

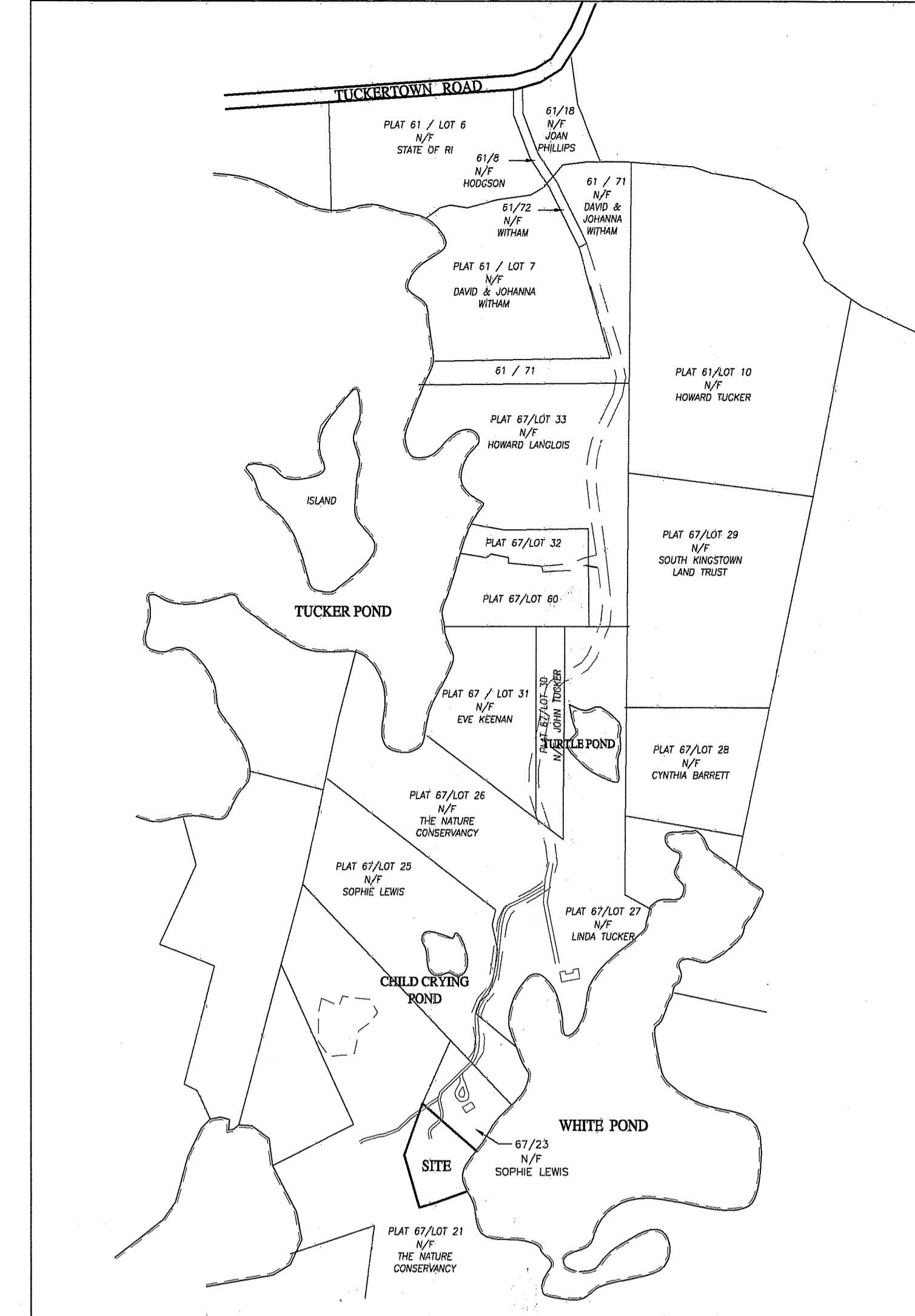
TEST HOLE INFORMATION

DEPTH	DESCRIPTION	DEPTH	DESCRIPTION
0	0-1' Organic Sandy Loam	0	0-1' Organic Sandy Loam
1	1-2' Sandy Loam	1	1-2' Sandy Loam
2	2-4' Sandy Loam	2	2-3' Sandy Loam
3	4-24' 1sbk, fr Soil Cot. 4	3	3-24' 1sbk, fr Soil Cot. 4
48		48	
72		72	
96		96	
108		108	

TEST PIT ID: TH_01
DATE EXCAVATED: 9/23/14
VERIFIED GWT: 96"

SITE ACCESS

SCALE: 1" = 500'



LOCUS MAP

SCALE: 1" = 2500'



USGS TOPO MAP

SCALE: 1" = 2000'



ZONING DIMENSIONAL REGULATIONS

ZONING DISTRICT: R80		
	REQUIRED	SITE
MINIMUM LOT AREA	80,000 S.F.	68,431 S.F.
MINIMUM LOT FRONTAGE	200 FT.	40 FT.
MINIMUM LOT WIDTH	200 FT.	40 FT.
MAXIMUM BUILDING COVERAGE	20%	---
MINIMUM YARD SETBACKS:		
PRIMARY STRUCTURE		
FRONT	50 FT.	---
SIDE	40 FT.	---
REAR	50 FT.	---
ACCESSORY STRUCTURE		
SIDE	20 FT.	---
REAR	20 FT.	---
MAXIMUM BUILDING HEIGHT		
PRIMARY STRUCTURE	35 FT.	---
ACCESSORY STRUCTURE	20 FT.	---

GENERAL NOTES:

- THIS SITE IS LOCATED WITHIN A NATURAL HERITAGE AREA.
- THE SITE IS LOCATED WITH THE SALT POND CRITICAL RESOURCE AREA AS DEFINED BY CRM & RIDEM.
- THIS PARCEL IS NOT LOCATED WITHIN THE TOWN OF SOUTH KINGSTOWN HISTORIC OR ZONING OVERLAY DISTRICTS.
- ACCORDING TO FEMA FLOOD INSURANCE RATE MAP COMMUNITY PANEL NUMBER 4400001911H REVISED 10/15/2010, THE PORTION OF THE SITE ADJACENT TO WHITE POND WITHIN FLOOD ZONE X, SHADED "OTHER FLOOD AREAS." THIS ZONE IS DEFINED AS AREAS SUBJECT TO INUNDATION BY THE 0.2% ANNUAL-CHANCE FLOOD EVENT WITH AVERAGE DEPTHS LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE. NO BASE FLOOD ELEVATIONS (BFES) OR FLOOD DEPTHS HAVE BEEN DETERMINED.
- THIS SITE IS NOT LOCATED WITHIN A WELL-HEAD PROTECTION AREA, GROUNDWATER RECHARGE ZONE, OR GROUNDWATER RESERVOIR.
- LONG POND (R0010043L-07) IS LISTED AS A SPECIAL RESOURCE PROTECTION WATER (SRPW).
- ONSITE SOILS ARE CLASSIFIED BY THE RHODE ISLAND SOIL SURVEY AS GcC & ChD SOILS (GLOUCESTER-HINKLEY VERY STONY SANDY LOAMS) - SOILS SUITABLE FOR DEVELOPMENT.

GENERAL OWTS NOTES:

- ALL DESIGN, CONSTRUCTION AND MAINTENANCE REQUIREMENTS SHALL BE IN CONFORMANCE WITH THE LATEST AMENDED VERSION (JULY 2014) OF THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, OFFICE OF WATER RESOURCES, "RULES ESTABLISHING MINIMUM STANDARDS RELATING TO LOCATION, DESIGN, CONSTRUCTION, AND MAINTENANCE OF ONSITE WASTEWATER TREATMENT SYSTEMS (OWTS)," HEREIN REFERRED TO AS THE "REGULATIONS."
- BENCHMARK IS SET WITHIN 150' OF PROPOSED OWTS (SEE SITE PLAN).
- ALL STORM & SUBSURFACE DRAINS WITHIN FIFTY FEET (50') OF THE PROPOSED OWTS HAVE BEEN SHOWN.
- ALL PRIVATE DRINKING WATER WELLS WITHIN 200' OF THE PROPOSED OWTS HAVE BEEN SHOWN. ALL PUBLIC WELLS WITHIN 500' OF THE SITE HAVE BEEN SHOWN. PUBLIC WATER SERVICE IS PROVIDED IN THIS NEIGHBORHOOD.
- PUBLIC SEWERS ARE NOT AVAILABLE AT THIS TIME TO THE SITE.
- THE LOCATION OF ALL WETLANDS WITHIN 100' OF THE PARCEL ARE SHOWN.
- ADDITIONAL OWTS DETAILS & REQUIREMENTS PROVIDED ON SHEET 4

O.W.T.S. ELEVATION SCHEDULE

BUILDING SEWER INVERTS:	
MAIN DWELLING INVERT:	ELEV. 122.00
TANK ELEVATIONS:	
1,500 GAL. SEPTIC TANK	
TOP OF TANK:	ELEV. 122.80
BASE OF TANK:	ELEV. 117.20
4" PVC INLET INV.:	ELEV. 121.80
4" PVC OUTLET INV.:	ELEV. 121.55
1 1/2" REDIRC. IN.:	ELEV. 121.80
ADVANTEX AX-RT25	
AX-RT LID ELEVATION	ELEV. 123.50
AX-RT BASE	ELEV. 117.50
GRAVITY 4" PVC INLET	ELEV. 121.4
PRESSURE 1 1/2" TO S.T.	ELEV. 121±
PRESSURE TO DRAINFIELD	ELEV. 121±
DRAINFIELD	
D-BOX IN.:	ELEV. 122.34
D-BOX OUT.:	ELEV. 122.17
DRAINFIELD INVERT:	ELEV. 122.00
BOTTOM OF STONE:	ELEV. 123.00
DESIGN ELEVATION:	ELEV. 123.00
GROUNDWATER:	ELEV. 115.00
COVER OVER SYSTEM MIN.:	ELEV. 123.5±
COVER OVER SYSTEM MAX.:	ELEV. 124.5±

O.W.T.S. DESIGN DATA:

PROPOSED USE:	RESIDENTIAL DWELLING
NUMBER OF UNITS:	5 BEDROOMS
DESIGN FLOW PER UNIT:	115 GPD/BEDROOM
TOTAL DESIGN FLOW:	575 GALLONS PER DAY

SEPTIC TANK REQUIREMENTS:	1,500 GALLONS
SEPTIC TANK PROVIDED:	1,500 GALLON 2-COMPARTMENT
DRAINFIELD REQUIREMENTS:	
DESIGN LOADING RATE:	0.61 GAL/DAY/SF
REQUIRED SQUARE FOOTAGE =	575 GPD / 0.61 GPD/SF = 942.6 SF [100%]
DRAINFIELD REDUCTION FOR ADVANCED TREATMENT	942.6 * 50% = 471.3 SF
PROVIDED SQUARE FOOTAGE =	4 END UNITS & 4 INTERIOR UNITS = 8 UNITS
	END UNITS: 78 SF/UNIT
	INTERIOR UNITS: 64 SF/UNIT
	4*78 SF/UNIT & 4*64 SF/UNIT = 568 SF

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OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED 1/22/2014 FILE # 20-0255
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

