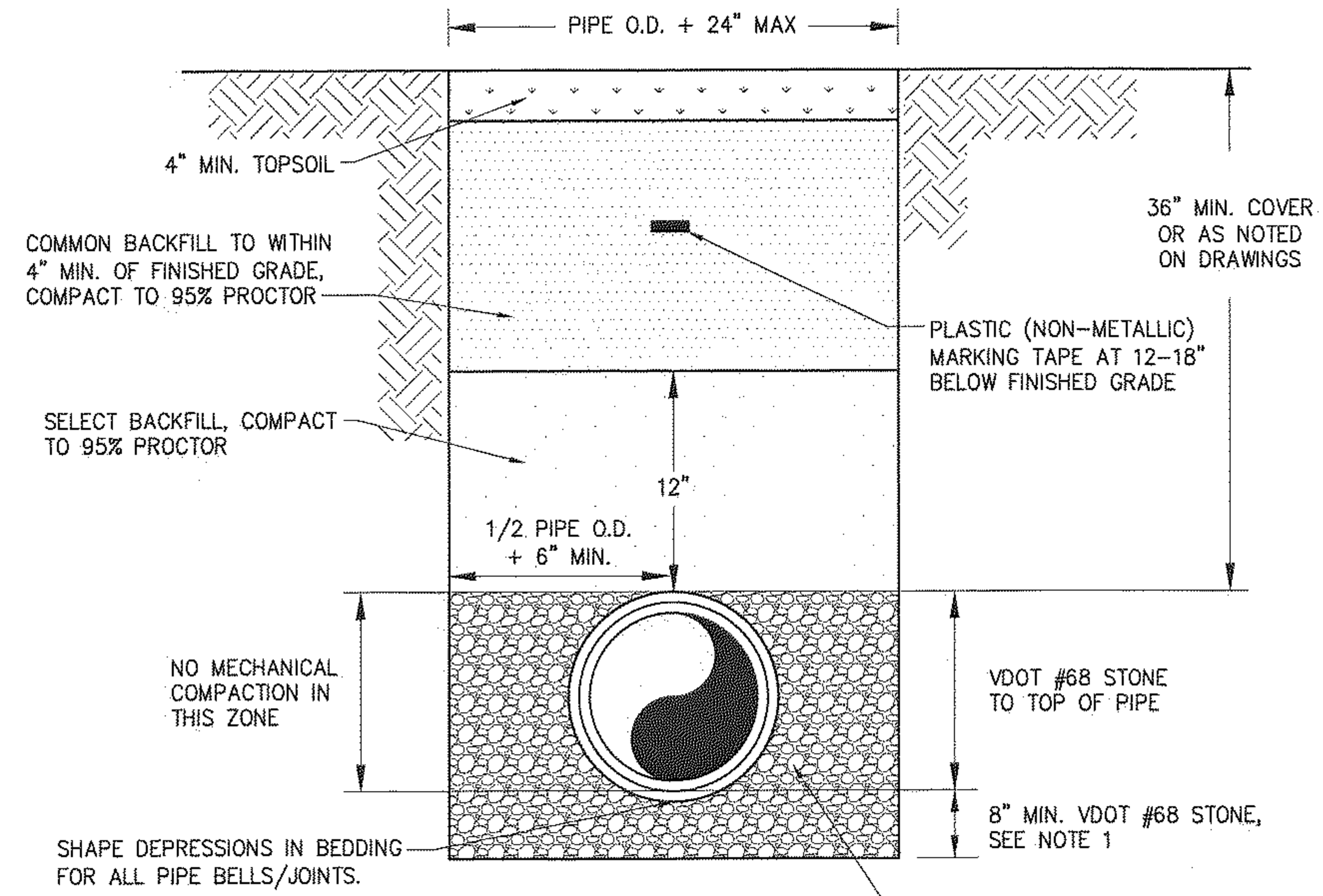
