

PROPOSED SINGLE FAMILY DWELLING 11 MYRTLE AVENUE VILLAGE OF DOBBS FERRY WESTCHESTER COUNTY - NEW YORK

STORMWATER MANAGEMENT PLAN

**HUDSON** 

Checked By: M.

ENGINEERING CONSULTING, P.C Knollwood Road — Suite 20 Elmsford, New York 10523

T: 914-909-0420 F: 914-560-2086

ANY ALTERATIONS OR REVISIONS OF THESE PLANS, UNLESS DONE BY OR UNDER THE DIRECTION OF THE NYS LICENSED AND REGISTERED ENGINEER THAT PREPARED THEM, IS A VIOLATION OF THE NYS EDUCATION LAW.

ALL EROSION CONTROL MEASURES REMOVED AND GRASS ESTABLISHED.

CALL FOR INSPECTION FROM THE APPROPRIATE MUNICIPAL AGENCY HAVING

SPREAD TOPSOIL EVENLY OVER AREAS TO BE SEEDED. HAND RAKE LEVEL.

AREA TO BE SEEDED. APPLY STRAW MULCH AND WATER WITHIN 2 DAYS OF

COMPLETION OF TOPSOILING. CALL FOR INSPECTION FROM THE APPROPRIATE

MUNICIPAL AGENCY HAVING JURISDICTION AT LEAST 2 DAYS PRIOR TO FINISH.

CALL FOR INSPECTION FROM THE APPROPRIATE MUNICIPAL AGENCY HAVING

INSPECTION BY MUNICIPALITY - FINAL LANDSCAPING

JURISDICTION AT LEAST 2 DAYS PRIOR TO FINISH.

INSPECTION BY MUNICIPALITY - FINAL INSPECTION

JURISDICTION AT LEAST 2 DAYS PRIOR TO FINISH.

GRASS ESTABLISHED.

BROADCAST 1.25 LB. BAG OF JONATHAN GREEN "FASTGROW" MIX OR EQUAL OVER

12. ADJOINING PUBLIC AND PRIVATE PROPERTY SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION, EROSIÓN DURING CONSTRUCTION OR DEMOLITION ACTIVITIES. THE PERSON MAKING OR CAUSING AN EXCAVATION TO BE MADE SHALL PROVIDE WRITTEN NOTICE TO THE OWNERS OF ADJOINING BUILDINGS ADVISING THEM THAT THE EXCAVATION IS TO BE MADE AND THAT THE ADJOINING BUILDING SHOULD BE STARTING DATE OF THE EXCAVATION.

REMODELING AND DEMOLITION WORK. PROTECTION MUST BE PROVIDED FOR FOOTINGS, FOUNDATIONS, PARTY WALLS, CHIMNEYS, SKYLIGHTS AND ROOFS. PROVISIONS SHALL BE MADE TO CONTROL WATER RUNOFF AND PROTECTED. SAID NOTIFICATION SHALL BE DELIVERED NOT LESS THAN 10 DAYS PRIOR TO THE SCHEDULED

13. OWNER SHALL INSURE THAT THE INSURANCE PROVIDED BY THE CONTRACTOR HIRED TO PERFORM THE WORK SHALL BE ENDORSED TO NAME HUDSON ENGINEERING & CONSULTING, P.C., AND ANY DIRECTORS, OFFICERS, EMPLOYEES, SUBSIDIARIES, AND AFFILIATES, AS ADDITIONAL INSURED ON ALL POLICIES AND HOLD HARMLESS DOCUMENTS, AND SHALL STIPULATE THAT THIS INSURANCE IS PRIMARY, AND THAT ANY OTHER INSURANCE OR SELF-INSURANCE MAINTAINED BY HUDSON ENGINEERING & CONSULTING, P.C., SHALL BE EXCESS ONLY AND SHALL NOT BE CALLED UPON TO CONTRIBUTE WITH THIS INSURANCE. ISO ADDITIONAL INSURED ENDORSEMENT FORM NUMBER CG2010 1185 UNDER GL. COPIES OF THE INSURANCE POLICIES SHALL BE SUBMITTED TO HUDSON ENGINEERING & CONSULTING, P.C., FOR APPROVAL PRIOR TO THE SIGNING OF THE

CONTRACT 14. INDUSTRIAL CODE RULE 753: THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES 72 HOURS PRIOR TO THE START OF HIS OPERATIONS AND SHALL COMPLY WITH ALL THE LATEST INDUSTRIAL CODE RULE 753 REGULATIONS.