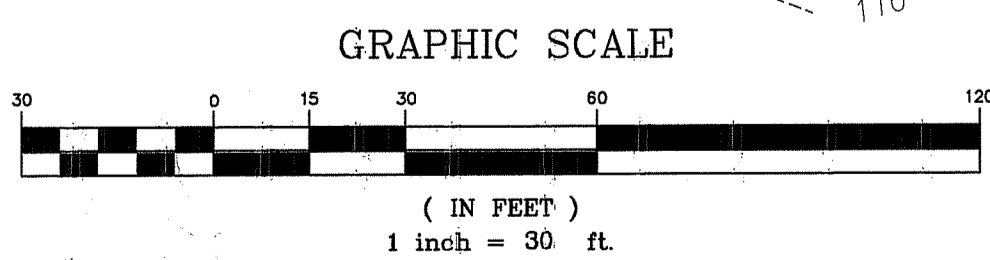
Matthew D. Weneck

LEGEND

Elev.	EXISTING CONTOURS	PROPOSED CONTOUR
---	EXISTING SITE CONDITIONS	PROPOSED SITE CONDITIONS
- - -	EXISTING PROPERTY LINE	PROPOSED PROPERTY LINE
- - -	BUILDING SETBACKS	USDA SOIL BOUNDARIES
- - -	EXISTING FIELD STONEWALLS	PROPOSED RETAINING WALLS
- - -	EXISTING FENCE	PROPOSED FENCE
⊙	EXISTING WELLS	PROPOSED WELLS
- - -	EXISTING WATERLINE	PROPOSED WATERLINE
- - -	EXISTING ROOF DRAIN	PROPOSED ROOF DRAIN
⊙	EXISTING UTILITY POLE	PROPOSED UTILITY POLE
- - -	EXISTING SANITARY SEWER	PROPOSED SANITARY SEWER
⊙	TEST HOLES/EDGE PROBES	WOOD OR BRUSH LINE
⊙	BIOLOGICAL WETLANDS	LIMIT OF DISTURBANCE
- - -	50' WETLANDS SETBACK	EROSION CONTROLS
- - -	STREAM CHANNEL	R.I.D.O.T STANDARD DETAIL
□	GRANITE BOUND (EXISTING)	
◆	BUFFER ZONE MARKER (TO BE SET)	

WHITE POND

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

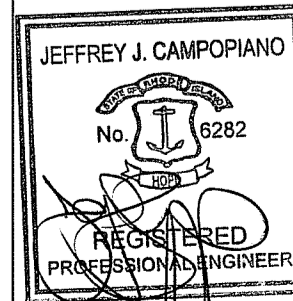


SITE PLAN

PROPOSED SINGLE FAMILY RESIDENCE
ASSESSOR'S PLAT 67 / LOT 22
TUKERTOWN ROAD
SOUTH KINGSTOWN, RHODE ISLAND

PREPARED BY:

JEFFREY J. CAMPOPIANO, P.E.
16 WEST MAIN STREET
WICKFORD, RHODE ISLAND 02852
PHONE: 401-295-3037
jeff@campopiano-eng.com



DATE: DECEMBER 4, 2014

REVISIONS:		
NO.	DATE	DESCRIPTION

DRAWN BY: TAG
CHECKED BY: JJC

SHEET NUMBER

1

EROSION & SEDIMENT CONTROL NOTES:

- EXTREME CARE SHALL BE EXERCISED TO PREVENT ANY UNSUITABLE MATERIAL FROM ENTERING A WETLAND, STREET, OR NEIGHBORING PROPERTY. THE CONTRACTOR SHALL IMMEDIATELY CLEAN AND RESTORE ANY DISTURBED AREAS.
- ALL EROSION CONTROL METHODS, MATERIALS, AND MAINTENANCE SHALL BE ACCOMPLISHED ACCORDING TO THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK, PREPARED BY THE UNITED STATES DEPARTMENT OF AGRICULTURE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING ALL TEMPORARY EROSION AND SEDIMENT CONTROLS, AS SHOWN ON THE PLANS AND DIRECTED BY THE ENGINEER. ALL RUNOFF SHALL BE CONTROLLED. IN NO CASE SHALL ANY DIRECT RUNOFF BE ALLOWED TO ENTER ONTO ADJACENT PROPERTIES OR INTO THE WETLAND BUFFERS.
- HAYBALES/SILT FENCING SHALL BE PLACED IMMEDIATELY DOWN SLOPE OF SOIL DISTURBANCE AREAS AS SHOWN ON THE PLANS. BALED HAY EROSION CHECKS SHALL BE PLACED AT ALL DRAINAGE STRUCTURE INLETS, EXISTING AND PROPOSED, DURING CONSTRUCTION. ADDITIONAL HAYBALES OR SANDBAGS SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE ENGINEER.
- SPOIL AND STOCKPILE MATERIALS REMAINING EXPOSED FOR LONGER THAN 30 DAYS SHALL BE ENCLOSED WITH SILT FENCING OR HAYBALES AND COVERED WITH EROSION CONTROL MIX (NOTE 9).
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL SEDIMENT AND EROSION CONTROLS UNTIL ALL AREAS ARE STABILIZED. CONTROLS SHALL REMAIN IN PLACE UNTIL A GOOD STAND OF VEGETATION IS ESTABLISHED.
- SEEDING - SEED IS TO BE DISTRIBUTED EVENLY OVER THE TOP 1 INCH OF TOPSOIL. SEED SHALL BE URI #2, OR APPROVED EQUAL. APPLY AT A RATE OF 5-7 # / 1,000 S.F.
- SLOPE PROTECTION BLANKETS USED AT THIS PROJECT SHALL BE THE 100% BIODEGRADABLE STRAW AND COCONUT FIBER BLANKETS WHICH SHALL DISINTEGRATE IN-PLACE, NOT REQUIRING FUTURE MAINTENANCE.

SHOULD THE VEGETATION PLANTING SEASON BE PASSED, WINTER MULCHING OF ALL EXPOSED SURFACES SHALL BE COMPLETED BY DECEMBER 1. WINTER MULCHING SHALL CONSIST OF THE FOLLOWING EROSION CONTROL MIX.

EROSION CONTROL MIX
USE EROSION CONTROL MIX AS A LONG-TERM SOIL COVER THAT WILL EVENTUALLY ALLOW THE GROWTH OF VEGETATION, IF DESIRED.
• EROSION CONTROL MIX INCLUDES SHREDED OR COMPOSTED BARK, STUMP GRINDINGS, OR OTHER COMPOSTED WOOD PRODUCTS, WOOD CHIPS, GROUND CONSTRUCTION DEBRIS, OR PROCESSED WOOD ARE NOT ACCEPTABLE.
• APPLY THE EROSION CONTROL MIX AS A LAYER AT LEAST THREE INCHES THICK. DO NOT COMPACT THE MIX WITH EQUIPMENT.

HAY MULCH
• USE HAY MULCH AS A TEMPORARY MEASURE TO PROTECT BARE SOILS OR TO COVER NEWLY SEEDED AREAS.
• APPLY AT A RATE OF TWO SQUARE BALES (70-90 POUNDS) PER 1000 SQ FT OR 1.5 TO 2 TONS (90-100 BALES) PER ACRE.
• ANCHOR THE HAY MULCH USING ONE OF THE FOLLOWING METHODS:
** STAPLE JUTE OR PLASTIC NETTING OVER THE MULCH ACCORDING TO THE NET OR JUTE MANUFACTURER'S RECOMMENDATION.
** STRETCH TWINE BETWEEN PEGS IN A CRISS-CROSS PATTERN OVER THE MULCH (4-6 PEGS PER SQ YD).
• MULCHING SHALL FOLLOW GUIDELINES IN THE RI SOIL EROSION AND SEDIMENT CONTROL HANDBOOK, CHAPTER 4 & CHAPTER 5, A TEMPORARY MULCHING. STRAW / HAY SHALL BE APPLIED AT 90# / 1,000 S.F. FREE FROM WEEDS AND ANCHORED WITH MULCH NETTING.

SEQUENCE OF CONSTRUCTION:

- INSTALL PERIMETER SEDIMENT CONTROL MEASURES:
 - PERFORM SELECTIVE VEGETATION REMOVAL FOR SILT FENCE INSTALLATION
 - INSTALL SILT FENCE/HAYBALES PER R.I. STATE STANDARD AROUND L.O.D.
 - INSTALL CONSTRUCTION ENTRANCE
 - INSTRUCT CONTRACTOR THAT ABSOLUTELY NO WORK OR DUMPING IS PERMITTED BEYOND THE LIMIT OF THE EROSION CONTROL BARRIERS!
- CLEAR AND GRUB AREA WITHIN PERMITTED WORKZONE. SELECT TREES FOR TRANSPLANTING; DIG, TRANSPORT & MUCK PLANTS TO TEMPORARY LOCATION.
- STRIP & STOCKPILE TOPSOIL, AS NECESSARY. PROVIDE TEMPORARY STABILIZATION AROUND STOCKPILE (SEED PILE AND INSTALL SILT FENCE AROUND TOE OF SLOPE).
- CONSTRUCT SITE AMENITIES.
- PERFORM MAINTENANCE INSPECTIONS OF HAYBALES AND SILT FENCE CONDITIONS WEEKLY AND AFTER EVERY RAINFALL EVENT WITH 1/2" OR MORE. REPLACE OR REPAIR THE CONTROLS AS REQUIRED AND REMOVE ANY SEDIMENT WHICH ACCUMULATES UP TO ONE-HALF THE HEIGHT OF THE BALE/FENCE.
- TEMPORARILY OR PERMANENTLY STABILIZE ALL DISTURBED AREAS WITHIN 7 DAYS OF CEASING WORK.
- CONSTRUCT FINAL LANDSCAPING. INSTALL MONUMENTATION POSTS.
- PERMANENTLY STABILIZE LOT.
- REMOVE ALL TEMPORARY SOIL AND SEDIMENT EROSION CONTROLS AFTER THE SITE IS FULLY STABILIZED WITH VEGETATION.