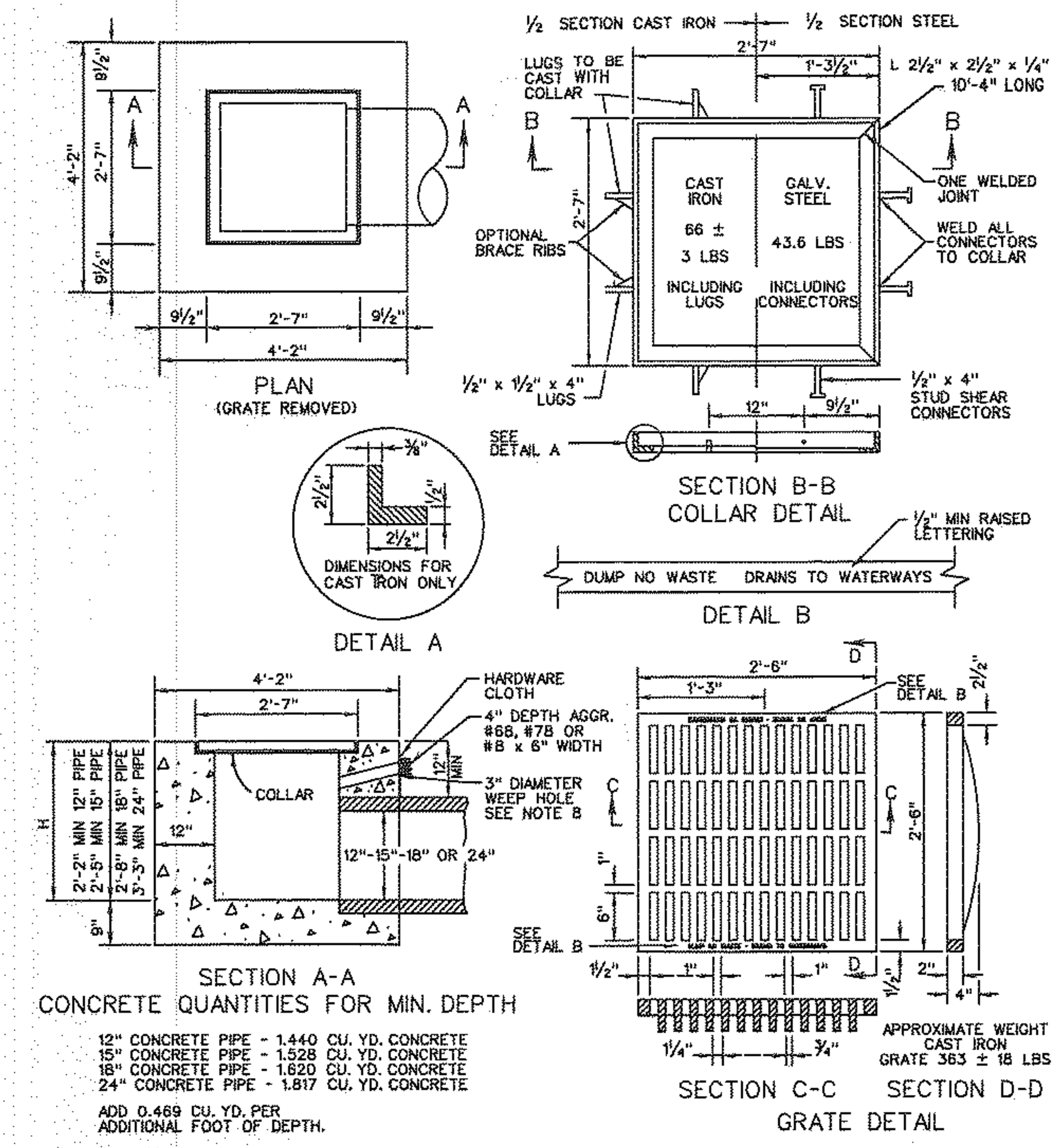


