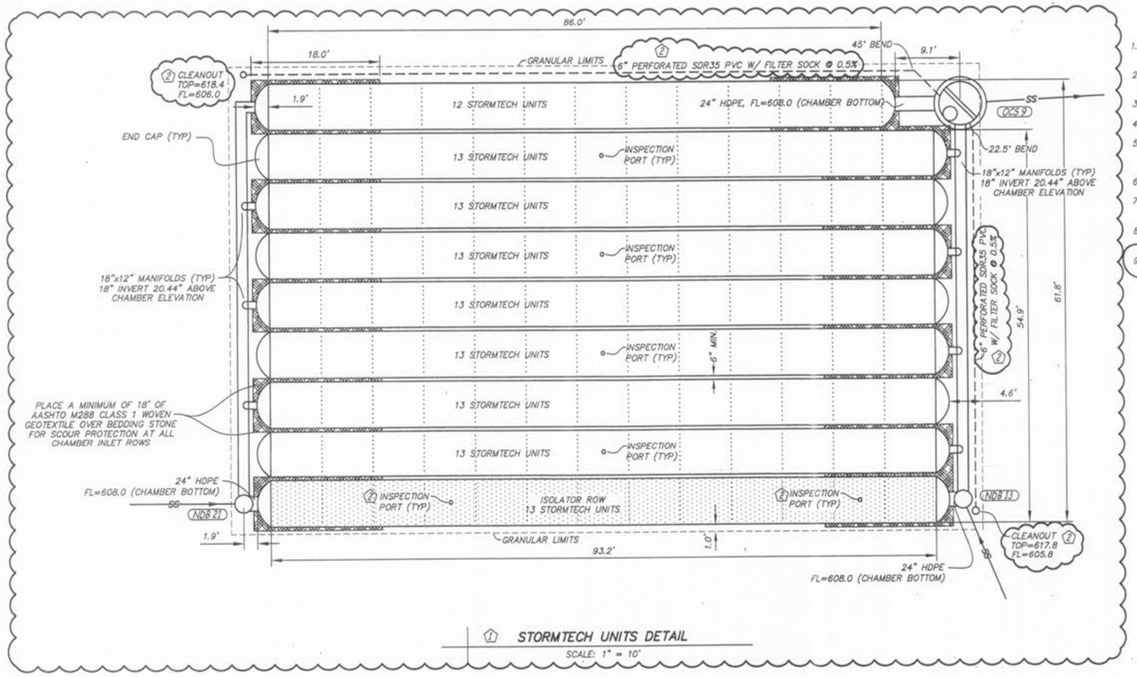


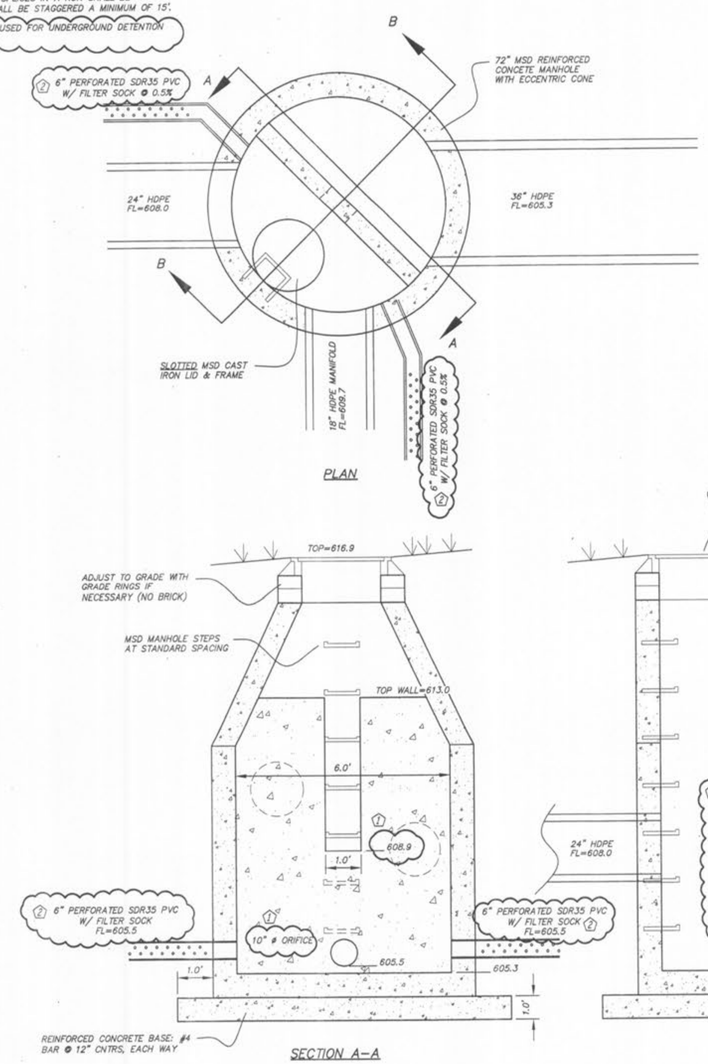
① STORMTECH UNITS DETAIL

SCALE: 1" = 10'

FOUNDATION GEOTEXTILE FABRIC

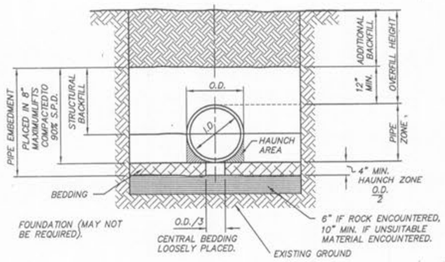
1. GEOTEXTILE FABRIC AT BASE OF FOUNDATION ROCK FOR THE STORMTECH UNITS SHALL BE MIRAFI 160N OR APPROVED EQUAL.
2. GEOTEXTILE FABRIC SHALL BE PLACED DIRECTLY ON PREPARED SUBGRADE. THE FABRIC SHALL BE ROLLED OUT FLAT AND TIGHT WITH NO FOLDS.
3. GEOTEXTILE FABRIC SHALL BE ORIENTED IN THE DIRECTION OF THE STORMTECH UNITS.
4. ADJACENT GEOTEXTILE ROLLS SHALL BE OVERLAPPED A MINIMUM OF 18".
5. PRIOR TO BASE ROCK PLACEMENT, THE GEOTEXTILE SHALL BE HELD IN PLACE USING PINS OR SOIL NAILS AND EACH END OF THE ROLL SHALL BE HELD IN PLACE WITH PILES OF BASE ROCK PRIOR TO ADDITIONAL BASE ROCK PLACEMENT.
6. FILL OVER GEOTEXTILE FABRIC SHALL BE PLACED IN 8" TO 12" LOOSE LIFTS.