MAINTENANCE REQUIREMENTS

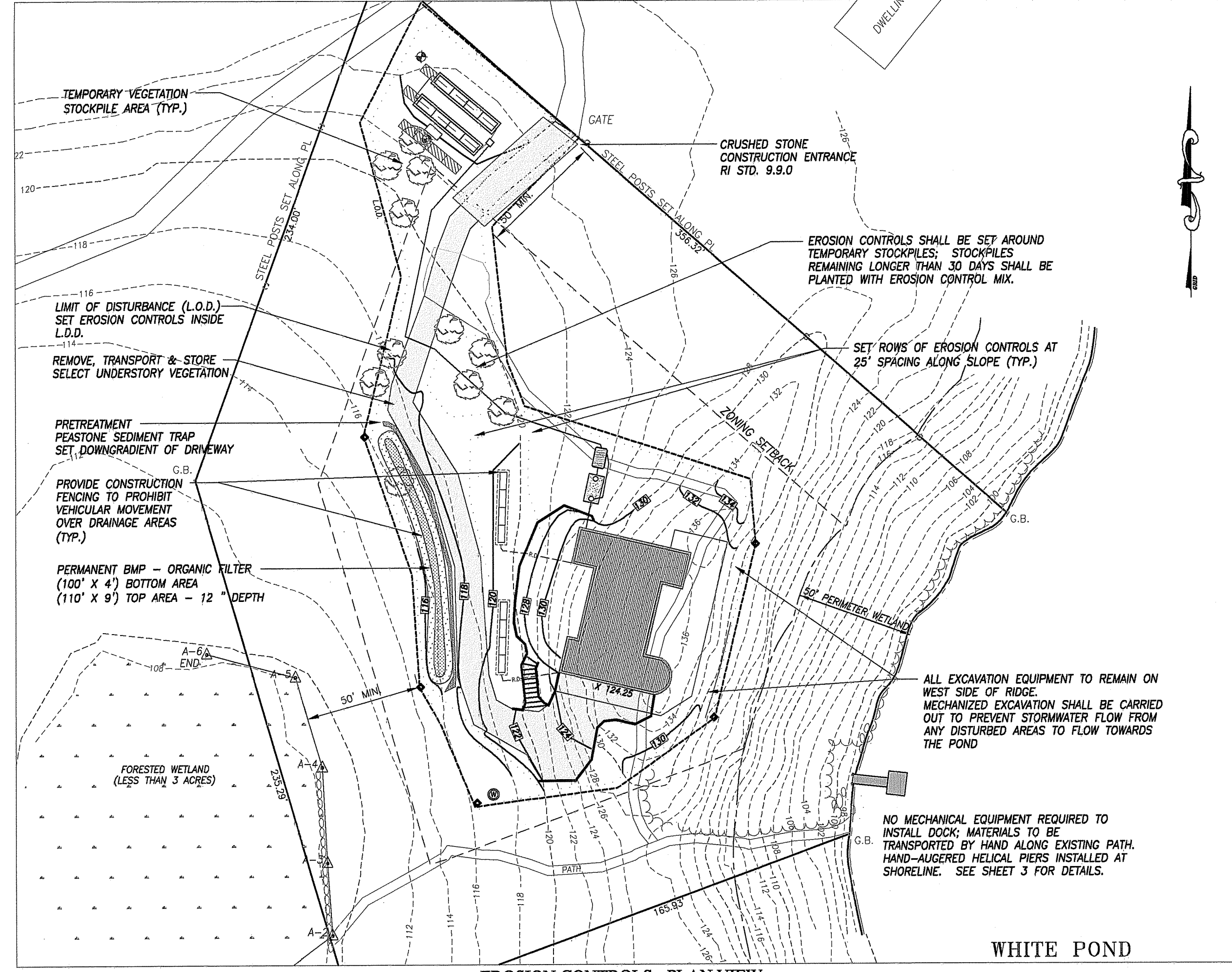
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- THE DEVELOPER SHALL FOLLOW ALL REQUIREMENTS REQUIRED BY SOUTH KINGSTOWN CODE OF ORDINANCES, "SUPPLEMENTAL DRAINAGE".
- A LEGALLY BINDING MAINTENANCE AGREEMENT SHALL BE RECORDED IN THE LAND EVIDENCE RECORDS OUTLINING THE MAINTENANCE PROCEDURES FOR EACH ELEMENT OF THE DRAINAGE SYSTEM.

SHORT TERM - OPERATIONAL NOTES / MAINTENANCE

- THE CONSTRUCTION SUPERINTENDENT SHALL HAVE OVERALL RESPONSIBILITY OF THE MAINTENANCE PROGRAM AND THE IMPLEMENTATION OF ALL STRUCTURAL AND NON-STRUCTURAL BEST MANAGEMENT PRACTICES (BMPs) DURING CONSTRUCTION. THE SUPERINTENDENT SHALL IMPLEMENT A REGULAR INSPECTION SCHEDULE AND PROVIDE THE APPROPRIATE LABOR AND MATERIALS TO REMEDY ANY SUBSTANDARD ELEMENTS.
- ALL EROSION CONTROLS SHALL BE MAINTAINED IN WORKING ORDER BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PERIOD AND SHALL REMAIN IN-PLACE UNTIL AN APPROVED GROUND COVER IS ESTABLISHED.
- ALL DISTURBED SLOPES SHALL BE RE-SEEDED OR PROTECTED PRIOR TO OCTOBER 15. AFTER THIS DATE, WINTER MULCHING SHALL BE PROVIDED IN AREAS WHERE VEGETATION HAS NOT BEEN ESTABLISHED.
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- THE CONTRACTOR IS RESPONSIBLE FOR THE PROPER GROWTH OF ALL VEGETATIVE FEATURES FOR A PERIOD OF ONE YEAR FOLLOWING CONSTRUCTION. ALL AREAS UNDEVELOPED SHALL BE TOPSOILED, PLANTED, SEEDED, OR SODDED AT NO ADDITIONAL COST TO THE OWNER.

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ACCEPTABLE PLANTING MATERIALS:

PREPARATION: AREAS TO BE SEEDED SHALL BE BROUGHT TO AN ELEVATION 6" BELOW THE PROPOSED FINISHED GRADE. THE SUBGRADE IS TO BE SCARIFIED TO A DEPTH OF 12" WITH THE TEETH OF A BACKHOE TO RESULT IN UNCOMPACTED SOIL. THEN A 6" LAYER OF LOAM TOPSOIL IS TO BE APPLIED AND RAKED TO FINISHED GRADE. LOAM IS TO BE GOOD QUALITY TOPSOIL, FRIABLE, FERTILE, AND FREE OF WEEDS, STICKS, & STONES OVER 1" IN SIZE.

GENERAL LAWN:

MIXTURES WHICH REQUIRE REGULAR FERTILIZATION SHALL NOT BE UTILIZED.

GENERAL USE - TURFOGRASS SEED MIX: (URI #2)

MIX	% BY VOLUME
CREeping RED FESCUE	40
IMPROVED KENTUCKY BLUEGRASS	20
KENTUCKY BLUE 98/85	20
PERENNIAL RYEGRASS	20

SHADE / LOW MAINTENANCE TURFOGRASS SEED MIX: (URI #3)

MIX	% BY VOLUME
CHEWING FESCUE	50
KENTUCKY BLUE 98/85	40
COLONIAL BENTGRASS	10

REGULATED AREAS & WATERWAYS

DISTURBED AREAS IN BUFFER ZONES WILL BE SEEDED WITH A WILDLIFE CONSERVATION MIX.

BUFFER ZONES / WETLAND AREAS:

MIX	% BY VOLUME
PERENNIAL RYEGRASS	25
CREeping RED FESCUE	25
ANNUAL RYE	25
TALL FESCUE	17
KENTUCKY BLUEGRASS	5
COLONIAL BENTGRASS	1
RED TOP	1
WHITE CLOVER*	1

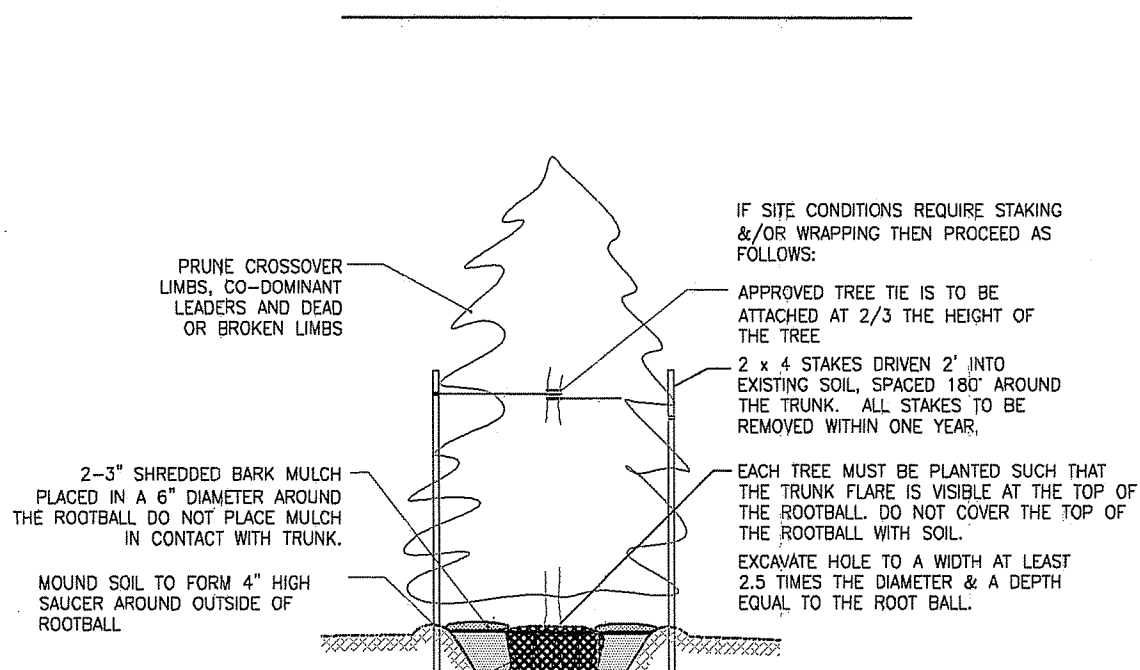
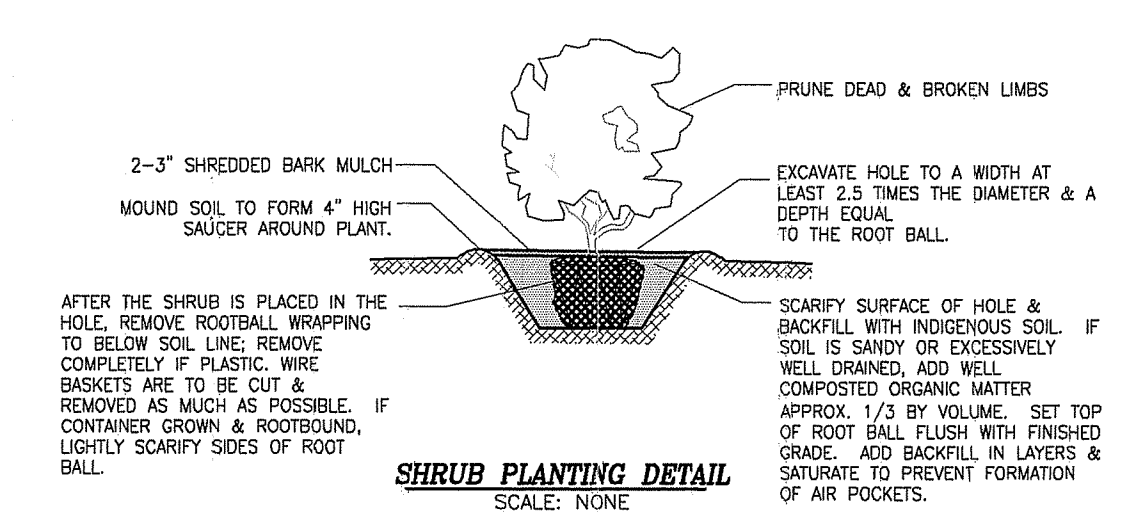
* CLOVER SEED TO BE INOCULATED

SOD WATERWAYS & DRAINAGE DITCHES:

IT IS IMPORTANT TO PROVIDE A SEED MIXTURE THAT CAN HANDLE FLUCTUATING WATER LEVELS AND/OR HIGH VELOCITIES. FERTILIZER CANNOT BE USED IN THESE AREAS.