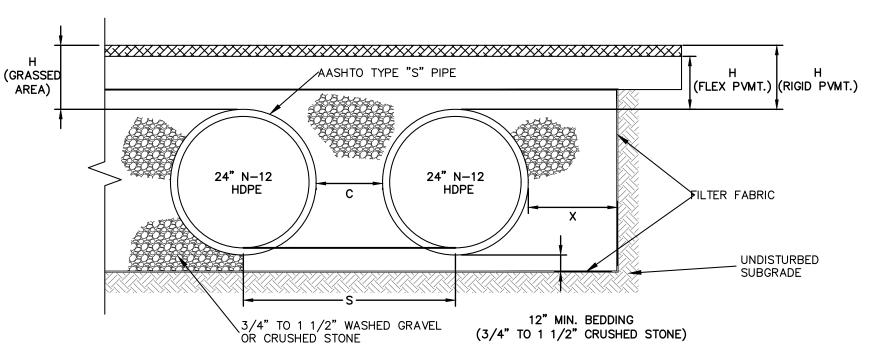
TEST HOLE #1 DEPTH - 75" 0-6" TOPSOIL 6-75" LOOSELY COMPACTED BROWN SANDY LOAM NO GROUNDWATER LEDGE ROCK AT 75" PERC. = 8.99 INCHES/HOUR (DESIGN =8 INCHES/HOUR)

TEST HOLE #2

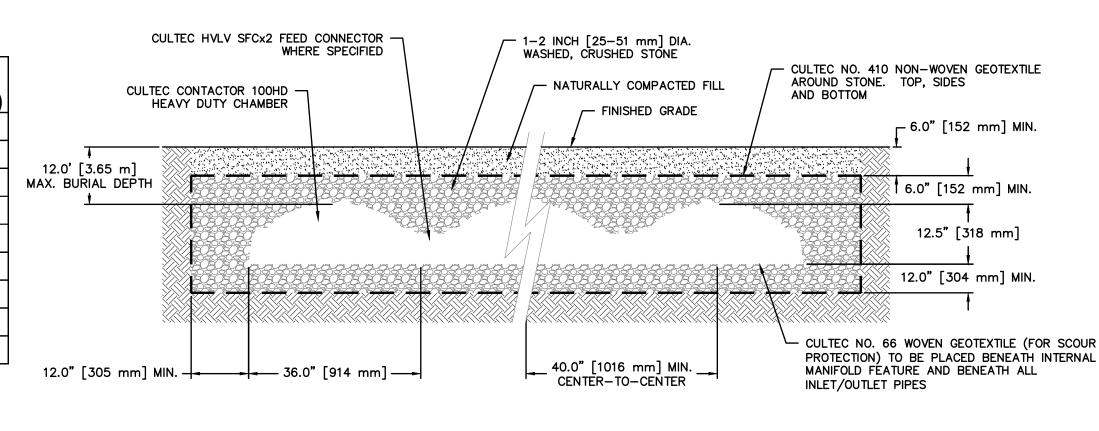
DEPTH - 41" 0-6" TOPSOIL 6-41" LOOSELY COMPACTED BROWN SANDY LOAM WITH ROCKS NO GROUNDWATER LEDGE ROCK AT 41"

11 MYRTLE AVENUE STORMWATER MANAGEMENT PLAN BASED UPON EXISTING INFORMATION PROVIDED BY SUMMIT LAND SURVEYING P.C., NOVEMBER 20, 2018

GRAPHIC SCALE ( IN FEET ) 1 inch = 10 ft.



