

<u>EROSION CONTROL SEQUENCE</u>

MEASURES SHALL BE TAKEN TO PREVENT SOIL EROSION DURING PROJECT CONSTRUCTION. ALL FRESHLY DISTURBED AREAS THAT WILL REMAIN DISTURBED FOR MORE THAN A PERIOD OF FOURTEEN (14) DAYS SHALL BE STABILIZED BY TEMPORARY SEEDING AS INDICATED ON THE TEMPORARY SEEDING SCHEDULE. DISTURBED AREAS SHALL BE MINIMAL IN SIZE AND SHALL NOT EXCEED THE APPROVED CLEARING AND GRADING LIMITS. THE FOLLOWING MEASURES SHALL BE IMPLEMENTED AS CONSTRUCTION PROGRESSES.

- A. PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES, THE LIMITS OF CLEARING AND GRADING SHALL BE MARKED. FILTER FABRIC SEDIMENTATION BARRIERS (SILT FENCE) SHALL BE PLACED ALONG THE DOWNGRADE PERIMETER OF THE SITE AND ANY OTHER AREAS WHERE SILT FENCE IS INDICATED AS TO BE INSTALLED "PRIOR TO CONSTRUCTION" ON THE APPROVED PLANS. INSTALLATION IS TO BEGIN AT THE DOWNSTREAM PORTIONS OF THE SITE THEN WORKING UPSTREAM.
- B. STABILIZED CONSTRUCTION ENTRANCES SHALL BE BUILT IN THE AREAS SHOWN ON THE APPROVED PLANS AND WHEREVER A CONSTRUCTION ACCESS ROAD INTERSECTS ANY PUBLIC THROUGHFARE. STABILIZED ENTRANCES SHALL BE BUILT IN ACCORDANCE WITH THE STABILIZED CONSTRUCTION ENTRANCE DETAIL.
- UPON COMPLETION OF CLEARING AND GRUBBING ACTIVITIES, TOPSOIL SHALL BE STRIPPED AND STOCKPILED FROM ALL AREAS TO BE DISTURBED. STOCKPILED TOPSOIL SHALL BE STABILIZED BY TEMPORARY SEEDING AND SURROUNDED WITH A PERIMETER SILT FENCE.
- D. TEMPORARY EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO COMMENCING EARTH MOVING ACTIVITIES THIS INCLUDES SEDIMENTATION TRAPS, TYPE "B" DIVERSION SWALES (WITH CHECK DAMS IF APPLICABLE) AND SILT FENCE IN AREAS NOT DESIGNATED TO BE GRADED. INSTALLATION SHALL BEGIN AT DOWNSTREAM PORTIONS THE SITE THEN WORKING UPSTREAM. INFILTRATION AND FILTERING PRACTICES, SUCH AS SAND FILTERS AND BIORETENTION PONDS SHALL NOT HAVE INFILTRATION AND FILTER MEDIA INSTALLED UNTILL ALL TRIBUTARY AREAS HAVE BEEN SUBSTANTIALLY STABILIZED.
- IMMEDIATELY AFTER COMPLETION OF ROUGH GRADING, REMAINING TEMPORARY EROSION CONTROL SHALL BE INSTALLED AS SPECIFIED ON THE APPROVED PLANS. THIS INCLUDES ANY REMAINING SILT FENCE AND TYPE "A" DIVERSION SWALES (WITH CHECK DAMS IF APPLICABLE). AREAS NOT REQUIRING FURTHER EARTHWORK SHALL BE FINE GRADED, TOPSOILED, AND STABILIZED AS EARLY AS POSSIBLE.
- ANY PROPOSED STORM DRAINAGE SHALL BE INSTALLED AND INCORPORATED INTO EROSION CONTROL AS SPECIFIED ON THE APPROVED PLANS. STORM DRAINAGE COMPONENTS SHALL BE PROTECTED FROM SILTATION AS
- G. UPON COMPLETION OF CONSTRUCTION ACTIVITES, REMAINING AREAS SHALL BE FINE GRADED, TOPSOILED, AND STABILIZED. PERMANENT VEGETATION AND LANDSCAPING SHALL BE ESTABILISHED
- H. TEMPORARY EROSION CONTROL DEVICES SHALL BE REMOVED ONCE UPSTREAM AREAS HAVE BEEN PERMANENTLY STABILIZED. REMOVAL OF TEMPORARY EROSION CONTROL DEVICES SHALL BEGIN WITH THE MOST UPSTREAM PORTIONS OF THE SITE THEN WORKING DOWNSTREAM.
- I. ALL NEWLY SEEDED VEGETATIVE COVER SHALL BE MAINTAINED. WASHOUTS OR POORLY GROWING AREAS SHALL BE CORRECTED AS THEY OCCUR.

GENERAL EROSION CONTROL NOTES

- FILTER FABRIC IS TO BE MIRAFI 140 AS MANUFACTURED BY THE CELANESE CORPORATION OR APPROVED EQUAL. WHEREVER FEASIBLE, NATURAL VEGETATION SHOULD BE RETAINED AND PROTECTED. ONLY THE SMALLEST PRACTICAL AREA OF LAND SHOULD BE EXPOSED AT ANY ONE TIME DURING DEVELOPMENT. 4. WHEN LAND IS EXPOSED DURING DEVELOPMENT, THE EXPOSURE SHALL BE KEPT TO THE SHORTEST PRACTICAL
- PERIOD OF TIME. 5. ALL WORK SHALL BE IN ACCORDANCE WITH ALL OF THE ATTACHED DRAWINGS.

<u>MAINTENANCE REQUIREMENTS</u>

- 1. THE MAINTENANCE OF EROSION CONTROL DEVICES WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE JOB SUPERINTENDENT WILL MONITOR THE CONDITION OF ALL THE DEVICES, CLEAN AND REPLACE STRUCTURES AS CLIMATIC CONDITIONS REQUIRE, THE DEVELOPER WILL ALSO BE SUBJECT TO THE DIRECTIVE OF THE DESIGN ENGINEER AND TOWN REPRESENTATIVES TO INCLUDE TOWN ENGINEER, HIGHWAY SUPERINTENDENT AND BUILDING
- 2. GENERAL CONTRACTOR AND ALL CONTRACTORS SHALL PERFORM ALL WORK IN ACCORDANCE WITH THE APPROVED PLANS AND MAY BE SUBJECT TO ADDITIONAL EROSION CONTROL REQUIREMENTS AS CONDITIONS MAY
- ARISE IN THE FIELD OR AS DIRECTED BY THE DESIGN ENGINEER. 3. THE CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES IN ACCORDANCE WITH THE APPROVED PLANS. MANUFACTURER'S RECOMMENDATIONS, AS DIRECTED BY THE DESIGN ENGINEER AND TOWN REPRESENTATIVES
- INCLUDING TOWN ENGINEER, HIGHWAY SUPERINTENDENT AND BUILDING INSPECTOR 4. NO EROSION CONTROL STRUCTURES SHALL BE REMOVED UNTIL ALL WORK UPSTREAM THEREFROM HAS BEEN COMPLETED, INCLUDING STABILIZATION AND APPROVED BY THE DESIGN ENGINEER AND TOWN REPRESENTATIVES. CONSTRUCTION ACTIVITIES TO BE LIMITED TO THE PERIOD OF 7:00 AM TO 7:00 PM.
- 6. ALL CONSTRUCTION EQUIPMENT SHALL HAVE PROPERLY SIZED MAINTAINED MUFFLERS. ALL CONSTRUCTION EQUIPMENT SHALL BE TURNED OFF WHEN NOT IN USE.

