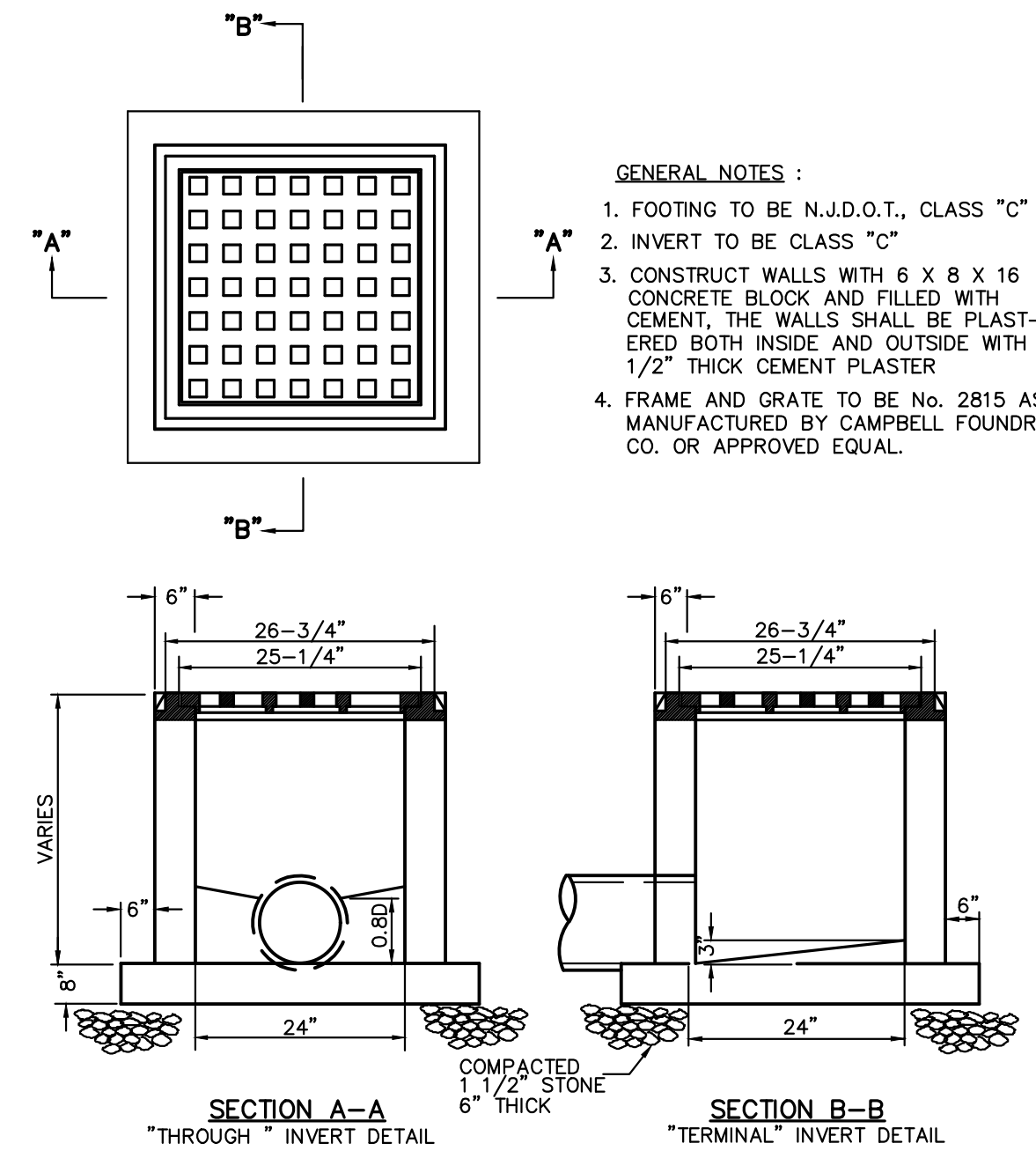
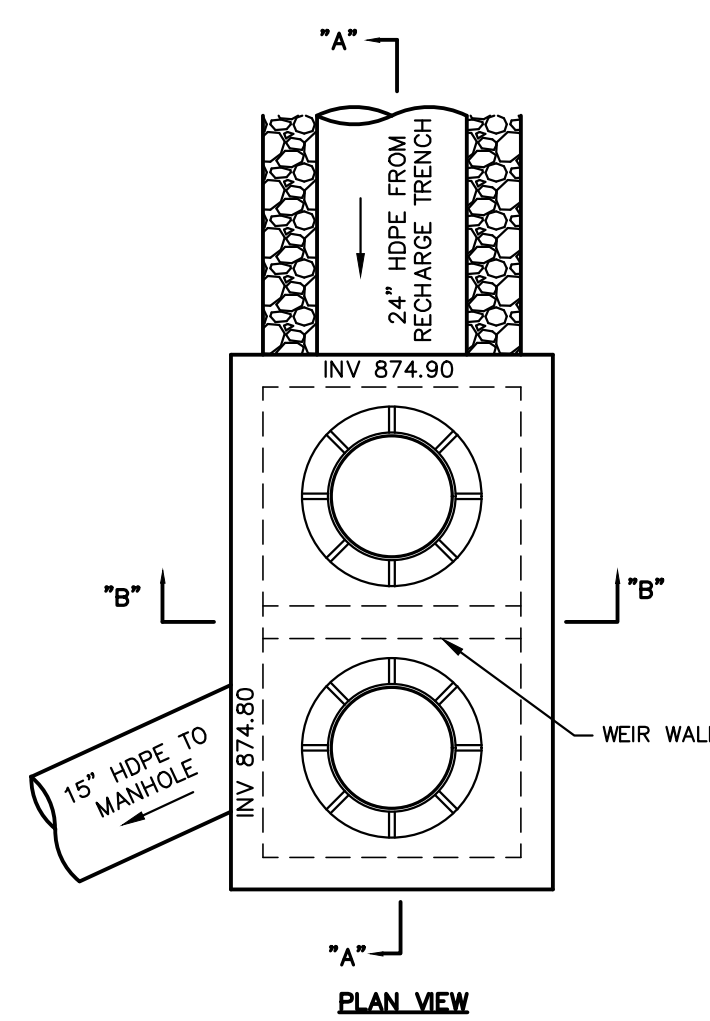


