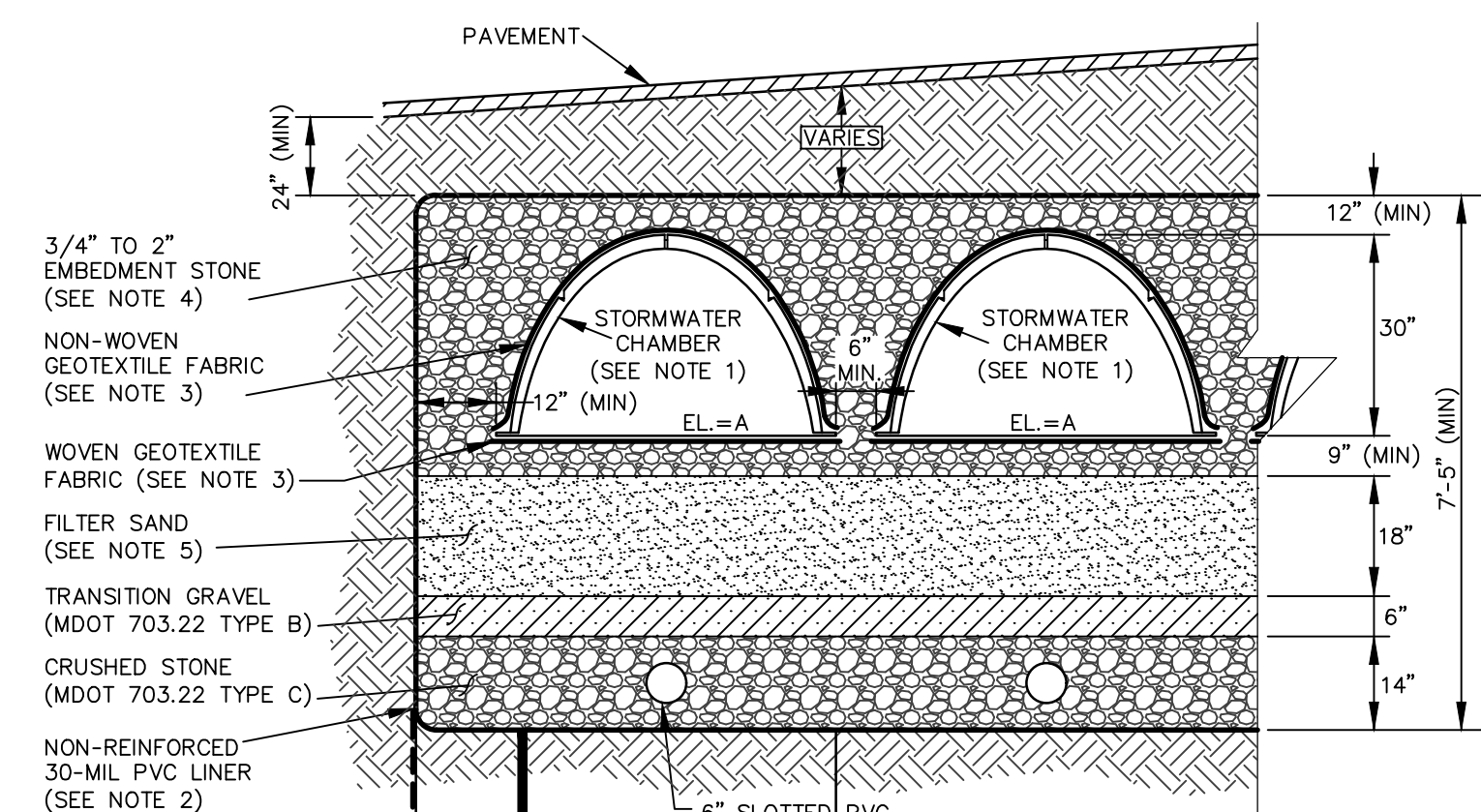


SUBSURFACE SAND FILTER SECTION TABLE				
NAME	CHAMBER	CHAMBER BOTTOM ELEV.=A	UNDERDRAIN ELEV.=B	OVERFLOW OUTLET PIPE ELEV.=D
SSSF #1	DC-780	53.00	49.41	54.00

