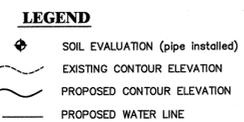


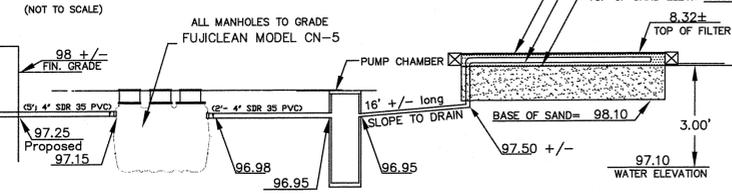
- GENERAL NOTES:**
- 1) ALL DESIGN, CONSTRUCTION, AND MAINTENANCE TO BE IN CONFORMANCE WITH THE "RULES ESTABLISHING MINIMUM STANDARDS RELATING TO LOCATION, DESIGN, CONSTRUCTION AND MAINTENANCE OF ONSITE WASTEWATER TREATMENT SYSTEMS (OWTS), STATE OF RHODE ISLAND, DEPARTMENT OF ENVIRONMENTAL MANAGEMENT" AS ADOPTED NOVEMBER 25, 2018.
 - 2) PROPOSED TOP OF FOUNDATION ELEVATION IS DIRECTLY RELATED TO INSTALLATION AND FUNCTIONING OF THE OWTS AND SHOULD NOT BE CHANGED WITHOUT FIRST CONSULTING DESIGNER.
 - 3) ALL PIPING MUST BE SDR 35 PVC UNLESS NOTED OTHERWISE.
 - 4) NO SUBSURFACE DRAINS, FOUNDATION DRAINS OR STORMWATER DRAINS MAY BE LOCATED WITHIN 25 FEET OF PROPOSED OWTS UPGRADIENT OR WITHIN 50 FEET OF PROPOSED OWTS DOWNGRADIENT.
 - 5) THERE IS NO WATERCOURSE OR WETLAND AREA WITHIN 200' OF SYSTEM UNLESS SHOWN ON PLAN.
 - 6) CLEAR ALL TREES AND STUMPS WITHIN 10' OF SYSTEM.
 - 7) THERE ARE NO EXISTING OR PROPOSED DRAINS WITHIN 200' OF SYSTEM UNLESS SHOWN ON PLAN.

- SEPTIC TANK: (REFERENCE RI DEM OWTS SECTION 6.27)**
- 1) SEPTIC TANKS SHALL BE CONSTRUCTED OF PRECAST REINFORCED CONCRETE, FIBERGLASS, POLYETHYLENE OR OTHER MATERIAL APPROVED BY THE DIRECTOR. PRECAST REINFORCED CONCRETE SEPTIC TANKS SHALL CONFORM TO THE AMERICAN SOCIETY FOR TESTING AND MATERIALS' STANDARD SPECIFICATION FOR PRECAST CONCRETE SEPTIC TANKS C-1227-02 AND ANY UPDATES THERETO. FIBERGLASS AND POLYETHYLENE SEPTIC TANKS SHALL CONFORM TO THE INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS' MATERIAL AND PROPERTY STANDARD FOR PREFABRICATED SEPTIC TANKS MPMD P5-2004A AND ANY UPDATES THERETO.
 - 2) SEPTIC TANK SHALL HAVE TWO (2) COMPARTMENTS. ONE (1) INLET AND ONE (1) OUTLET SHALL BE PROVIDED. THE INVERT ELEVATION OF THE OUTLET SHALL BE 3 INCHES BELOW THE INVERT ELEVATION OF THE INLET. THE OUTLET TEE SHALL BE EQUIPPED WITH AN EFFLUENT SCREEN APPROVED BY DEM.
 - 3) THE INLET AND OUTLET PIPES SHALL BE CONNECTED TO THE TANK WITH A WATER TIGHT SEALED FLEXIBLE JOINT.
 - 4) SEPTIC TANKS SHALL BE PROVIDED WITH INLET AND OUTLET TEES. THE INLET AND OUTLET TEES SHALL BE MINIMUM SDR 35 PVC SOLVENT WELDED.
 - 5) A MINIMUM 20" INSIDE DIAMETER ACCESS OPENING SHALL BE LOCATED OVER BOTH THE INLET AND OUTLET TEE. THE ACCESS OPENING OVER THE OUTLET TEE SHALL BE BROUGHT TO FINISHED GRADE. OTHER ACCESS OPENINGS SHALL EITHER BE BROUGHT TO FINISHED GRADE OR WITHIN 12" OF FINISHED GRADE.
 - 6) SEPTIC TANKS SHALL BE INSTALLED ON A LEVEL, STABLE BASE THAT WILL NOT SETTLE.

