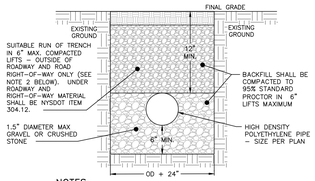


FRONT VIEW SIDE VIEW

NOTES:

1. PRECAST CONCRETE CATCH BASIN WITH CONCRETE STRENGTH OF 4,000 PSI @ 28 DAYS.
2. THE ENDS OF ALL PIPES SHALL BE CUT OFF FLUSH WITH THE INSIDE SURFACE OF THE CATCH BASIN AND PARGED AROUND.
3. PIPES SHALL BE PARGED AROUND INTERIOR AND EXTERIOR PRIOR TO BACKFILLING OF STRUCTURE. CONNECTIONS MADE WITHIN 10 FEET OF A WATER MAIN (OR SERVICE LINE) OR A SEWER MAIN (OR SERVICE LATERAL), SHALL BE MADE WATERTIGHT.
4. PROVIDE A MINIMUM 0.1' DROP BETWEEN INLET AND OUTLET INVERTS (MATCH CROWNS FOR PIPES WITH DIFFERENT SIZE) UNLESS OTHERWISE NOTED ON THE PLAN.
5. CATCH BASINS WITH AN INTERIOR DEPTH OF 4' AND GREATER SHALL BE FURNISHED WITH STEEL REINFORCED POLYPROPYLENE PLASTIC STEPS AT 12" INTERVALS.
6. HDPE PIPE SHALL BE PROVIDED WITH WATERTIGHT CONNECTIONS. ADS MODEL N12 WT IB OR APPROVED EQUAL.

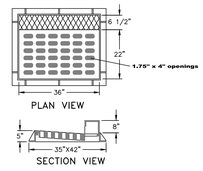
CATCH BASIN DETAIL
NOT TO SCALE



NOTES:

1. EXCAVATION AND TRENCHING SHALL MEET ALL OSHA REQUIREMENTS.

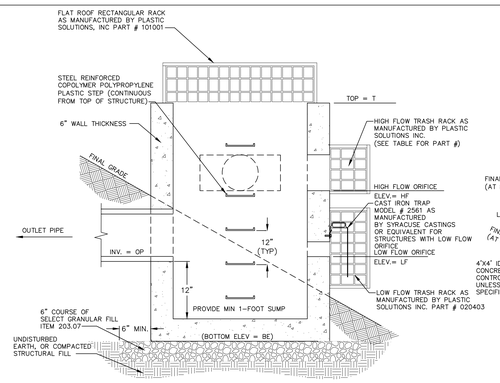
STORM LINE TRENCH DETAIL
NOT TO SCALE



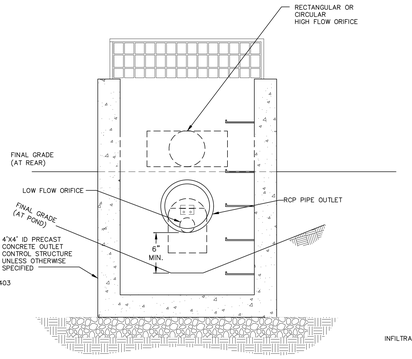
NOTES:

1. HEAVY DUTY RECTANGULAR STORMWATER INLET GRATE TO BE CAMPBELL FOUNDRY MODEL 2541, OR APPROVED EQUAL.
2. CATCH BASINS TO RECEIVE CURB INLETS ARE: CB 104, CB 301, CB 301A, CB 302, CB 303, CB 304, AND CB 305.

CAST IRON STORMWATER CURB INLET GRATE DETAIL
NOT TO SCALE



SIDE VIEW

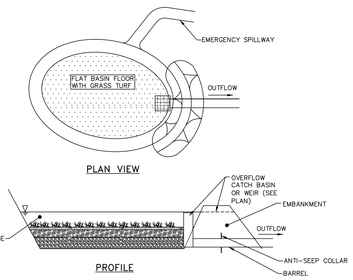


FRONT VIEW

OUTLET CONTROL STRUCTURE DATA										
OCS ID	STRUCTURE DIMENSIONS	LOW FLOW ORIFICE DIM	"LF" (FT)	HIGH FLOW ORIFICE DIM	# OF HIGH FLOW INLETS	"HF" (FT)	"T" (FT)	OUTLET PIPE ø (IN)	"OP" (FT)	HIGH FLOW ORIFICE TRASH RACK PART #
1	4'X4' I.D.	3" ø	89.55	NONE	NONE	N/A	89.9	15	86.0	020601