7. TRACKED CONSTRUCTION EQUIPMENT SHOULD NOT BE OPERATED DIRECTLY UPON THE GEOTEXTILE. A MINIMUM OF 6" BASE ROCK IS REQUIRED FOR TRACKED VEHICLE OPERATION.
8. NO MORE THAN ONE SPLICE PER FUN SHALL BE ALLOWED. SPLICES IN A RUN SHALL BE OVERLAPPED AT LEAST 5'. SPLICES IN ADJACENT RUNS SHALL BE STAGGERED A MINIMUM OF 15'.
9. SC3500 STORMTECH UNITS OR APPROVED EQUAL SHALL BE USED FOR UNDERGROUND DETENTION SYSTEM.

①



OUTFLOW CONTROL STRUCTURE (OCS 9)

NOT TO SCALE



TYPICAL TRENCH DETAIL

BACKFILL NOTES

1. BEDDING, HAUNCH, AND STRUCTURAL BACKFILL SHALL BE IN CONFORMANCE W/ AASHTO M145 GROUP A-1, A-2, OR A-3 COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS DEFINED BY ASTM D698.
2. ADDITIONAL BACKFILL SHALL BE PLACED IN LIFTS NOT TO EXCEED 8 INCHES AND COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AS DEFINED BY ASTM D698.

