

Storm Chamber Performance Data

Storm	Q _{in} CFS	Q _{out} CFS	H _{WL}
2 YR	0.27	0.05	1561.61
10 YR	0.47	0.12	1561.70
100 YR	0.67	0.38	1561.91

Storage vs. Depth

Elev	Storage (CF)
1559.5	0
1560.0	2250
1563.0	7875

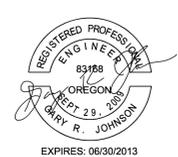
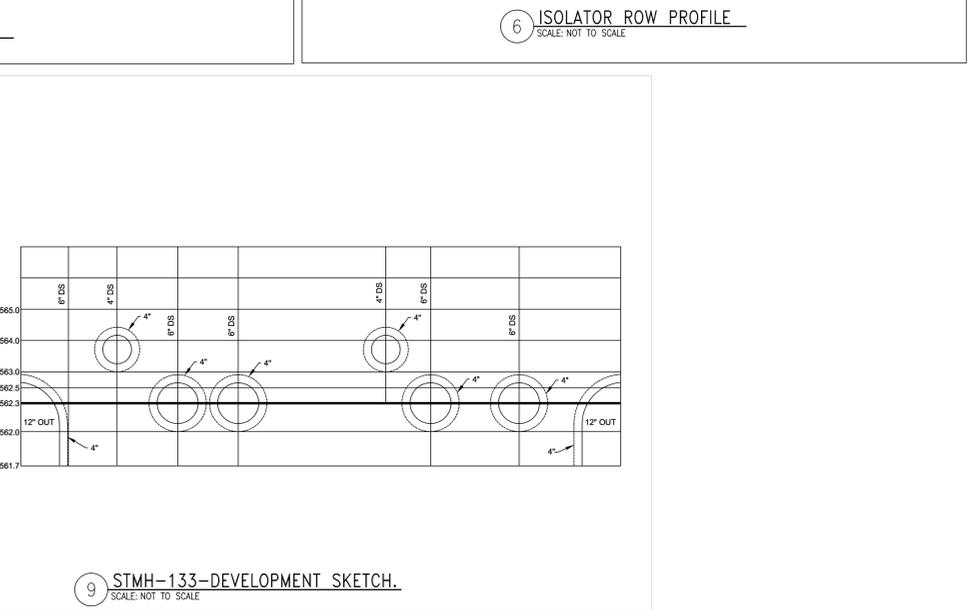
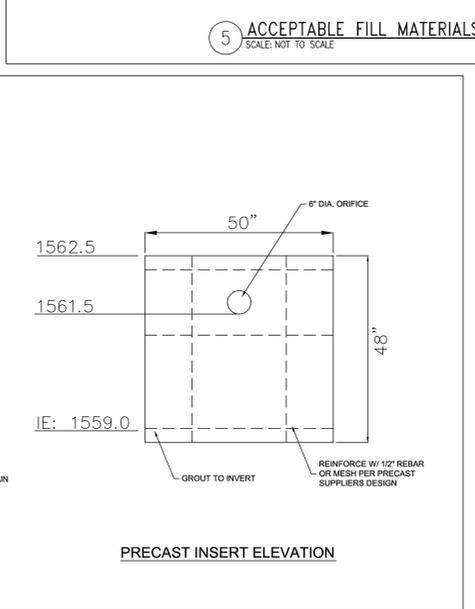
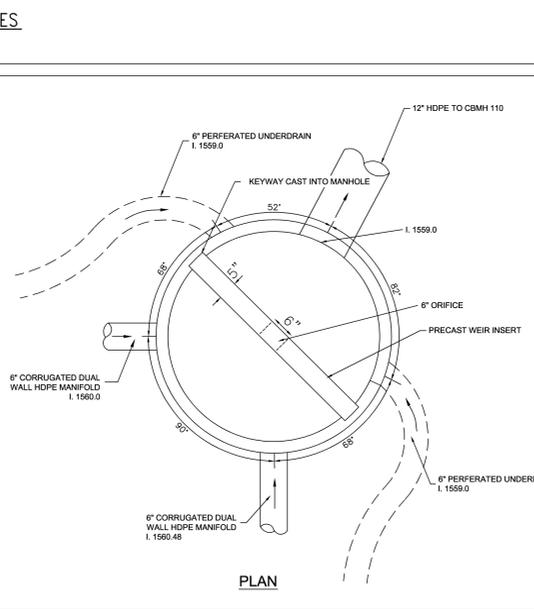
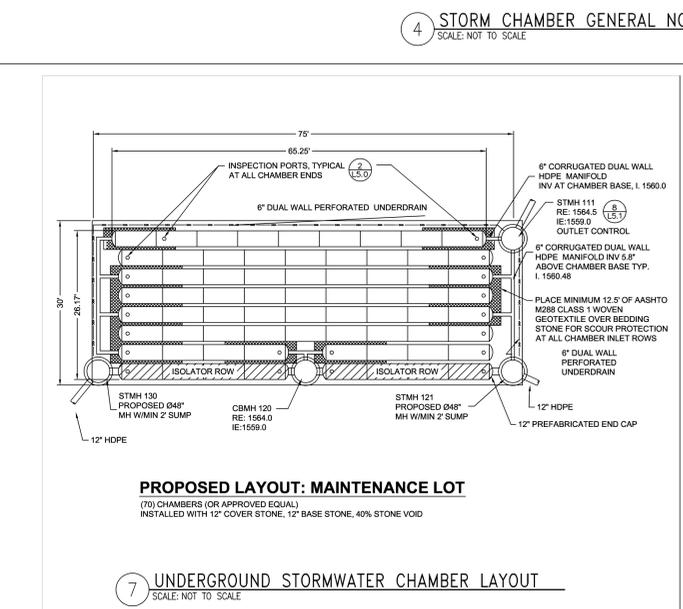
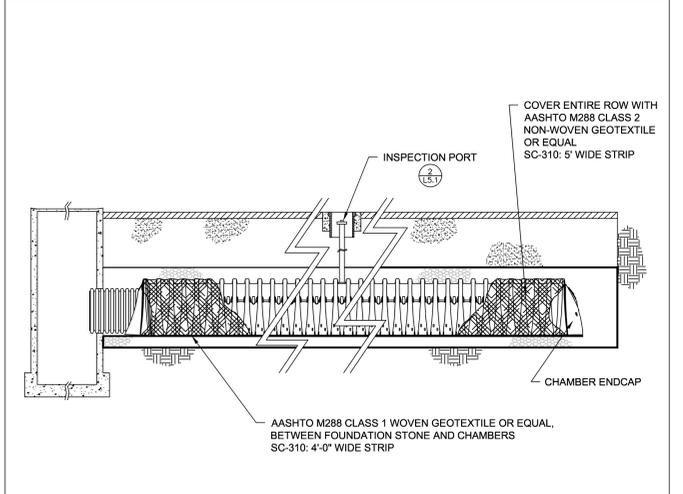
- STORM CHAMBER GENERAL NOTES**
- CHAMBERS SHALL BE STORMTECH SC-310, TRITON M-12, CULTEC 150HD, OR APPROVED EQUAL.
 - CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
 - CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORT PANELS.
 - THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12 ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCE.
 - ONLY CHAMBERS THAT ARE APPROVED BY THE ENGINEER WILL BE ALLOWED. THE CONTRACTOR SHALL SUBMIT (3 SETS) OF THE FOLLOWING TO THE ENGINEER FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE:
 - A STRUCTURAL EVALUATION BY A REGISTERED STRUCTURAL ENGINEER THAT DEMONSTRATES THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12 ARE MET. THE 50-YEAR CREEP MODULUS DATA SPECIFIED IN ASTM F2418-05 MUST BE USED AS A PART OF THE AASHTO STRUCTURAL EVALUATION TO VERIFY LONG-TERM PERFORMANCE.