NOTES:
1. ALL TRASH RACKS SHALL HAVE UV PROTECTION MEETING OR EXCEEDING THE REQUIREMENTS OF ASTM D2565-99.
2. TRASH RACKS SHALL BE SECURED PER THE MANUFACTURER'S RECOMMENDATIONS.
3. WHERE HIGH FLOW ORIFICE EXTENDS TO TOP OF STRUCTURE, THE MAXIMUM ALLOWABLE GAP BETWEEN THE TRASH RACKS SHALL BE 4".

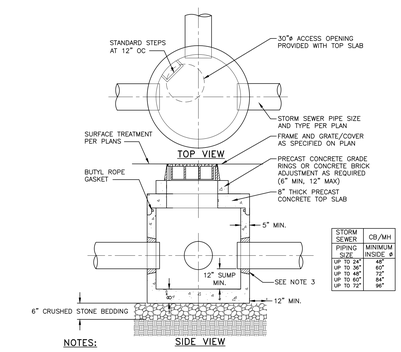
INFILTRATION BASIN OUTLET CONTROL STRUCTURE DETAIL
NOT TO SCALE



NOTES:

1. THE INFILTRATION BASIN SHALL NOT SERVE AS A SEDIMENT TRAP DURING CONSTRUCTION AND SHALL BE PROTECTED FROM CONSTRUCTION ACTIVITY.
2. RELATIVELY LIGHT TRACKED EQUIPMENT IS RECOMMENDED FOR CONSTRUCTION PURPOSES TO AVOID COMPACTION OF THE BASIN FLOOR.
3. A HIGHLY POROUS SURFACE TEXTURE SHALL BE RETAINED ALONG THE BASIN FLOOR, ESPECIALLY WITHIN THE AREA IDENTIFIED AS BEING USED FOR INFILTRATION.
4. ESTABLISH DENSE VEGETATION ON THE BASIN SIDE SLOPES AND FLOOR TO PREVENT EROSION AND SLOUGHING AND TO PROVIDE A NATURAL MEANS OF MAINTAINING RELATIVELY HIGH INFILTRATION RATES. GRASSES OF THE FESCUE FAMILY (ALTAI FESCUE, WESTERN FESCUE OR RED FESCUE) ARE SPECIFIED ON THIS PLAN, PRIMARILY DUE TO THEIR ADAPTABILITY TO DRY SANDY SOILS, DROUGHT RESISTANCE, HARDINESS, AND ABILITY TO WITHSTAND BRIEF INUNDATIONS. FESCUE WILL ALSO ALLOW FOR LONG INTERVALS BETWEEN MOWINGS, WHICH SHALL OCCUR TWICE PER YEAR MINIMUM, TYPICALLY IN JUNE AND SEPTEMBER IS SATISFACTORY.
5. THE BERMS SHALL BE SUFFICIENTLY COMPACTED AND OF SUCH MATERIAL TO PREVENT SEEPAGE.

TYPICAL INFILTRATION BASIN DETAIL
NOT TO SCALE

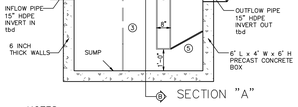


STORM SEWER PIPING SIZE	CB/MH MINIMUM INSIDE ø
UP TO 24"	48"
UP TO 36"	72"
UP TO 48"	96"
UP TO 60"	84"
UP TO 72"	96"

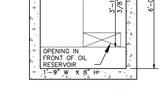
NOTES:

1. PRECAST CONCRETE MANHOLE WITH CONCRETE STRENGTH OF 4,000 PSI @ 28 DAYS.
2. THE ENDS OF ALL PIPES SHALL BE CUT OFF FLUSH WITH THE INSIDE SURFACE OF THE MANHOLE AND PARGED AROUND.
3. PIPES SHALL BE PARGED AROUND INTERIOR AND EXTERIOR PRIOR TO BACKFILLING OF STRUCTURE. 4. CONCRETE STRUCTURE AND CASTING SHALL BE RATED FOR H20 TRAFFIC LOADING.
5. INLET FRAME SHALL BE FULLY SUPPORTED ON THE CONCRETE STRUCTURE FOR H20 LOADING.
6. MANHOLES WITH AN INTERIOR DEPTH OF 4' AND GREATER SHALL BE FURNISHED WITH STEEL REINFORCED POLYPROPYLENE PLASTIC STEPS AT 12" INTERVALS.