**TEST PIT TABLE**

TEST PIT #	BMP	BMP INV.	GROUND ELEV.	LIMITING FACTOR ELEV.	TYPE LIMITING FACTOR
TP-2	SSSF-1	49.41	61.5	58.8	GROUND WATER



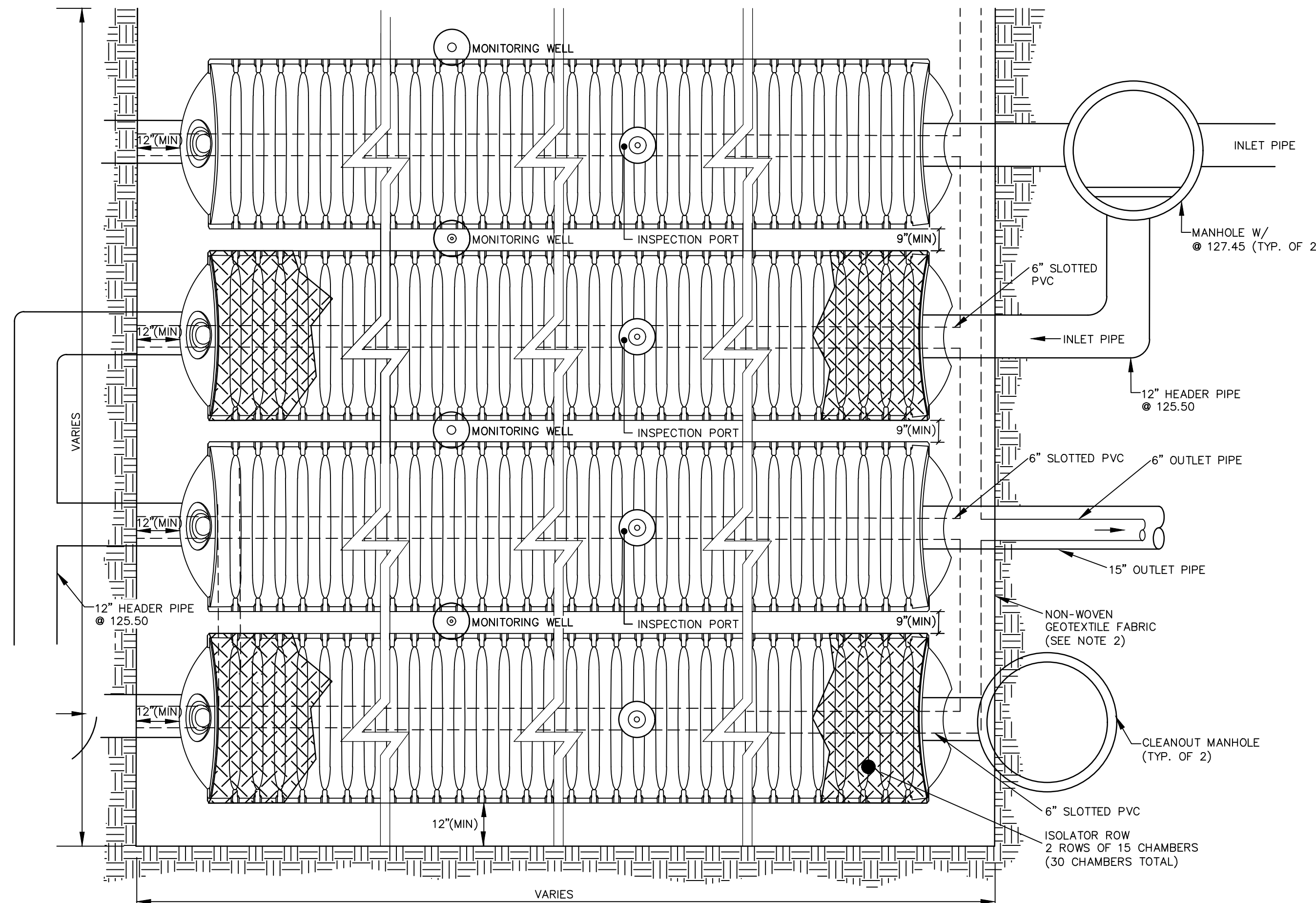
**UNDERDRAINED SAND FILTER SECTION**  
NOT TO SCALE

**SUBSURFACE UNDERDRAINED SAND FILTER NOTES:**

1. THE STORMWATER CHAMBER SHALL BE A STORMTECH DC-780 OR EQUIVALENT SUBSURFACE STORAGE CHAMBER APPROVED BY THE ENGINEER.
2. THE ENTIRE SUBSURFACE SYSTEM, INCLUDING THE CRUSHED STONE STORAGE VOLUME, THE FILTER MEDIA, AND UNDERDRAIN MATERIALS, SHALL BE WRAPPED IN A NON-REINFORCED 30-MIL PVC LINER.
3. A STRIP OF WOVEN GEOTEXTILE THAT MEETS AASHTO M288 CLASS ONE REQUIREMENTS (MIRAFI F1404 OR EQUIVALENT) MUST BE PLACED BETWEEN THE BOTTOM OF THE CHAMBER AND ITS STONE FOUNDATION. THIS FABRIC TRAPS SEDIMENTS AND PROTECTS THE UNDERLYING CRUSHED STONE. A SECOND STRIP OF NON-WOVEN AASHTO M288 CLASS 2 GEOTEXTILE (MIRAFI 160N OR EQUIVALENT) SHALL BE DRAPED OVER THE ENTIRE LENGTH OF THE CHAMBERS. THIS FABRIC WILL ALSO TRAP SEDIMENTS AND PROVIDE SEPARATION BETWEEN THE CHAMBERS AND SURROUNDING STONE.