SLOPE STABILIZATION, SEEDING METHOD & MULCHING

SLOPES SHALL BE HYDROSEEDED WITH THE MIXTURES AND RATES INDICATED IN THE PERMANENT SEEDING MIXTURE SCHEDULE. STRAW OR HAY MULCH SHALL BE APPLIED AT A RATE OF 2000 LBS/ACRE. STRAW OR HAY MULCH SHALL BE ANCHORED WITH BIOD-Mesh60 NETTING AS MANUFACTURED BY ROLANKA INTERNATIONAL OR APPROVED EQUIVALENT. NETTING TO BE INSTALLED PER MANUFACTURER SPECIFICATIONS.

GENTLE SLOPES AND FLAT AREAS

- AREAS SHALL BE SEEDED BY HYDROSEEDING OR BROADCASTING WITH THE MIXTURES AND RATES INDICATED ON THE PERMANENT SEEDING MIXTURE AND RATES INDICATED ON THE PERMANENT SEEDING MIXTURE SCHEDULE. HYDROSEEDED AREAS SHALL BE MULCHED WITH A WOOD FIBER MULCH APPLIED AT A RATE OF 500 LBS/ACRES. BROADCAST AREAS SHALL BE MULCHED WITH HAY OR STRAW AT A RATE OF 2000 LBS/ACRE. AREAS SEEDED BY BROADCASTING SHALL BE LIGHTLY RAKED AND PACKED PRIOR TO PLACING MULCH.

STREAMS, DRAINAGE SWALES AND EMBANKMENTS

- ALL CONSTRUCTION ACTIVITIES IN OR EXISTING AROUND DRAINAGE SWALES OR WETLANDS ARE TO BE PROVIDED WITH TEMPORARY EROSIION CONTROL STRUCTURES AS SHOWN IN DETAIL, LOCATED IMMEDIATELY DOWNSTREAM FROM SUCH ACTIVITY. THESE STRUCTURES ARE TO BE IN PLACE AS SHOWN PRIOR TO THE START OF ANY UPSTREAM CONSTRUCTION ACTIVITY.
- CONSTRUCTION EQUIPMENT SHALL NOT UNNECESSARILY CROSS LIVE STREAMS OR DRAINAGE SWALES EXCEPT BY MEANS OF BRIDGES AND CULVERTS OR OTHER APPROVED METHODS.
- ALL EMBANKMENTS TO BE GRADED AND SEEDED IMMEDIATELY UPON BEING LAID BACK. STABILIZATION OF THE SWALES WILL INCLUDE SEEDING AND STRAW MULCH ON SLOPES LESS THAN 5% AND JUTE NETTING OR EQUAL ON SLOPES EXCEEDING 5%.
- 5. TOPSOIL AND/OR EARTH STOCKPILE SHALL BE LOCATED OUTSIDE OF EXISTING DRAINAGE SWALES, WETLANDS AND ADJACENT AREAS. SILT FENCE WILL BE PLACED ALONG THE TOE OF THE PILES AND PILES SHALL RECEIVE

SOIL RESTORATION NOTE:

TO INCREASE INFILTRATION OF STORM WATER AND IMPROVE DIRECT GROUNDWATER RECHARGE FROM RAIN EVENTS, SOIL RESTORATION PRACTICES, AS OUTLINED IN CHAPTER 5.1.6 OF THE NEW YORK STATE STORMWATER MANAGEMENT DESIGN MANUAL, SHOULD BE APPLIED TO THE SITE. AERATION AND DEEP RIPPING PROCEDURES SHALL BE AS DESCRIBED IN APPENDIX 8 OF SWPPP, AND SHALL BE APPLIED TO ALL FLAT TO MODERATELY SLOPED AREAS OF SOIL DISTURBANCE WHICH ARE PROPOSED TO REMAIN PERVIOUS.

SEEDBED PREPARATION & AMENDMENTS

MODERATE TO STEEP SLOPES AND LOW MAINTENANCE AREAS

-SCARIFY SOIL TO DEPTH OF 4" TO 6" IF COMPACTED.

-REMOVED LARGE STONES AND STUMPS ALLOWING ROCKS, ROOTS CLODS AND OTHER NATURAL DEBRIS TO REMAIN.

-ROUGHEN SLOPE FACES BY MAKING GROVES 2"-3" DEEP, PERPENDICULAR TO THE SLOPE WITH DISK OR YORK RAKE. -LIME AS REQUIRED TO ACHIEVE A pH OF 6.0.

-FERTILIZE AT A RATE OF 600 LBS/ACRE OF 5-10-10 FERTILIZER OR AS RECOMMENDED BY SOIL TESTS.

-INCORPORATE LIME AND FERTILIZER INTO TOP 4" OF SOIL BY ROUGHENING.

GENERAL RECREATION AREAS AND LAWNS -PLACE TOPSOIL TO A MINIMUM DEPTH OF 4"

-SCARIFY SOIL TO A DEPTH OF 4"-6" IF COMPACTED -REMOVE ALL STONES OVER 1" IN DIAMETER, STICKS AND FOREIGN MATTER FROM THE SURFACE.

-LIME AS REQUIRED TO ACHIEVE A pH OF 6.5. -FERTILIZE AT A RATE OF 850 LBS/ACRE OF 5-10-10 OR EQUIVALENT

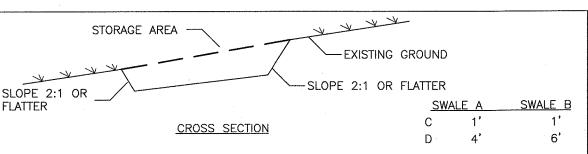
FERTILIZER OR AS RECOMMENDED BY SOIL TESTS. -INCORPORATE LIME AND FERTILIZER INTO TOP 2"-4" OF TOPSOIL. -SMOOTH AND FIRM THE SEEDBED.

TEMPORARY SEEDING SPECIFICATIONS

-SCARIFY SOILS IF COMPACTED -LIME TO pH OF 6.0 IF REQUIRED

-FERTILIZE WITH 600 LBS/ACRE 5-10-10 FERTILIZER IF REQ.. -SEED WITH SPECIES AND RATE SHOWN BELOW -MULCH WITH HAY OR STRAW AT A RATE OF 2000 LBS/ACRE. ANCHOR MULCH WITH NETTING OF WOOD FIBER OR JUTE IF STEEP SLOPE OR HIGH POTENTIAL FOR EROSION.