NOTES:

1. OVEREXCAVATE TRENCH WHEN FOUNDATION IS ROCK, SOFT, YIELDING, SATURATED, UNSTABLE, OR OTHERWISE UNSUITABLE, AS APPROVED BY THE ENGINEER, TO ALLOW PLACEMENT OF 8" MIN. VODT #68 STONE BEDDING BENEATH PIPE.
2. SELECT BACKFILL: EXCAVATED NATIVE SOIL FREE OF ROCKS/STONES LARGER THAN 1" DIAMETER, ASPHALT, CONCRETE, ICE/FROST, TRASH/DEBRIS, WOOD OR ANY OTHER ORGANIC MATERIAL, LARGE CLODS.
3. COMMON BACKFILL: EXCAVATED NATIVE SOIL FREE OF ROCKS/STONES LARGER THAN 4" DIAMETER, ASPHALT, CONCRETE, ICE/FROST, TRASH/DEBRIS, WOOD OR ANY OTHER ORGANIC MATERIAL, LARGE CLODS.
4. PLACE BACKFILL IN 6" LIFTS MAX.
5. TOPSOIL: EXCAVATED NATIVE TOPSOIL (6" MAX.), PROPERLY STORED DURING TRENCH WORK, AUGMENTED AND PLACED AS INDICATED, OR OFF-SITE TOPSOIL, AUGMENTED AND PLACED AS INDICATED. NATIVE TOPSOIL DESIGNATED BY THE OWNER AS UNSUITABLE MAY BE USED AS COMMON BACKFILL AS NOTED ABOVE.

1 WATER MAIN TRENCH NOT UNDER ASPHALT

NOT TO SCALE



12" CONCRETE PIPE - 1.440 CU. YD. CONCRETE
15" CONCRETE PIPE - 1.528 CU. YD. CONCRETE
18" CONCRETE PIPE - 1.620 CU. YD. CONCRETE
24" CONCRETE PIPE - 1.817 CU. YD. CONCRETE

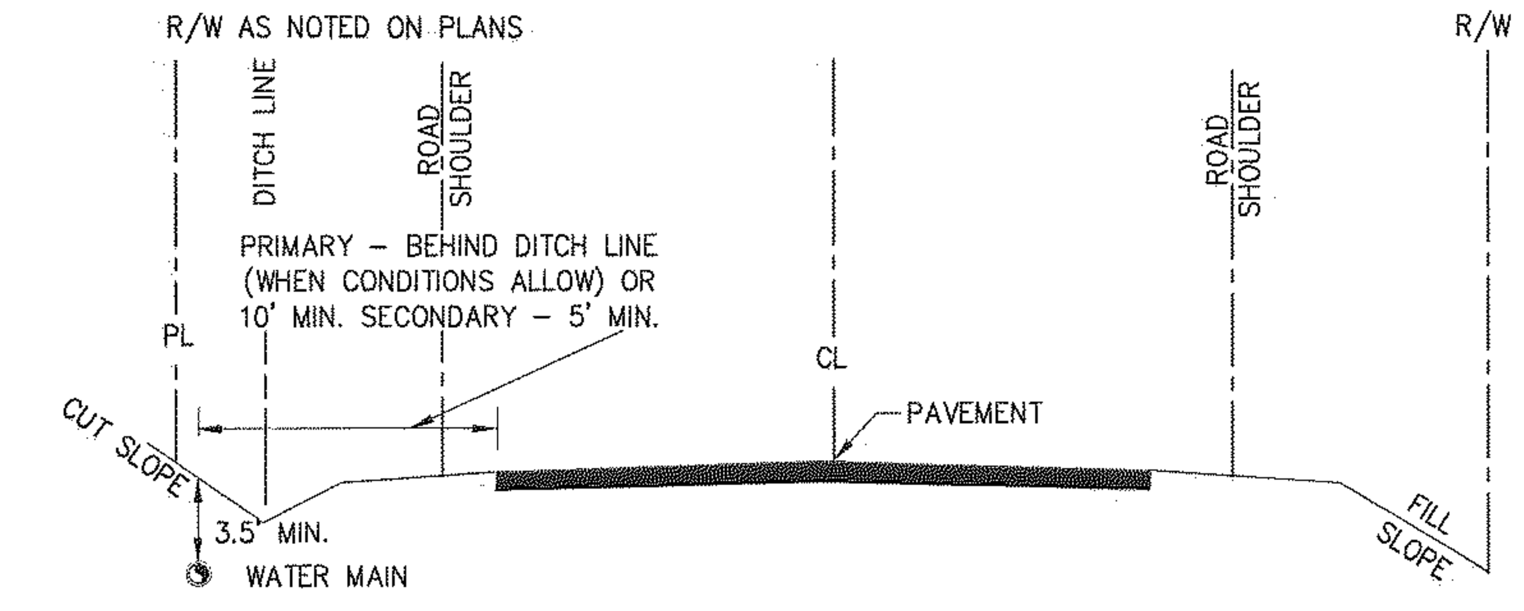
ADD 0.469 CU. YD. PER ADDITIONAL FOOT OF DEPTH.