 - INSTALLING CONTRACTORS TO USE AND UNDERSTAND MANUFACTURER'S LATEST INSTALLATION INSTRUCTIONS PRIOR TO BEGINNING SYSTEM INSTALLATION.
 - CONTRACTOR TO FOLLOW MANUFACTURER'S MINIMUM COVER STANDARDS. REQUIREMENTS FOR SYSTEMS WITH PAVEMENT DESIGN (ASPHALT, CONCRETE PAVERS, ETC.): MINIMUM COVER IS 18" NOT INCLUDING PAVEMENT. MAXIMUM COVER IS 96" INCLUDING PAVEMENT. FOR INSTALLATIONS THAT DO NOT INCLUDE PAVEMENT, WHERE RUTTING FROM VEHICLES MAY OCCUR, MINIMUM REQUIRED COVER IS 24", MAXIMUM COVER IS 96".
 - THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE DESIGN ENGINEER.
 - AASHTO M288 CLASS 2 NON-WOVEN GEOTEXTILE (FILTER FABRIC) MUST BE USED AS INDICATED IN THE PROJECT PLANS.
 - STONE PLACEMENT BETWEEN CHAMBERS ROWS AND AROUND PERIMETER MUST FOLLOW INSTRUCTIONS AS INDICATED IN THE MOST CURRENT VERSION OF THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
 - BACKFILLING OVER THE CHAMBERS MUST FOLLOW REQUIREMENTS AS INDICATED IN THE MOST CURRENT VERSION OF MANUFACTURER'S INSTALLATION INSTRUCTIONS.
 - THE CONTRACTOR MUST APPLY EROSION AND SEDIMENT CONTROL MEASURES TO PROTECT THE STORMWATER SYSTEM DURING ALL PHASES OF SITE CONSTRUCTION PER LOCAL CODES AND DESIGN ENGINEER'S SPECIFICATIONS.