OTHER NOTES:
 PROPERTY IS NOT LOCATED IN A CRITICAL RESOURCE AREA.
 PLAN DOES NOT REPRESENT A BOUNDARY SURVEY.
 THE SURROUNDING AREA IS SERVED BY PRIVATE WELLS.

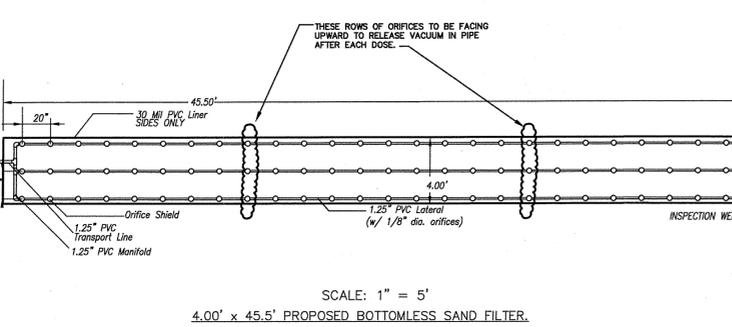
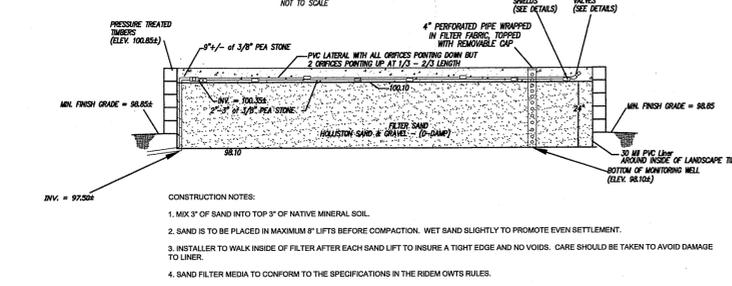


TYPICAL SYSTEM PROFILE
 (NOT TO SCALE)

