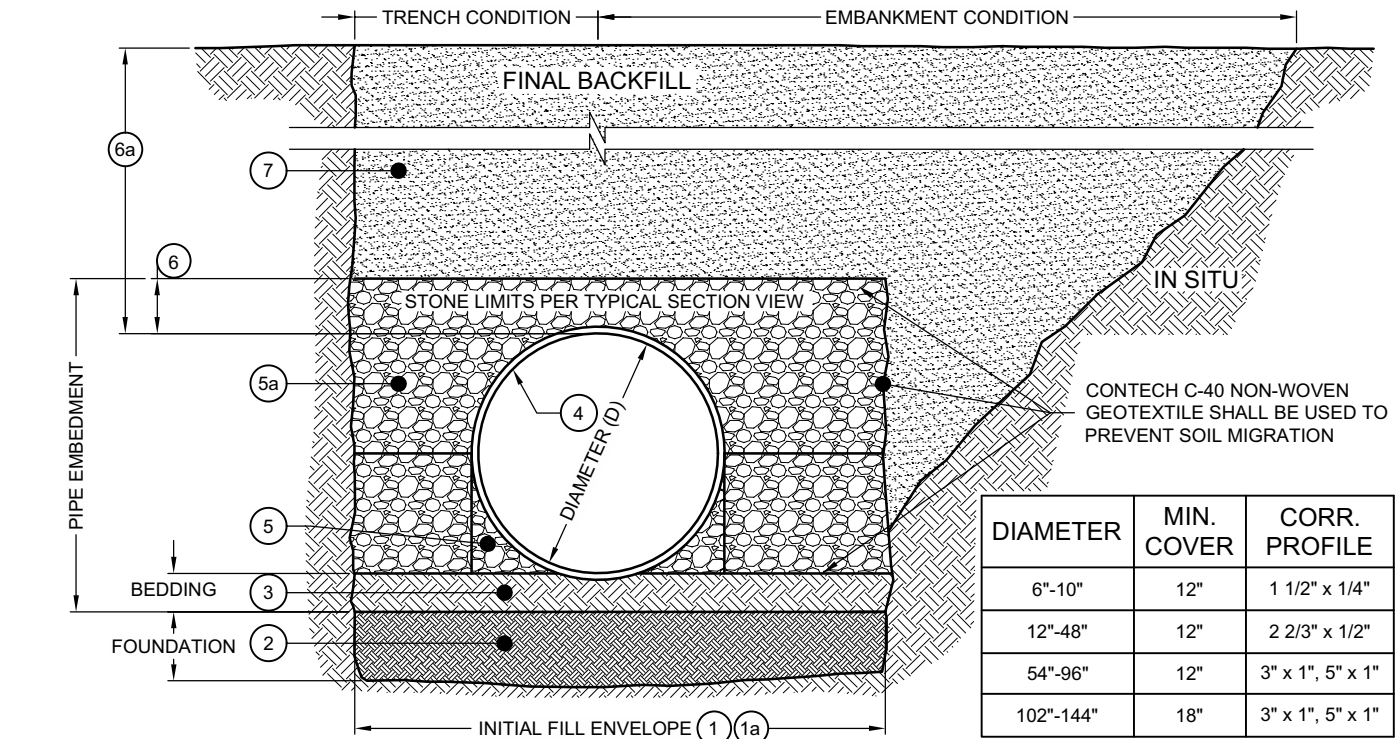


\\MERLIN\PROJECT\ACTIVE\1717697\17697-10-CMP DETENTION\DYODS\GATEWAY INDUSTRIAL CMP.DWG 12/7/2022 2:04 PM



- 1 MINIMUM TRENCH WIDTH MUST ALLOW ROOM FOR PROPER COMPACTION OF HAUNCH MATERIALS UNDER THE PIPE. THE TRENCH WIDTH IS THE MINIMUM AMOUNT REQUIRED FOR PROPER INSTALLATION AND TO SUPPORT HORIZONTAL PRESSURE FROM THE PIPE. THE MANUFACTURER'S SUGGESTED MINIMUM VALUE IS:  $1.5D + 12"$ .
- 1a MINIMUM EMBANKMENT WIDTH (IN FEET) FOR INITIAL FILL ENVELOPE:  $3.0D$  BUT NO LESS THAN  $D + 4'0"$ .
- 2 FOUNDATION SHALL BE WELL CONSOLIDATED & STABLE, CAPABLE OF SUPPORTING FILL MATERIAL LOAD.
- 3 GRANULAR BEDDING MATERIAL SHALL BE A RELATIVELY LOOSE MATERIAL THAT IS ROUGHLY SHAPED TO FIT THE BOTTOM OF THE PIPE, 2" MIN DEPTH. THE BEDDING MATERIAL MAY BE SUITABLE FOUNDATION SOILS CONFORMING TO AASHTO SOIL CLASSIFCATIONS A1, A2, OR A3.
- 4 CORRUGATED STEEL PIPE (CSP / HEL-COR).
- 5 HAUNCH ZONE MATERIAL SHALL BE HAND SHOVELED OR SHOVEL SLICED INTO PLACE TO ALLOW FOR PROPER COMPACTION.
- 5a THE BACKFILL MATERIAL SHALL BE A VIRGIN FREE-DRAINING, ANGULAR, WASHED-STONE PER AASHTO M 43 GRADATION WITH A  $\frac{1}{2}" - 2"$  PARTICLE SIZE OR APPROVED EQUAL. MATERIAL SHALL BE PLACED IN 12" MAXIMUM LIFTS AND SHALL BE WORKED INTO THE PIPE HAUNCHES BY MEANS OF SHOVEL-SLICING, RODDING, AIR-TAMPER, VIBRATORY PLATE OR OTHER EFFECTIVE METHODS. COMPACTION IS CONSIDERED ADEQUATE WHEN A DENSITY EQUIVALENT TO 90% STANDARD PROCTOR