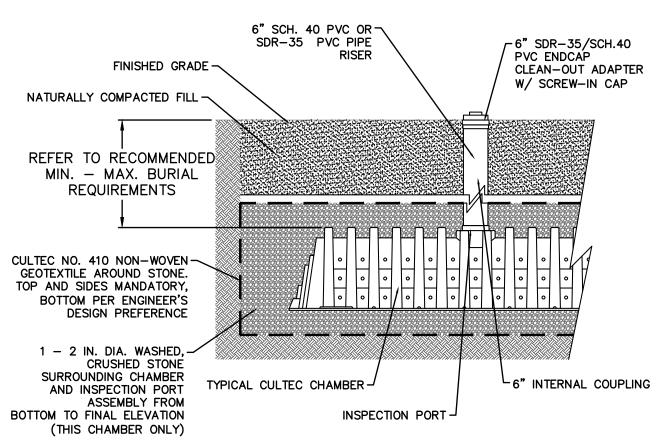
NOMINAL	NOMINAL	TYPICAL	TYPICAL	TYPICAL SIDE	н	н
DIAMETER	O.D.	SPACING "C"	SPACING "S"	WALL "X"	(NON-TRAFFIC)	(TRAFFIC)
12"	14.5"	11"	25.4"	8"	12"	12"
15"	18"	12"	28.9"	8"	12"	12"
18"	21"	17"	33.9"	9"	12"	12"
24"	28"	13"	40.7"	10"	12"	12"
30"	36"	18"	53.1"	18"	12"	12"
36"	42"	22"	63"	18"	12"	12"
42"	48"	24"	71.9"	18"	12"	24"
48"	54"	25"	78.5"	18"	12"	24"
60"	67"	24"	90''	18"	12"	24"



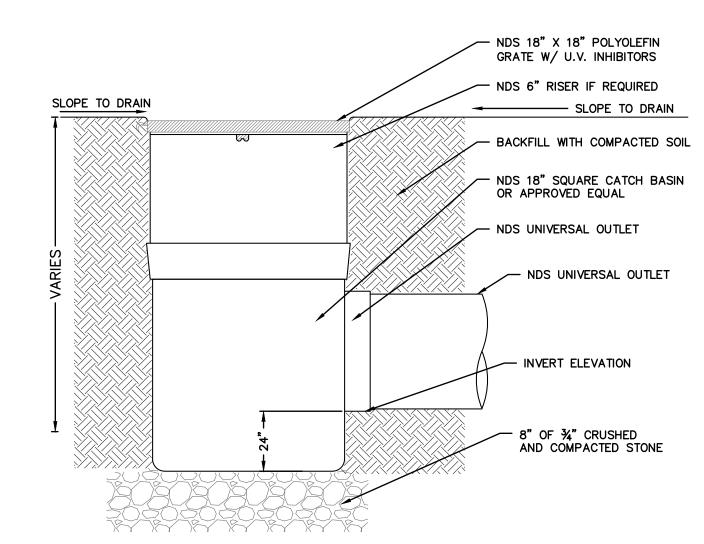
# ATTENUATION GALLERY SECTION

1. ALL REFERENCES TO CLASS I OR II MATERIAL ARE PER ASTM D2321 "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION.

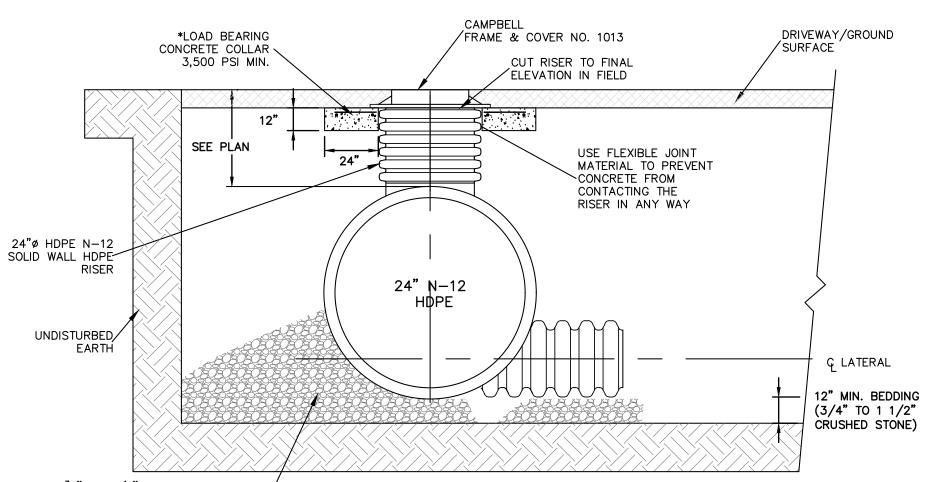
- 2. THE ATTENUATION GALLERY SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, LATEST EDITION AND THE MANUFACTURER'S PUBLISHED INSTALLATION GUIDELINES. MEASURES SHOULD BE TAKEN TO PREVENT THE MIGRATION OF NATIVE FINES INTO THE
- BACKFILL MATERIAL, WHEN REQUIRED. SEE ASTM D2321. FILTER FABRIC: A GEOTEXTILE FABRIC SHALL BE USED AS SPECIFIED BY THE ENGINEER TO PREVENT THE MIGRATION OF FINES FROM THE NATIVE SOIL INTO THE SELECT BACKFILL
- 5. <u>FOUNDATION:</u> WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
- BEDDING: SUITABLE MATERIAL SHALL BE 34" TO 11/2" WASHED GRAVEL OR CRUSHED STONE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 12" MINIMUM.
- 7. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE 34" TO 11/2" WASHED GRAVEL OR CRUSHED STONE. IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
- MINIMUM COVER: MINIMUM COVER OVER ALL ATTENUATION GALLERIES IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER IS 12" UP TO 36" DIAMETER PIPE AND 24" OF COVER FOR 42" - 60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.
- 9. ALL PIPE STUBS, ORIFICE PLATES, FITTINGS, BENDS, TEES, ETC. SHALL BE MANUFACTURED AT THE FACTORY.