MIX	% BY VOLUME
CREeping RED FESCUE *	50
TALL FESCUE OR REED CANARYGRASS	50

* CREeping RED FESCUE FOR SLOPES 0-5% ONLY
SUBSTITUTE SMOOTH BROME FOR SLOPES 5-10% & SUBSTITUTE BUFFALO GRASS FOR SLOPES > 10%



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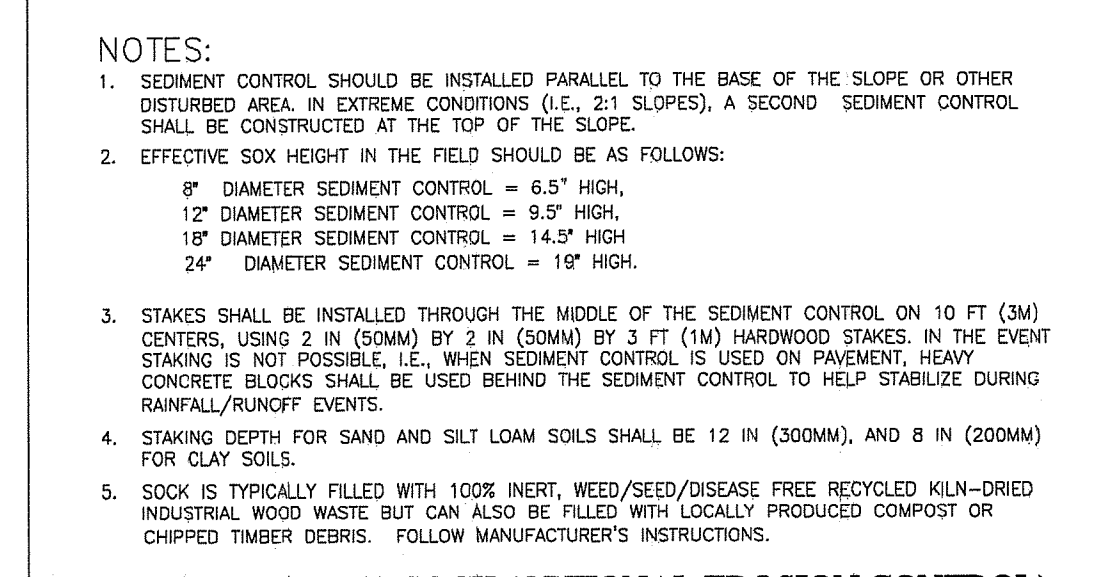
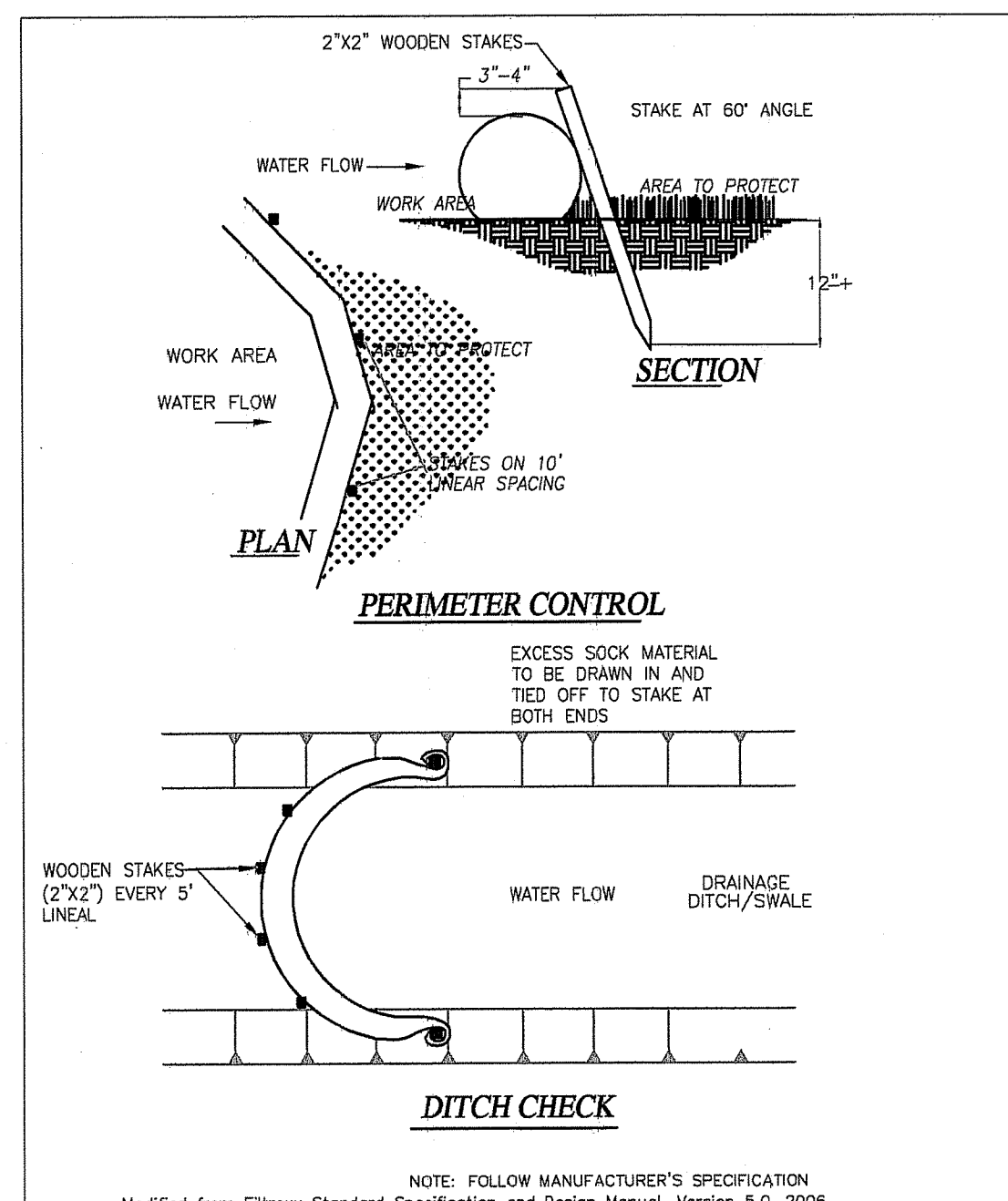
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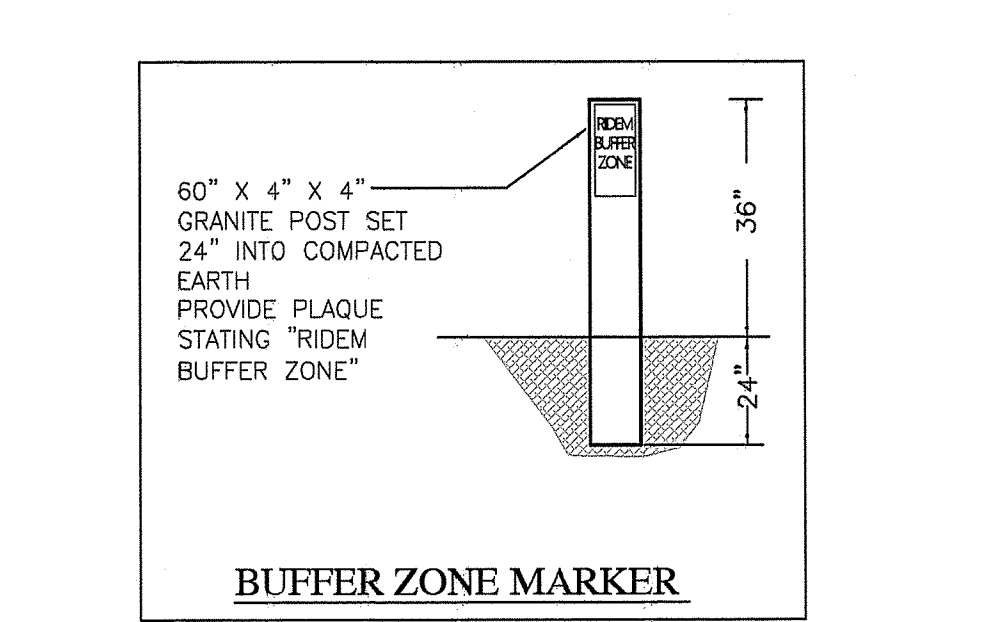
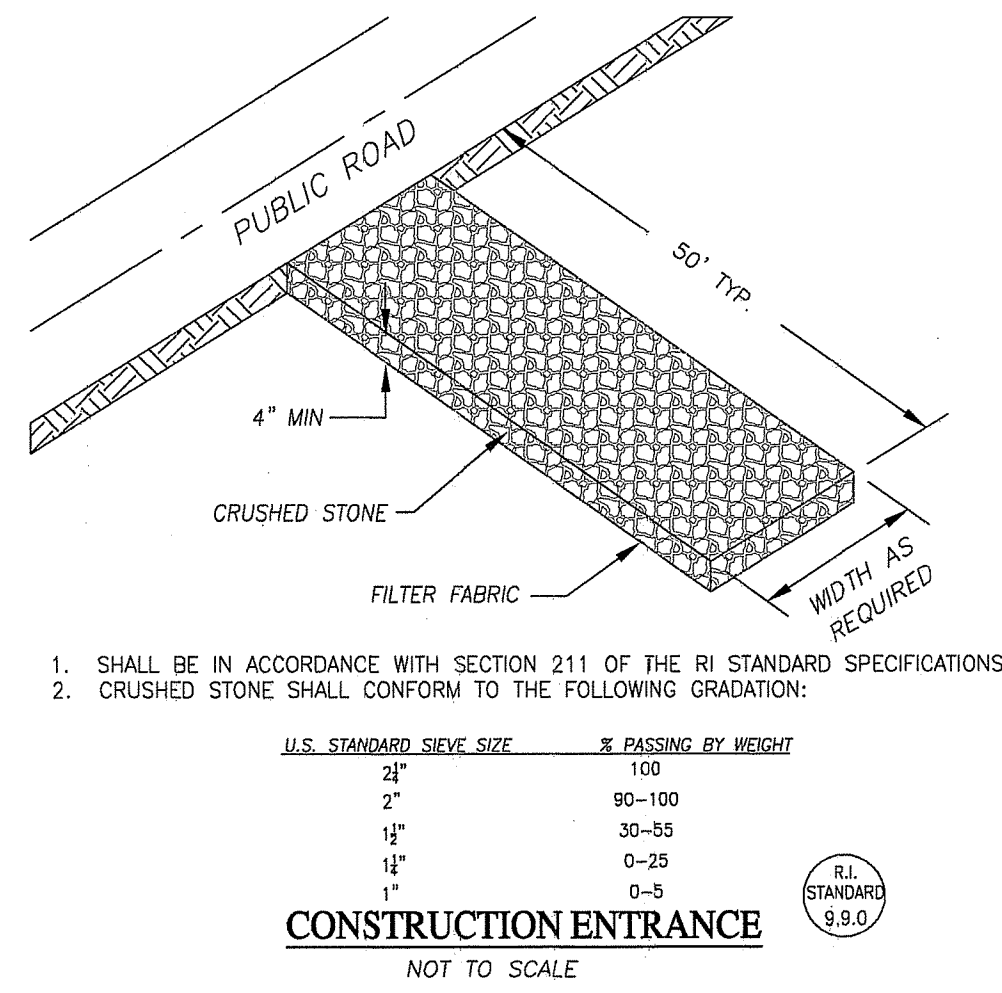