4. THE EMBEDMENT STONE SURROUNDING THE CHAMBERS SHALL BE A WASHED, ANGULAR STONE WITH THE MAJORITY OF PARTICLES BETWEEN 3/4 INCH AND 2 INCH. THE BOTTOM 6 INCH LAYER OF STONE THAT ACTS AS THE FOUNDATION BELOW THE CHAMBERS SHALL BE COMPACTED TO ACHIEVE A 95% STANDARD PROCTOR DENSITY.
5. THE SAND FILTER MATERIAL SHALL BE A UNIFORM MIX, FREE OF STONES LARGER THAN 2 INCHES, STUMPS, ROOTS, OR OTHER SIMILAR OBJECTS. THE MATERIAL SHALL MEET THE SPECIFICATIONS FOR MDOT AGGREGATE SAND (MDOT #703.01). HOWEVER, THIS AGGREGATE SAND SHALL BE MIXED WITH LOAM TO ACHIEVE A MATERIAL WITH BETWEEN 8% AND 10% PASSING THE #200 SIEVE. THE LOAM USED IN THIS MIXTURE SHALL HAVE A MINIMAL CLAY CONTENT. THIS 18 INCH LAYER OF SAND FILTRATION MEDIA SHALL BE PLACED TO ACHIEVE A LEVEL OF COMPACTION BETWEEN 92% AND 95% STANDARD PROCTOR DENSITY.

