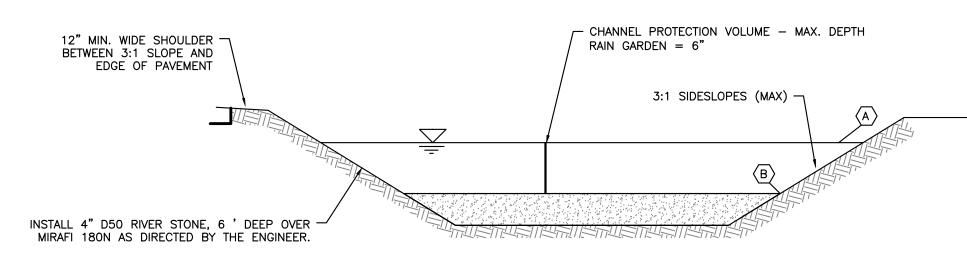
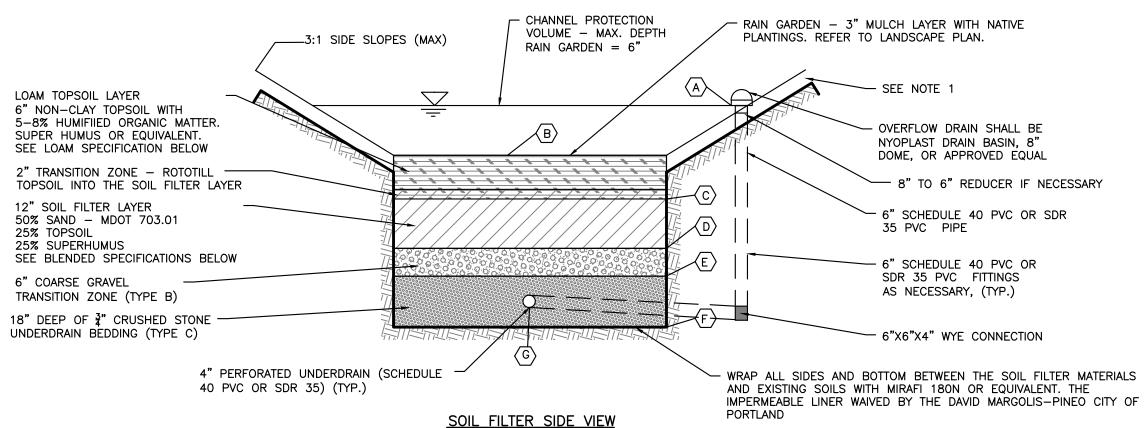


PLAN VIEW RAIN GARDEN



SOIL FILTER CROSS SECTION



1. THE SIDESLOPES SHALL BE STABILIZED WITH HARDWOOD MULCH.

A QUALIFIED MATERIAL TESTING FIRM.

2. LIGHT COMPACTION SOIL FILTER AND PIPE BEDDING MATERIAL. (90 TO 92% STANDARD PROCTOR). TESTING SHALL BE PERFORMED BY

3. THE SOIL FILTER MEDIA SHALL NOT BE CONSTRUCTED UNTIL THE AREA DRAINING TO THE BASIN HAS BEEN PERMANENTLY STABILIZED.

4. A SCHEDULE OF APPROPRIATE PLANTS FOR THE RAIN GARDENS AT THE SITE CONDITIONS IS LOCATED IN THE LANDSCAPE PLAN. 6. TESTING: SIEVE ANALYSIS INCLUDING HYDROMETER TESTING FOR CLAY CONTENT FOR EACH LAYER SHALL BE PERFORMED BY A QUALIFIED SOIL TESTING LABORATORY AND SUBMITTED TO THE PROJECT ENGINEER FOR APPROVAL 2 WEEKS PRIOR TO CONSTRUCTION. ALL TESTING AND SUBMITTALS SHALL BE IN ACCORDANCE WITH THE MOST RECENT VERSION OF THE MAINE DEP - TECHNICAL DESIGN MANUAL SECTION 7.2.5 TESTING AND SUBMITTALS.

7. ACORN ENGINEERING, INC., RECOMMENDS THE SOIL FILTER LAYER BE SUPPLIED BY JONES ASSOCIATES, INC., AUBURN, ME.

6" LOAM TOPSOIL LAYER SPECIFICATION		
SIEVE SIZE	% PASSING BY WEIGHT	
#4	75–95	
#10	60-90	
#40	35-85	
#200	20-70	

2. LOAM SHALL BE LOOSE AND FRIABLE AND SHALL BE FREE FROM ADMIXTURE OF SUBSOIL. REFUSE. LARGE STONES, CLODS OR ROOTS OR RHIZOMES OR "WITCH GRASS" OR OTHER UNDESIRABLE GRASSES.