NOTES

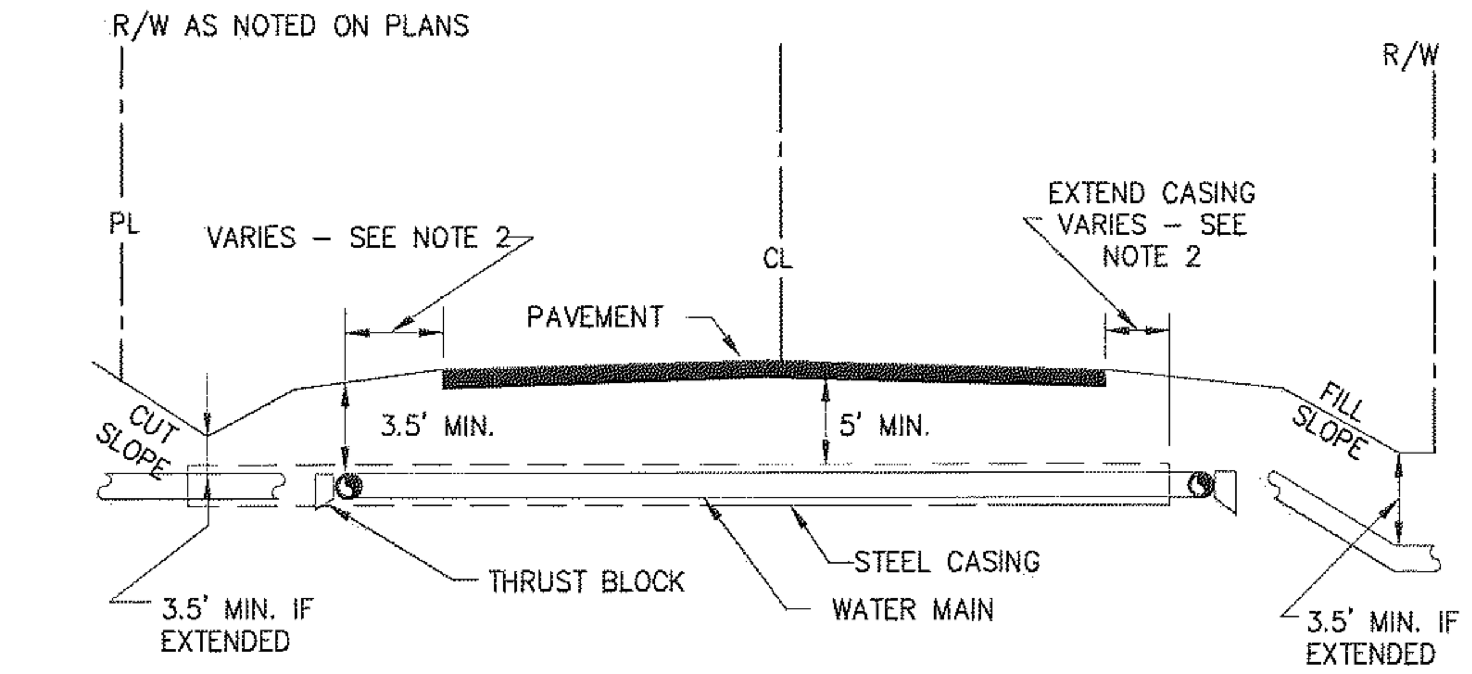
1. DEPTH OF INLET (H) TO BE SHOWN ON PLANS. FOR DEPTH GREATER THAN 10' USE STANDARD DI-1A
2. THE "H" DIMENSION SHOWN ON THE STANDARDS AND SPECIFIED ON THE PLANS WILL BE MEASURED FROM THE INVERT OF THE OUTFALL PIPE TO THE TOP OF THE STRUCTURE. PLAN "H" DIMENSIONS ARE APPROXIMATE ONLY FOR ESTIMATING PURPOSES AND THE ACTUAL DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FROM FIELD CONDITIONS.
3. WHEN SPECIFIED ON THE PLANS THE INVERT IS TO BE SHAPED IN ACCORDANCE WITH STANDARD IS-1. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
4. IN THE EVENT THE INVERT OF THE OUTFALL PIPE IS HIGHER THAN THE BOTTOM OF THE STRUCTURE, THE INVERT OF THE STRUCTURE SHALL BE SHAPED WITH CEMENT MORTAR TO PREVENT STANDING OR PONDING OF WATER IN THE STRUCTURE. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO INLET SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