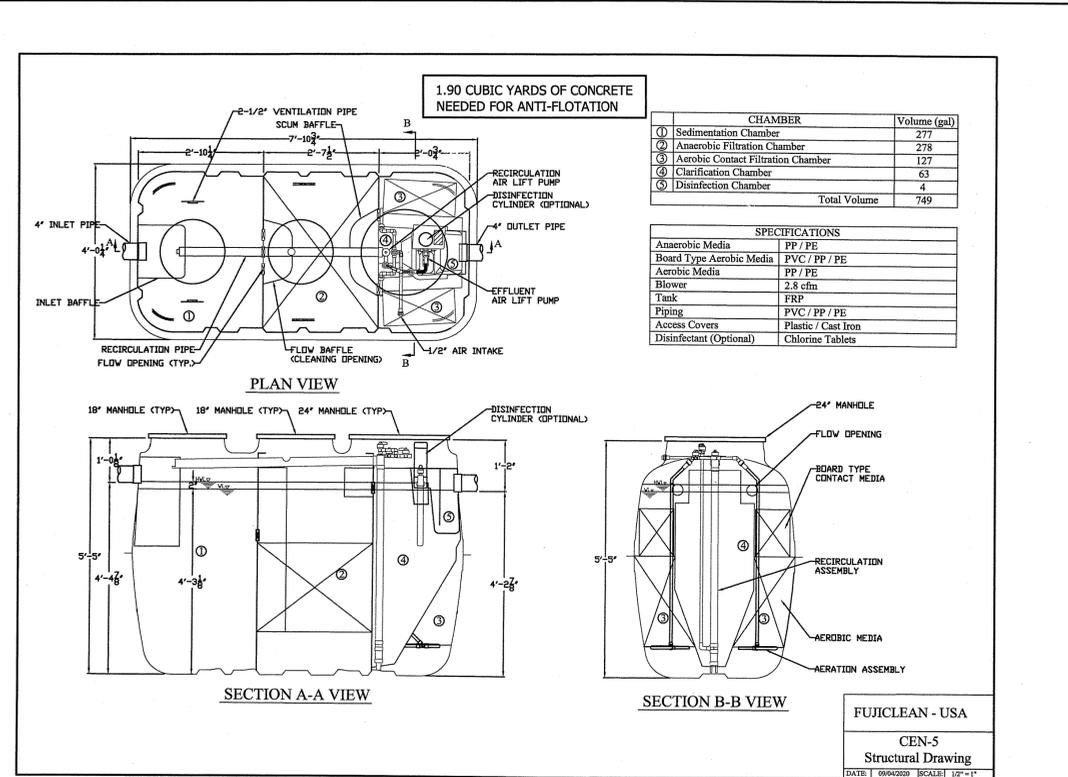
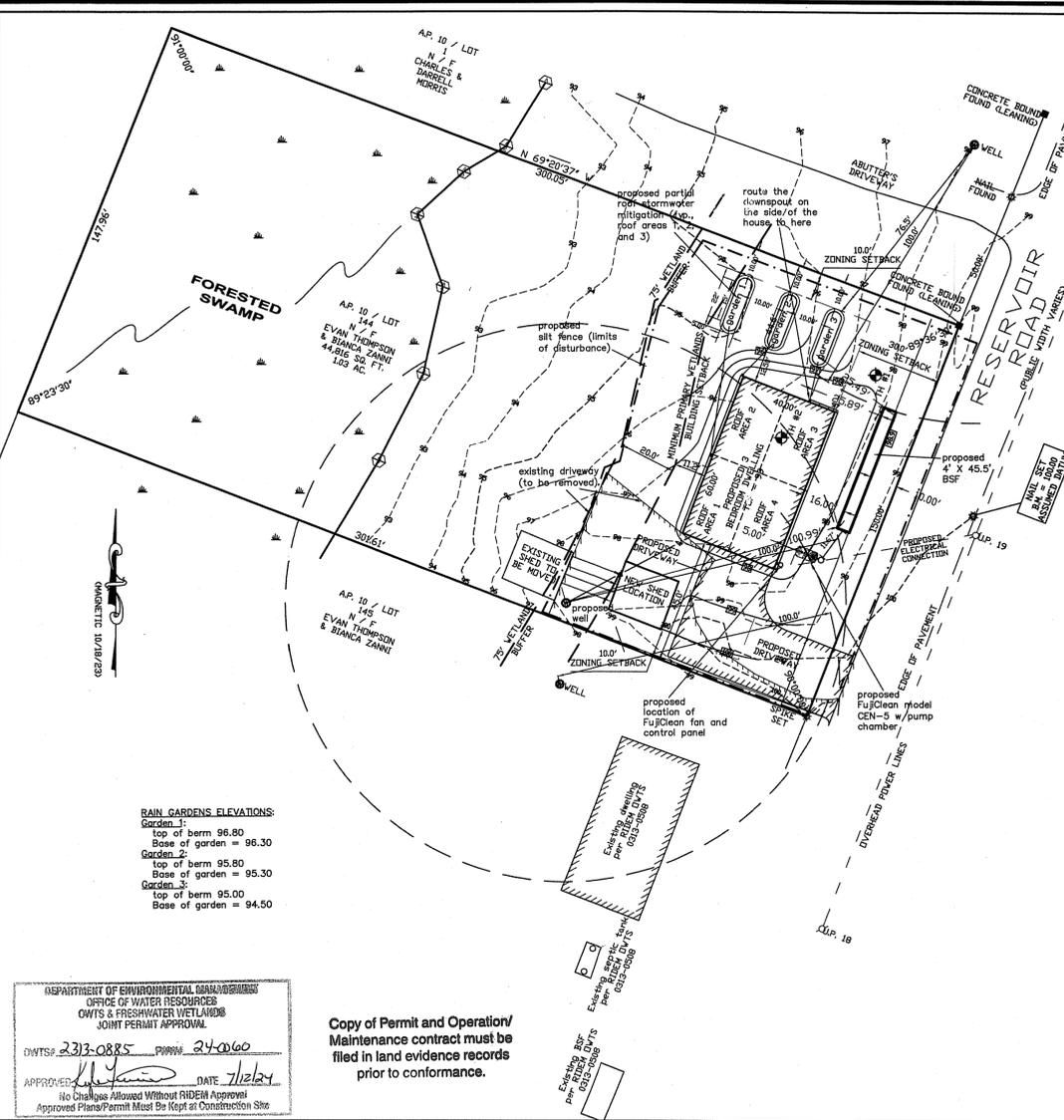