*<10% CLAY PASSING THE #200 SIEVE ALLOWED PER EMAIL FROM MARIANNE HUBERT - MDEP TO WILL SAVAGE DATED 9/20/13

SOIL FILTER BED — SUPERHUMUS OR EQUIV. SPECIFICATION		
SIEVE SIZE	% PASSING BY WEIGHT	
1"	100	
#200	0-5	
MINIMAL CLAY CONTENT, NO MORE THAN 3-5% PASSING #200 SIEVE		

ON	12" SOIL FILTER BED — BLENDED SAND, LOAM, SUPERHUMI SIEVE ANALYSIS	
	SIEVE SIZE	% PASSING BY WEIGHT
	#10	85-100
	#20	70-100
	#60	15-40
	#200	8-15
	1. CLAY FRACTION #200 SIEVE. 2. SUPERHUMUS C	

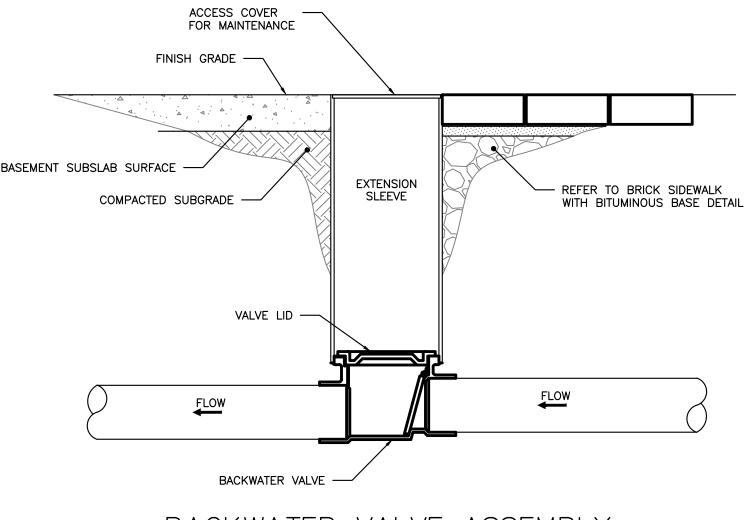
RAIN GARDEN DETAIL

NOT TO SCALE

SCHEDULE		
ITEM	RG-1	
A PROPOSED OVERFLOW RIM	55.25'	
B TOP OF LOAM TOPSOIL LAYER	54.75'	
C TOP OF SOIL FILTER	54.25'	
D TOP OF GRAVEL	53.25'	
E TOP OF STONE	52.75	
F BOTTOM OF STONE	51.25'	
G UNDERDRAIN INVERT	51.50'	
STREET CATCH BASIN INV. OUT 49.48'		

SOIL FILTER BED – TRANSISTION ZONE (TYPE B)		
SIEVE SIZE	% PASSING BY WEIGHT	
1"	90-100	
1/2"	75–100	
#4	50-100	
#20	15-80	
#50	0-15	
#200	0-5	

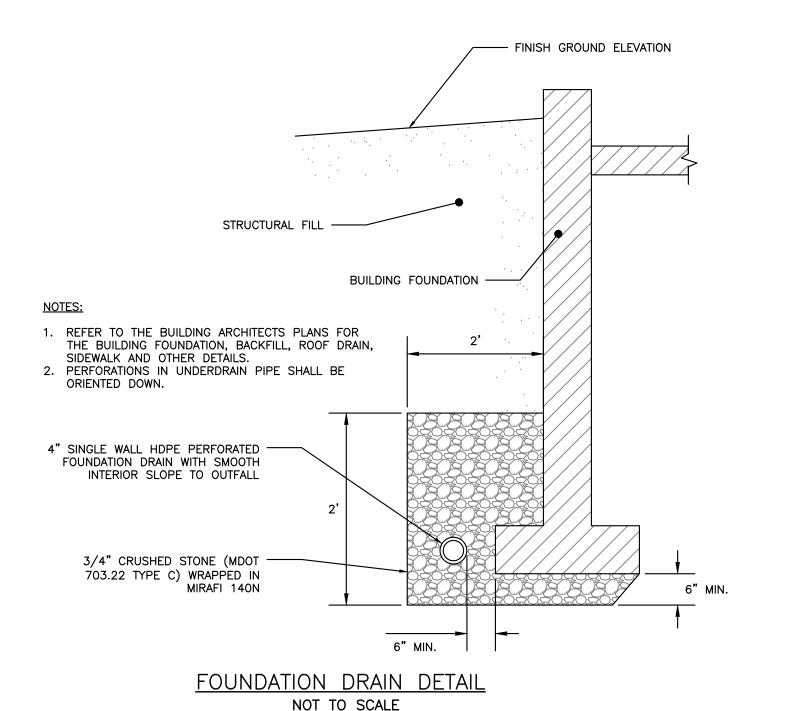
SOIL FILTER BED — UNDERDRAIN BEDDING (TYPE C)	
SIEVE SIZE	% PASSING BY WEIGHT
1"	100
3/4"	90-100
3/8"	0-75
#4	0-25
#10	0-5