5. STEPS ARE TO BE PROVIDED WHEN H IS 4'-0" OR GREATER. FOR DETAILS SEE STANDARD ST-1.
6. THIS ITEM MAY BE PRECAST OR CAST-IN-PLACE.
7. #4 X 8" SMOOTH DOWELS AT APPROXIMATELY 12" C-C TO BE PLACED IN ALL AREAS ADJACENT TO ABUTTING CONCRETE TO PREVENT SETTLEMENT. IN LIEU OF DOWELS A 2"X4" NOTCH MAY BE PROVIDED. SEE STANDARD T-DI-3, 4 FOR ALTERNATE DESIGN.
8. 3" DIAMETER WEEP HOLE WITH 12"X12" PLASTIC HARDWARE CLOTH ¼" MESH OR GALVANIZED STEEL WIRE, MINIMUM WIRE DIAMETER 0.03", NUMBER 4 MESH HARDWARE CLOTH ANCHORED FIRMLY TO THE OUTSIDE OF THE STRUCTURE.
9. CAST IN PLACE CONCRETE IS TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE IS TO BE 4000 PSI.
10. ANY ALTERNATE METHODS OF ANCHORAGE MEETING THE APPROVAL OF THE ENGINEER MAY BE SUBSTITUTED FOR THE CAST IRON LUGS AS SHOWN HEREON.
11. DUMP NO WASTE DRAINS TO WATERWAY LETTERING IS REQUIRED ON ALL DI-1 GRATES. LOCATION OF LETTERING MAY VARY BY MANUFACTURER.