**CONSTRUCTION OVERSIGHT NOTES FOR SUBSURFACE SAND FILTER:**

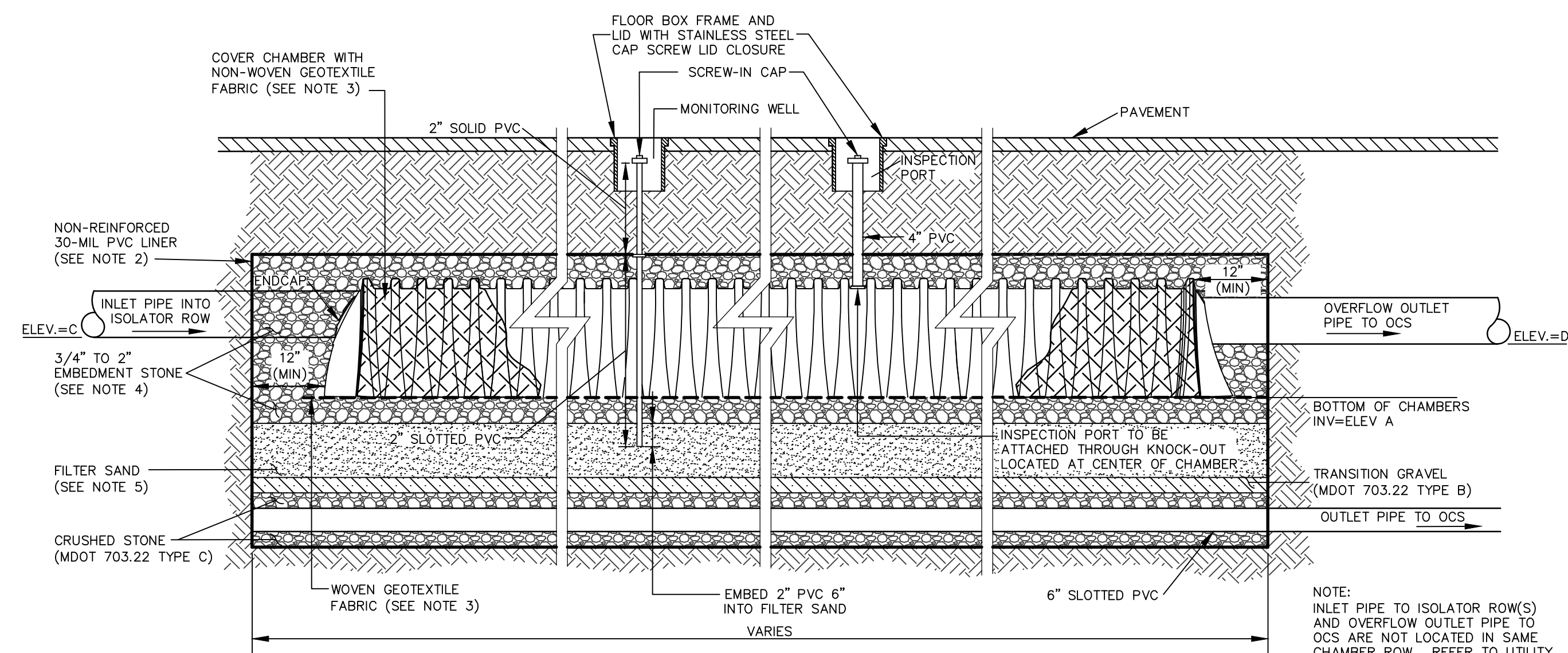
1. INSPECTIONS BY A PROFESSIONAL ENGINEER SHALL CONSIST OF WEEKLY VISITS TO THE SITE TO INSPECT THE CONSTRUCTION AND STABILIZATION OF THE PROPOSED SUBSURFACE CHAMBERS AND ITS FILTER COURSE MATERIAL TO BE BUILT ON THE SITE. INSPECTIONS SHALL CONSIST OF AN APPROPRIATE NUMBER OF VISITS TO THE SITE TO INSPECT THE INSTALLATION OF THE SUBGRADE, FILTER BED MATERIAL PLACEMENT, INSTALLATION OF STONE, ISOLATOR ROW AND CHAMBER, SURROUNDING STONE, FABRIC LAYMENT AND STORMWATER OVERFLOW BYPASS CONSTRUCTION FROM INITIAL GROUND DISTURBANCE TO FINAL PAVEMENT PLACEMENT.