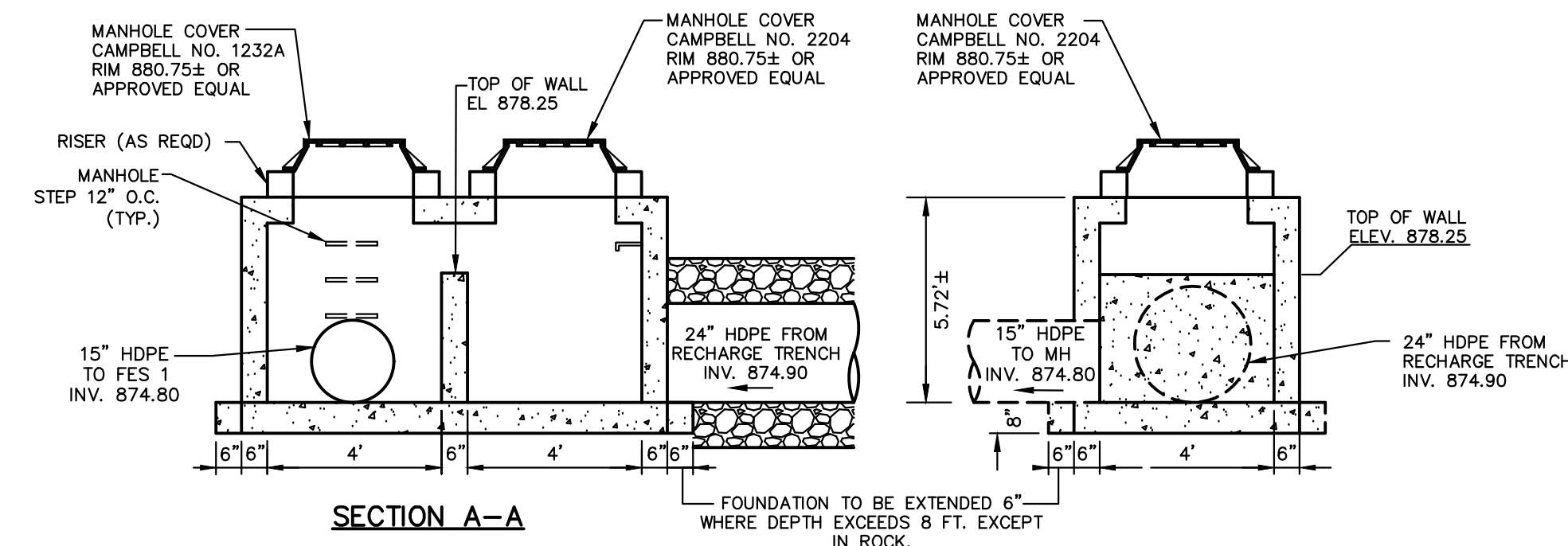
OUTLET STRUCTURE (OS1)  
N.T.S.



YARD DRAIN DETAIL  
N.T.S.