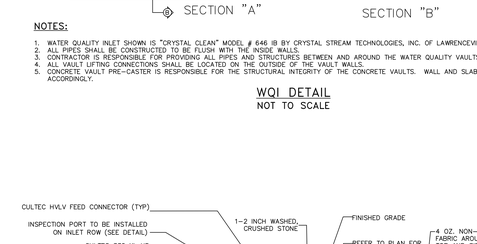
STORMWATER MANHOLE DETAIL
NOT TO SCALE



TOP VIEW (INTERNAL)



TOP VIEW (SLAB)



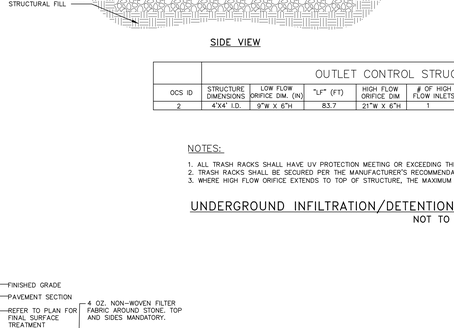
NOTES:

1. WATER QUALITY INLET SHOWN IS "CRYSTAL CLEAN" MODEL # 646 iB BY CRYSTAL STREAM TECHNOLOGIES, INC. OF LAWRENCEVILLE, GA., 1-800-648-6945.
2. ALL PIPES SHALL BE CONSTRUCTED TO BE FLUSH WITH THE INSIDE WALLS.
3. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL PIPES AND STRUCTURES BETWEEN AND AROUND THE WATER QUALITY VAULTS.
4. ALL VAULT LIFTING CONNECTIONS SHALL BE LOCATED ON THE OUTSIDE OF THE VAULT WALLS.
5. CONCRETE VAULT PRE-CASTER IS RESPONSIBLE FOR THE STRUCTURAL INTEGRITY OF THE CONCRETE VAULTS. WALL AND SLAB THICKNESSES SHALL BE ALTERED ACCORDINGLY.

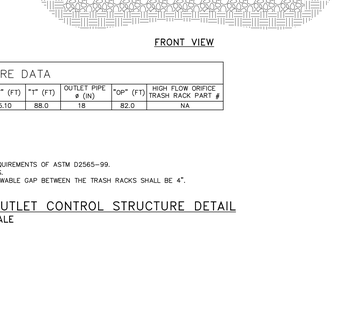
WQI DETAIL
NOT TO SCALE

LEGEND

1. EXPANDED ALUMINUM BASKET W/ 1/4" MESH LINING, 1'-6" H x 2'-0" L x 4'-0" W, Upfit 3'-6 3/4" FROM SUMP
2. 2ND INTERNAL BAFFLE W/ 1" HOLES DRILLED AT 1 1/4" O.C., 4'-0" H.
3. SPILL PROTECTION RESERVOIR 5'-0" H. WITH A 1'-8" FRONT CUT.
4. 3/4"COCONUT FIBER FILTER IN ALUMINUM FRAME 1'-8" LONG.
5. 1/4"ALUMINUM PLATE, 9" H., 1'-11" WIDE.



SIDE VIEW



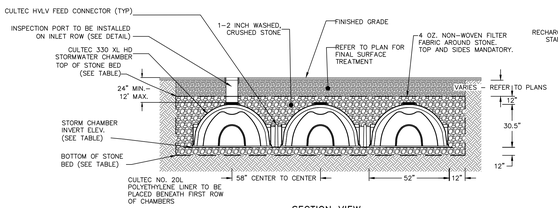
FRONT VIEW

OUTLET CONTROL STRUCTURE DATA										
OCS ID	STRUCTURE DIMENSIONS	LOW FLOW ORIFICE DIM. (IN)	"LF" (FT)	HIGH FLOW ORIFICE DIM	# OF HIGH FLOW INLETS	"HF" (FT)	"T" (FT)	OUTLET PIPE ø (IN)	"OP" (FT)	HIGH FLOW ORIFICE TRASH RACK PART #
2	4'X4' I.D.	9"W X 6"H	83.7	21"W X 6"H	1	85.10	88.0	18	82.0	NA

NOTES:

1. ALL TRASH RACKS SHALL HAVE UV PROTECTION MEETING OR EXCEEDING THE REQUIREMENTS OF ASTM D2565-99.
2. TRASH RACKS SHALL BE SECURED PER THE MANUFACTURER'S RECOMMENDATIONS.
3. WHERE HIGH FLOW ORIFICE EXTENDS TO TOP OF STRUCTURE, THE MAXIMUM ALLOWABLE GAP BETWEEN THE TRASH RACKS SHALL BE 4".