**UNDERDRAINED SAND FILTER PLAN VIEW**  
NOT TO SCALE

**SUBSURFACE UNDERDRAINED SAND FILTER**

NOT TO SCALE



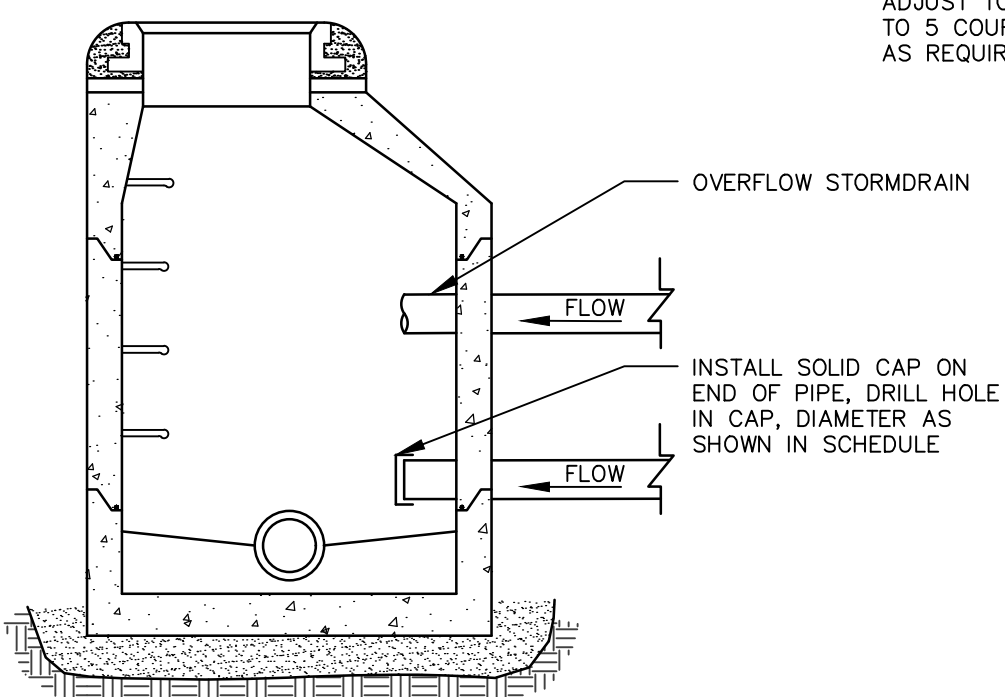
**UNDERDRAINED SAND FILTER ELEVATION VIEW**  
NOT TO SCALE

**OCS CAP ORIFICE SIZE**

OUTLET CONTROL STRUCTURE	ORIFICE DIAMETER (IN)
OCS 1	0.8

**OUTLET CONTROL ELEVATION SCHEDULE**

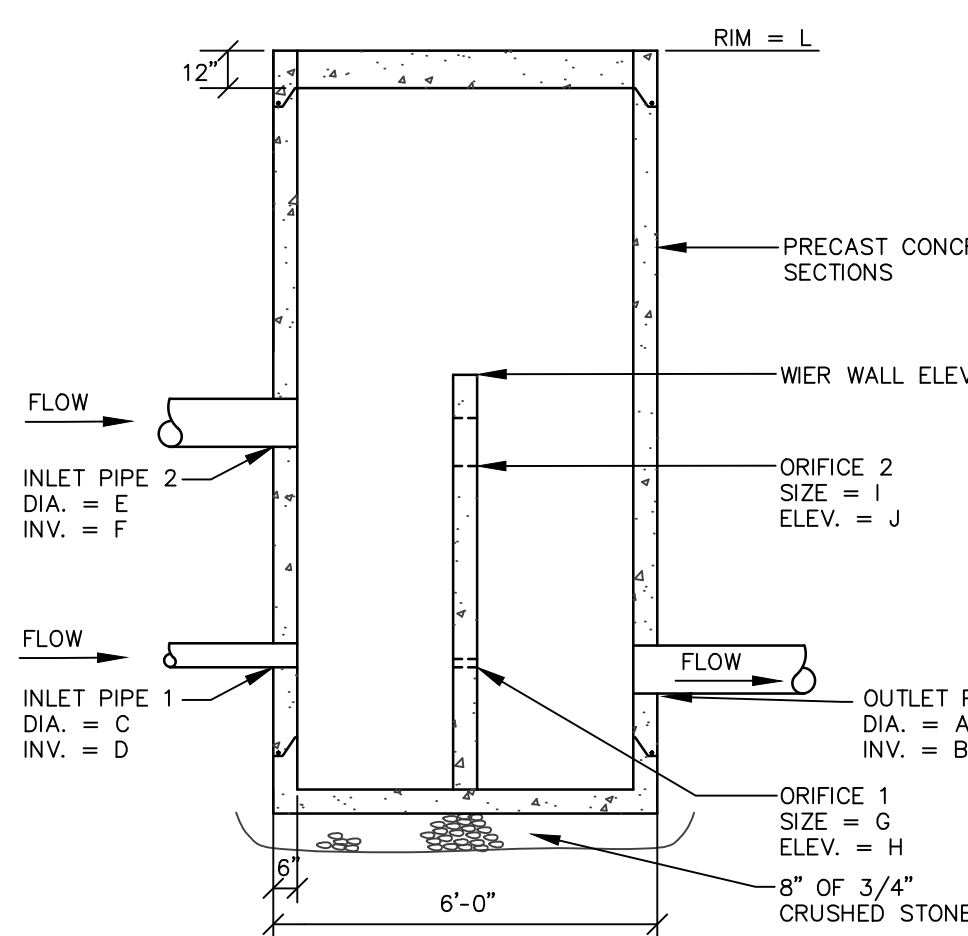
OUTLET PIPE	OCS-1
DIA=A	12"
ELEV.=B	69.80
INLET PIPE 1	
DIA=C	12"
ELEV.=D	69.90
INLET PIPE 2	
DIA=E	12"
ELEV.=F	70.50
WEIR WALL	
ELEV.=K	76.65
RIM	
ELEV.=L	78.24



NOTE: THIS DETAIL SHOWS THE CONDITION OF THE ORIFICE WHICH WILL CONTROL FLOW. OTHER OUTLET CONTROL STRUCTURE FEATURES SHALL CONFORM WITH "DRAINAGE STRUCTURE" DETAIL