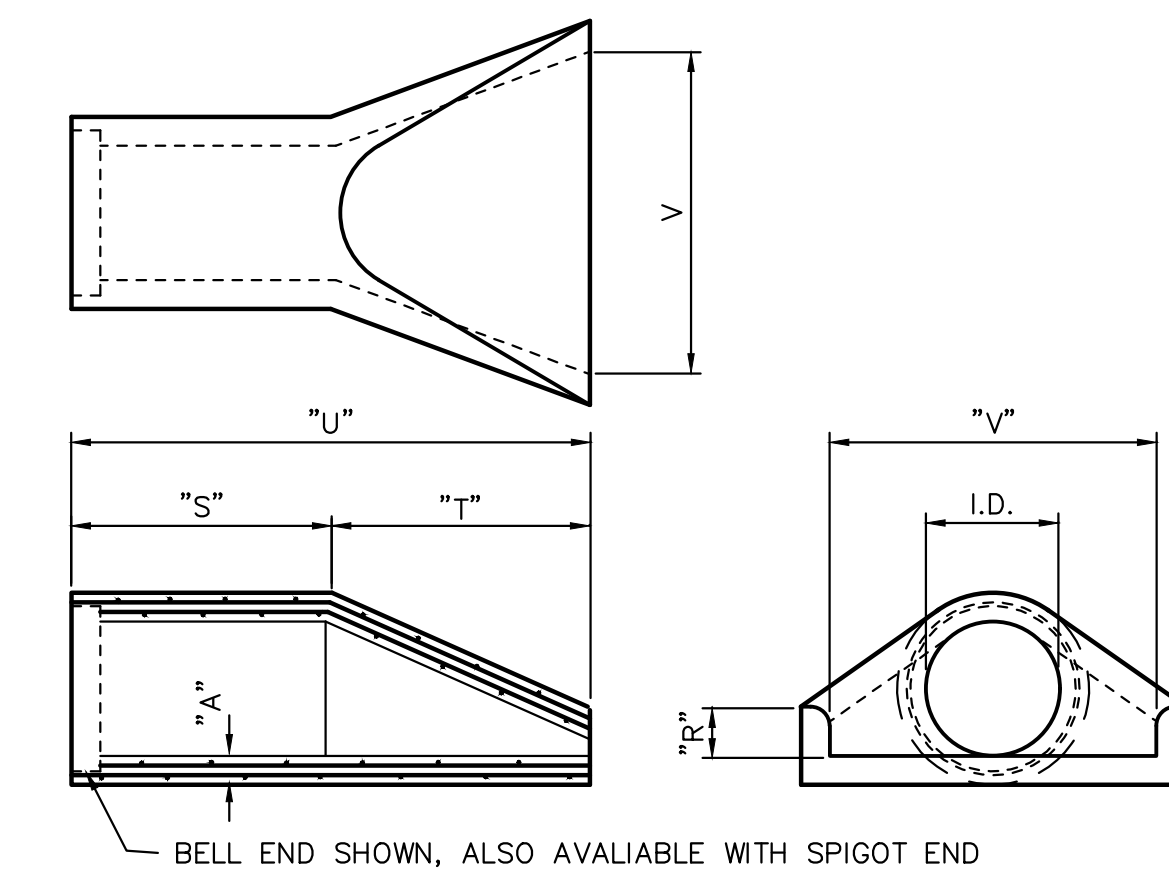
SECTION B-B



SECTION A-A

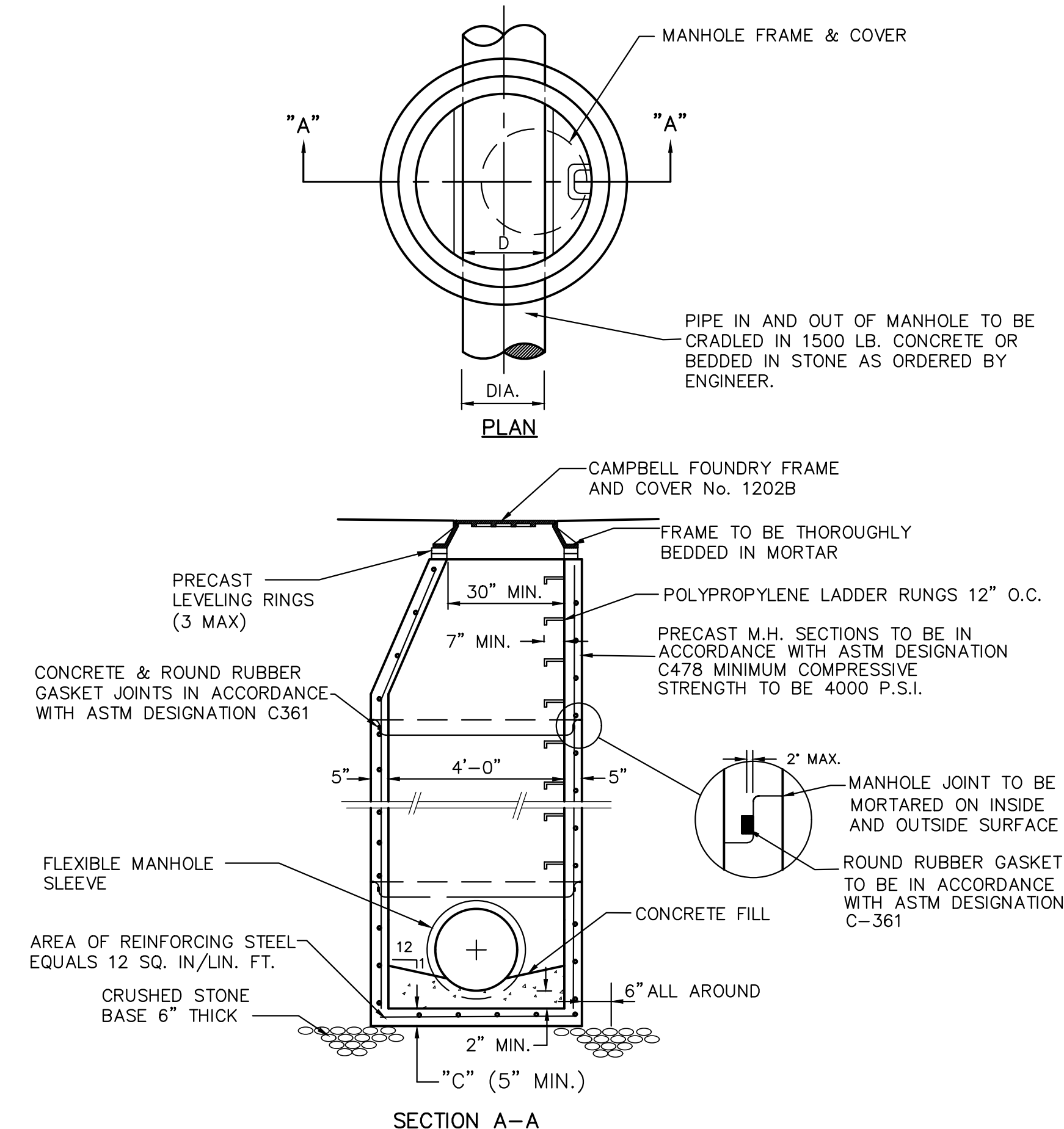
NOTE:  
1. OUTLET STRUCTURE TO BE PRECAST WITH INTEGRAL WEIR WALLS. SHOP DRAWINGS TO BE SUBMITTED TO ENGINEER PRIOR TO CONSTRUCTION.

OUTLET STRUCTURE (OS 2)  
N.T.S.