COMPOST FILTER SOIL (OPTIONAL EROSION CONTROL)

NOTE: FOLLOW MANUFACTURER'S SPECIFICATION
Modified from Fibrex Standard Specification and Design Manual, Version 5.0, 2006

NOTES:

- SEDIMENT CONTROL SHOULD BE INSTALLED PARALLEL TO THE BASE OF THE SLOPE OR OTHER DISTURBED AREA. IN EXTREME CONDITIONS (I.E., 2:1 SLOPES), A SECOND SEDIMENT CONTROL SHALL BE CONSTRUCTED AT THE TOP OF THE SLOPE.
- EFFECTIVE SOX HEIGHT IN THE FIELD SHOULD BE AS FOLLOWS:
8" DIAMETER SEDIMENT CONTROL = 6.5' HIGH
12" DIAMETER SEDIMENT CONTROL = 9.2' HIGH
18" DIAMETER SEDIMENT CONTROL = 14.2' HIGH
24" DIAMETER SEDIMENT CONTROL = 19' HIGH.
- STAKES SHALL BE INSTALLED THROUGH THE MIDDLE OF THE SEDIMENT CONTROL ON 10 FT (3M) CENTERS, USING 2 IN (50MM) BY 2 IN (50MM) BY 3 FT (1M) HARDWOOD STAKES. IN THE EVENT STAKING IS NOT POSSIBLE, I.E. WHEN SEDIMENT CONTROL IS USED ON PAVEMENT, HEAVY CONCRETE BLOCKS SHALL BE USED BEHIND THE SEDIMENT CONTROL TO HELP STABILIZE DURING RAINFALL/RUNOFF EVENTS.
- STAKING DEPTH FOR SAND AND SILT LOAM SOILS SHALL BE 12 IN (300MM), AND 8 IN (200MM) FOR CLAY SOILS.
- SOX IS TYPICALLY FILLED WITH 100% NET, WEED/SEED/DISEASE FREE RECYCLED KILN-DRIED INDUSTRIAL WOOD WASTE BUT CAN ALSO BE FILLED WITH LOCALLY PRODUCED COMPOST OR CHIPPED TIMBER DEBRIS. FOLLOW MANUFACTURER'S INSTRUCTIONS.



BioNet SC150BN Double Net Straw-Coconut Blanket

TOP NET: Leno woven, 100% biodegradable Jute Fiber 5.30 lbs/1000 F#2 (4.53 kg/100 m2) approx wt
STRAW/COCONUT MATRIX
70% straw at 0.25 lbs/yd2 (0.19 kg/m2)
30% coconut at 0.15 lbs/yd2 (0.08 kg/m2)

BOTTOM NET: Woven, 100% biodegradable Jute Fiber 7.70 lbs/1000 F#2 (3.76 kg/100 m2) approx wt
THREAD: Biodegradable

STANDARD ROLL SPECIFICATIONS
Width: 6' 6\"/>

14640 HIGHWAY 41 NORTH
EVANSVILLE, IN 47725
800-772-2940
www.northgreen.com

DISTRIBUTED BY:
Everett J. Prescott, Inc.
800 Gilman
Warwick, RI 02886
(401) 738-2511
Fax (401) 738-2834
Contact: Jack Blase

Environmental Management
NOV - 6 2020
Office of Water Resources

SLOPE INSTALLATION

- PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
- BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP's IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30 CM) OF RECP's EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL, AND FOLD REMAINING 12" (30 CM) PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECP's.
- ROLL THE RECP's (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
- THE EDGES OF PARALLEL RECP's MUST BE STAPLED WITH APPROXIMATELY 2" - 5" (5 CM - 12.5 CM) OVERLAP DEPENDING ON RECP's TYPE.
- CONSECUTIVE RECP's SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECP's WIDTH.
NOTE:
IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE RECP's.

SEDIMENT & EROSION CONTROL PLAN (SECR)

PROPOSED SINGLE FAMILY RESIDENCE
ASSESSOR'S PLAT 67 / LOT 22
TUKERTOWN ROAD
SOUTH KINGSTOWN, RHODE ISLAND

PREPARED BY:
JEFFREY J. CAMPOPIANO, P.E.
16 WEST MAIN STREET
WICKFORD, RHODE ISLAND 02852
PHONE: 401-295-3037
jeff@campopiano-eng.com

APPLICANT:
OWNER:

DATE: DECEMBER 4, 2014

NO.	DATE	DESCRIPTION

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CHECKED BY: JJC

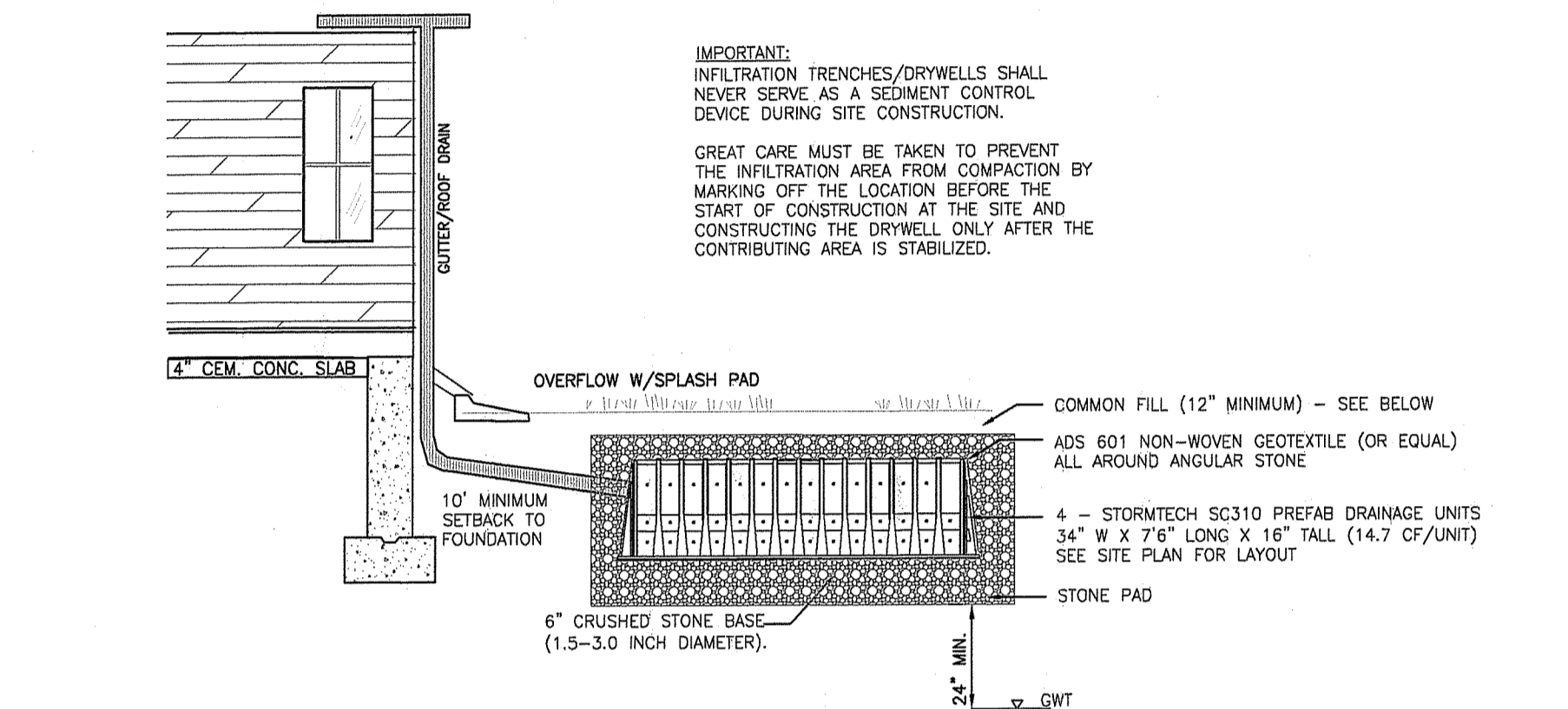
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INFILTRATION SYSTEM CONSTRUCTION NOTES:

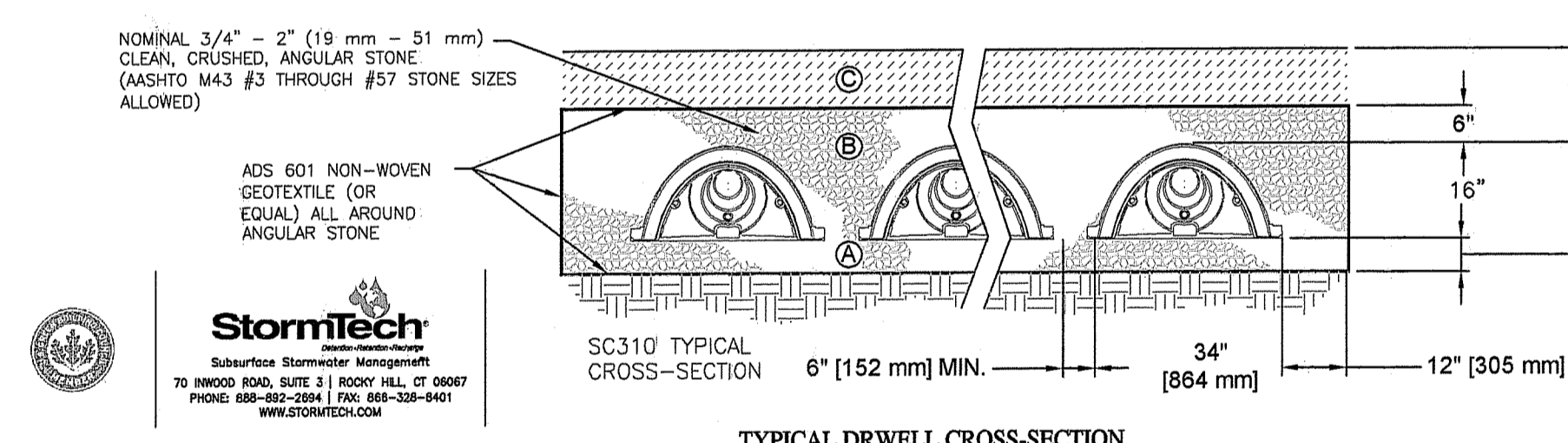
- INFILTRATION TRENCH OR CHAMBER SYSTEMS MAY NOT RECEIVE RUN-OFF UNTIL THE ENTIRE CONTRIBUTING DRAINAGE AREA TO THE INFILTRATION SYSTEM HAS RECEIVED FINAL STABILIZATION.
- CONSTRUCTION EQUIPMENT AND TRAFFIC SHALL BE RESTRICTED FROM TRAVELING OVER THE INFILTRATION AREAS TO MINIMIZE COMPACTION OF THE SOIL.
- EXCAVATE THE INFILTRATION CHAMBER TO THE DESIGN DIMENSIONS. EXCAVATED MATERIALS SHALL BE PLACED AWAY FROM THE TRENCH/CHAMBER SIDES TO ENHANCE TRENCH WALL STABILITY. LARGE TREE ROOTS MUST BE TRIMMED FLUSH WITH THE TRENCH SIDES IN ORDER TO PREVENT FABRIC PUNCTURING OR TEARING OF THE FILTER FABRIC DURING SUBSEQUENT INSTALLATION PROCEDURES. THE SIDE WALLS OF THE TRENCH/CHAMBER SHALL BE ROUGHENED WHERE SHEARED AND SEALED BY HEAVY EQUIPMENT.
- INFILTRATION CHAMBERS SHOULD CONSIST OF STORMTECH RC-310 UNITS. ANY SUBSTITUTIONS MUST BE OF EQUAL SIZE (STORAGE CAPACITY & HEIGHT) AND COMPRISED OF HIGH MOLECULAR WEIGHT HIGH DENSITY POLYETHYLENE (HDPE).
- ASHTO M288 CLASS 2 NON-WOVEN GEOTEXTILE CLASS "C" GEOTEXTILE OR BETTER SHALL INTERFACE BETWEEN THE TRENCH/CHAMBER SIDE WALLS AND BETWEEN THE STONE RESERVOIR AND GRAVEL FILTER LAYERS. A PARTIAL LIST OF NONWOVEN FILTER FABRICS THAT MEET THE CLASS CRITERIA IS CONTAINED INCLUDES (MIRAFI 180-N, AMOCO 4552, WEBTEC N70, GEOLON N70, CARTHAGE FX-8055).
- THE WIDTH OF THE GEOTEXTILE MUST INCLUDE SUFFICIENT MATERIAL TO CONFORM TO TRENCH/CHAMBER PERIMETER IRREGULARITIES AND FOR A 6-INCH MINIMUM TOP OVERLAP. THE FILTER FABRIC SHALL BE TUCKED UNDER THE STONE LAYER ON THE BOTTOM OF THE INFILTRATION TRENCH/CHAMBER FOR A DISTANCE OF 6 TO 12 INCHES.
- THE STONE AGGREGATE SHOULD BE PLACED IN 8" LIFTS AND LOOSELY COMPACTED. THE GRAVEL STONE FOR THE INFILTRATION TRENCH/CHAMBER SHALL BE WASHED AND MEET ONE OF THE FOLLOWING ASHTO STD. M-43; SIZE NO. 2 OR NO. 3.
- CARE SHALL BE EXERCISED TO PREVENT NATURAL OR FILL SOILS FROM INTERMIXING WITH THE STONE AGGREGATE. ALL CONTAMINATED STONE AGGREGATE SHALL BE REMOVED AND REPLACED WITH UNCONTAMINATED STONE AGGREGATE.
- VOIDS CAN BE CREATED BETWEEN THE FABRIC AND THE EXCAVATION SIDES AND SHALL BE AVOIDED. REMOVING BOULDERS OR OTHER OBSTACLES FROM THE TRENCH WALLS IS ONE SOURCE OF SUCH VOID; THEREFORE, NATURAL SOILS SHOULD BE PLACED IN THESE VOID AT THE MOST CONVENIENT TIME DURING CONSTRUCTION TO ENSURE FABRIC CONFORMITY TO THE EXCAVATION SIDES.
- PVC SHOULD BE IN ACCORDANCE WITH ROOT SPECIFICATION SECTION M.04 DRAINAGE AND THE FOLLOWING PROVISIONS, AS APPLICABLE. PVC DISTRIBUTION PIPES SHALL BE SCHEDULE 40 AND MEET ASTM STD. D 1784. ALL FITTINGS AND PERFORATIONS (1/2 INCH IN DIAMETER) SHALL MEET ASTM STD. D 2729.
- THE CONTRACTOR MUST REFER TO STORMTECH'S INSTALLATION INSTRUCTIONS FOR A TABLE OF ACCEPTABLE VEHICLE LOADS AT VARIOUS DEPTHS OF COVER. THIS INFORMATION IS ALSO AVAILABLE AT STORMTECH'S WEBSITE: WWW.STORMTECH.COM. THE CONTRACTOR IS RESPONSIBLE FOR PREVENTING VEHICLES THAT EXCEED STORMTECH'S REQUIREMENTS FROM TRAVELING ACROSS OR PARKING OVER THE STORMWATER SYSTEM. TEMPORARY ZONING, WARNING TAPE AND APPROPRIATELY LOCATED SIGNS ARE COMMONLY USED TO PREVENT UNAUTHORIZED VEHICLES FROM ENTERING SENSITIVE CONSTRUCTION AREAS.



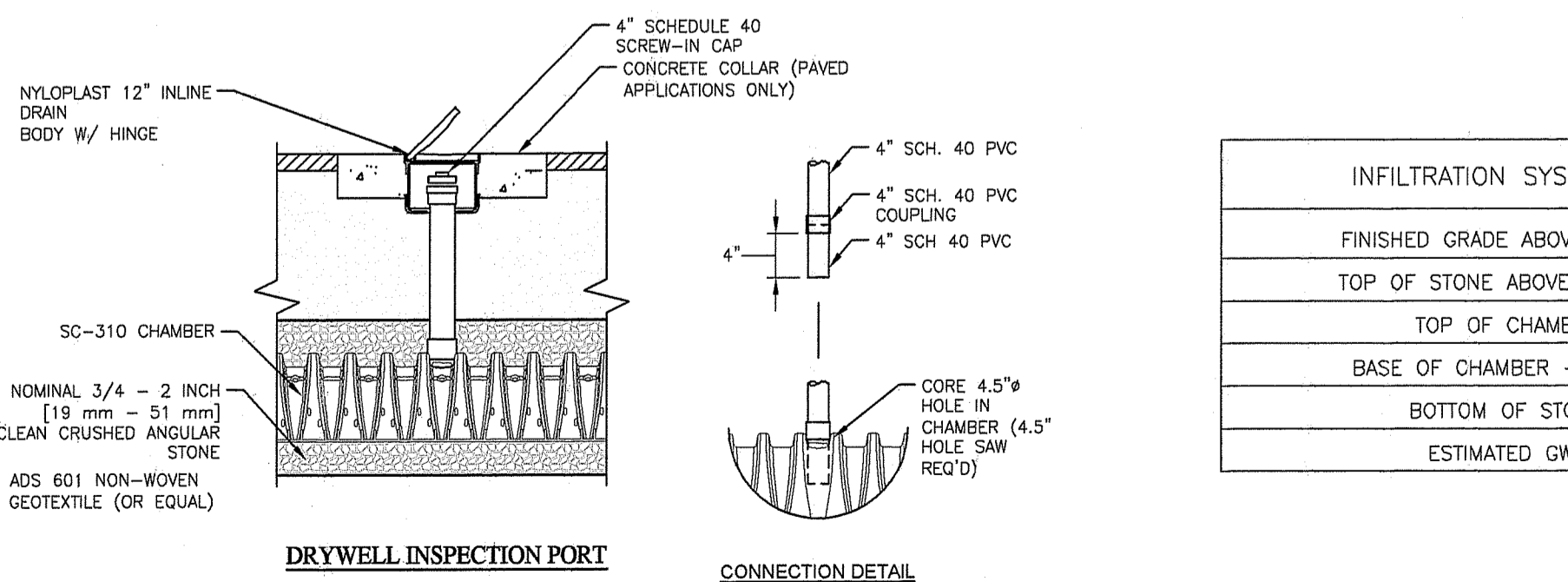
TYPICAL DRYWELL PROFILE
ACCEPTABLE FILL MATERIALS: STORMTECH SC-310 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO M43 DESIGNATION	COMPACTION/DENSITY REQUIREMENT
① FILL MATERIAL FOR LAYER "C" STARTS FROM THE TOP OF THE EMBEDMENT STONE TO 12" (457 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUB-BASE MAY BE A PART OF THIS LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, < 30% FINES. MOST PAVEMENT SUB-BASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTION AFTER 12" (305 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (152 mm) LIFTS TO A MIN. 95% STANDARD PROCTOR DENSITY ROLLER CROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
② EMBEDMENT STONE SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE TO THE "C" LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE. NOMINAL SIZE DISTRIBUTION BETWEEN 3/4" - 2 INCH (19 - 51 mm)	3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
③ FOUNDATION STONE BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE. NOMINAL SIZE DISTRIBUTION BETWEEN 3/4" - 2 INCH (19 - 51 mm)	3, 35, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A 95% STANDARD PROCTOR DENSITY.

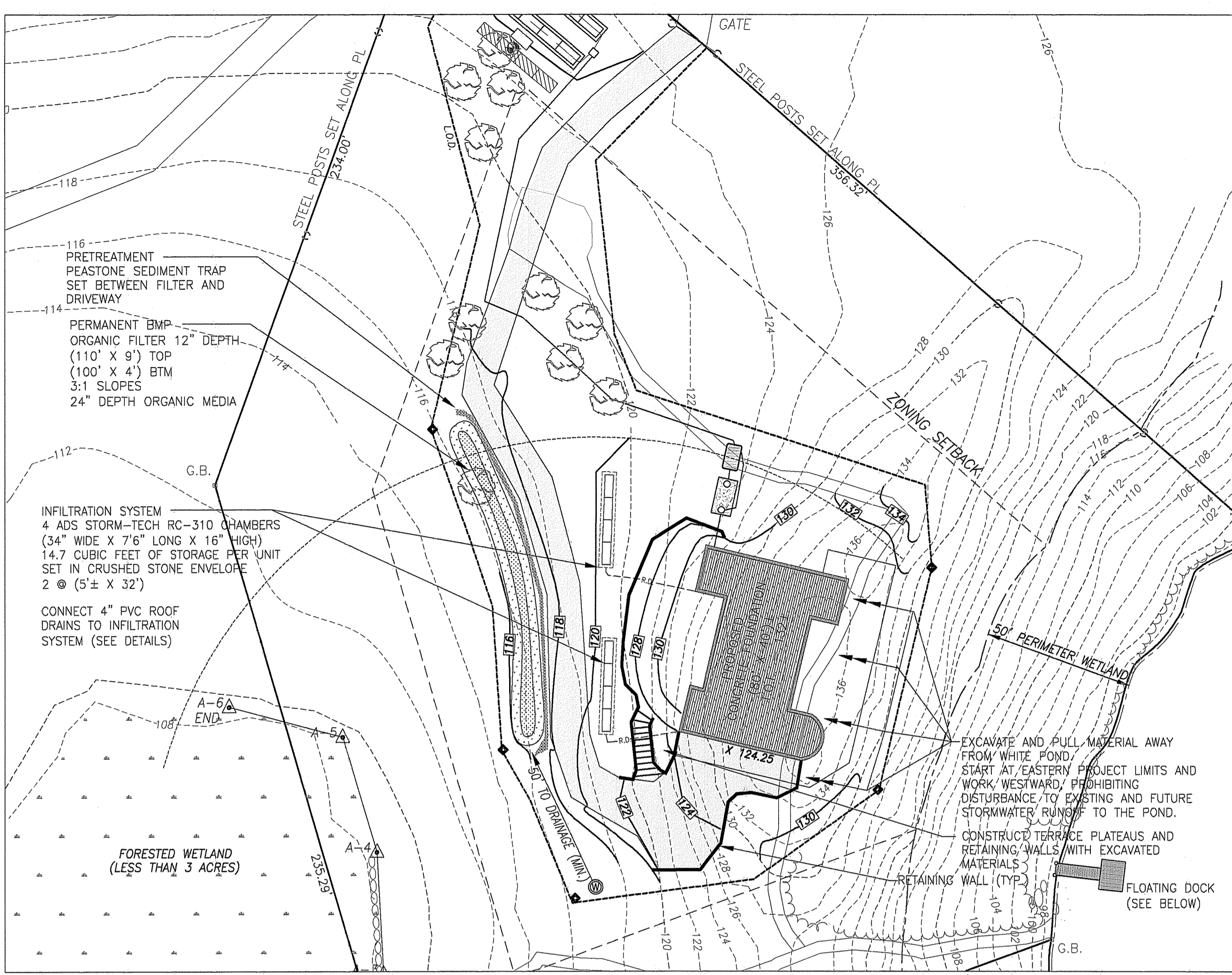
PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. AS AN ALTERNATE TO PROCTOR TESTING AND FIELD DENSITY MEASUREMENTS ON OPEN GRADED STONE, STORMTECH COMPACTION REQUIREMENTS ARE MET FOR "A" LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (229 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH AN APPROPRIATE COMPACTOR.