UNDERGROUND INFILTRATION/DETENTION OUTLET CONTROL STRUCTURE DETAIL
NOT TO SCALE



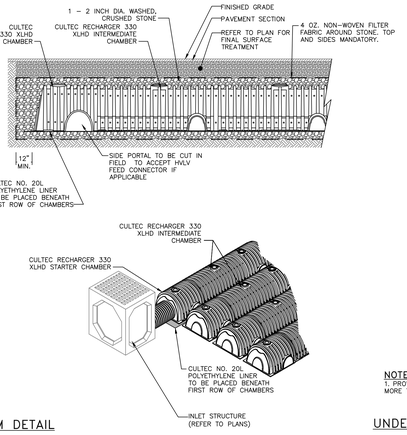
SECTION VIEW

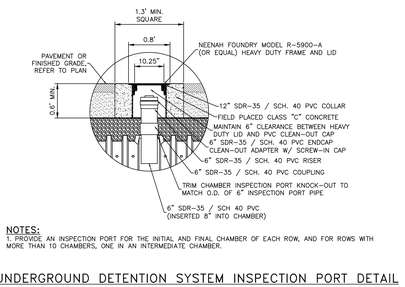
NOTES:

1. CULTEC RECHARGER 330XLHD CHAMBERS BY CULTEC, INC. OF BROOKFIELD, CT. ALL CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH CULTEC INC.'S CURRENT RECOMMENDED INSTALLATION GUIDELINES.
2. THE BED OF THE SYSTEM FOOTPRINT SHALL BE LAID NEARLY LEVEL.
3. EACH ROW OF CHAMBERS SHALL BE FED VIA A 12" MANIFOLD WITH TEE CONNECTIONS BY CULTEC OR EQUAL.
4. THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IF SUBSURFACE CONDITIONS IN THE AREAS OF THE INFILTRATOR TRENCHES IS NOT CONSISTENT WITH THE TEST PIT OR PERCOLATION DATA (E.G. GROUNDWATER OR BEDROCK ENCOUNTERED, SOIL PROPERTIES ARE NOT CONSISTENT, ETC.).
5. REFER TO THE INSPECTION SCHEDULE & LONG TERM MAINTENANCE OF STORMWATER STRUCTURES NOTES ON THE GRADING SHEET.
6. SEE ALSO CLAY KEY DETAIL THIS SHEET.

SYSTEM ID	BOTTOM OF STONE BED ELEVATION	CHAMBER INVERT	TOP OF STONE BED ELEVATION	STONE BED FOOTPRINT	STONE BED DIMENSIONS	NO. OF CHAMBERS
A	81.0	82.0	85.54	1,599 S.F.	44.84'X35.66	42

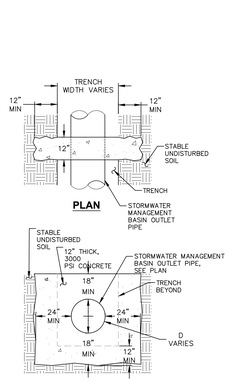
UNDERGROUND INFILTRATION/ DETENTION SYSTEM DETAIL
NOT TO SCALE





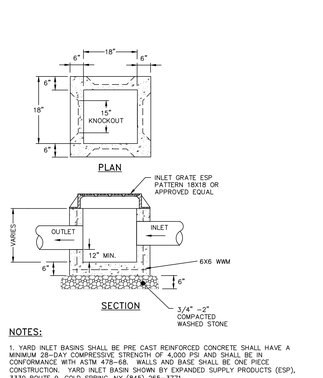
NOTES:
1. PROVIDE AN INSPECTION PORT FOR THE INITIAL AND FINAL CHAMBER OF EACH ROW, AND FOR ROWS WITH MORE THAN 10 CHAMBERS, ONE IN AN INTERMEDIATE CHAMBER.

UNDERGROUND DETENTION SYSTEM INSPECTION PORT DETAIL
NOT TO SCALE



NOTES:
1. TO BE PROVIDED AT INFILTRATION BASIN A.