ACCEPTABLE FILL MATERIALS: STORM CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO M43 DESIGNATION	AASHTO M145 DESIGNATION	COMPACTION/DENSITY REQUIREMENT
① FILL MATERIAL FROM 18" TO GRADE ABOVE CHAMBERS	ANY SOIL/ROCK MATERIALS, NATIVE SOILS OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	N/A	PREPARE PER ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
② FILL MATERIAL FOR 6" TO 18" ELEVATION ABOVE CHAMBERS (2" FOR UNPAVED INSTALLATIONS)	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES.	3, 357, 4, 487, 5, 56, 57, 6, 67, 68, 7, 78, 8, 88, 9, 10	A-1 A-2 A-3	COMPACT IN 6" LIFTS TO A MINIMUM 95% STANDARD PROCTOR DENSITY. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 LBS. DYNAMIC FORCE NOT TO EXCEED 20,000 LBS.
③ EMBEDMENT STONE SURROUNDING AND TO A MIN. 6" ELEVATION ABOVE CHAMBERS	CLEAN ANGULAR STONE WITH THE MAJORITY OF PARTICLES BETWEEN 1 - 2 INCH	3, 357, 4, 487, 5, 56, 57	N/A	NO COMPACTION REQUIRED.
④ FOUNDATION STONE BELOW CHAMBERS	CLEAN ANGULAR STONE WITH THE MAJORITY OF PARTICLES BETWEEN 1 - 2 INCH	3, 35, 4, 487, 5, 56, 57	N/A	PLATE COMPACT OR ROLL TO ACHIEVE A 95% STANDARD PROCTOR DENSITY.

PLEASE NOTE: THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, THE STONE MUST BE SPECIFIED AS CLEAN, CRUSHED, ANGULAR NO. 4 STONE. MANUFACTURER RECOMMENDS HARDNESS AND DURABILITY CRITERIA FOR USE OF RECYCLED CONCRETE IN A AND B LOCATION. CONTACT MANUFACTURER FOR DIRECTION ON "RECYCLED CONCRETE STRUCTURAL BACKFILL".

5 ACCEPTABLE FILL MATERIALS SCALE: NOT TO SCALE



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BID DOCUMENTS 7/1/2011

Revisions	Date

Drawing Title STORM UTILITY DETAILS	Project Title REPLACE ADMINISTRATION AND MAINTENANCE BUILDING AND SITE IMPROVEMENTS	Date 7-1-2011
Approved: Director, Office of Construction Management	Building Number	Project No. 906CM3009
Approved: Director, Project Management Service	Checked GRJ	Drawn AMT/PSH
	Location EAGLE POINT NATIONAL CEMETERY 2763 RILEY ROAD EAGLE POINT, OR 97524	DRAWING NO. L-5.1
		Dwg. 33 Df 181