TABLE III

PARALLEL PIPE INSTALLATION

PIPE SIZE	S (IN.)	X (IN.)
12	12	9
15	12	9
18	12	9
24	12	10
30	15	16
36	18	18
42	21	18
48	24	18

S = MINIMUM PIPE SEPARATION (IN) BETWEEN OUTSIDE WALLS OF PIPES.
X = MINIMUM SEPARATION BETWEEN TRENCH WALL AND OUTSIDE WALL OF PIPE.

CONSTRUCTION SEQUENCE

1. PLACE BEDDING MATERIAL TO GRADE.
2. COMPACT BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
3. INSTALL PIPE TO GRADE.
4. PLACE AND COMPACT THE HAUNCH AREA UP TO THE SPRINGLINE.
5. COMPLETE BACKFILL ACCORDING TO SPECIFICATIONS.

LEGEND

I.D. = NORMAL INSIDE DIAMETER OF PIPE.
O.D. = OUTSIDE DIAMETER OF PIPE.
H = FILL COVER HEIGHT OVER PIPE (FEET).
MIN. = MINIMUM
MAX.= MAXIMUM
= UNDISTURBED SOIL

TABLE I

CORRUGATED HDPE AND POLYVINYL CHLORIDE CIRCULAR PIPE

SPECIFIED DIA OF PIPE (IN.)	MIN OVERFILL HEIGHT (FT)	HDPE MAX OVERFILL HEIGHT* (FT)	POLYVINYL CHLORIDE MAX OVERFILL HEIGHT* (FT)		TRENCH WIDTH (IN.)
			SDR 35#	SDR 26#	
12	1	38	15	30	34
15	1	39	15	30	39
18	1	40	15	30	44
24	1	40	15	30	55
30	1	40	N/A	N/A	67
36	1	38	N/A	N/A	76
42	2	10	N/A	N/A	84
48	2	9	N/A	N/A	95
54	2	8	N/A	N/A	104
60	2	8	N/A	N/A	113

* MAXIMUM OVERFILL MEASURED FROM THE TOP OF PIPE TO SURFACE

\# PER ASTM D-3034 FOR PIPE UP TO 15" AND ASTM F679 OVER 15"

TABLE II

MINIMUM COVER FOR CONSTRUCTION LOADS

PIPE DIA. (IN.)	MINIMUM COVER (FT) FOR INDICATED AXLE LOADS (THOUSANDS OF POUNDS)			
	18-50	50-75	75-110	110-150
12-36	2.0	2.5	3.0	3.0
42-48	3.0	3.0	3.5	4.0

THE CONTRACTOR SHALL PROVIDE MINIMUM COVER PLUS ANY ADDITIONAL COVER REQUIRED TO AVOID DAMAGE TO THE PIPE. IN UNPAVED SITUATIONS, THE SURFACE MUST BE MAINTAINED TO A LEVEL AND NON-RUTTED CONDITION.

EMBEDMENT OF PLASTIC STORM SEWER PIPE

NOT TO SCALE

PLANNING & DEVELOPMENT #1709.03 APPROVED JANUARY 7, 2010

STATE OF MISSOURI — MATTHEW AARON KRIETE — NUMBER PE-2007002811 — PROFESSIONAL ENGINEER — 8/24/10

STORM SEWER DETAILS

HILLMANN PLACE

ST. CHARLES COUNTY, O'FALLON, MISSOURI

Surveyed: –
Drawn: BR
Checked: MK

Engineering Surveys & Services
1113 Fay Street
Columbia, Missouri
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Missouri Engineering Corporation # 2004005018

Revised
1 JULY 20, 2010
2 AUG 24, 2010

MATTHEW A. KRIETE
PROFESSIONAL ENGINEER
PE-2007002811

Scale	Date	Job	Sheet
AS SHOWN	JUNE 4, 2010	11481	C126

F:\CURRENT\DRAWINGS\JES\11481\COVER & DETAILS.DWG 8/23/2010