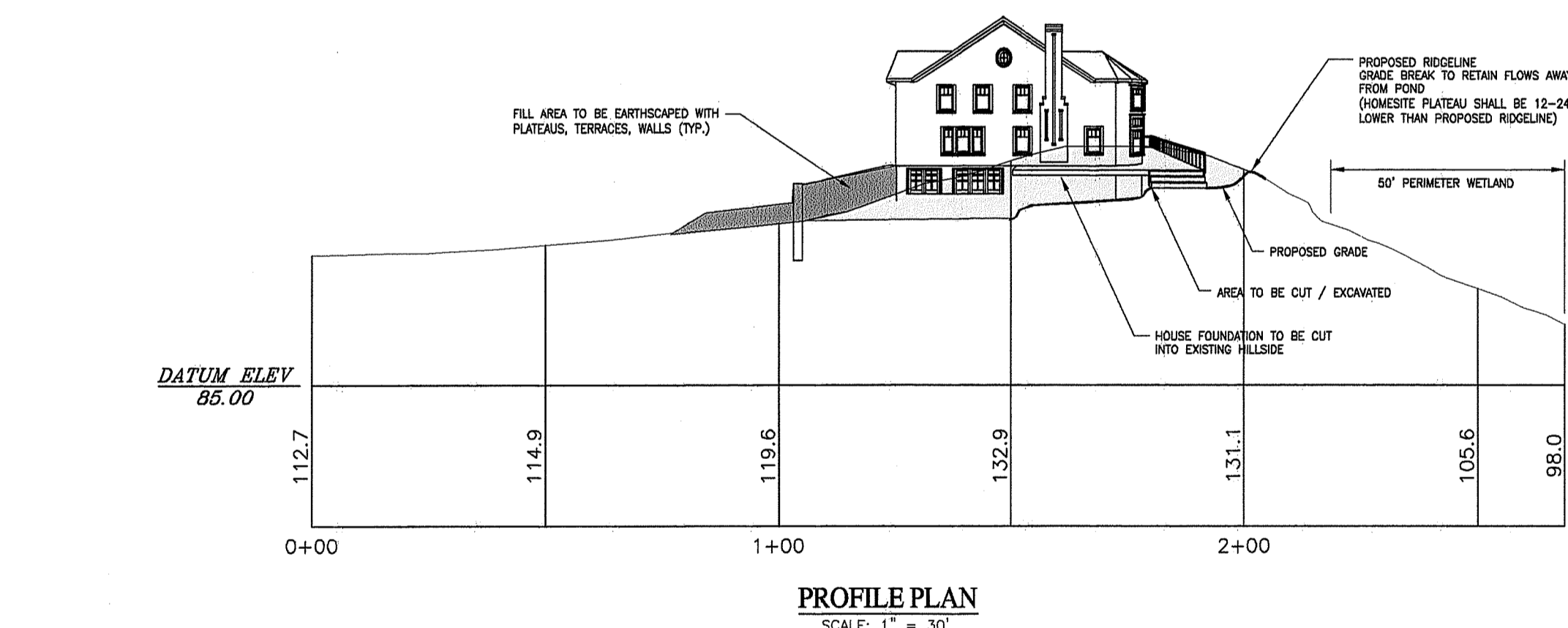
TYPICAL DRYWELL CROSS-SECTION



INFILTRATION SYSTEM INVERT SCHEDULE	
FINISHED GRADE ABOVE SYSTEM	ELEV. 120±
TOP OF STONE ABOVE CHAMBER	ELEV. 119.50
TOP OF CHAMBER	ELEV. 119.00
BASE OF CHAMBER - INVERT	ELEV. 117.67
BOTTOM OF STONE	ELEV. 117.17
ESTIMATED GWT	ELEV. 111±



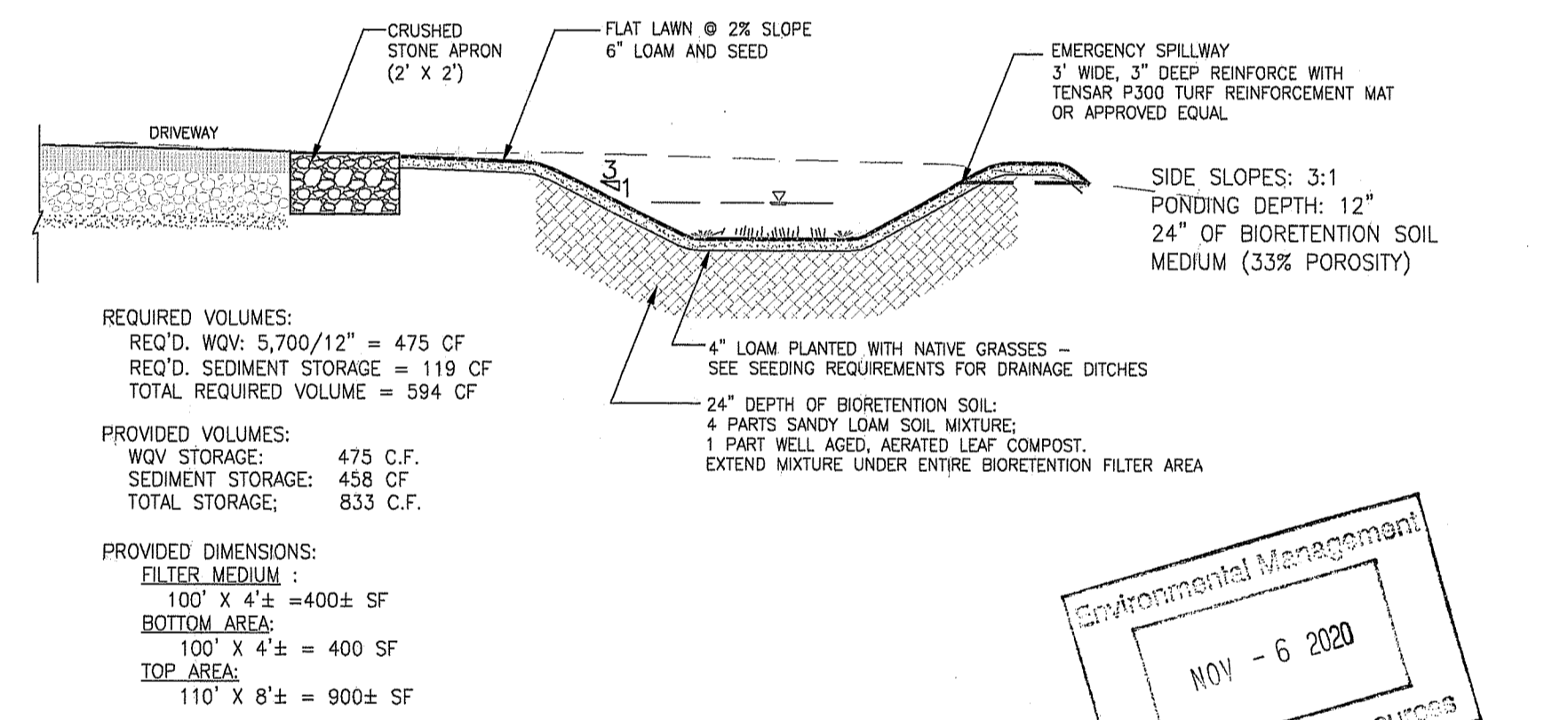
GRADING PLAN
SCALE: 1" = 30'



PROFILE PLAN
SCALE: 1" = 30'

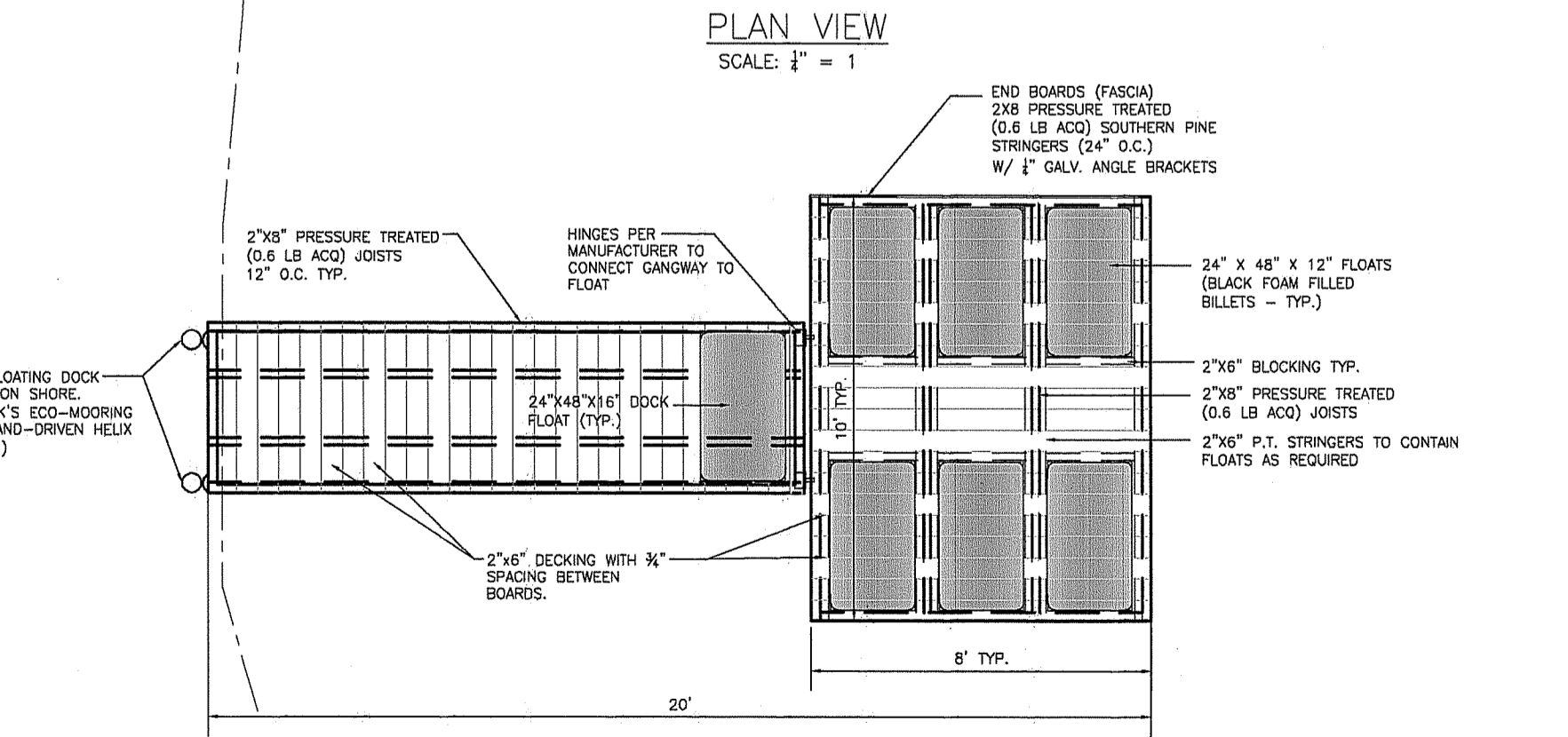
ORGANIC FILTER CONSTRUCTION NOTES:

- THE ORGANIC FILTER AREA SHALL BE CONSTRUCTED FOLLOWING THE COMPLETION AND STABILIZATION OF OTHER SITE WORK. COMPACTION OF THE AREA PRIOR TO AND DURING CONSTRUCTION MUST BE AVOIDED. EXCAVATION SHALL BE COMPLETED USING LIGHT EQUIPMENT WITH WIDE TRACKS. IF THE AREA DOES BECOME COMPACTED, SOIL MUST BE TILLED TO A MINIMUM DEPTH OF 12".
 - IF SPECIFIED, UNDERDRAINS SHALL BE PLACED ON A MINIMUM OF 3" WIDE SECTION OF FILTER CLOTH, OVERLAIN BY GRAVEL BEDDING FREE FROM FINES. PIPE SHALL BE SLOPED A MINIMUM OF 0.5%.
 - FOLLOW SOIL SPECIFICATIONS TO PROVIDE A MEDIA WITH ADEQUATE NUTRIENTS. ORGANIC MEDIA SHALL BE PLACED IN 12" LIFTS.
- MATERIALS**
PLANTING MEDIA - THE MATERIAL TO BE FURNISHED SHALL BE A UNIFORM MIX FREE OF SUBSOIL, REFUSE, STUMPS, ROOTS, ROCKS, BRUSH, WEEDS OR OTHER MATERIAL WHICH WOULD PREVENT THE FORMATION OF A SUITABLE SEED BED. THE MEDIA SHALL CONSIST OF THE 4 PARTS PLANTING SOIL & 1 PART WELL AGED, AERATED, LEAF COMPOST.
PLANTING SOIL:
SAND: 85-95%
SOIL FINES: 8-12% (NO MORE THAN 2% CLAY)
ORGANIC MATTER: 3-5%
- A TEXTURAL ANALYSIS IS REQUIRED TO ENSURE THE BIORETENTION SOIL MEETS THE SPECIFICATION LISTED ABOVE. THE BIORETENTION SOIL SHOULD ALSO BE TESTED FOR THE FOLLOWING CRITERIA:
• PH RANGE: 5.2 - 7.0
• MAGNESIUM NOT TO EXCEED 32 PPM
• PHOSPHORUS P205 NOT TO EXCEED 60 PPM
• POTASSIUM K2O NOT TO EXCEED 78 PPM
• SOLUBLE SALTS NOT TO EXCEED 500 PPM
- ALL BIORETENTION AREAS SHOULD HAVE A MINIMUM OF ONE TEST. EACH TEST SHOULD CONSIST OF BOTH THE STANDARD SOIL TEST FOR PH, PHOSPHORUS, AND POTASSIUM AND ADDITIONAL TESTS OF ORGANIC MATTER, AND SOLUBLE SALTS. SINCE DIFFERENT LABS CALIBRATE THEIR TESTING EQUIPMENT DIFFERENTLY, ALL TESTING RESULTS SHOULD COME FROM THE SAME TESTING FACILITY.
- SHOULD THE PH FALL OUT OF THE ACCEPTABLE RANGE, IT MAY BE MODIFIED (HIGHER) WITH LIME OR (LOWER) WITH IRON SULFATE PLUS SULFUR.
- INSTALLATION**
1. IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF THE AREA AND THE REQUIRED BACKFILL. WHEN POSSIBLE, USE EXCAVATION HOES TO REMOVE ORIGINAL SOIL. IF AREA IS EXCAVATED USING A LOADER, THE CONTRACTOR SHOULD USE WIDE TRACK OR MARSH TRACK EQUIPMENT, OR LIGHT EQUIPMENT WITH TURF TYRE TIRES. USE OF EQUIPMENT WITH NARROW TRACKS OR NARROW TIRES, RUBBER TIRES WITH LARGE LUGS, OR HIGH PRESSURE TIRES ARE NOT ACCEPTABLE.
2. COMPACTION CAN BE ALLEVATED AT THE BASE OF THE FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS A CHISEL PLOW, RIPPER, OR SUBSOILER. THESE TILLING OPERATIONS ARE PERFORMED TO REFRACURE THE SOIL PROFILE THROUGH THE 12-IN COMPACTION ZONE. SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER. ROTOTILLERS TYPICALLY DO NOT TILL DEEP ENOUGH TO REDUCE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT.
3. WHEN BACKFILLING THE FACILITY, PLACE SOIL IN LIFTS 12IN OR GREATER. DO NOT USE HEAVY EQUIPMENT. HEAVY EQUIPMENT CAN BE USED AROUND THE PERIMETER OF THE BASIN TO SUPPLY SOILS AND SAND. GRADE ORGANIC MATERIALS WITH LIGHT EQUIPMENT SUCH AS A COMPACT LOADER OR A DOZER/LOADER WITH MARSH TRACKS.
- PLANT INSTALLATION**
1. THE PLANT ROOT BALL SHOULD BE PLANTED SO 1/8TH OF THE BALL IS ABOVE FINAL GRADE SURFACE.
2. ROOT STOCK OF THE PLANT MATERIAL SHOULD BE KEPT MOIST DURING TRANSPORT AND ON-SITE STORAGE. THE DIAMETER OF THE PLANTING PIT SHOULD BE AT LEAST SIX INCHES LARGER THAN THE DIAMETER OF THE PLANTING BALL. SET AND MAINTAIN THE PLANT STRAIGHT DURING THE ENTIRE PLANTING PROCESS. THOROUGHLY WATER GROUND BED COVER AFTER INSTALLATION.
3. TREES SHOULD BE BRACED USING 2 IN X 2 IN STAKES ONLY AS NECESSARY AND FOR THE FIRST GROWING SEASON ONLY. STAKES ARE TO BE EQUALLY SPACED ON THE OUTSIDE OF THE TREE BALL. GRASSES AND LEGUME SEED SHOULD BE TILLED INTO THE SOIL TO A DEPTH OF AT LEAST ONE INCH.
- MULCH SPECIFICATIONS.**
A FINELY SHREDDED, WELL-AGED ORGANIC HARDWOOD MULCH IS THE PREFERRED ACCEPTED MULCH; A FINELY SHREDDED, WELL-AGED ORGANIC DARK PINE MULCH MAY BE ACCEPTED ON A CASE-BY-CASE BASIS.
SHREDDED MULCH MUST BE WELL AGED (6-12 MONTHS) FOR ACCEPTANCE.
MIX APPROXIMATELY 1/3 THE SPECIFIED MULCH LAYER INTO THE PLANTING SOIL TO A DEPTH OF APPROXIMATELY 4 INCHES TO HELP FOSTER A HIGHLY AERATED SURFACE LAYER.
- MAINTENANCE:**
REPLACE DEAD PLANTS, MULCH ANNUALLY, MOW 3 X ANNUALLY; 12" MAX HEIGHT; FERTILIZER SHALL NOT BE UTILIZED. AMEND SOIL YEARLY WITH A COMPOST MIX.



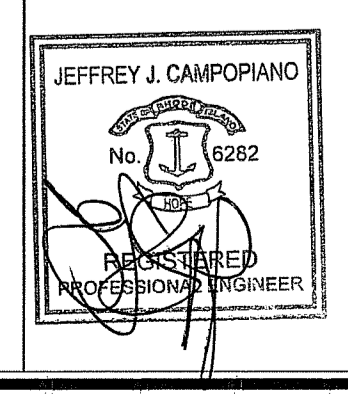
DOCK CONSTRUCTION NOTES:

- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF WATER RESOURCES, THE RHODE ISLAND STATE BUILDING CODE (RISBC), THE LOCAL BUILDING INSPECTOR OFFICE IN THE TOWN OF SOUTH KINGSTOWN AND/OR ANY APPROPRIATE AUTHORITY HAVING JURISDICTION AT THE PROJECT LOCATION.
- TIMBER CONSTRUCTION SHALL CONFORM TO PART II "DESIGN SPECIFICATIONS" AS PUBLISHED IN THE TIMBER CONSTRUCTION MANUAL (ATC 1974) AND TO "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" (1982).
- NEW TIMBER FOR STRUCTURAL USE SHALL HAVE A 19% MOISTURE CONTENT AS SPECIFIED IN THE "NATIONAL SPECIFICATION FOR WOOD CONSTRUCTION" (1982).
- ALL HANGERS AND FASTENERS SHALL BE HOT DIPPED GALVANIZED OR STAINLESS STEEL.
- ALL LUMBER SHALL BE TREATED WITH 0.6 LB/CF OF AMMONIACAL COPPER QUATERNARY (ACQ) OR APPROVED EQUAL FOR WOOD PRESERVATION IN FRESH WATER IN ACCORDANCE WITH AMERICAN WOOD PROTECTION ASSOCIATION REQUIREMENTS (AWPA) FOR AQUATIC USE. CHROMATED COPPER ARSENATE (CCA) SHALL NOT BE USED IN FRESH WATER APPLICATIONS.
- INSTALL ACQ DOCK ECO MOORING SYSTEM WITH HAND DRIVEN HELIX PIERS.



SITE GRADING & STORMWATER CONTROLS
PROPOSED SINGLE FAMILY RESIDENCE
ASSESSOR'S PLAT 67 / LOT 22
TUKERTOWN ROAD
SOUTH KINGSTOWN, RHODE ISLAND

PREPARED BY:
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PHONE: 401-295-3037
jeff@campopiano-eng.com



APPLICANT:
OWNER:

DATE: DECEMBER 4, 2014		
REVISIONS:		
NO.	DATE	DESCRIPTION

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CHECKED BY: JJC
SHEET NUMBER
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DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED 1/22/2021 FILE # 20-0255
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Christopher D. Leonard