### CULTEC ACCESS PORT



NDS SQUARE CATCH BASIN



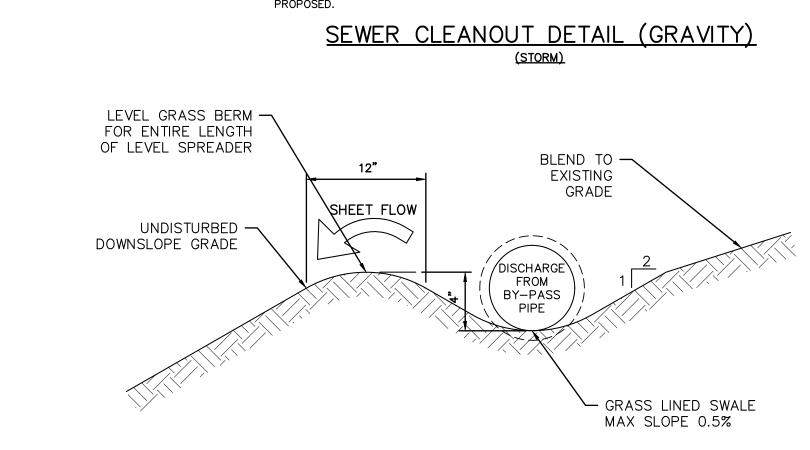
34" TO 11/2" WASHED GRAVEL ACCESS MANHOLE STRUCTURE OR CRUSHED STONE., COMPACTED IN MAX. 8" LOOSE LIFTS TO 95% MIN. OF MAX. SPD \* LOAD BEARING CONCRETE COLLAR SHALL BE CONSTRUCTED

IN TRAFFIC AREAS SUCH THAT THE LIVE LOAD IS TRANSMITTED

TO THE SURROUNDING SOIL AND NOT DIRECTLY TO THE RISER.

┌ 3' LONG NDS CHANNEL GRATE (NDS PART # 540, 541, 542, 543, OR 544) COLOR TO BE SELECTED BY OWNER RECESSED 1/8" PAVING STONES MORTAR JOINT CHANNEL DRAIN POURED CONCRETE MINIMUM 4" THICK 4x4 W2.9/2.9 WELDED WIRE MESH PIPING SPACED NDS ANCHOR STAKE
OR APPROVED EQUAL 6" COLLECTION . PIPING SLOPED @ 36" O.C. **@** 2.0% NDS MINI CHANNEL DRAIN

12" O.D. 12"



LEVEL SPREADER

NOTES (STORM SEWED)



12"+ 1/2 DIA. COMPACTED

SELECT GRANULAR MATERIAL

TRENCH BEDDING

#### GENERAL NOTES CONTACTOR 100HD BY CULTEC, INC. OF BROOKFIELD, CT. STORAGE PROVIDED = $3.84 \text{ CF/FT} [0.82 \text{ M}^3/3] \text{ PER DESIGN UNIT.}$ REFER TO CULTEC, INC.'S CURRENT RECOMMENDED INSTALLATION GUIDELINES. MAXIMUM ALLOWED COVER ON TOP OF UNIT SHALL BE 12.0' [3.66 m]