2 VDOT STANDARD DROP INLET DI-1

NOT TO SCALE



PARALLEL INSTALLATION



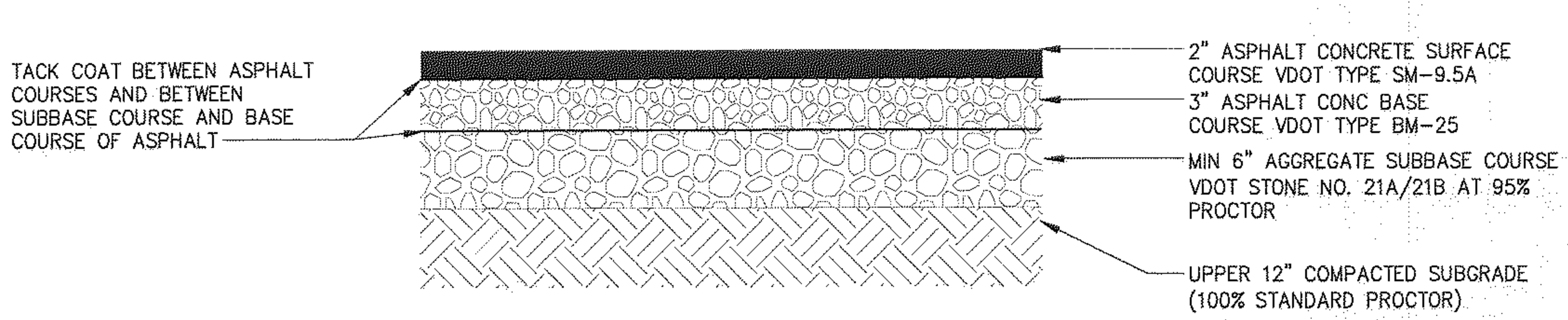
CROSSING INSTALLATION

NOTES:

1. COMPLY WITH ALL LOCAL VDOT RESIDENCY REQUIREMENTS.
2. EXTEND STEEL CASING A MINIMUM OF 5 FEET PAST THE EDGE OF PAVEMENT ON SECONDARY ROADS AND A MINIMUM OF 10 FEET PAST THE EDGE OF PAVEMENT ON PRIMARY ROADS.

3 TYPICAL WATER MAIN LOCATION WITHIN V.D.O.T. RIGHT OF WAY

NOT TO SCALE

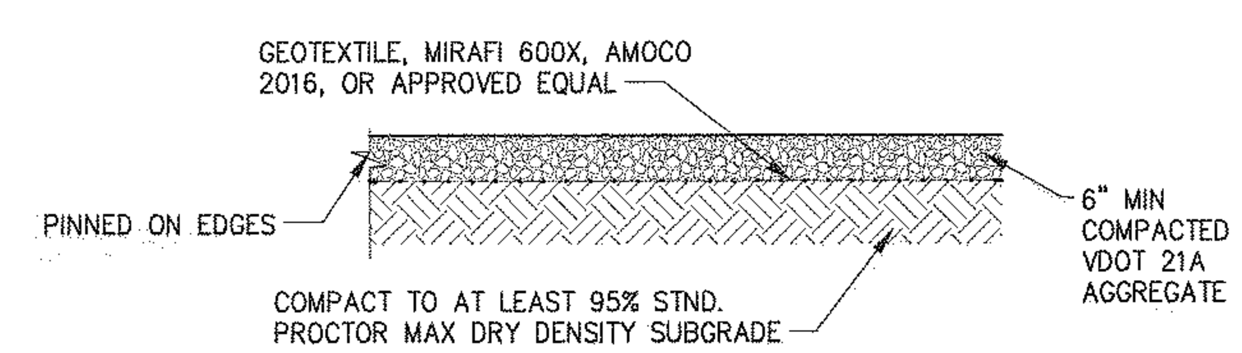


DESIGN ADT = 1830 VPD
DESIGN CBR = 4.33 (AVERAGE OF 3 TESTS)

NOTES:
CONTRACTOR SHALL PROVIDE CBR TESTS ON IN PLACE SUBGRADE MATERIAL PRIOR TO INSTALLATION OF PAVEMENT SECTION. PAVEMENT SECTION DESIGN SHALL BE ANALYZED AND MODIFIED AS REQUIRED TO PROVIDE ADEQUATE STRUCTURAL INTEGRITY.