APPLICATION RATE RYEGRASS (ANNUAL OR PERENNIAL) 30 LBS/ACRE (0.7 LBS/1000 SF) (USE WINTER RYE IF SEEDING IN OCT./NOV.)



POSITIVE DRAINAGE: 0.5% OR STEEPER DEPENDENT ON TOPOGRAPHY OUTLET AS REQUIRED SEE ITEM 8 BELOW.

CONSTRUCTION SPECIFICATIONS

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PLAN VIEW

- 1. ALL TEMPORARY SWALES SHALL HAVE UNINTERUPTED POSITIVE GRADE TO AN OUTLET. 2. DIVERTED RUNOFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT
- 3. DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET DIRECTLY INTO AN UNDISTURBED STABILIZED AREA AT NON-EROSIVE VELOCITY.
- 4. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE SWALE.
- 5. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
- 6. FILLS SHALL BE COMPACTED BY EARTH MOVING EQUIPMENT.
- 7. ALL EARTH REMOVED AND NOT NEEDED FOR CONSTRUCTION SHALL BE PLACED SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE SWALE.

SEED AND STRAW MULCH

- 8. STABILIZATION SHALL BE AS PER THE FLOW CHANNEL STABILIZATION CHART BELOW: TREATMENT GRADE B(5 AC -10AC) SEED AND STRAW MULCH 0.5 - 3.0%SEED AND STRAW MULCH
- RECYCLED CONCRETE EQUIVALENT 8.1-20.% LINED WITH 4-8" RIP-RAP ENGINEERED DESIGN 9. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH

SEED WITH JUTE OR EXCELSIOR, SOD

RAIN EVENT.	
U.S. DEPARTMENT OF AGRICULTURE	
NATURAL RESOURCES CONSERVATION SERVICE	
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION	

NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

APPLICATION RATE

APPLICATION RATE

85-114 LBS/ACRE

26-35 LBS/ACRE

19-26 LBS/ACRE

114-143 LBS/ACRE

105-138 LBS/ACRE

25-37 LBS/ACRE

60-91 LBS/ACRE

25-39 LBS/ACRE

26-33 LBS/ACRE 35-44 LBS/ACRE

8 LBS/ACRE

5 LBS/ACRE

20 LBS/ACRE

PERMANENT SEEDING MIXTURES

GENERAL RECREATION AREAS AND LAWNS

<u>SPECIES</u>

TALL FESCUE

RYEGRASS

EMPIRE BIRDSFOOT TREFOIL

65% KENTUCKY BLUEGRASS BLEND

20% KENTUCKY BLUEGRASS BLEND

80% SHADE TOLERANT KENTUCKY

BLUEGRASS BLEND

80% SHADE TOLERANT KENTUCKY

BLUEGRASS BLEND

20% PERENNIAL RYEGRASS

70% ROUGH BLUEGRASS

20% PERENNIAL RYEGRASS

15% PERENNIAL RYEGRASS

15% FINE FESCUE

65% FINE FESCUE

MODERATE TO STEEP SLOPES AND LOW MAINTENANCE AREAS

SUNNY SITES (WELL, MODERATELY WELL AND SOMEWHAT POORLY

SUNNY DROUGHTY SITES (SOMEWHAT EXCESSIVELY TO EXCESSIVELY

SHADY DRY SITES (WELL TO SOMEWHAT POORLY DRAINED SOILS)

SHADY WET SITES (SOMEWHAT POOR TO POORLY DRAINED SOILS)

DRAINED SOILS)

DRAINED SOILS)

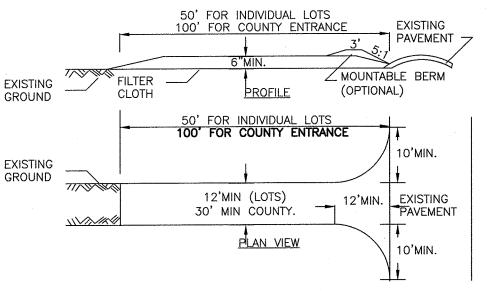
3.1-5.0%

5.1-8.0%

TEMPORARY SWALE

SEED USING JUTE OR EXCELSIOR

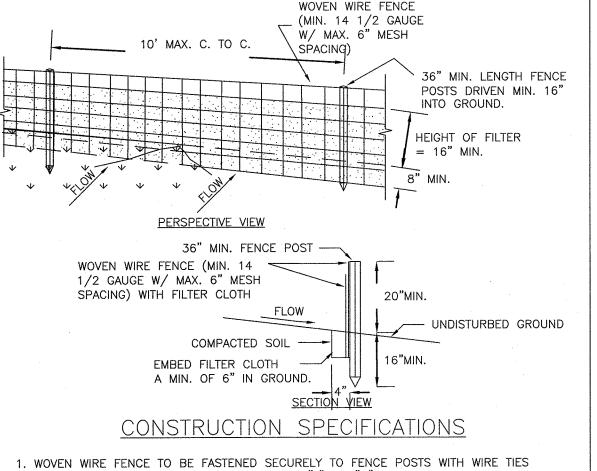
LINED WITH 4-8" RIP-RAP OR



CONSTRUCTION SPECIFICATIONS

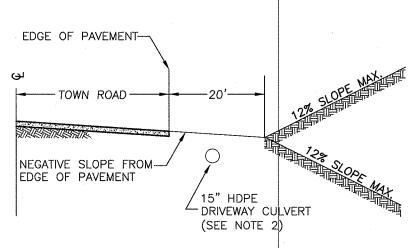
- 1. STONE SIZE USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT. 2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
- 3. THICKNESS NOT LESS THAN SIX (6) INCHES.
- 4. WIDTH TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE
- 5. FILTER CLOTH WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
- 6. SURFACE WATER ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CON-STRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS MPRACTICAL, 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 RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACTED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
- 8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
- 9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	STABILIZED CONSTRUCTION ENTRANCE
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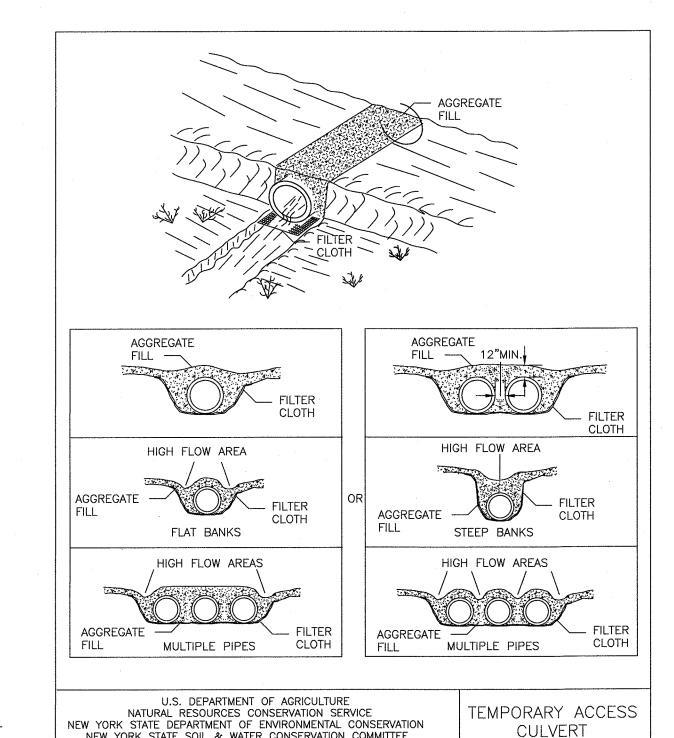
- OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
- 2. FILTER CLOTH TO BE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 12 1/2 GAUGE, 6" MAXIMUM MESH OPENING.
- 3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
- 4. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT. 5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN

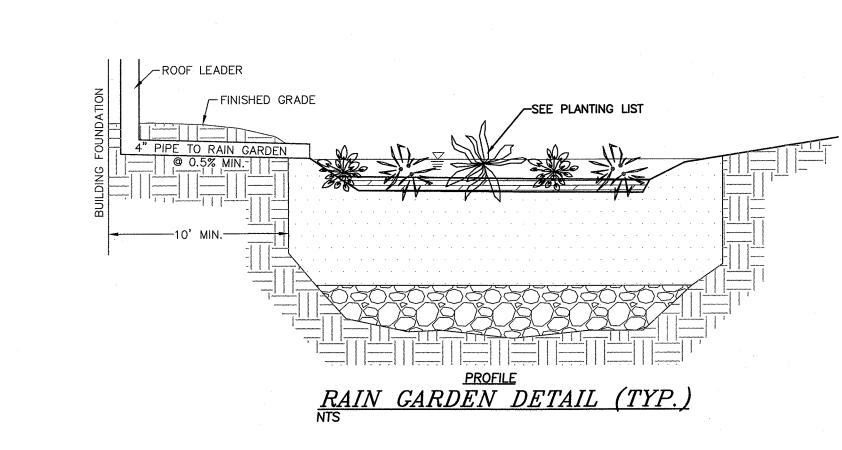
BOLGES DEVELOT IN THE SIET LENGE.	
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	SILT FENCE

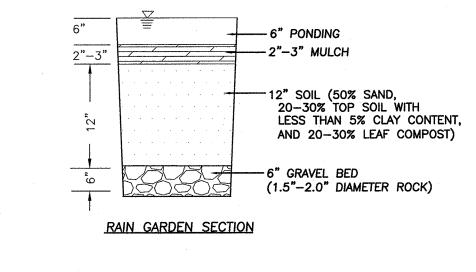


<u>DRIVEWAY PROFILE</u>

- 1. RESIDENTIAL DRIVEWAYS SHALL SLOPE FROM THE STREET AT A MAXIMUM GRADE OF 2% FOR A MIN. DISTANCE OF 20' MEASURED FROM THE EDGE OF PAVEMENT.
- 2. A MINIMUM 18" COVER TO BE PROVIDED OVER ALL DRIVEWAY CULVERTS. COVER MAY BE REDUCED TO 12" UTILIZING D.I.P.
- 3. THE FIRST 10' MINIMUM OF ALL DRIVEWAYS TO BE PAVED.







BOTANICAL NAME	COMMON NAME	SIZE	SEASON
WINTERBERRY	ILEX VERTICILLATA	24" HIGH	AUTUMN
ARROWWOOD	VIBURNUM DENTATUM	24" HIGH	SPRING
SWEET PEPPERBUSH	CLETHRA ALNIFOLIA	24" HIGH	SUMMER

1. A MIX OF THE SHRUB SPECIES LISTED IS TO BE SELECTED FOR EACH INDIVIDUAL RAIN GARDEN

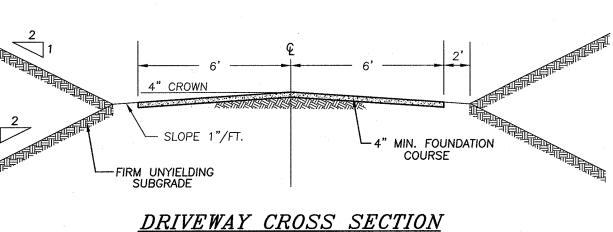
2. SHRUBS ARE TO BE SPACED 5 FEET ON CENTER. SHRUBS ARE TO BE A MINIMUM OF 24" IN HEIGHT.

4. SHRUBS SHOULD BE CONTAINER GROWN WITH A WELL ESTABLISHED

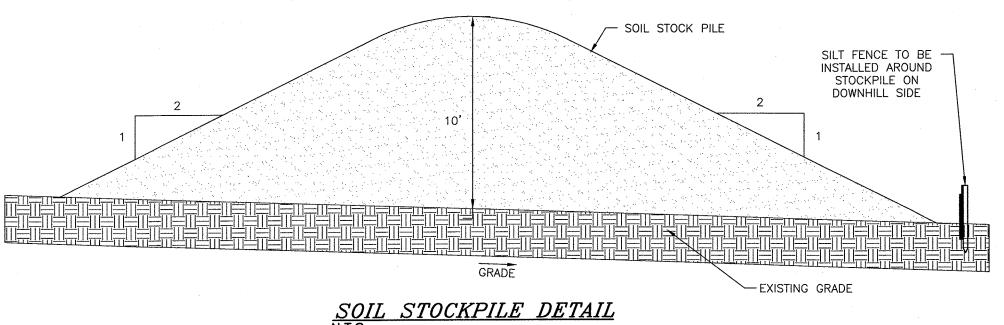
6. ROUTINE MAINTENANCE MAY INCLUDE OCCASIONAL REPLACEMENT OF PLANTS, MULCHING, WEEDING, AND THINNING TO MAINTAIN THE DESIRED APPEARANCE.

. SHRUBS ARE TO BE PRUNED IF THEY START TO BECOME LEGGY AND FLOPPY.

7. THE TOP FEW INCHES OF PLANTING SOIL IS TO BE REMOVED AND REPLACED WHEN WATER PONDS FOR MORE THAN 48 HOURS. 8. LONG TERM MAINTENANCE OF THE RAIN GARDEN SHALL BE THE PROPERTY



ROAD SWALE DETAIL



FIRM UNYIELDING SUBGRADE

RESERVED FOR TOWN PLANNING BOARD APPROVAL

PIETRZAK & PFAU ENGINEERING & SURVEYING, pl 62 GREENVICH AVENUE, SUITE A 2 HAMILTON AVENUE GOSHEN, NEW YORK 10924 MONTICELLO, NEW YORK 12701 **(845) 796–4646** MICHAEL F. CREEGAN P.L. <u> Joseph J. Pfau P.E.</u> <u>vincent a pietrzak P.E., P.L.S., Leed®ap</u> E LICENSE NO. 076936 | P.L.S. LICENSE NO. 050075 N.J.P.L.S. LICENSE NO. 35396 OAK WOODS SUBDIVISION TOWN OF CHESTER COUNTY OF ORANGE, NEW YORK

1-10-21 REVISIONS AS PER P.B. COMMENT LETTER

MAP CHECK DATE: 11/11/21 INITIALED BY: -_-

9-21-21 ORIGINAL PREPARATION DATE

SECTION 15 BLOCK 1 LOT 27.41

PROJECT TITLE

EROSION CONTROL

UNAUTHORIZED ALTERATION OR ADDITION TO A PLAN BEARING A LICENSED AND SURVEYOR'S OR PROFESSIONAL ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2 OF THE N.Y. STATE EDUCATION LAW O.C.H.D. SHEET NO. | D.E.C. SHEET NO. | DRAWING NUMBER <u>N/A</u> OF <u># | N/A</u> OF <u># | 6</u> OF _ CAD REFERENCE | PROJECT NUMBER 19140.01 ENG BASE 18122.01

3' MIN. SHOULDER

	SOIL TEST	RESULTS & SEPTIC	SYSTE	M DESIGN
LOT #	WITNESSED DEEP TEST PIT #1 RESULTS	WITNESSED DEEP TEST PIT #2 RESULTS	WITNESSED PERC RATE	SEPTIC SYSTEM DESIGN
1	0"-6" TOPSOIL 6"-60" SANDY LOAM WITH SMALL ROCKS	0"-6" TOPSOIL 6"-60" SANDY LOAM WITH SMALL ROCKS	PT1: 9 MIN. DEPTH: 24" PT2: 18 MIN. DEPTH: 24"	ELJEN SEPTIC DESIGNED FOR: 4 BEDROOM MAXIMUM (Q = 475 GAL/DAY) REQUIRED: 113 L.F. TOTAL DESIGNED: 6 LATERALS @ 20', 120 L.F. TOTAL SEPTIC TANK SIZE: 1,250 GALLONS
	NO MOTTLING, NO BEDROCK, NO GROUNDWATER	NO MOTTLING, NO BEDROCK, NO GROUNDWATER		
2	0"-4" TOPSOIL 4"-66" SANDY LOAM NO MOTTLING, NO BEDROCK, NO GROUNDWATER	0"-4" TOPSOIL 4"-72" SANDY LOAM NO MOTTLING, NO BEDROCK, NO GROUNDWATER	PT1: 6 MIN. DEPTH: 24" PT2: 8 MIN. DEPTH: 24"	ELJEN SEPTIC DESIGNED FOR: 4 BEDROOM MAXIMUM (Q = 475 GAL/DAY) REQUIRED: 88 L.F. TOTAL DESIGNED: 4 LATERALS @ 24', 96 L.F. TOTAL SEPTIC TANK SIZE: 1,250 GALLONS
		0"-4" TOPSOIL		
3	0"-4" TOPSOIL 4"-72" SANDY LOAM WITH SMALL ROCKS	4"-66" SANDY LOAM WITH SMALL ROCKS	PT1: 10 MIN. DEPTH: 24" PT2: 7 MIN. DEPTH: 24"	ELJEN SEPTIC DESIGNED FOR: 4 BEDROOM MAXIMUM (Q = 475 GAL/DAY) REQUIRED: 88 L.F. TOTAL DESIGNED: 4 LATERALS @ 24', 96 L.F. TOTAL SEPTIC TANK SIZE: 1,250 GALLONS
	NO MOTTLING, NO BEDROCK, NO GROUNDWATER	NO MOTTLING, NO BEDROCK, NO GROUNDWATER	J 2 .	
4	0"-6" TOPSOIL 6"-60" SANDY LOAM WITH SMALL ROCKS	0"-6" TOPSOIL 6"-60" SANDY LOAM WITH SMALL ROCKS	PT1: 32 MIN. DEPTH: 24" PT2: 6 MIN. DEPTH: 24"	ELJEN SEPTIC DESIGNED FOR: 4 BEDROOM MAXIMUM (Q = 475 GAL/DAY) REQUIRED: 158 L.F. TOTAL DESIGNED: 6 LATERALS @ 28', 168 L.F. TOTAL SEPTIC TANK SIZE: 1,250 GALLONS
	NO MOTTLING, NO BEDROCK, NO GROUNDWATER	NO MOTTLING, NO BEDROCK, NO GROUNDWATER		
5	0"-6" TOPSOIL 6"-72" SANDY SILTY LOAM WITH SMALL ROCKS NO MOTTLING, NO BEDROCK, NO GROUNDWATER	0"-6" TOPSOIL 6"-72" SANDY SILTY LOAM WITH SMALL ROCKS NO MOTTLING, NO BEDROCK, NO GROUNDWATER	PT1: 7 MIN. DEPTH: 24" PT2: 5 MIN. DEPTH: 24"	ELJEN SEPTIC DESIGNED FOR: 4 BEDROOM MAXIMUM (Q = 475 GAL/DAY) REQUIRED: 79 L.F. TOTAL DESIGNED: 4 LATERALS @ 20', 80 L.F. TOTAL SEPTIC TANK SIZE: 1,250 GALLONS
6	0"-6" TOPSOIL 6"-60" SANDY LOAM NO MOTTLING, NO BEDROCK, NO GROUNDWATER	0"-6" TOPSOIL 6"-60" SANDY LOAM NO MOTTLING, NO BEDROCK, NO GROUNDWATER	PT1: 18 MIN. DEPTH: 24" PT2: 7 MIN. DEPTH: 24"	ELJEN SEPTIC DESIGNED FOR: 4 BEDROOM MAXIMUM (Q = 475 GAL/DAY) REQUIRED: 113 L.F. TOTAL DESIGNED: 6 LATERALS @ 20', 120 L.F. TOTAL SEPTIC TANK SIZE: 1,250 GALLONS

SOIL TESTING AND SEPTIC SYSTEM DESIGN NOTES: 1. PERCOLATION TESTS WERE PERFORMED BY PIETRZAK & PFAU, PLLC AND WITNESSED BY FUSCO ENGINEERING ON

PERCOLATION TESTS WERE PERFORMED AT A DEPTH OF 24" UNLESS NOTED OTHERWISE. DEEP TEST PITS WERE WITNESSED BY PIETRZAK & PFAU, PLLC AND FUSCO ENGINEERING ON JUNE 17, 2021. SEPTIC SYSTEM DESIGN BASED ON 110 GALLONS PER BEDROOM PER DAY. SEPTIC SYSTEM DESIGN FOR 4 BEDROOM MAXIMUM DWELLING UNLESS NOTED OTHERWISE. ALL SEPTIC SYSTEM DESIGNS INCLUDE 35 GALLONS PER DAY OF BACKWASH FOR THE OPTIONAL WATER

SOFTENER, MAKING A TOTAL DISCHARGE OF 475 GALLONS PER DAY. SURFACE WATER DIVERSION SWALES ARE REQUIRED ON ALL LOTS.

GENERAL NOTES - SEWAGE SYSTEMS

1. SEPTIC SYSTEMS TO CONFORM TO THE MINIMUM REQUIREMENTS OF THE N.Y.S. HEALTH DEPARTMENT STANDARDS/CODES FOR INDIVIDUAL DISPOSAL SYSTEMS, APPENDIX 75-A, AND THE AUTHORITY HAVING JURISDICTION. 2. THE SANITARY FACILITIES ON THESE PLANS SHALL BE INSPECTED FOR COMPLIANCE, WITH THE APPROVED PLANS, AT THE TIME OF CONSTRUCTION, BY

A LICENSED PROFESSIONAL ENGINEER. WRITTEN CERTIFICATION TO THAT EFFECT SHALL BE SUBMITTED TO THE COUNTY HEALTH DEPARTMENT AND THE LOCAL BUILDING CODE ENFORCEMENT OFFICER PRIOR TO OCCUPANCY, AND SHALL INDICATE THAT ANY JOINTS HAVE BEEN SEALED AND TESTED FOR WATER TIGHTNESS AND THAT THE TANK IS INSTALLED IN ACCORDANCE WITH APPENDIX 75-A AND THE MANUFACTURERS INSTRUCTIONS. 3. SEPTIC FIELDS AND WELLS SHALL NOT BE RELOCATED

4. ALL PERCOLATION TESTS TAKEN AT 24" - 30" UNLESS OTHERWISE NOTED. 5. SEPTIC SYSTEM DESIGNS ARE BASED ON THE SLOWEST PERCOLATION RATE

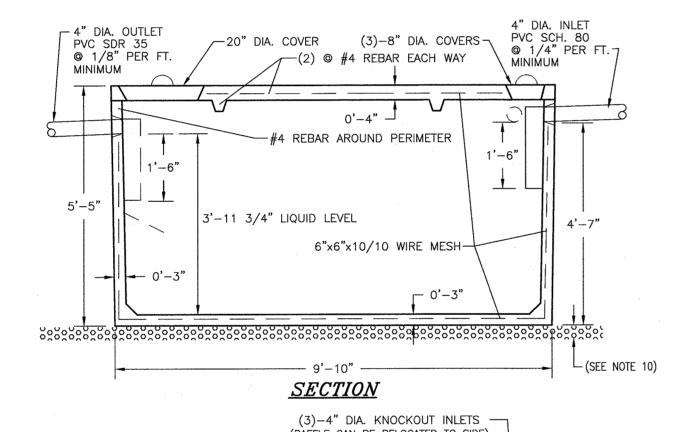
FOUND WITHIN THE AREA OF THE SYSTEM.

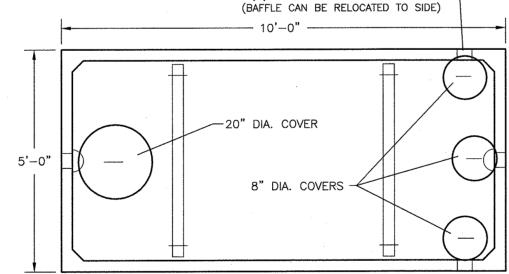
- 6. LAUNDRY WASTE IS TO BE DISCHARGED INTO THE SEPTIC SYSTEM. 7. HOUSE SEWER AND SEWER RUNS SHALL NOT EXCEED 75' BETWEEN POINTS OF POSSIBLE CLEANOUT. AT LEAST ONE CLEANOUT IS TO BE PROVIDED. BENDS ARE TO BE AVOIDED BUT WHERE REQUIRED AN ADDITIONAL CLEANOUT SHALL BE
- 8. THE MAXIMUM LENGTH OF ABSORPTION LINES USED IN CONJUNCTION WITH GRAVITY DISTRIBUTION SHALL BE 60 FEET.
- 9. FOOTING DRAINS ARE NOT TO DISCHARGE INTO THE SEPTIC SYSTEM. FOOTING DRAINS ARE TO RUN TO DAYLIGHT WITH RODENT SCREEN.
- 10. UNLESS OTHERWISE INDICATED ON THESE PLANS, INDIVIDUAL SEPTIC TANKS ARE NOT DESIGNED TO ACCOMMODATE GARBAGE GRINDERS.
- 11. TRENCHES SHALL NOT BE CONSTRUCTED IN WET SOILS 12. SIDES AND BOTTOM OF TRENCHES SHALL BE RAKED IMMEDIATELY PRIOR TO
- 13. THE END OF ALL DISTRIBUTOR PIPES SHALL BE PLUGGED.

 14. HEAVY EQUIPMENT SHALL BE KEPT OFF THE AREA OF THE TILE FIELD EXCEPT FOR THE ACTUAL CONSTRUCTION OF THE FIELD. THERE SHALL BE NO UNNECESSARY MOVEMENT OF CONSTRUCTION EQUIPMENT IN THE AREA OF THE PROPOSED FIELD BEFORE, DURING AND AFTER CONSTRUCTION. EXTREME CARE MUST BE TAKEN DURING THE ACTUAL CONSTRUCTION SO AS TO AVOID ANY UNDUE COMPACTION THAT COULD RESULT IN A CHANGE OF THE ABSORPTION
- CAPACITY OF THE SOIL ON WHICH THE DESIGN WAS BASED. 15. THERE IS NO REGRADING ALLOWED IN THE AREA OF THE ABSORPTION FIELD. 16. NO SWIMMING POOLS, DRIVEWAYS, OR STRUCTURES WHICH MAY COMPACT THE
- SOIL SHALL BE LOCATED OVER ANY PORTION OF THE ABSORPTION FIELD 17. THIS SYSTEM WAS NOT DESIGNED TO ACCOMMODATE GARBAGE GRINDERS, OR "JACUZZI" TYPE SPA TUBS OVER 100 GALLONS, AS SUCH, THESE ITEMS SHALL NOT BE INSTALLED UNLESS THE SDS IS REDESIGNED TO ACCOUNT FOR THEM
- AND REAPPROVED BY THE ORANGE COUNTY DEPARTMENT OF HEALTH. 18. THERE MUST BE AN UNINTERRUPTED POSITIVE SLOPE FROM THE SEPTIC TANK (OR ANY PUMPING OR DOSING CHAMBER) TO THE HOUSE, ALLOWING SEPTIC GASES TO DISCHARGE THROUGH THE STACK VENT.

GENERAL NOTES - WATER SYSTEMS

- WELL CONSTRUCTION SHALL CONFORM TO THE MINIMUM REQUIREMENTS OF THE N.Y.S. HEALTH DEPARTMENT STANDARDS.
- TREATMENT FOR HARDNESS SHOULD BE CONSIDERED ONLY IF EXCESSIVE
- HARDNESS IS FOUND (GREATER THAN 150 MG/L). THE DESIGN AND LOCATION OF SANITARY FACILITIES (WATER AND SEWER SYSTEMS)
- SHALL NOT BE CHANGED.
- FOOTING DRAINS WITHIN 25 FEET OF A WELL MUST BE WATERTIGHT. WELLS ARE TO BE INSTALLED 100 FEET FROM ANY SEPTIC SYSTEM, AND 200 FEET FROM ANY SEPTIC SYSTEM UPHILL FROM THE WELL
- WELL CASING IS TO BE INSTALLED 10 FEET INTO IMPERVIOUS BEDROCK. NEW YORK STATE SANITARY CODE, PART 5, APPENDIX 5-B REQUIRES A 50% INCREASE IN SEPARATION DISTANCES OR 50' MINIMUM WELL CASING IF AQUIFER WATER ENTERS THE WELL LESS THAN 50' BELOW GRADE.

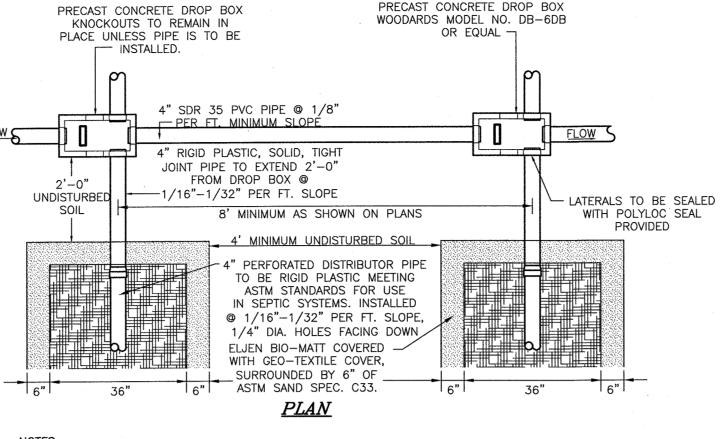




<u>PLAN</u>

- BUILDING SEWER TO BE SCHEDULE 80 PVC.
- SEPTIC TANK TO BE INSTALLED A MINIMUM OF TEN (10) FEET FROM BUILDING FOUNDATION.
- LOCATION STAKE TO BE SET IN GROUND DIRECTLY ABOVE THE INLET END COVER.
- SEPTIC TANK TO BE COVERED WITH EARTH TO A MINIMUM DEPTH OF 6" AND A MAXIMUM DEPTH OF 12".
 PRECAST CONCRETE TO REACH 4000 PSI STRENGTH @ 28 DAYS.
- TANK CONSTRUCTION JOINTS TO BE SEALED WITH BUTYL RUBBER BASE CEMENT.
- INLET INVERT TO BE 3" HIGHER THAN OUTLET INVERT. INLET AND OUTLET JOINTS TO BE SEALED WITH PORTLAND CEMENT GROUT
- PRECAST CONCRETE SEPTIC TANK TO BE AS MANUFACTURED BY WOODARD'S CONCRETE PRODUCTS, INC. MODEL ST1250 OR EQUAL.
- 3" MINIMUM OF SAND, PEA GRAVEL OR TRENCH AGGREGATE FOR
- 11. SEPTIC TANKS SHOULD BE INSPECTED PERIODICALLY AND PUMPED EVERY 2-3 YEARS.

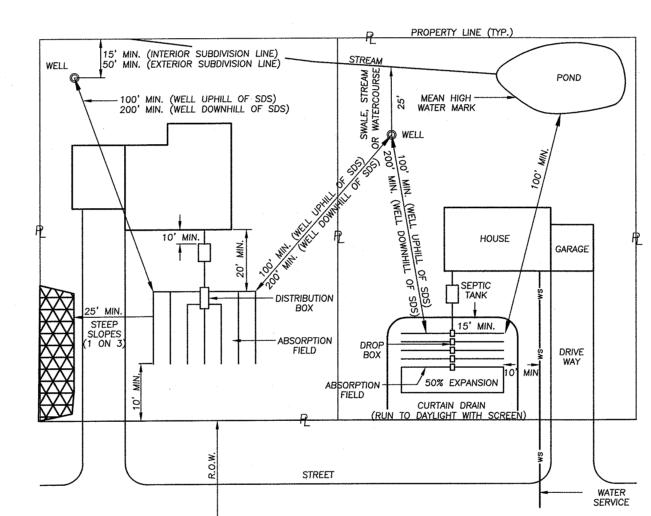
1,250 GALLON SEPTIC TANK DETAIL



ABSORPTION FIELDS SHALL NOT BE BUILT UNDER DRIVEWAYS, PARTS OF BUILDINGS, OR UNDER ABOVE GROUND POOLS, OR OTHER AREAS SUBJECT TO HEAVY LOADINGS.

- THE SAND BEDDING SHALL BE COVERED WITH THE GEOTEXTILE FABRIC PROVIDED WITH EACH UNIT. TRENCHES SHALL NOT BE CONSTRUCTED IN WET SOIL. SIDES AND BOTTOM OF TRENCH SHALL BE RAKED IMMEDIATELY PRIOR TO PLACING SAND.
- THE END OF ALL DISTRIBUTOR PIPES SHALL BE PLUGGED HEAVY EQUIPMENT SHALL BE KEPT OFF THE AREA OF THE FIELD EXCEPT FOR ACTUAL
- CONSTRUCTION OF TEH FIELD. THERE SHALL BE NO UNNECESSARY MOVEMENT OF CONSTRUCTION EQUIPMENT IN THE AREA OF THE PROPOSED FIELD, BEFORE OR AFTER CONSTRUCTION.
- DISTRIBUTION LATERALS SHALL BE SLOPED AT 1/16"-1/32" PER FOOT ABSORPTION TRENCH BOTTOM TO BE SET LEVEL
- 9. DISTRIBUTION LATERALS ARE TO BE SET WITH PERFORATIONS FACING DOWN.

ELJEN IN-DRAIN SYSTEM DROP BOX/ABSORPTION TRENCH DETAIL





CASINGS ARE 40' AND THROUGH

4. DIAMETER OF DRILL HOLES TO BE 10"-12" THROUGH OVERBURDEN,

5. IF WATER IS ENCOUNTERED AT A

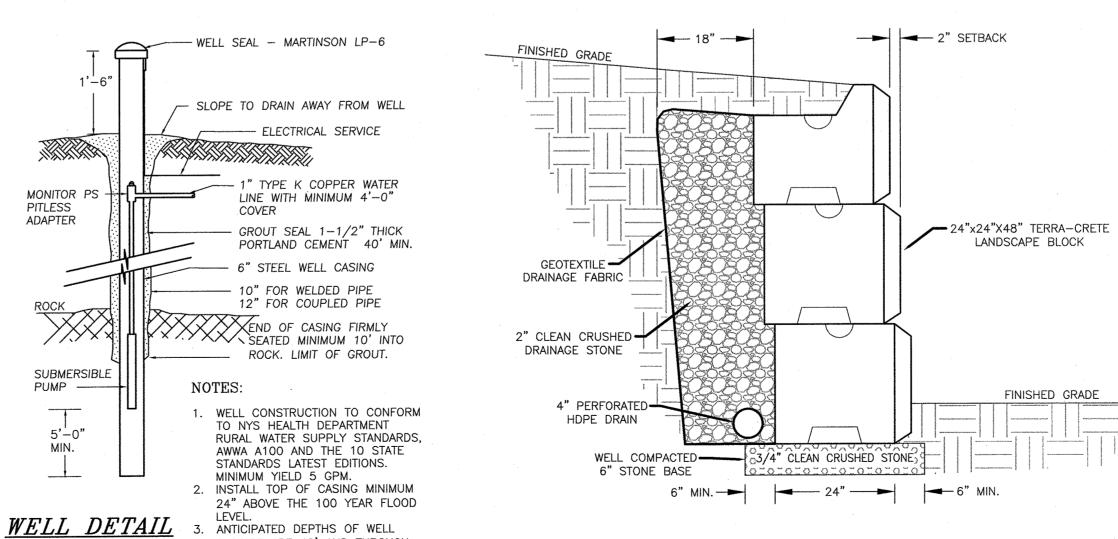
THE MINIMUM CASING AND

DEPTH OF LESS THAN 50 FEET,

REQUIREMENT SHALL BE 50 FEET.

AND 6" THROUGH ROCK.

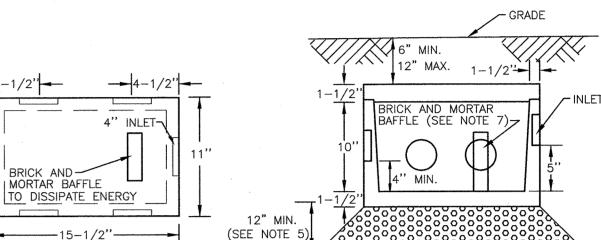
BEDROCK.



TERRA-CRETE BLOCK RETAINING WALL DETAIL

- . DETAIL IS TO BE UTILIZED FOR PROPOSED RETAINING WALLS.
- 2. RETAINING WALL INSTALLATION IS TO BE IN ACCORDANCE WITH ALL MANUFACTURER INSTALLATION GUIDES AND REQUIREMENTS. 3. RETAINING WALL TO BE DESIGNED BY A STRUCTURAL ENGINEER AND
- APPROVED BY THE TOWN BEFORE CONSTRUCTION. 4. ANY RETAINING WALL OVER FOUR (4) FEET HIGH REQUIRE A BUILDING

BACKFILL WITH NATIVE SOIL 7" MINIMUM 4" DIA. PERFORATED PIPE-13" MAXIMUM (HOLES AT 5 & 7 O'CLOCK) (FROM TOP OF PIPE TO GEO-TEXTILE COVER-FINISHED GRADE) ELJEN BIO-MAT ASTM C33 SAND SPECIFICATION (SEE CHART PROVIDED) UNDISTURBED SOIL-24" MIN. TO IMPERVIOUS STRATA, BEDROCK, OR SEASONAL HIGH GROUNDWATER ELJEN IN-DRAIN CROSS SECTION DETAIL 6" MIN. 12" MAX.



- 1. DROP BOX TO BE AS MANUFACTURED BY WOODARD'S CONCRETE PRODUCTS, INC. MODEL NO. DB-6DB OR APPROVED EQUAL.
- 2 CONCRETE TO TEST 4,000 PSI AT 28 DAYS. ALL OUTLETS NOT USED SHALL REMAIN PLUGGED.

<u>PLAN</u>

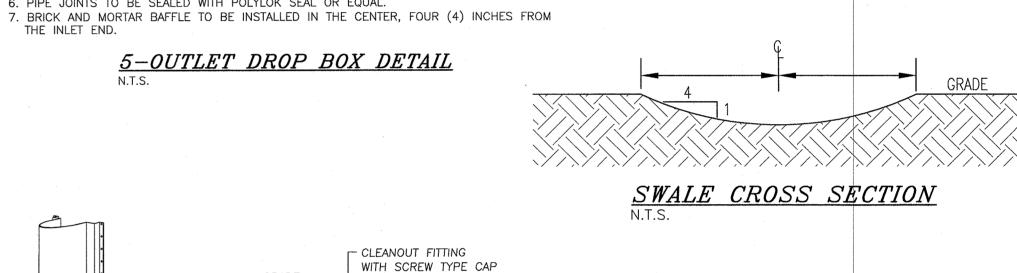
GAS DEFLECTOR

BAFFLE

(DEFLECTOR ON OUTLET ONLY)

BACKFILL IMMEDIATELY OR TEMPERARILY COVER -TRENCH WITH NATIVE MATERIAL. MOUND BACKFILL SLIGHTLY. GRADE AFTER SETTLEMENT AND SEED.

- 4. BOX TO BE INSTALLED WITH A MIN. 6" AND MAX. 12" EARTH COVER. 5. BOX TO BE INSTALLED ON 12" MIN OF SAND, PEA GRAVEL, OR TRENCH AGGREGATE.
- 6. PIPE JOINTS TO BE SEALED WITH POLYLOK SEAL OR EQUAL.



RESERVED FOR TOWN PLANNING BOARD APPROVAL

SIDE VIEW

ASTM C33 SAND SPECIFICATION

9.5 mm

4.75 mm

2.36 mm

1.18 mm

600 µm

300 µm

150 µm

75 µm

SIEVE SQUARE SPECIFICATION %

OPENING SIZE PASSING (WET SIEVE)

100.0 - 100.0

95.0 - 100.0

80.0 - 100.0

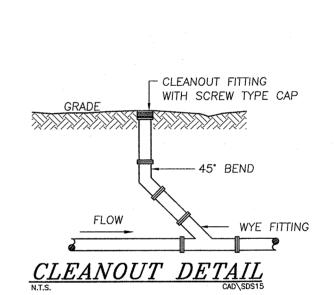
50.0 - 85.0

25.0 - 60.0

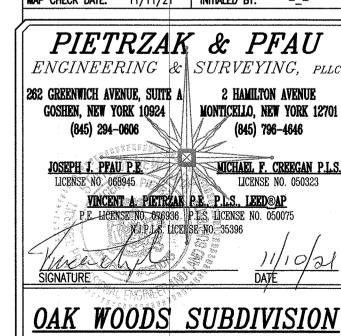
5.0 - 30.0

< 10.0

< 5.0



1-10-21 REVISIONS AS PER P.B. COMMENT LETTER 9-21-21 ORIGINAL PREPARATION DATE MAP CHECK DATE: 11/11/21 INITIALED BY:



COUNTY OF ORANGE, NEW YORK SECTION 15 BLOCK 1 LOT 27.41

DETAIL SHEET

UNAUTHORIZED ALTERATION OR ADDITION TO A PLAN BEARING A LICENSED LAND SURVEYOR'S OR PROFESSIONAL ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2 OF THE N.Y. STATE EDUCATION LAW. O.C.H.D. SHEET NO. D.E.C. SHEET NO. DRAWING NUMBER N/A OF # N/A OF #

CAD REFERENCE PROJECT NUMBER 19140.01 ENG BASE 18122.01