THE CHAMBER WILL BE DESIGNED TO WITHSTAND TRAFFIC LOADS

CAP

4" SDR-35 PVC -

45° BEND

REFER TO PLAN FOR SPECIFIC PIPE SIZING AND SLOPE SPECIFICATIONS; HOWEVER, IN

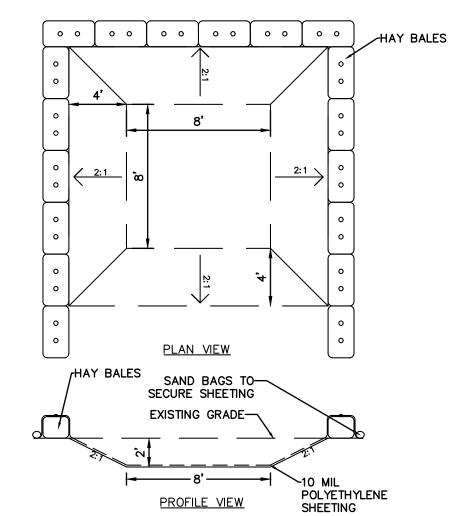
JUNCTIONS, 90-DEGREE BENDS, ETC.) UNLESS A ROOF LEADER DOWNSPOUT CONNECTION IS

GENERAL, ALL STORM SEWER SERVICES TO BE 6" SCH. 40 @ 1.0% MINIMUM.

2. CLEANOUTS SHALL BE PLACED BEFORE SIGNIFICANT PIPE BEND LOCATIONS (I.E.,

WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.ALL CONTACTOR 100HD HEAVY DUTY UNITS ARE MARKED WITH A COLOR STRIPE FORMED INTO THE PART ALONG THE LENGTH OF THE CHAMBER. ALL CONTACTOR 100 CHAMBERS MUST BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.

#### CULTEC CONTACTOR 100HD



# NOTES:

- 1. CONCRETE WASHOUT AREA TO BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE. CONCRETE WASHOUT AREA TO BE ENTIRELY SELF CONTAINED 2. HAY BALES SHALL BE PROVIDED AROUND THE PERIMETER OF CONCRETE WASHOUT
- AREA FOR CONTAINMENT. 3. WASHOUT AREA SHALL BE LINED WITH PLASTIC SHEETING NO THINNER THAN 10 MILS. SHEETING SHALL HAVE NO HOLES OR TEARS AND SHALL BE ANCHORED BY SAND BAGS ON ALL SIDES EXCEPT ACCESS SIDE. PLASTIC LINING TO BE REPLACED WITH
- EACH CLEANING 4. SIGNS SHALL BE PROVIDED AT THE CONSTRUCTION ENTRANCE AND CONCRETE AREAS
- INDICATING LOCATION OF WASHOUT AREA. . WASHOUT AREA TO BE ENCLOSED IN CONSTRUCTION FENCE
- 5. WASHOUT AREAS TO BE INSPECTED DAILY TO ENSURE LINER IS INTACT AND ADEQUATE CAPACITY IS AVAILABLE AT ALL TIMES. WASHOUT AREAS SHALL BE INSPECTED IMMEDIATELY AFTER HEAVIER RAINS. DAMAGED OR LEAKING WASHOUT AREAS TO BE DEACTIVATED AND REPAIRED IMMEDIATELY.
- 7. CONCRETE WASTE SHALL BE REMOVED AND DISPOSED OF ONCE IT REACHES THREE-QUARTERS OF THE WASHOUT AREA'S HEIGHT. ALL WASTE SHALL BE DISPOSED OF IN A MANNER CONSISTENT WITH APPLICABLE LAWS, REGULATIONS, AND GUIDELINES OF MUNICIPALITY.

# CONCRETE WASHOUT AREA

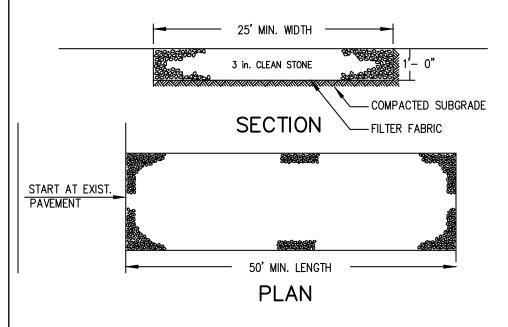
# STABILIZE ENTIRE PILE WITH VEGETATION OR COVER SLOPE OR LESS MIN. SLOPE MIN. SLOPE - SILTFENCE **INSTALLATION NOTES**