- 1) STRIP ALL SOIL AND ORGANIC MATERIAL FROM BELOW BASE OF SAND FILTER. SCARIFY TOP 3" OF NATIVE MINERAL SOIL AND MIX WITH 3" OF SAND.
- 2) MAINTAIN ELEVATION 98.10 FOR A 5 FOOT PERIMETER AROUND BSF.
- 3) MAINTAIN ELEVATION 96.98 FOR A 10 FOOT PERIMETER AROUND TANK.
- 4) COVER ALL PIPE ABOVE THE FROST LINE WITH A 2" THICK FOUNDATION INSULATION 2' WIDE, CENTERED ON THE PIPE, BY THE LENGTH OF THE PIPE BEFORE BACKFILLING.

BOTTOMLESS SAND FILTER PROFILE
 NOT TO SCALE



SCALE: 1" = 5'
 4.00' x 45.5' PROPOSED BOTTOMLESS SAND FILTER.



CHAMBER	Volume (gal)
① Sedimentation Chamber	277
② Anaerobic Filtration Chamber	278
③ Aerobic Contact Filtration Chamber	127
④ Clarification Chamber	63
⑤ Disinfection Chamber	4
Total Volume	749

SPECIFICATIONS	
Anaerobic Media	PP / PE
Board Type Aerobic Media	PVC / PP / PE
Aerobic Media	PP / PE
Blower	2.8 cfm
Tank	FRP
Piping	PVC / PP / PE
Access Covers	Plastic / Cast Iron
Disinfectant (Optional)	Chlorine Tablets

BSF DESIGN

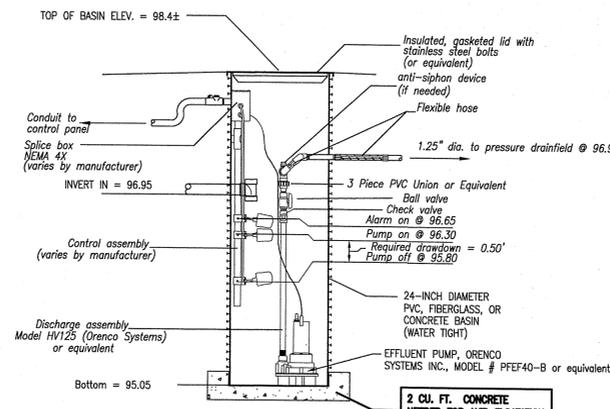
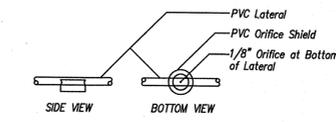
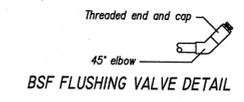
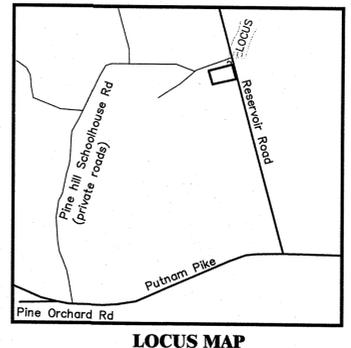
@ BSF :
 MAX. EXIST. GROUND ELEV. 98.60
 ESHWT = 18" (1.5' - Application # 2313-0885)
 SHWT ELEVATION 97.10

DESIGN USING 97.10 FOR SHWT ELEVATION

MIN. TOP SAND 100.10'
 DESIGN TOP SAND 100.10'
 BOTTOM OF SAND 98.10'

SOIL CATEGORY 8 WITHIN 3' OF BASE OF BSF
 (DESIGN ON 1.9 GAL/S.F./DAY, FOR CAT 1 BSF)

PROPOSED 3 BEDROOM DWELLING:
 3 BED X 115 GAL./BED/DAY = 345 GAL./DAY
 345 GAL./DAY + 1.9 GAL/S.F./DAY = 181.6 S.F. REQUIRED
 4' X 45.5' BSF = 182 S.F. PROPOSED