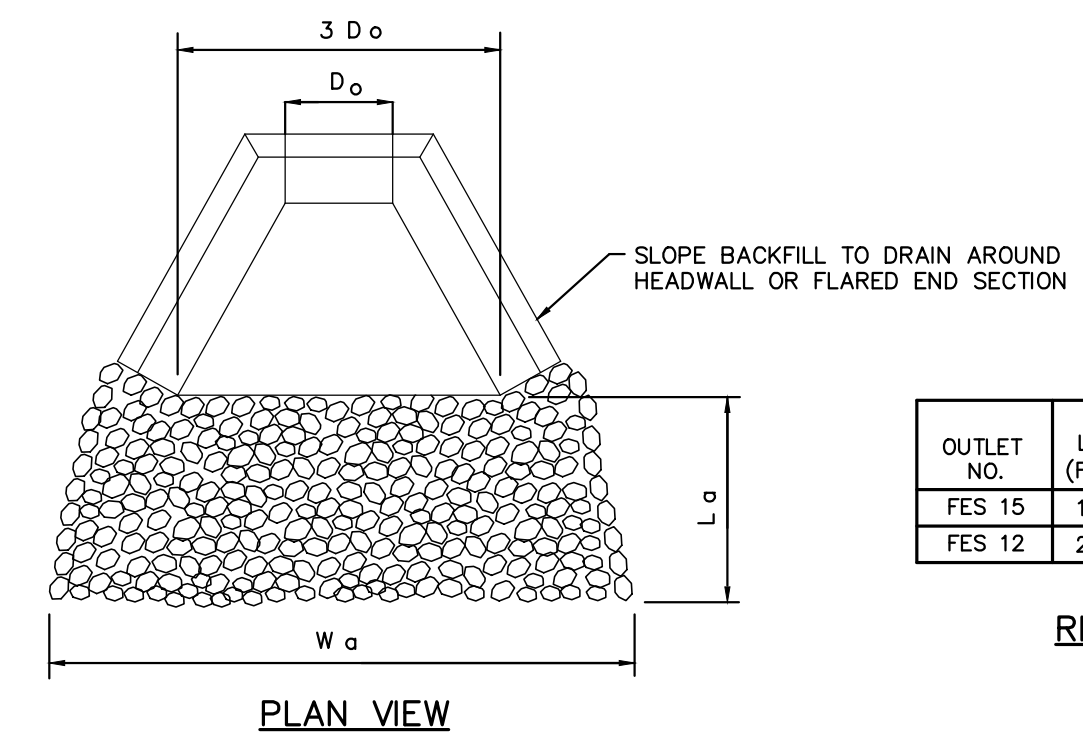


I.D.	PIPE SIZE							
	12"	15"	18"	21"	24"	27"	30"	36"
"A"	2"	2.25"	2.5"	2.75"	3"	3.25"	3.5"	4"
"R"	5"	7.5"	9"	10"	14"			
"S"	24"			26"				
"T"	24"			30" 36"				
"U"	4"			4'-8" 5'-2"				
"V"	24"	28"	34"	40"	48"	54"	60"	72"
WT/FT	360	480	640	860	920	1200	1540	2100

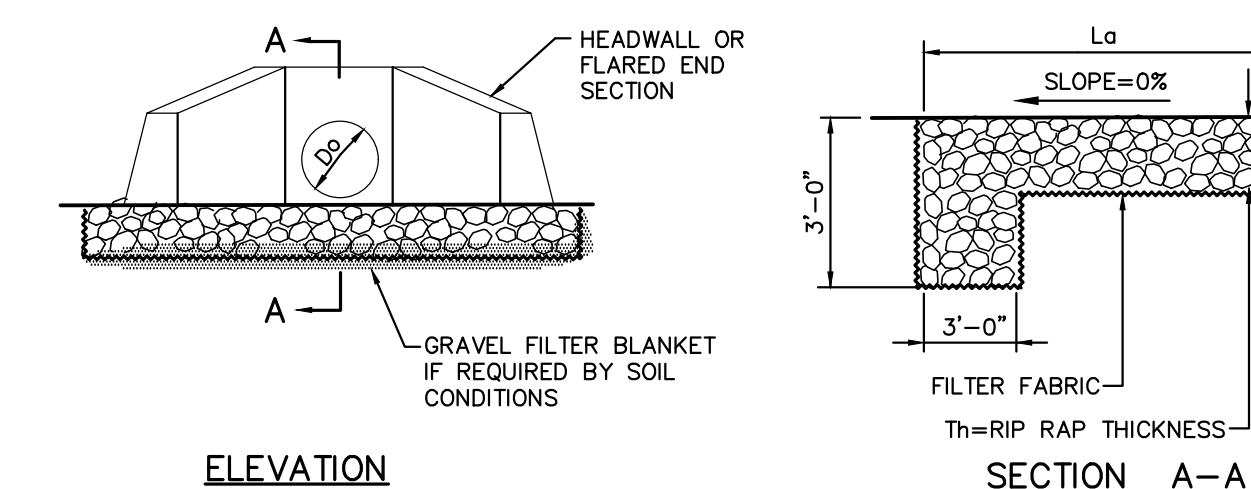
FLARED END SECTION  
NOT TO SCALE



PRECAST STORM MANHOLE  
N.T.S.