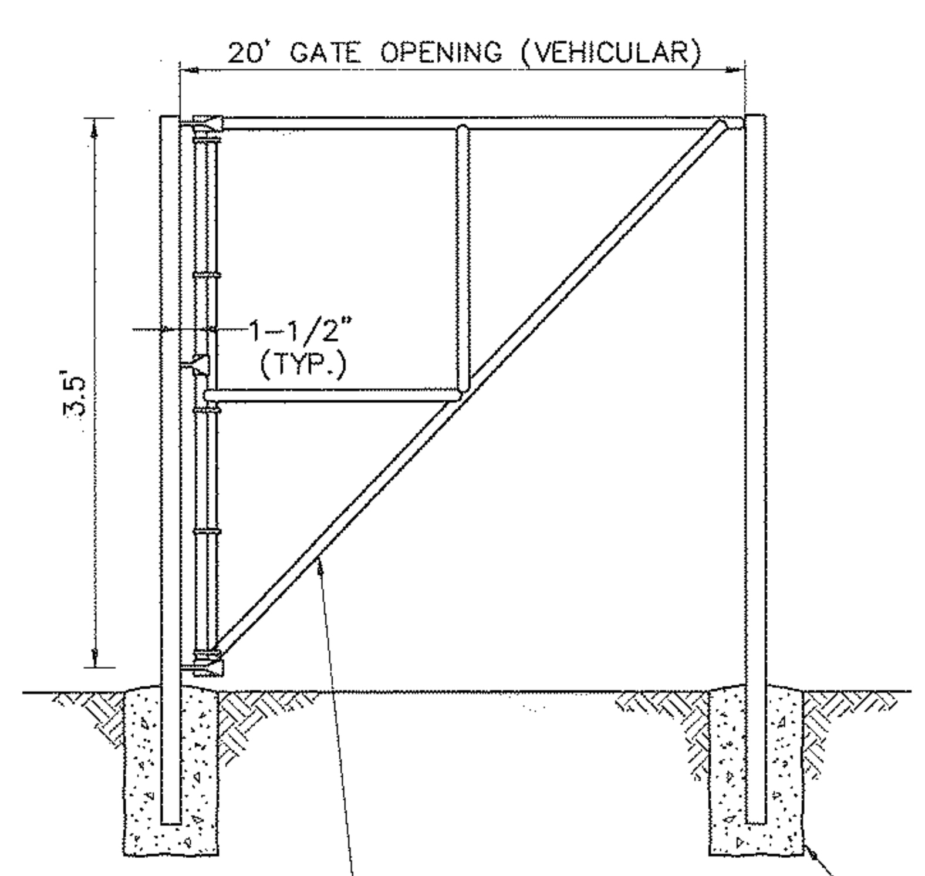
4 HEAVY DUTY DRIVEWAY

NOT TO SCALE



5 GRAVEL DRIVE AND ACCESS ROAD

NOT TO SCALE



SWING SENTINAL 20' MANUAL SINGLE LEFT SWING BARRIER GATE ARM (IN-GROUND) GALVANIZED GATE WITH RECEIVER POST (OR EQUAL).

42" DEEP, 24" DIAMETER SONOTUBE FORMED CONCRETE FOUNDATION (TYP)

6 SWING GATE

SCALE: N.T.S.

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WESTERN VIRGINIA WATER AUTHORITY

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COMMONWEALTH OF VIRGINIA
ERIC T. ANDERSON
Lic. No. 040613
12/16/2022
PROFESSIONAL ENGINEER

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

SOUTHLAKE WATER SYSTEM

CONTRACT 1: WATER TREATMENT PLANT

CONTRACT 2: WATER MAIN

No.	Submittal / Revision	App'd.	By	Date
1	BID ISSUE	ETA	CDR	12/15/22

CONSTRUCTION DETAILS

Designed By:	Drawn By:	Checked By:
CDR	CDR	ETA
Issue Date:	Project No:	Scale:
12/15/22	073612	AS SHOWN

Drawing No.:

C-504