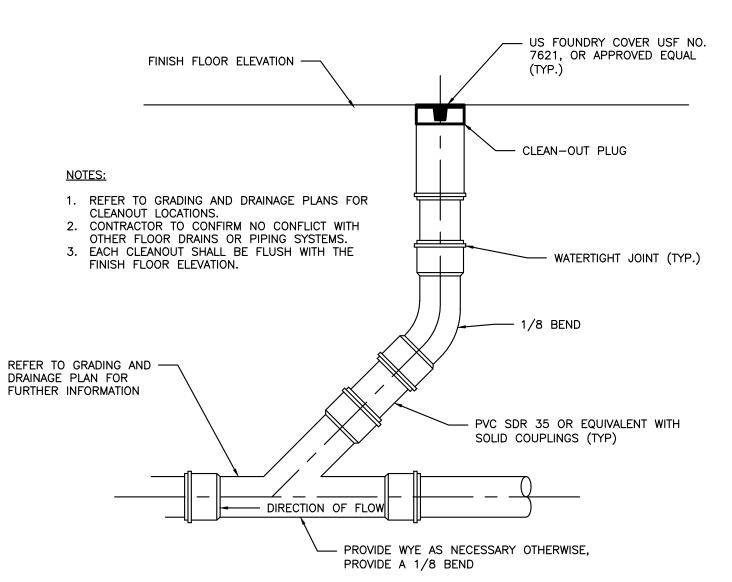


BACKWATER VALVE ASSEMBLY NOT TO SCALE

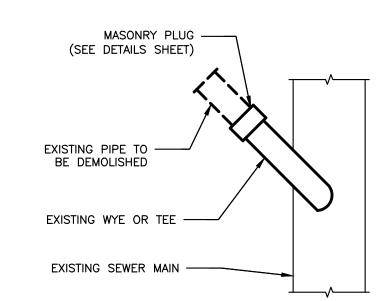
1. BACKWATER VALVE TO BE PROVIDED BY AGRI DRAIN CORPORATION OR AN APPROVED EQUAL.

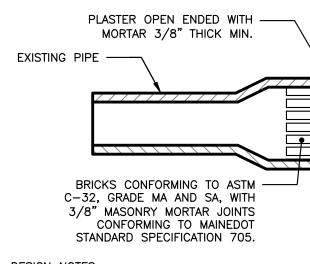
- 2. VALVE TO BE INSTALLED TO MANUFACTURER'S SPECIFICATIONS AND COMPLY WITH RULES AND REGULATIONS AS OUTLINED IN SECTION 2 OF THE CITY OF
- PORTLAND TECHNICAL MANUAL. 3. VALVE SHALL BE INSTALLED WITH A VALVE BOX AND COVER TO PROVIDE EASY ACCESS AND MAINTENANCE; VALVE COVER SHALL STATE 'SEWER' ON LID FLUSH





CLEANOUT DETAIL NOT TO SCALE





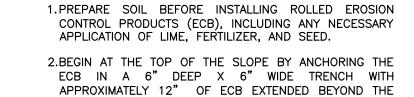
DESIGN NOTES:

FOR PVC PIPE

1. IT IS ASSUMED THAT THE EXISTING PIPE IS OF VITRIFIED CLAY CONSTRUCTION. USE CAP OR PLUG

MASONRY PLUG DETAIL NOT TO SCALE

INSTALLATION DETAIL



UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE ECB WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO THE COMPACTED SOIL AND FOLD THE REMAINING 12" PORTION OF ECB BACK OVER THE SEED AND COMPACTED SOIL. SECURE ECB OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE ECB.