IS ACHIEVED OR WHEN NO FURTHER YIELDING OF THE MATERIAL IS OBSERVED UNDER THE COMPACTOR OR UNDER FOOT. THE PROJECT ENGINEER OR HIS REPRESENTATIVE MUST BE SATISFIED WITH THE LEVEL OF COMPACTION. INADEQUATE COMPACTION CAN LEAD TO EXCESSIVE PIPE DEFLECTIONS AND SETTLEMENT OF THE SOILS OVER THE SYSTEM. BACKFILL SHALL BE PLACED SUCH THAT THERE IS NO MORE THAN A TWO-LIFT DIFFERENTIAL BETWEEN THE SIDES OF ANY PIPE IN THE SYSTEM AT ALL TIMES DURING THE BACKFILL PROCESS. BACKFILL SHALL BE ADVANCED ALONG THE LENGTH OF THE SYSTEM AT THE SAME RATE TO AVOID DIFFERENTIAL LOADING ON ANY PIPES IN THE SYSTEM.
- 6 INITIAL BACKFILL MATERIAL ABOVE THE PIPE MAY INCLUDE OPEN-GRADED MATERIAL ROAD BASE, OR STABILIZED SUB-GRADE MATERIAL ASSOCIATED WITH THE PAVEMENT SECTION, AS DESIGNED BY THE PROJECT ENGINEER OR COMPACTED SUITABLE FILL CONFORMING TO AASHTO SOIL CLASSIFICATION A1, A2, OR A3. REFER TO TYPICAL SECTION VIEW AND TABLE ABOVE.
- 6a TOTAL HEIGHT OF COMPACTED COVER FOR CONVENTIONAL HIGHWAY LOADS IS MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TOP OF RIGID PAVEMENT.
- 7 FINAL BACKFILL MATERIAL SELECTION AND COMPACTION REQUIREMENTS SHALL FOLLOW THE PROJECT PLANS AND SPECIFICATIONS PER THE ENGINEER OF RECORD.

NOTES:

- FOR MULTIPLE BARREL INSTALLATIONS THE RECOMMENDED STANDARD SPACING BETWEEN PARALLEL PIPE RUNS SHALL BE PIPE DIA./3 BUT NO LESS THAN 12", OR 36" FOR PIPE DIAMETERS 96" AND LARGER. CONTACT YOUR CONTECH REPRESENTATIVE FOR NONSTANDARD SPACING.

**TYPICAL BACKFILL DETAIL**  
NOT TO SCALE

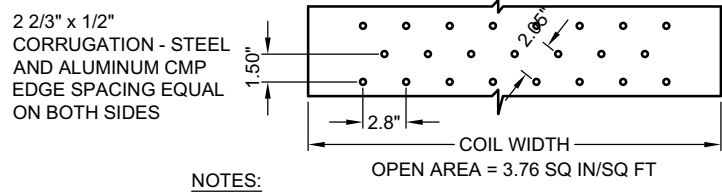
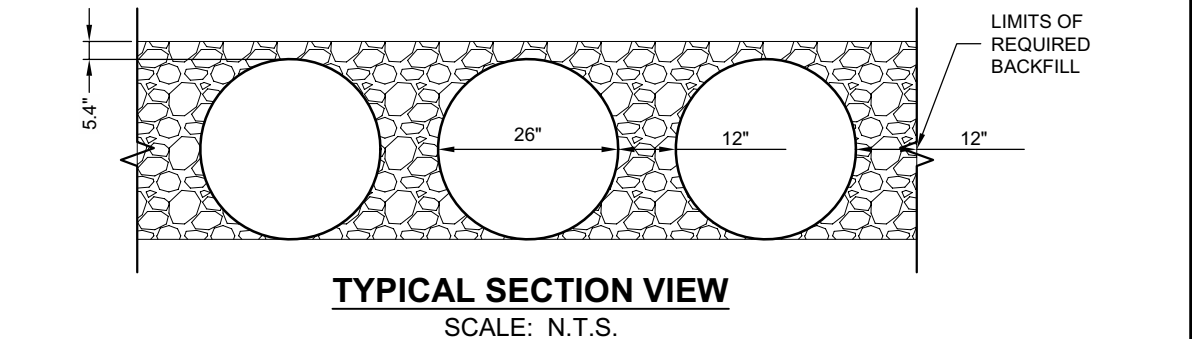
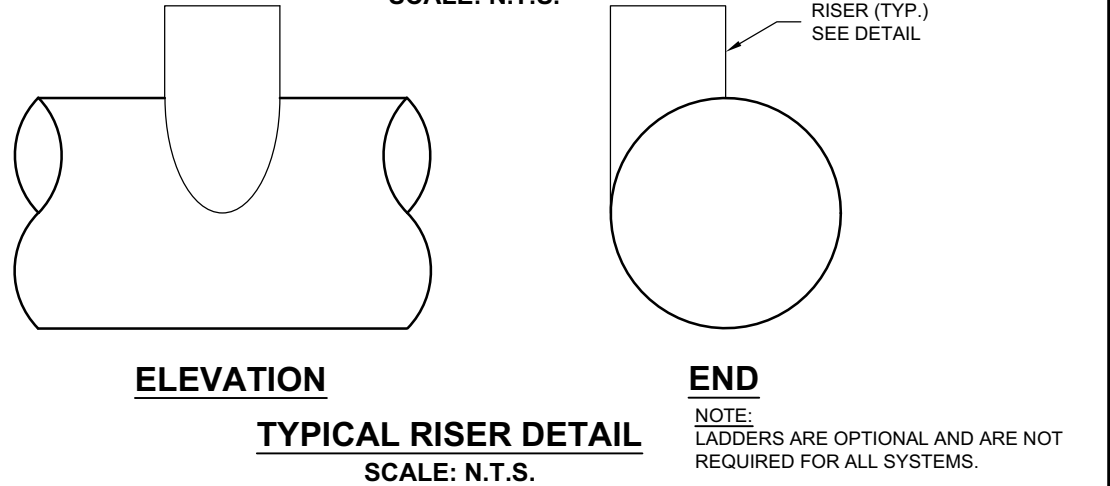
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- NOTES:
1. PERFORATIONS MEET AASHTO AND ASTM SPECIFICATIONS.
  2. PERFORATION OPEN AREA PER SQUARE FOOT OF PIPE IS BASED ON THE NOMINAL DIAMETER AND LENGTH OF PIPE.
  3. ALL DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
  4. ALL HOLES  $\varnothing 3/8"$ .

**TYPICAL PERFORATION DETAIL**  
SCALE: N.T.S.

717697-010 Gateway Industrial (SW 27TH AVE)  
26" Perforated CMP Underground System  
Pompano Beach, FL

PROJECT No.: 717697	SEQ. No.: 010	DATE: 12/7/2022
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.:		2