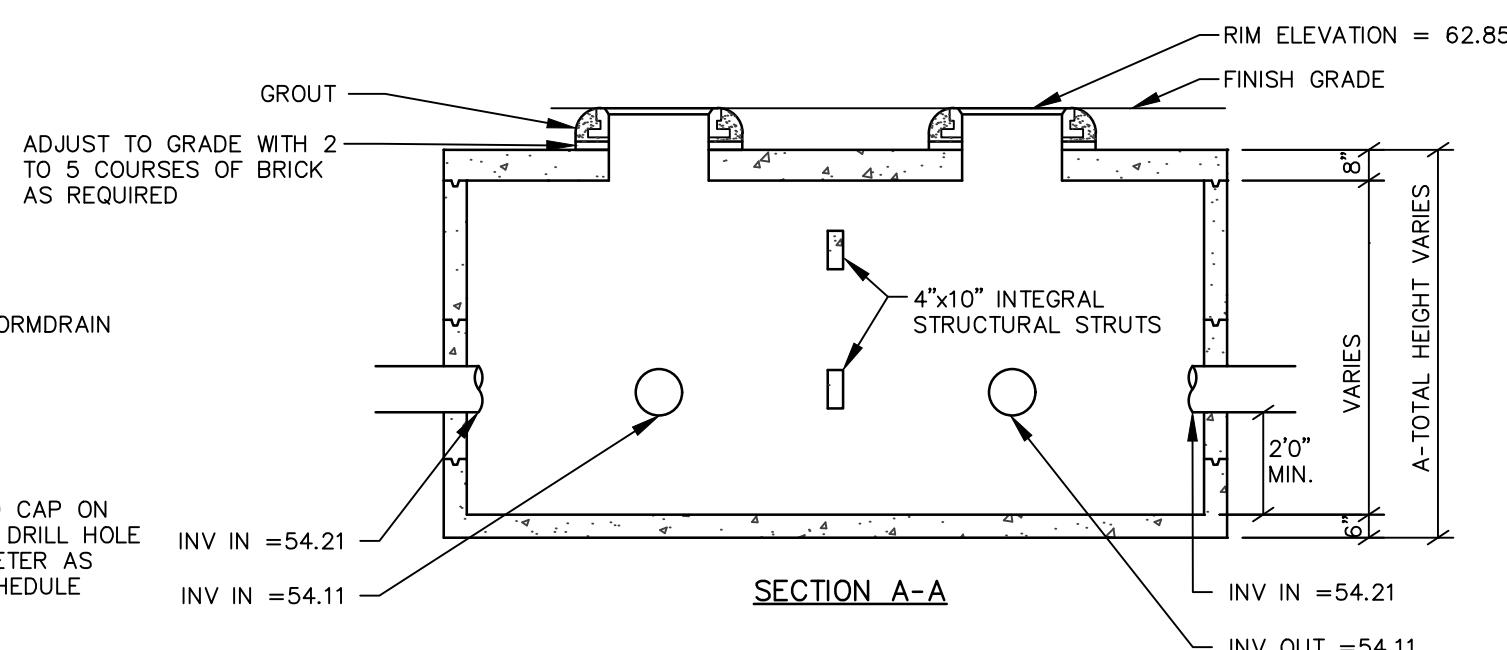
**OUTLET CONTROL STRUCTURE**

NOT TO SCALE



**6" OUTLET CONTROL STRUCTURE**

NOT TO SCALE

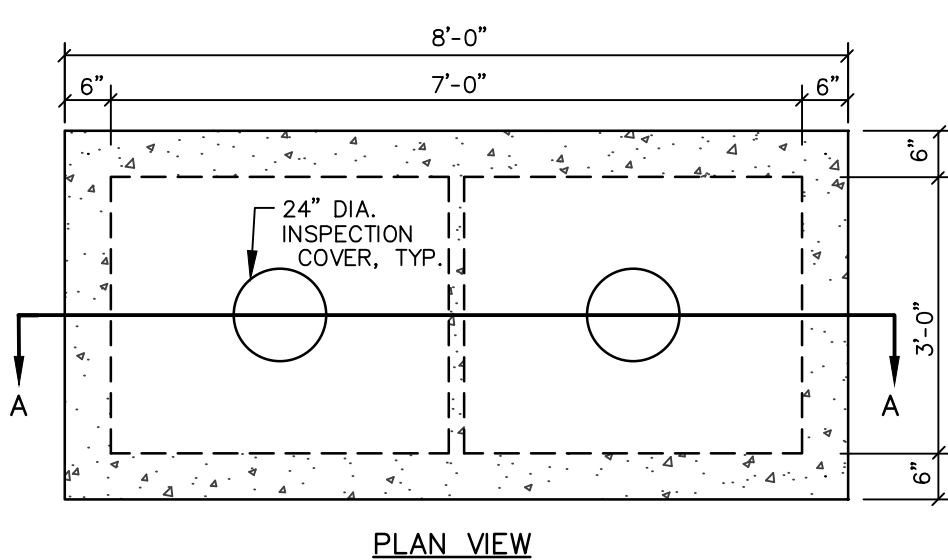


**NOTES:**

1. CONCRETE: 5000 PSI AFTER 28 DAYS
2. PIPE CONNECTIONS SHALL BE WATERTIGHT, FLEXIBLE BOOT CONNECTORS PROVIDE LEAKPROOF CONNECTION
3. TONGUE AND GROOVE JOINTS ARE SEALED WITH A STRIP OF ASPHALTIC BUTYL RUBBER
4. ALUMINUM OR HIGH IMPACT PLASTIC MANHOLE STEPS SHALL BE INSTALLED @ 12" O.C.
5. DRAINAGE MANHOLE FRAME AND GRATE TO BE EAST JORDAN "J" 1122 FRAME & COVER OR APPROVED EQUAL. COVER SHALL BE MARKED "DRAIN".

**4'x8' INLET VAULT**

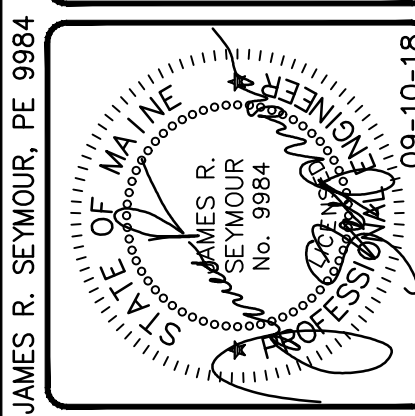
NOT TO SCALE