PLAN VIEW

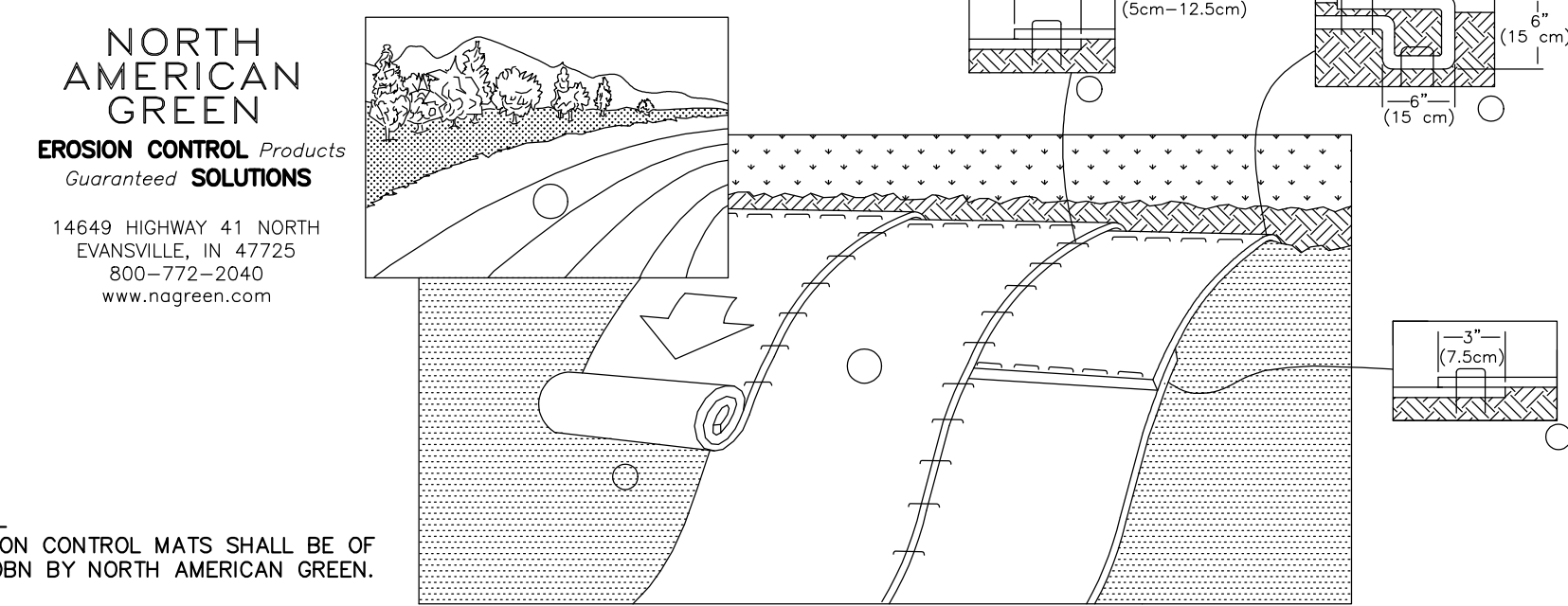


ELEVATION

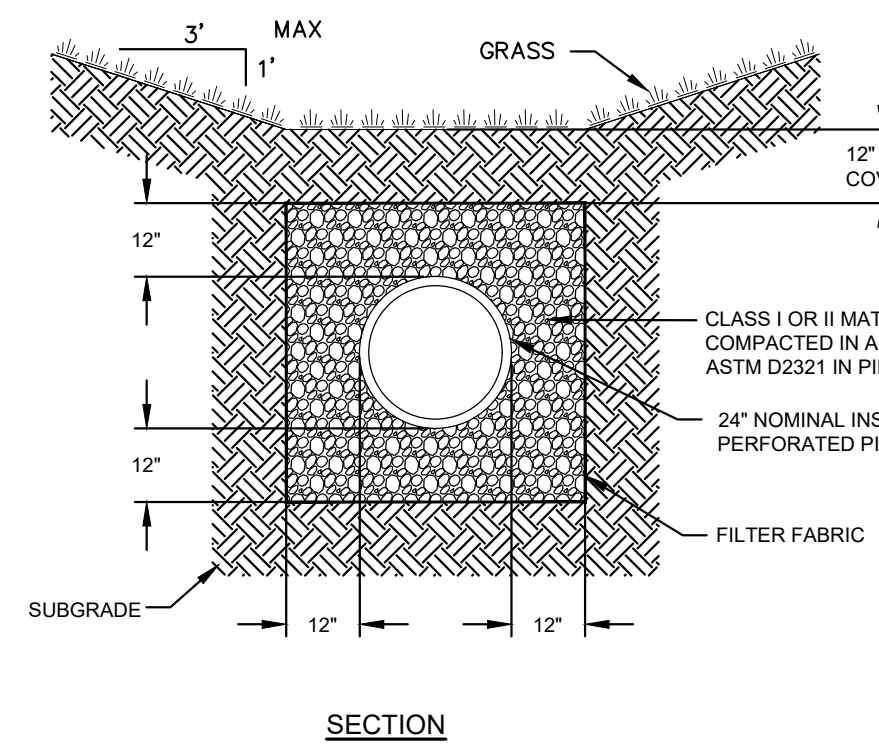
CONDUIT OUTLET PROTECTION DETAIL  
NOT TO SCALE

OUTLET NO.	La (FT.)	W (FT.)	da (IN.)	Th with Filter Fabric (IN.)	Do (IN.)
FES 15	15	12	6	12	24
FES 12	25	29	12	24	18

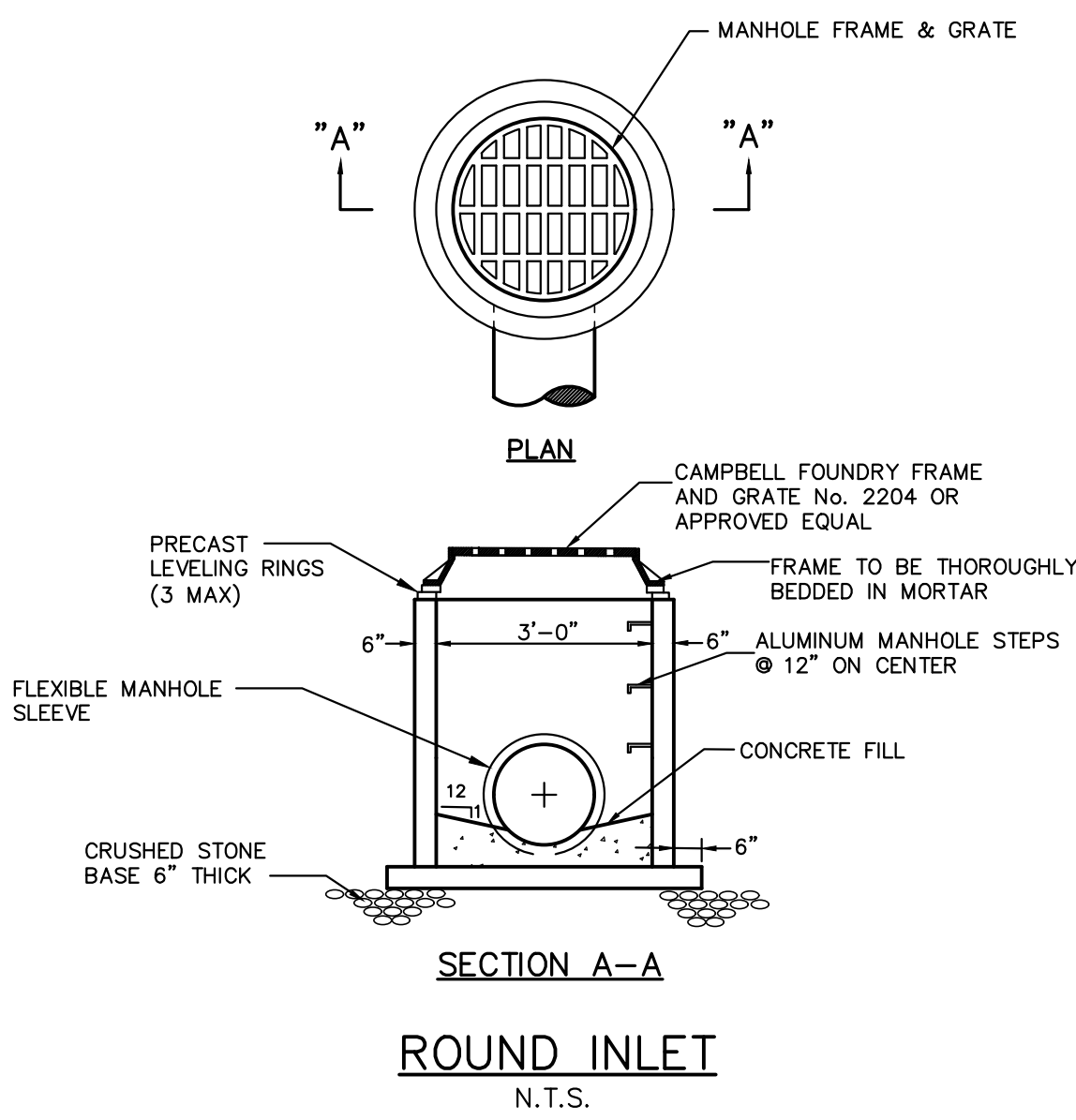
RIP RAP SCHEDULE



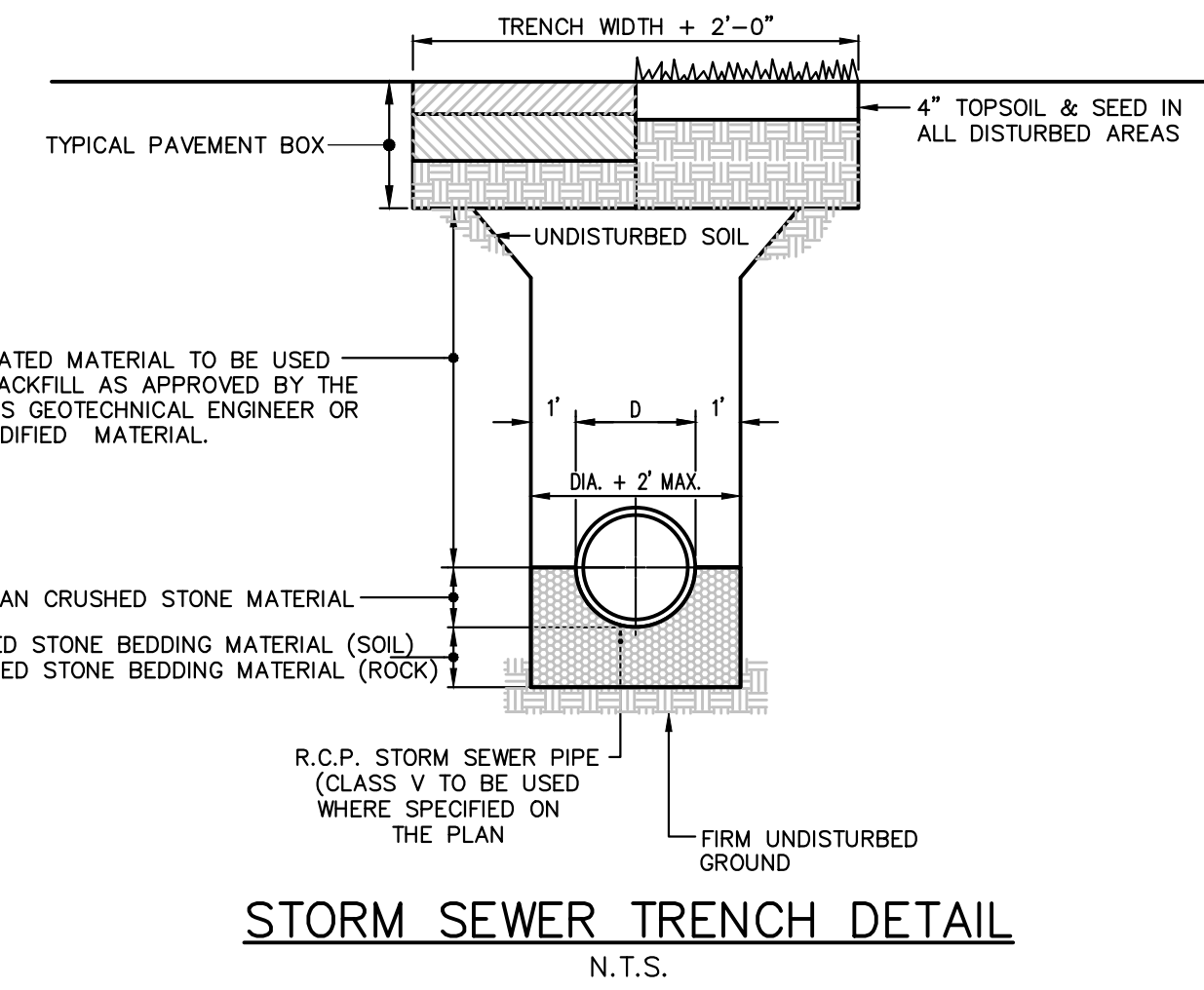
EROSION CONTROL MATTING  
NOT TO SCALE



RECHARGE TRENCH DETAIL  
N.T.S.



ROUND INLET  
N.T.S.



STORM SEWER TRENCH DETAIL  
N.T.S.

NOTE:  
EROSION CONTROL MATS SHALL BE OF SC150BN BY NORTH AMERICAN GREEN.

- PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.  
NOTE: WHEN USING CELL-0-SEED DO NOT SEED PREPARED AREA. CELL-0-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
- BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30CM) OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECP'S.
- ROLL THE RECP'S (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
- THE EDGES OF PARALLEL RECP'S MUST BE STAPLED WITH APPROXIMATELY 2" - 5" (5 CM - 12.5 CM) OVERLAP DEPENDING ON RECP'S TYPE.
- CONSECUTIVE RECP'S SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECP'S WIDTH.

- GENERAL NOTES:
- CONTRACTOR TO PROVIDE SITE SPECIFIC SHOP DRAWINGS FROM MANUFACTURER FOR ENGINEER OF RECORD REVIEW AND APPROVAL, BASED UPON CRITERIA CONTAINED HEREIN.
  - CONTRACTOR SHALL AVOID PLACING ANY TRAFFIC LOADING ON TOP OF INFILTRATION BED AREAS AFTER INSTALLATION IS COMPLETE.
- INSTALLATION NOTES:
- ALL REFERENCES TO CLASS I OR II MATERIAL ARE PER ASTM D2321 "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION.
  - ALL RETENTION AND DETENTION SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, LATEST EDITION AND THE MANUFACTURER'S PUBLISHED INSTALLATION GUIDELINES.
  - MEASURES SHOULD BE TAKEN TO PREVENT THE MIGRATION OF NATIVE FINES INTO THE BACKFILL MATERIAL, WHEN REQUIRED. SEE ASTM D2321.
  - FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER. THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
  - INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I OR II IN THE PIPE ZONE EXTENDING NOT LESS THAN 6' ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
  - MINIMUM COVER: MINIMUM COVER OVER ALL RETENTION/IDENTIFICATION SYSTEMS IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM TOP OF PIPE TO GROUND SURFACE.

No.	Date	Revision	Revised By	Checked By



DENIS F. KEENAN, P.E.  
PROFESSIONAL ENGINEER - NJ Lic. No. 46373

CONSTRUCTION DETAILS  
FOR  
RE-GRADING & RE-CONDITIONING  
OF BLACK RIVER FIELDS  
LOT 17.01 BLOCK 33  
TOWNSHIP OF CHESTER  
MORRIS COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
03/19/21	SKW	AS NOTED	15502.003
DRAWN BY:	CHECKED BY:	FIELD BOOK:	SHEET:
SKW	DFK		8 of 8