SIMPLEX PUMP STATION DETAIL
 NOT TO SCALE

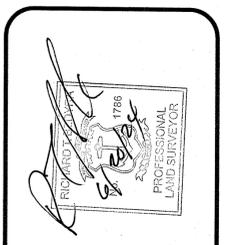
CERTIFICATION:
 THIS SURVEY HAS BEEN CONDUCTED AND THE PLAN HAS BEEN PREPARED PURSUANT TO SECTION 9 OF THE RULES AND REGULATIONS ADOPTED BY THE RHODE ISLAND STATE BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS ON NOVEMBER 25, 2015, AS FOLLOWS:

TYPE OF SURVEY: DATA ACCUMULATION SURVEY
MEASUREMENT SPECIFICATION: CLASS III

THE PURPOSE FOR THE CONDUCT OF THE SURVEY AND FOR THE PREPARATION OF THE PLAN IS AS FOLLOWS:
 TO COMPILE INFORMATION IN ORDER TO DESIGN AN OWTS NEW BUILDING CONSTRUCTION

BY: *[Signature]* DATE: 6/20/24
 BY: RICHARD T. BZDYRA, PLS. LICENSE #1786; CDA # LS-A60

PROPOSED ONSITE WASTEWATER TREATMENT SYSTEM
 NEW CONSTRUCTION APPLICATION
 A.P. 10 LOT 144 - RESERVOIR ROAD
 GLOCESTER, RI
 Prepared For: **EVAN THOMPSON**



Ocean State Planners, Inc.
 SURVEYORS • DESIGNERS
 1255 OAKLAWN AVENUE GRANSTON, RI 02920
 PHONE (401) 463-9696 EMAIL: info@osplanners.com

REVISION:
 MARCH 27, 2024
 MAY 15, 2024

DATE: MARCH 12, 2024
 DRAWN BY: OSP
 SCALE: 1" = 30'
 GRAPHIC SCALE: 0 15 30 45 60
SHEET 1
 OF 2 SHEETS
 JOB NO. 10605
 DWG. NO. 10605-OWTS

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TOTAL STORMWATER RUNOFF MITIGATION

EXISTING PAVED DRIVEWAY TO BE REMOVED (CREDIT AREA) = - 2,688 S.F.
 PROPOSED PAVED DRIVEWAY (AREA) = 1,986 S.F.
 PROPOSED AREA OF ROOFING = 2,520 S.F.
 TOTAL AREA TO BE MITIGATED FOR STORMWATER RUNOFF = 1,818 S.F.

3/4 OF THE ROOF AREA WILL BE USED FOR MITIGATION:
 $2,520 \text{ S.F.} \times 0.75 = 1,890 \text{ S.F.}$ (GREATER THAN 1,818 S.F. REQUIRED)

USING RAIN GARDENS, 6" DEEP,
 USING TABLE 7 (SIZING FOR RAIN GARDENS IN SANDY LOAM SOILS)

TOTAL HOUSE ROOF AREA = 2,520 S.F.
 ROOF SUB-AREAS (4 EQUAL SIZED) = 630 S.F. (EACH)