**PLAN VIEW**

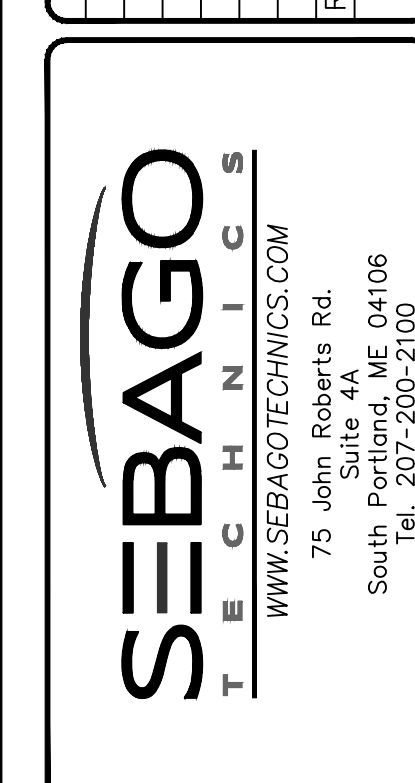
**REINFORCING SCHEDULE:**

- HEAVY DUTY COVER: H-20 WHEEL LOADING
- NO. 6'S @ 6" O.C. TRANSVERSELY
  - NO. 6'S @ 9" O.C. LONGITUDINALLY
- BASE: NO. 4'S @ 6" TRANSVERSELY
- NO. 4'S @ 12" O.C. LONGITUDINALLY
- SIDES: NO. 4'S @ 8" O.C. HORIZONTALLY
- NO. 4'S @ 12" O.C. VERTICALLY
- STRUTS: 2 NO. 5'S



DESIGNED	CHECKED
SAH	RLM

DATE: 9-10-18  
SUBMIT TO: CITY OF PORTLAND  
STATUS: FOR REVIEW  
REVIEW BY: [blank]  
DATE: [blank]  
REVISIONS: [blank]



**DETAILS**  
OF: PINE STATE FAMILY MART  
1884 FOREST AVENUE  
PORTLAND, MAINE 04103  
FOR: JOHN CHAU  
75 ARCADIA ST.  
PORTLAND, MAINE 04103

PROJECT NO.	SCALE
11142	NTS