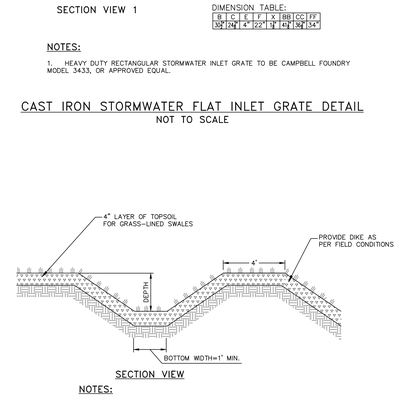
ANTI-SEEP COLLAR DETAIL
NOT TO SCALE



NOTES:

1. YARD INLET BASINS SHALL BE PRE CAST REINFORCED CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,000 PSI AND SHALL BE IN CONFORMANCE WITH ASTM 478-68. WALLS AND BASE SHALL BE ONE PIECE CONSTRUCTION. YARD INLET BASIN SHOWN BY EXPANDED SUPPLY PRODUCTS (ESP), 3330 ROUTE 9, COLD SPRING, NY (845) 265-3771.
2. BACKFILL USING SELECT MATERIAL, COMPACTED IN 6" LIFTS.
3. SUMP SHALL BE 12".
4. FRAMES AND GRATES SHALL BE SET IN A FULL BED OF MORTAR.

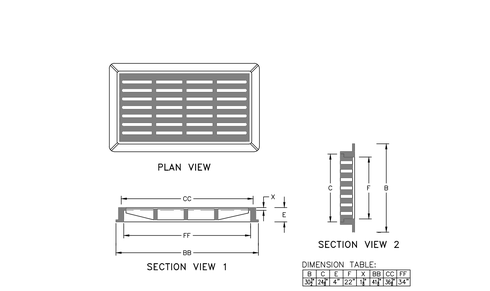
PRE-CAST CONCRETE YARD INLET DETAIL
NOT TO SCALE



NOTES:

1. MINIMUM 1' DEPTH AND 1' WIDTH FOR ALL SWALES.
2. SWALE SHALL BE SEEDED WITH FAST GERMINATING RYE 15 TO 25 POUNDS PER 1,000 SQUARE FEET AND MULCHED.

TEMPORARY GRASS LINED SWALE/DIKE DETAIL
NOT TO SCALE



EMERGENCY OVERFLOW WEIR TABLE

SWM ID	OVERFLOW WEIR ELEVATION (FT)	DIMENSION A (FT)	DIMENSION B (FT)	DIMENSION D (IN)
BIORETENTION AREA 1	90.0	6	3	12

NOTES:

1. RIP RAP OUTLET PROTECTION SHALL BE 15" OF LIGHT STONE FILLING. STONE FILLING SIZE d50=6", RIVER ROCK MAY BE SUBSTITUTED FOR ANGULAR STONE.

EMERGENCY OVERFLOW WEIR DETAIL
NOT TO SCALE

DIMENSION TABLE:

B	C	E	F	X	BB	CC	FF
30"	24"	4"	22"	3"	18"	36"	34"

NOTES:

1. HEAVY DUTY RECTANGULAR STORMWATER INLET GRATE TO BE CAMPBELL FOUNDRY MODEL 3433, OR APPROVED EQUAL.

CAST IRON STORMWATER FLAT INLET GRATE DETAIL
NOT TO SCALE

DRAWN BY: MAB	CHECKED BY: DGK

REVISIONS:

NO.	DATE	DESCRIPTION	BY
1	12/25/18	REVISED FOR PLANNING BOARD SUBMISSION	MAB
2	02/26/19	REVISED FOR PLANNING BOARD SUBMISSION	MAB
3	03/26/19	REVISED PER PLANNING BOARD COMMENTS	MAB
4	04/30/19	REVISED PER PLANNING BOARD COMMENTS	MAB
5	05/28/19	NO CHANGE THIS SHEET	MAB

REVISIONS:

NO.	DATE	DESCRIPTION	BY

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13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
PH: 845-440-6926
F: 845-440-6637

STORMWATER DETAILS

23-28 CREEK ROAD

23-28 CREEK ROAD
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 6054-37-037625

JOB #:	2016:029
DATE:	10/23/2018
SCALE:	AS SHOWN
TITLE:	D-2
SHEET:	11 OF 12

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW