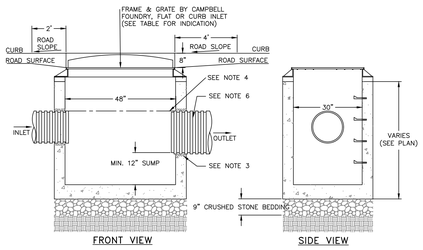
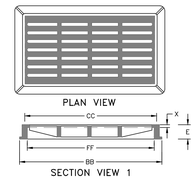



NOTES:
1. PRECAST CONCRETE CATCH BASIN WITH CONCRETE STRENGTH OF 4,000 PSI @ 28 DAYS.
2. THE ENDS OF ALL PIPES SHALL BE CUT OFF FLUSH WITH THE INSIDE SURFACE OF THE CATCH BASIN AND PARGED AROUND.
3. PIPES SHALL BE PARGED AROUND INTERIOR AND EXTERIOR PRIOR TO BACKFILLING OF STRUCTURE. CONNECTIONS MADE 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



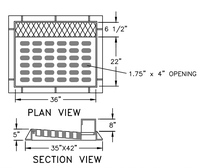

DIMENSION TABLE:

| B | C | E | F | X | BB | CC | FF |
|---|---|---|---|---|---|---|---|
| 30" | 24" | 4" | 22" | 1" | 41" | 36" | 34" |

NOTES:
1. HEAVY DUTY RECTANGULAR STORMWATER INLET GRATE TO BE CAMPBELL FOUNDRY MODEL 3433, OR APPROVED EQUAL.
2. EQUIP OCS1 WITH THIS GRATE.

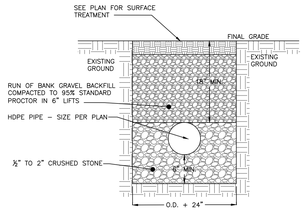
SECTION VIEW 1

## CAST IRON STORMWATER FLAT INLET GRATE DETAIL
NOT TO SCALE



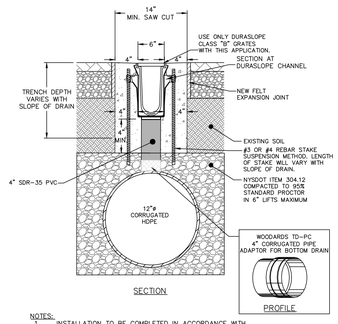

NOTES:
1. HEAVY DUTY RECTANGULAR STORMWATER INLET GRATE TO BE CAMPBELL FOUNDRY MODEL 2541, OR APPROVED EQUAL.
2. CATCH BASINS TO RECEIVE CURB INLETS ARE: CB 1 AND WQI 1.

## CAST IRON STORMWATER CURB INLET GRATE DETAIL
NOT TO SCALE



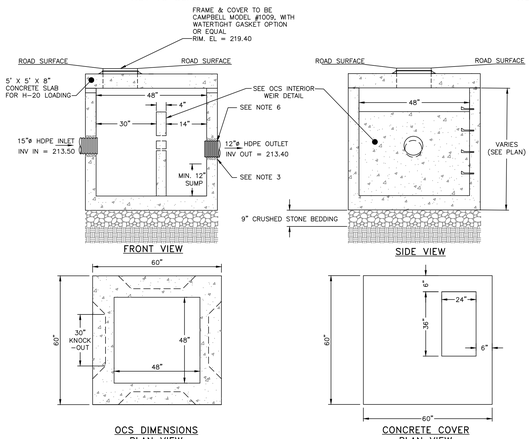

NOTES:
1. EXCAVATION AND TRENCHING SHALL MEET ALL OSHA REQUIREMENTS.

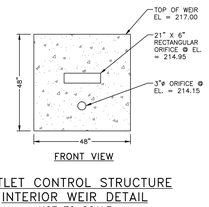
## STORMWATER PIPE IN TRENCH DETAIL
NOT TO SCALE




NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS:
2. TRENCH DRAIN SHALL BE NDS DURA-SLOPE TRENCH DRAIN, CLASS B LOADING, MODEL NUMBER: DS-091N OR APPROVED EQUAL.
3. PIPE ADAPTOR FOR BOTTOM DRAIN SHALL BE WOODARDS 4" CORRUGATED PIPE ADAPTOR, MODEL NUMBER: TD-PC OR APPROVED EQUAL.

## NDS DURA-SLOPE TRENCH DRAIN WITH CONNECTION TO STORMWATER CONVEYANCE
NOT TO SCALE



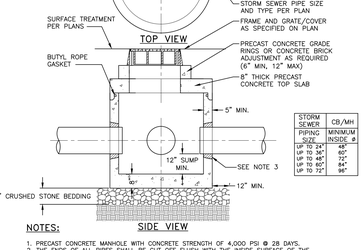




## OUTLET CONTROL STRUCTURE INTERIOR WEIR DETAIL
NOT TO SCALE




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.

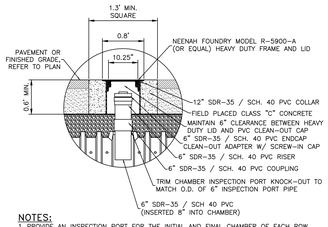
## UNDERGROUND INFILTRATION CHAMBER OUTLET CONTROL STRUCTURE DETAIL
NOT TO SCALE




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

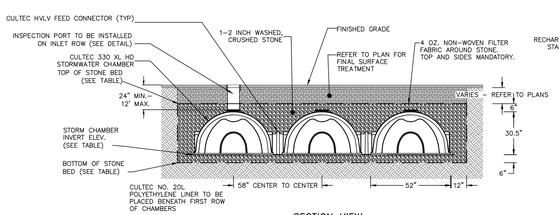
NOTES:
1. PRECAST CONCRETE MANHOLE WITH CONCRETE STRENGTH OF 4,000 PSI @ 28 DAYS.
2. THE ENDS OF ALL PIPES SHALL BE CUT OFF FLUSH WITH THE INSIDE SURFACE OF THE MANHOLE AND PARGED AROUND.
3. PIPES SHALL BE PARGED AROUND INTERIOR AND EXTERIOR PRIOR TO BACKFILLING OF STRUCTURE. 4. CONCRETE STRUCTURE AND 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

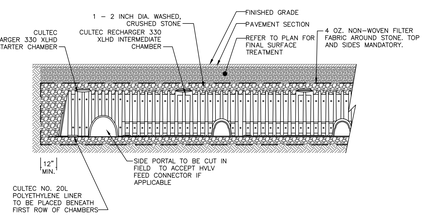



NOTES:
1. PROVIDE AN INSPECTION PORT FOR THE INITIAL AND FINAL CHAMBER OF EACH ROW, AND FOR ROWS WITH MORE THAN 10 CHAMBERS, ONE IN AN INTERMEDIATE CHAMBER.

## UNDERGROUND DETENTION SYSTEM INSPECTION PORT DETAIL
NOT TO SCALE

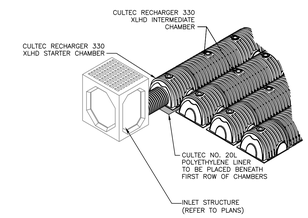


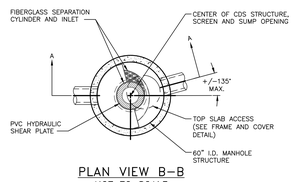

NOTES:
1. CULTEC RECHARGER 330XLHD CHAMBERS BY CULTEC, INC. OF BROOKFIELD, CT. ALL CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH CULTEC INC.'S CURRENT RECOMMENDED INSTALLATION GUIDELINES.
2. THE BED OF THE SYSYTEM FOOTPRINT SHALL BE LAID NEARLY LEVEL.
3. EACH ROW OF CHAMBERS SHALL BE FED VIA A 12" MANIFOLD 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 UTILITY SHEET.



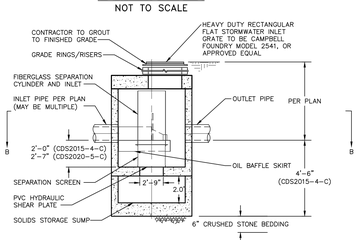

| SYSTEM ID | BOTTOM OF STONE BED ELEVATION | CHAMBER INVERT | TOP OF STONE BED ELEVATION | STONE BED FOOTPRINT |
|---|---|---|---|---|
| A | 213.55 | 214.05 | 217.10 | 2,346 S.F. |

## UNDERGROUND DETENTION SYSTEM DETAIL
NOT TO SCALE




## PLAN VIEW B-B
NOT TO SCALE




## SECTION VIEW A-A
NOT TO SCALE

| WQI ID | CDS MODEL |
|---|---|
| 1 | CDS2015-4 |

NOTES:
1. STORMWATER TREATMENT SYSTEM (SWTS) SHALL BE DESIGNED TO MEET PERFORMANCE GOALS BASED ON FULL SCALE LABORATORY PERFORMANCE DATA.
2. SWTS SHALL BE DESIGNED TO RETAIN FLOATABLES AND TRAPPED SEDIMENT AT FLOW RATES UP TO AND INCLUDING PEAK TREATMENT CAPACITY.
3. SWTS INVERTS IN AND OUT SHALL BE AT THE SAME ELEVATION.
4. SWTS SHALL NOT BE COMPROMISED BY EFFECTS OF DOWNSTREAM TAILWATER.
5. SWTS SHALL HAVE NO INTERNAL COMPONENTS THAT OBSTRUCT MAINTENANCE ACCESS.
6. PIPE ORIENTATION MAY VARY; SEE SITE PLAN FOR SIZE AND LOCATION.
7. PURCHASER SHALL NOT BE RESPONSIBLE FOR ASSEMBLY OF INTERNAL COMPONENTS.
8. ONE MANHOLE FRAME AND COVER SUPPLIED WITH SYSTEM, NOT INSTALLED.
9. PURCHASER TO PREPARE EXCAVATION AND PROVIDE LIFTING EQUIPMENT.
10. STRUCTURE SHALL MEET AASHTO HS20 AND CASTINGS SHALL MEET AASHTO M306 LOAD RATING, ASSUMING GROUNDWATER AT, OR BELOW THE OUTLET PIPE INVERT ELEVATION.
11. PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.
12. SEE UTILITY PLAN FOR PIPE ORIENTATION, INVERTS AND SIZES.

## CDS® PRE-TREATMENT UNIT DETAIL
NOT TO SCALE

CHECKED BY: DGK

DRAWN BY: CMB

REVISIONS:

| NO. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | 12/25/18 | PER PLANNING BOARD COMMENTS | CMB |
| 2 | 1/29/19 | PER PLANNING BOARD COMMENTS | CMB |
| 3 | 3/29/19 | NO CHANGES MADE THIS SHEET | AG |

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PROFESSIONAL ENGINEERING P.C.
174 MAIN ST., BEACON, NEW YORK 12508
13 CHAMBERS ST., NEWBURGH, NEW YORK 12550
T: 845-440-0657
F: 845-440-0657

SEAL

CONSTRUCTION DETAILS

511 FISHKILL AVENUE

511 FISHKILL AVENUE
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 6055-104-306250

JOB #: 2018041
DATE: 11/27/18
SCALE: AS SHOWN
TITLE: CD-2
SHEET: 13 OF 13