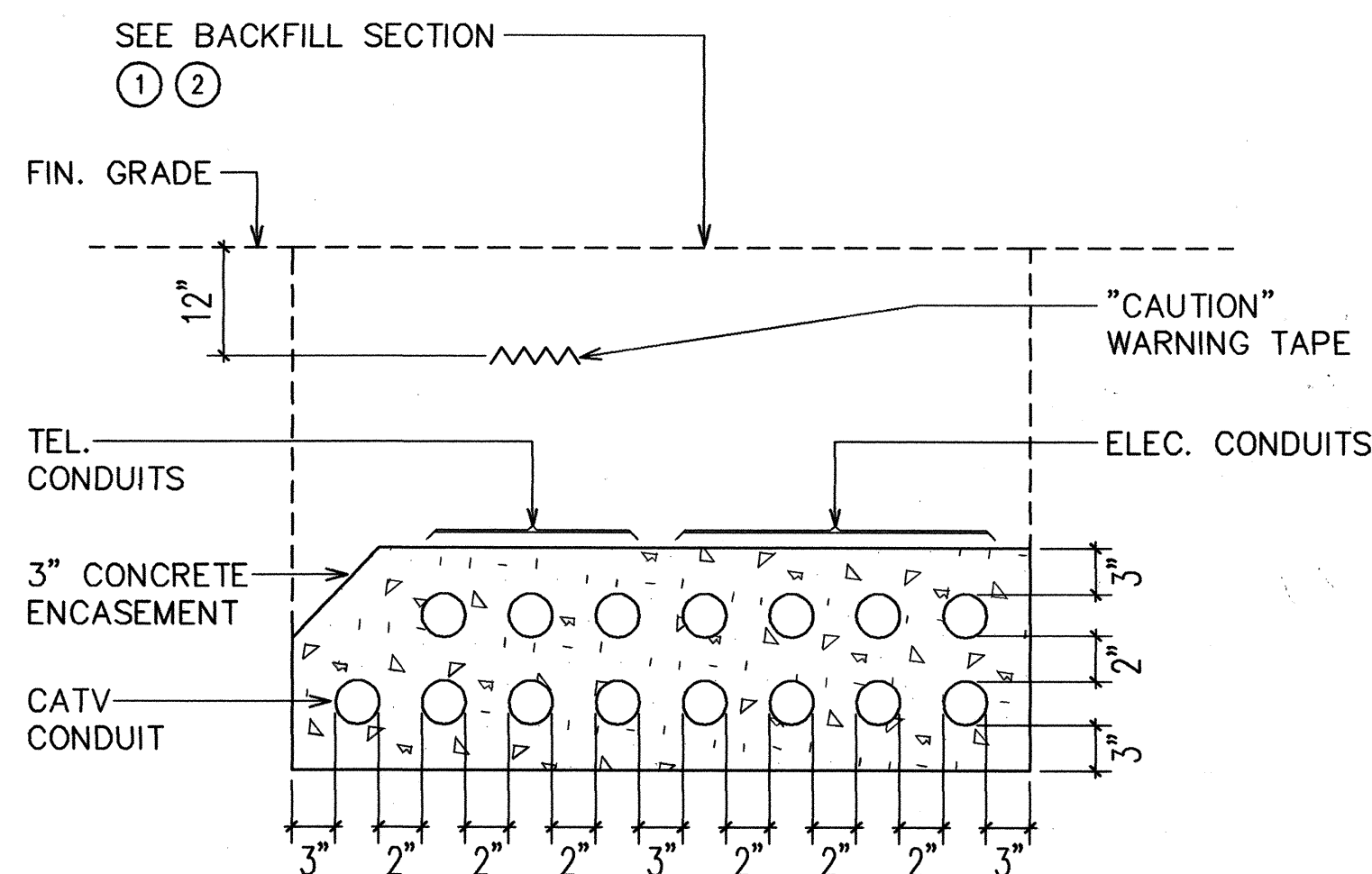
* ALL TRAFFIC SIGNAL UNDER ROADWAYS SHALL BE STEEL OR PVC SCHEDULE 80. ALL OTHER CONDUITS SHALL BE STEEL OR PVC SCHEDULE 40.



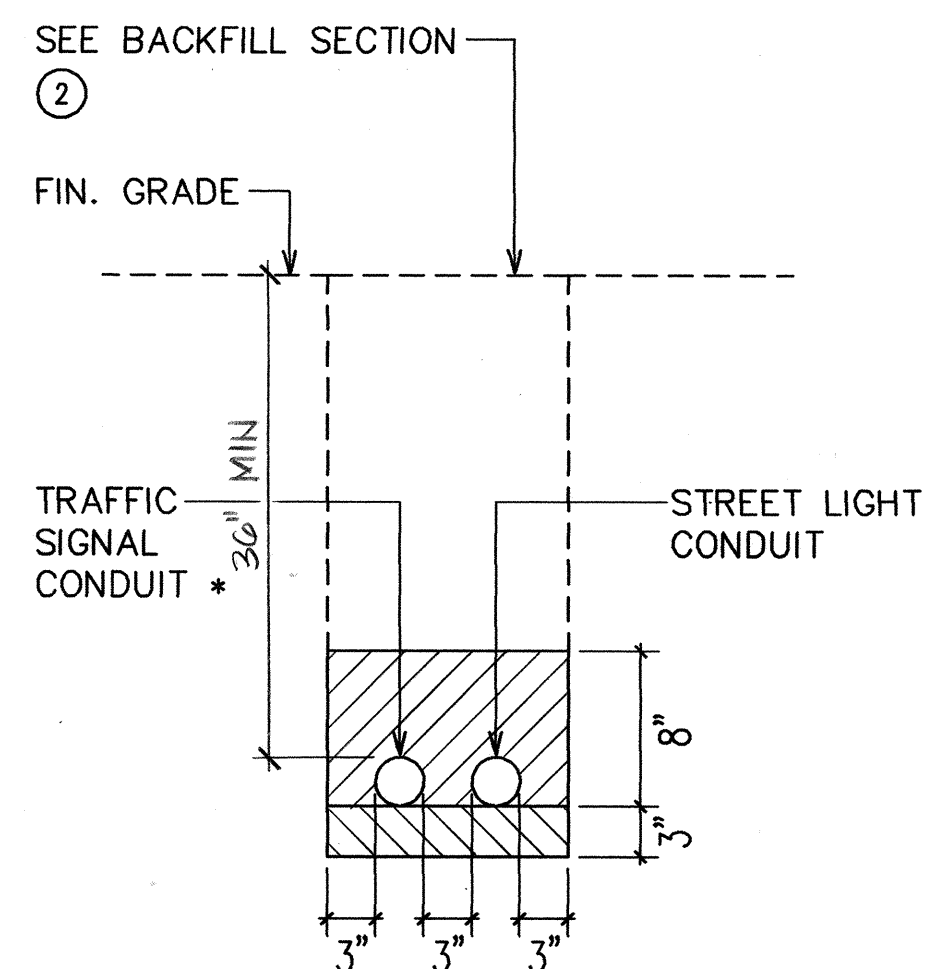
1 BACKFILL SECTION
WITHIN STATE RIGHT-OF-WAY
UNDER ROADWAY & SHOULDER



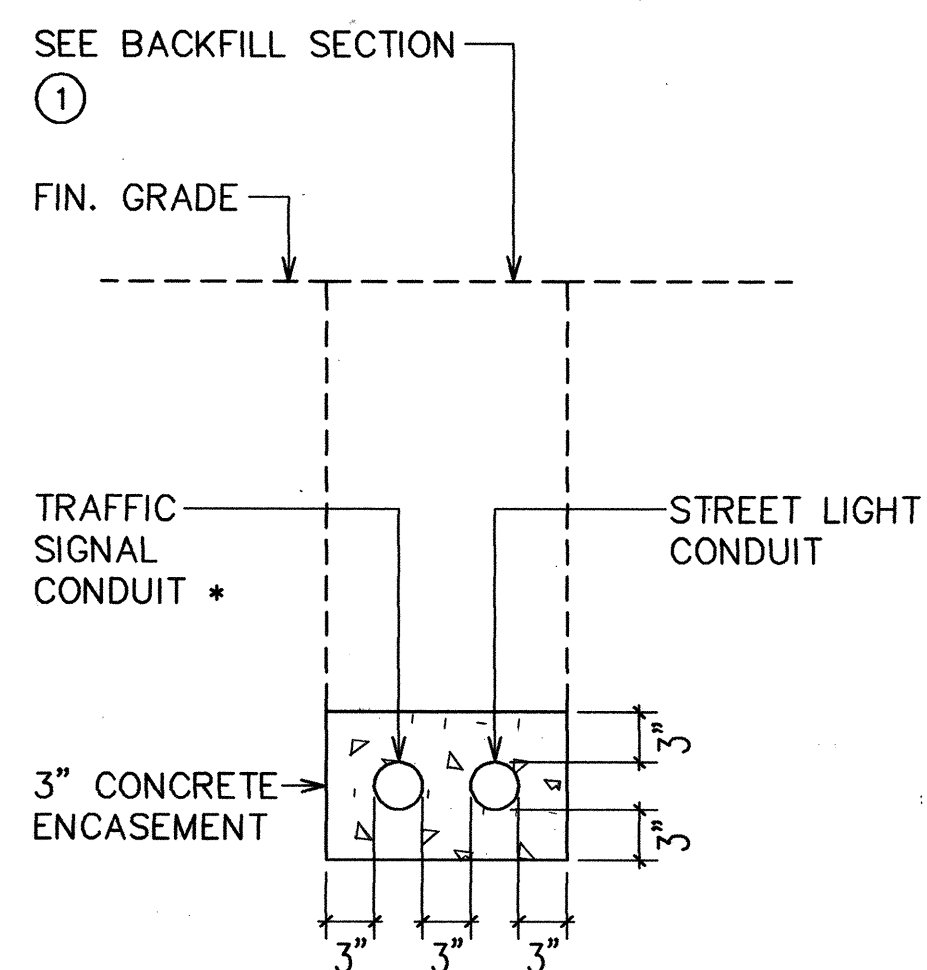
2 BACKFILL SECTION
WITHIN STATE RIGHT-OF-WAY
OUTSIDE PAVED SHOULDER



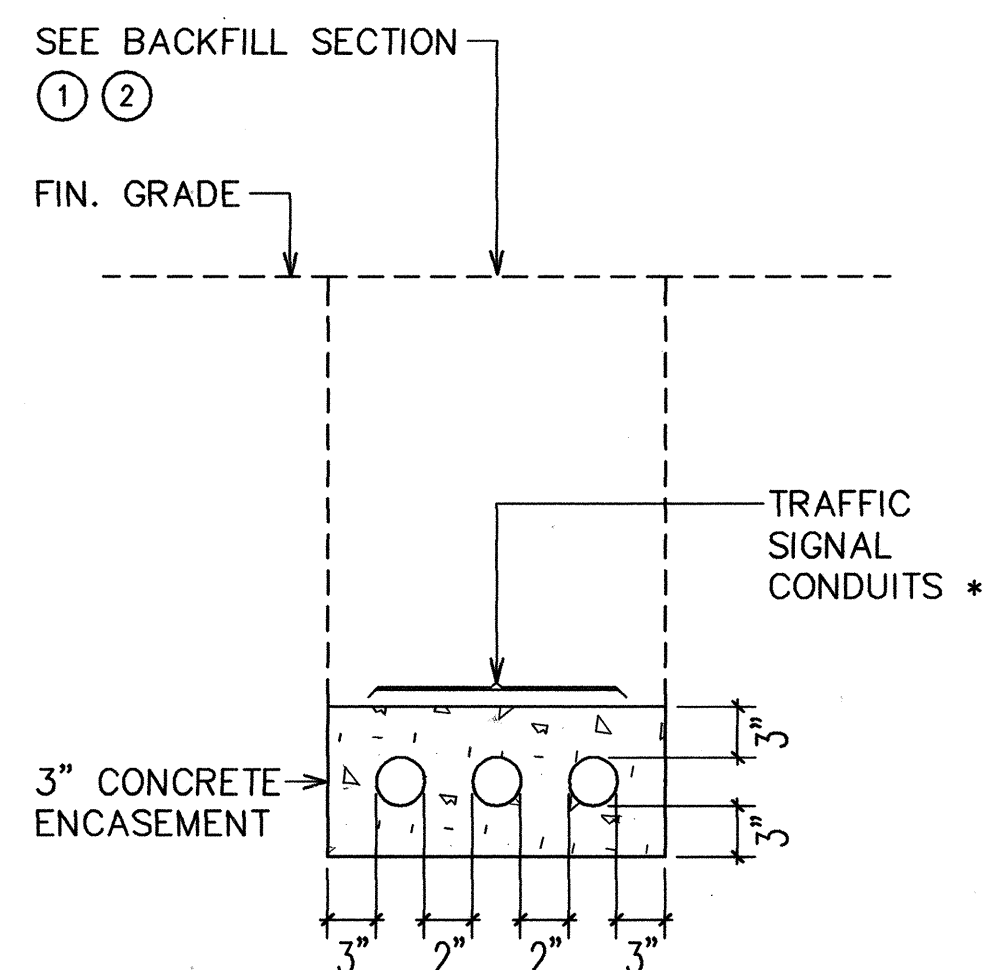
SECTION (SA)



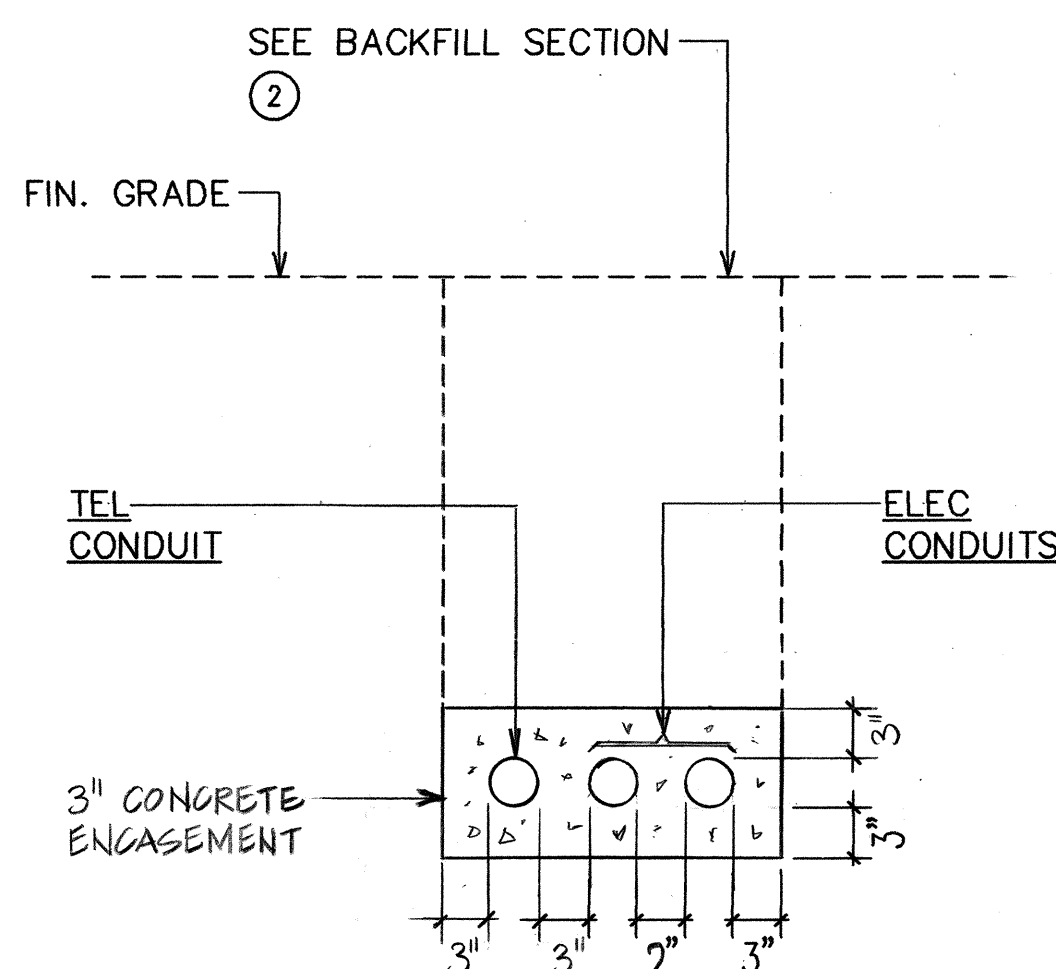
SECTION (SB)



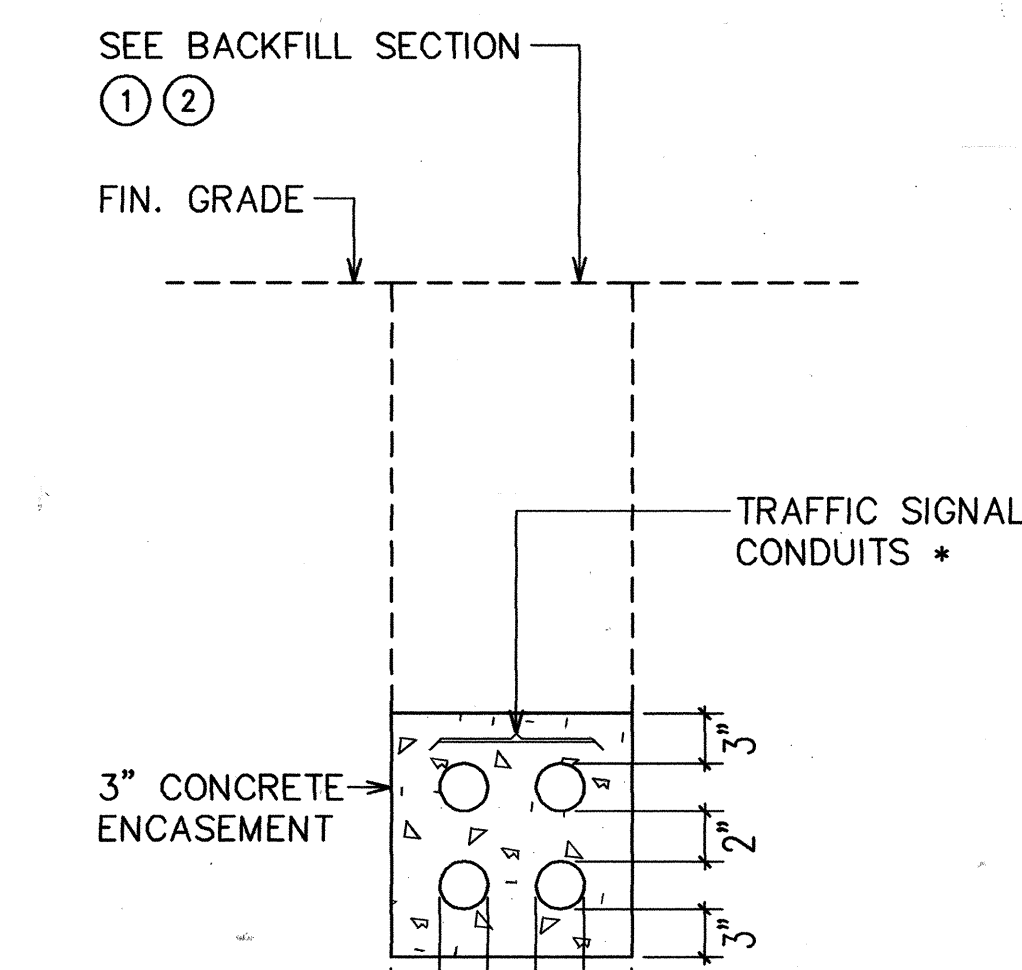
SECTION (SC)



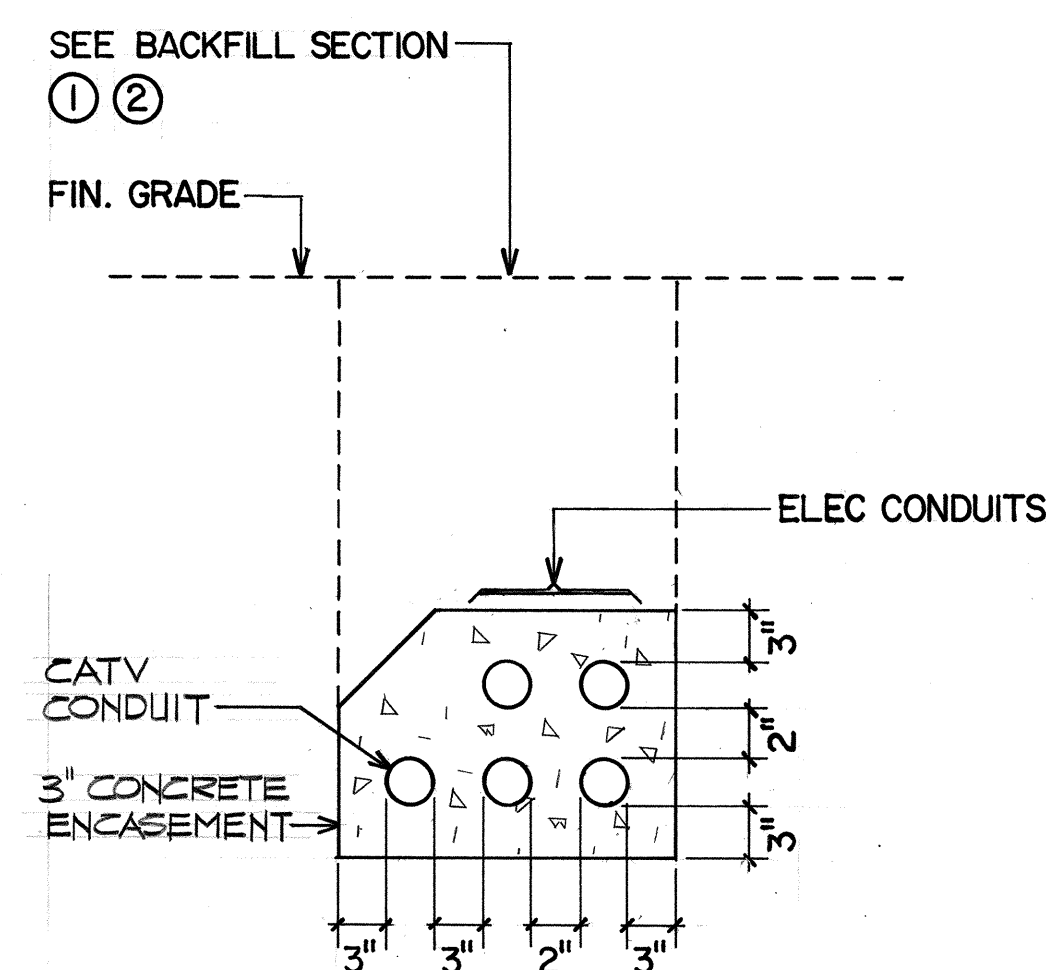
SECTION (SD)



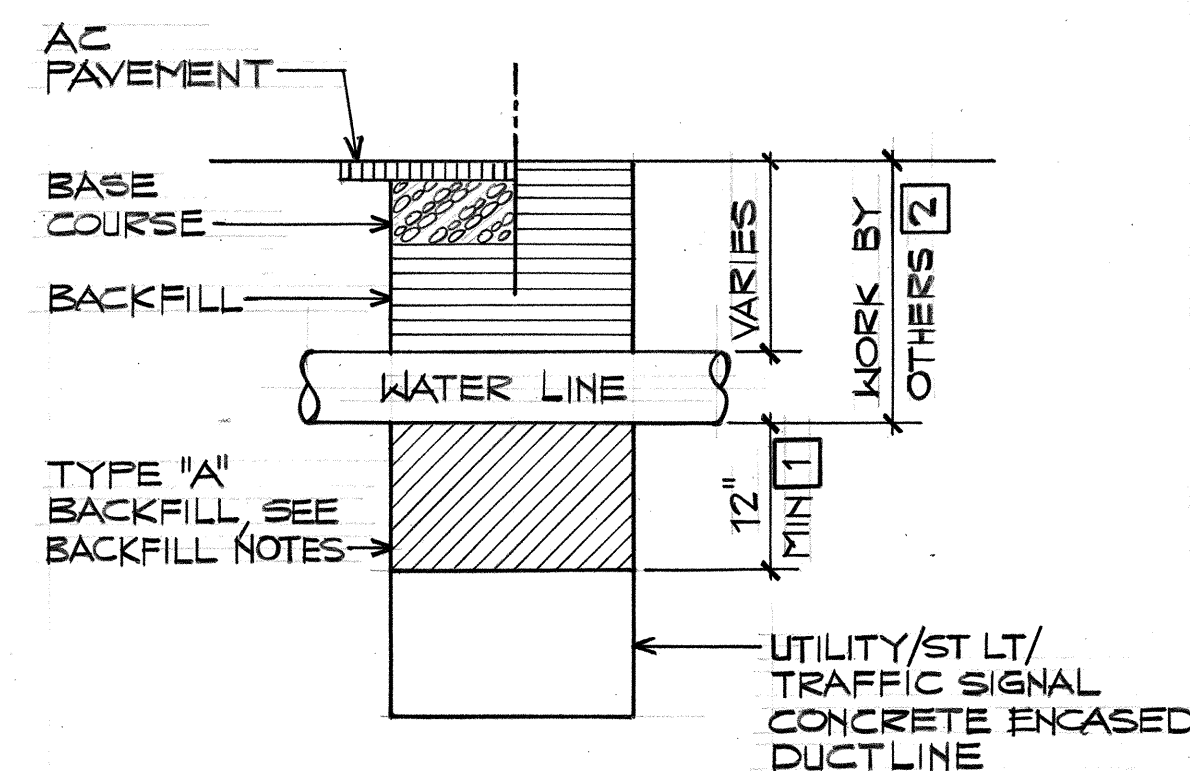
SECTION (SE)



SECTION (SF)

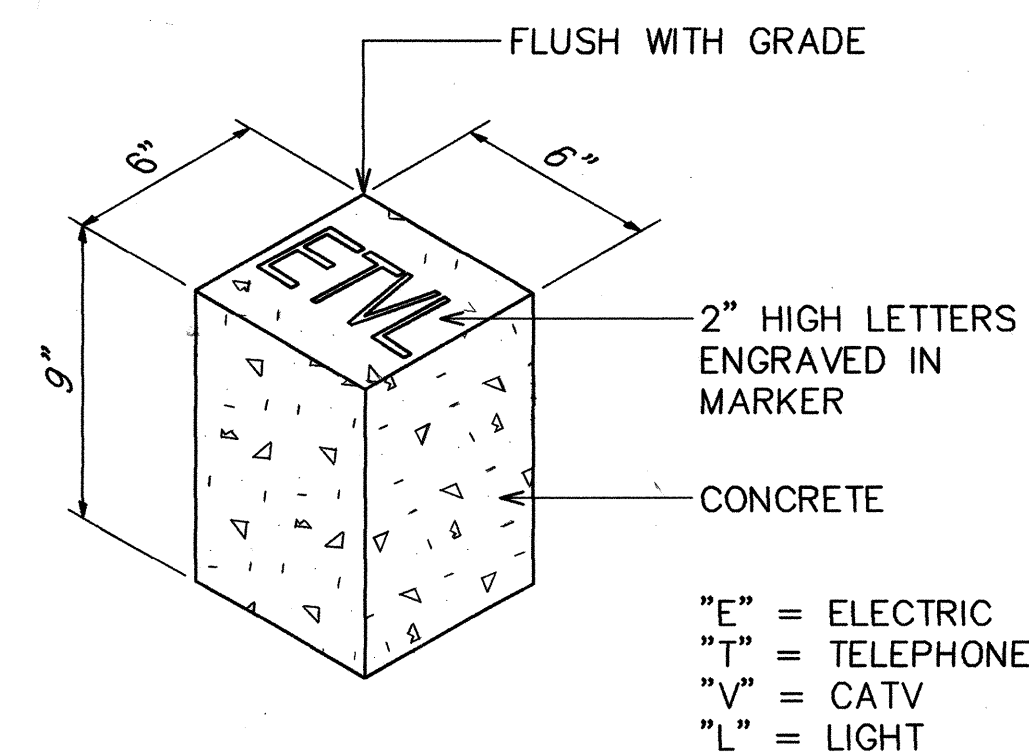


SECTION (SG)



NOTES:
1 18" MIN FOR DIRECT BURIED DUCTLINES.
2 FOR EXIST WATER LINE PROVIDE AC PAVEMENT, BASE COURSE & BACKFILL TO MATCH EXIST.

TYPICAL WATER LINE CROSSING DETAIL
N.T.S.



CONCRETE CONDUIT STUB-OUT MARKER
N.T.S.

CONDUIT SCHEDULE

ITEM	DESCRIPTION
(2E)	HELCO 2"C
(2-2E)	HELCO 2-2"C
(3E)	HELCO 3"C
(2-4E)	HELCO 2-4"C
(4-5E)	HELCO 4-5"C
(2T)	HTCO 2"C, GT-42 OR APPROVED EQUAL
(6-4T)	HTCO 6-4"C, GT-42 OR APPROVED EQUAL
(3V)	CATV 3"C
(4V)	CATV 4"C
(1/4)	STREET LIGHT 1 1/4"C
(2L)	STREET LIGHT 2"C
(1TS)	TRAFFIC SIGNAL 1"C
(1/2TS)	TRAFFIC SIGNAL 1 1/2"C
(2TS)	TRAFFIC SIGNAL 2"C
(2-7TS)	TRAFFIC SIGNAL 2-2"C
(3-7TS)	TRAFFIC SIGNAL 3-2"C

Rev	Date	Description	Eng	App

RONALD N. S. HO
REGISTERED PROFESSIONAL ENGINEER
No. 3737-E
HAWAII, U.S.A.
11/8/93
This work was prepared by me or under my supervision

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MAKALAPUA
QUEEN KAAHUMANU HIGHWAY AND
MAKALAPUA BLVD. INTERSECTION
TYPICAL DUCT SECTIONS

Designed By: **SI** Drawn By: **GN**
Project No. **333.5000** Date: **OCTOBER 1993**
Approved By: *[Signature]* Date: *[Signature]*
HAWAII ELECTRIC LIGHT COMPANY HAWAIIAN TELEPHONE COMPANY

FILE	POCKET	FOLDER	NO.