3.ROLL THE ECB (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. ECB WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL ECB MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.

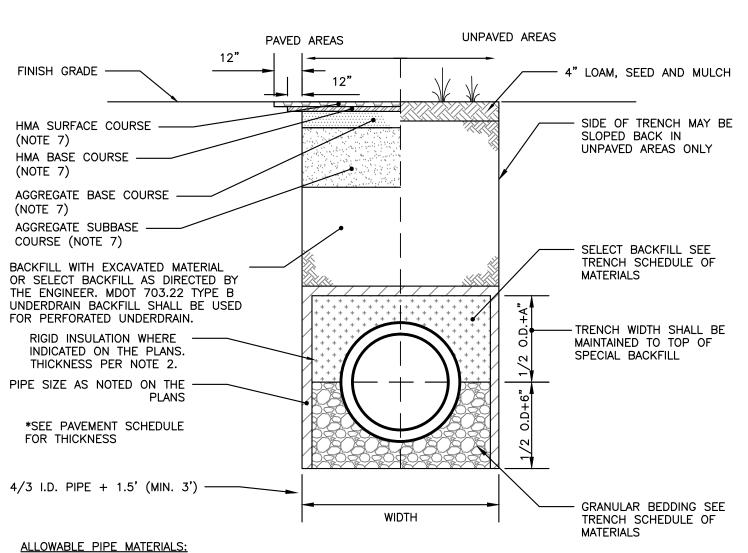
4.THE EDGES OF PARALLEL ECB MUST BE STAPLED WITH APPROXIMATELY 2" - 5" OVERLAP DEPENDING ON THE ECB TYPE.

5.CONSECUTIVE ECB SPLICED DOWN THE SLOPE MUST BE END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE ECB WIDTH.

IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE ECB.

EROSION CONTROL BLANKET SLOPE INSTALLATION

NOT TO SCALE



- REINFORCED CONCRETE PIPE (RCP) MIN. STRENGTH OF CLASS III

- PVC RING TYPE SEWER PIPE MEÉTING ASTM F 789

- ADS N-12 HP TRIPLE-WALL MIN PS-46 RATING

DUCTILE IRON PIPE (DIP)

ADS SANITITE HP MIN. PS-46

- PVC RING TYPE SEWER (SDR 35) OR EQUIVALENT, MIN PS-46 RATING

STORM DRAIN AND SEWER TYPICAL TRENCH SECTION

NOT TO SCALE

- O.S.H.A. SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION TO BE THE RESPONSIBILITY OF THE
- 2. STORM DRAIN COVER BETWEEN 2' AND 3' SHALL INCLUDE 4" OF RIGID INSULATION. COVER BETWEEN 3" AND 4' SHALL INCLUDE 2' RIGID INSULATION. OTHER
- ABOVE MINIMUM DEPTH. INSTALL WARNING TAPE DIRECTLY ABOVE UTILITIES AT
- 4.1. 2'-0" STORM DRAIN 4.2. 5'-0" - SEWER
- PIPE OR SERVICE
- 6. THIS DETAIL SHALL BE APPLIED ONLY TO DRAINAGE PIPE
- 7. THICKNESS AS NOTED BY SURFACE DETAILS



SCALE:

DESIGNED BY:

CHECKED BY:

DRAWN BY:

PRELIM. APPLICATION

FINAL APPLICATION

REV. GRADES

REVISION

DETAILS

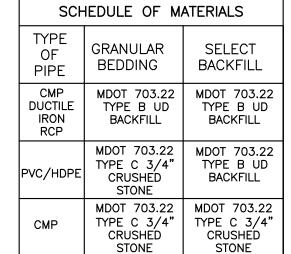
DRAINAGE

2

DRAWING NO

1068_DETAILS

12/28/15



NOTES:

1. BRACING AND SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND CONTRACTOR.

UTILITIES: ADD 2" OF RIGID INSULATION FOR EACH FOOT

THE TOP OF SUBGRADE.

4. MINIMUM COVER

5. NO TREES SHALL BE PLANTED WITHIN 5' OF A SEWER

TRENCHES OUTSIDE OF THE CITY OF PORTLAND ROW.

FINAL APPLICATION

NOT ISSUED FOR

CONSTRUCTION