SOIL STOCKPILING

INSTALLATION NOTES: 1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. SOILS OR FILL TO BE STOCKPILED ON SITE DURING CUTTING AND FILLING ACTIVITIES SHOULD BE LOCATED ON LEVEL PORTIONS OF THE SITE WITH A MINIMUM OF 50-75 FOOT SETBACKS FROM TEMPORARY DRAINAGE SWALES. 3. MAXIMUM SLOPE OF STOCKPILE SHALL BE 1:2. 4. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH EITHER SILT FENCING OR STRAWBALES, THEN STABILIZED WITH VEGETATION OR COVERED.

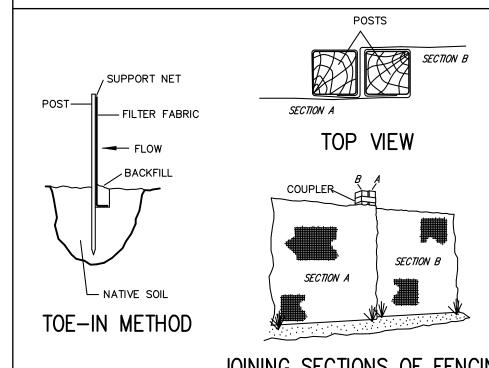
5. STOCKPILES REMAINING IN PLACE FOR MORE THAN A WEEK SHOULD BE SEEDED AND MULCHED OR COVERED WITH GEOTEXTILE FABRIC SURROUNDED BY SILT FENCE. 6. SEE SPECIFICATIONS (THIS MANUAL) FOR INSTALLATION OF SILT FENCE.

#### STABILIZED CONSTRUCTION ENTRANCE



1. STONE SIZE - USE 3" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT. 2. LENGTH — AS REQUIRED, BUT NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY. 3. THICKNESS - NOT LESS THAN SIX (6) INCHES. 4. WIDTH - 25 FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCUR. 5. FILTER CLOTH — WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE FILTER CLOTH WILL NOT BE REQUIRED ON A SINGLE FAMILY RESIDENCE LOT. 6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE — THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT OF WAY THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED. DROPPED. WASHED OR TRACKED ONTO PUBLIC RIGHT OF WAY MUST BE REMOVED IMMEDIATELY. 8. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT OF WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. 9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

# SILT FENCE

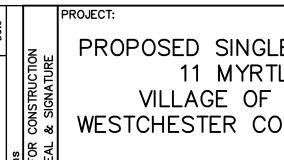


JOINING SECTIONS OF FENCING

#### **INSTALLATION NOTES:**

1. EXCAVATE A 4 INCH \* 4 INCH TRENCH ALONG THE LOWER PERIMETER OF THE SITE. 2. UNROLL A SECTION AT A TIME AND POSITION THE POSTS AGAINST THE BACK (DOWNSTREAM)WALL OF THE TRENCH (NET SIDE AWAY FROM DIRECTION OF FLOW).
3. DRIVE THE POST INTO THE GROUND UNTIL THE NETTING IS APPROXIMATELY 2 INCHES FROM THE TRENCH BOTTOM.

4. LAY THE TOE-IN FLAP OF FABRIC ONTO THE UNDISTURBED BOTTOM OF THE TRENCH,
BACKFILL THE TRENCH AND TAMP THE SOIL. STEEPER SLOPES REQUIRE AN INTERCEPT 5. JOIN SECTIONS AS SHOWN ABOVE



PROPOSED SINGLE FAMILY DWELLING 11 MYRTLE AVENUE VILLAGE OF DOBBS FERRY WESTCHESTER COUNTY - NEW YORK

STORMWATER MANAGEMENT PLAN



**HUDSON** 

ENGINEERING CONSULTING, P. C Knollwood Road — Suite 20 Elmsford, New York 10523

Checked By: M.

ANY ALTERATIONS OR REVISIONS OF THESE PLANS, UNLESS DONE BY OR UNDER THE DIRECTION OF THE NYS LICENSED AND REGISTERED ENGINEER THAT PREPARED THEM, IS A VIOLATION OF THE NYS EDUCATION LAW.

T: 914-909-0420 F: 914-560-2086