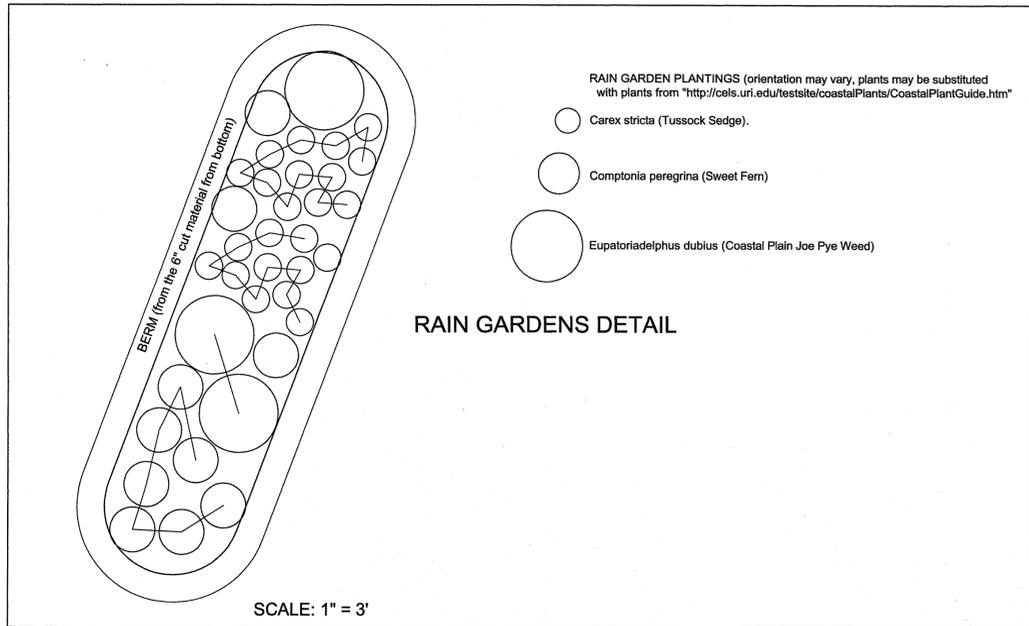
DRAINAGE AREA: 600 S.F. = 90 S.F. (INFILTRATION AREA)
 DRAINAGE AREA: 700 S.F. = 105 S.F. (INFILTRATION AREA)
 DIFFERENCE: 100 S.F. = 15 S.F.
 DIFFERENCE PER 1 S.F. OF DRAINAGE AREA:
 $15 \text{ S.F.} / 100 \text{ S.F.} = 0.15 \text{ S.F.} / \text{S.F.}$
 FOR 630 S.F. OF DRAINAGE AREA:
 $90 \text{ S.F.} + (30 \text{ S.F.} \times 0.15 \text{ S.F.} / \text{S.F.})$
 = 94.5 S.F. (DRAINAGE AREA)
 DESIGN DRAINAGE SUB-AREA = RECTANGLE (5' X 15') + CIRCLE (RADIUS 2.5')
 RECTANGLE AREA $15' \times 5' = 75 \text{ S.F.}$
 2 SEMI CIRCLES AREAS (2.5' RADIUS) = $3.1415 \times 2.5^2 = 19.64 \text{ S.F.}$
 TOTAL SUB-AREA (EACH) = $75 \text{ S.F.} + 19.64 \text{ S.F.} = 94.64 \text{ S.F.} > 94.5 \text{ S.F.}$

RAIN GARDENS ELEVATIONS:

Garden 1:
 top of berm 96.80
 Base of garden = 96.30

Garden 2:
 top of berm 95.80
 Base of garden = 95.30

Garden 3:
 top of berm 95.00
 Base of garden = 94.50



VEGETATIVE COVER AND PLANTING

- THE NORMAL ACCEPTABLE SEASONABLE SEEDING DATES ARE APRIL 1ST THROUGH OCTOBER 15TH.
 - TOP SOIL FOR PERMANENT OR LONG TERM TEMPORARY SEEDING SHOULD HAVE A SANDY LOAM TEXTURE, RELATIVELY FREE OF SUBSOIL MATERIAL, STONES, ROOTS, LUMPS OF SOIL, TREE LIMBS, TRASH OR CONSTRUCTION DEBRIS. TOP SOIL SHALL CONFORM WITH RHODE ISLAND SPECIFICATIONS M18.01.
 - THE DESIGN SEED MIX UTILIZED IN ALL DISTURBED AREAS TO BE SEEDED SHALL BE COMPRISED OF THE FOLLOWING:
- | TYPE | % BY WEIGHT | SEEDING DATE |
|---------------------|-------------|-------------------|
| CREeping RED FESCUE | 70 | APRIL 1 - JUNE 15 |
| ASTORIA BENTGRASS | 5 | APRIL 1 - JUNE 15 |
| BIRDFOOT TREFLOIL | 15 | AUG. 15 - OCT. 15 |
| PERENNIAL RYE GRASS | 10 | AUG. 15 - OCT. 15 |
- APPLICATION RATE - 100 LBS PER ACRE
- SEED MIX SHALL BE INOCULATED WITHIN 24 - HOURS BEFORE MIXING AND PLANTING, WITH APPROPRIATE INOCULATION FOR EACH SEED VARIETY. ALTERNATE SEED TYPES DUE TO SITE SPECIFIC CONDITIONS AND SOILS ARE ACCEPTABLE WITH THE ENGINEER'S APPROVAL.
- IN TOPSOIL SEEDING AREAS, THE CONTRACTOR WILL LIME AND FERTILIZE AS REQUIRED TO COMPLIMENT OR UPGRADE SOIL CONDITIONS.
 - THE CONTRACTOR MUST REPAIR AND/OR RESEED ANY PERMANENT VEGETATIVE COVER AREAS THAT DO NOT DEVELOP OR WHICH ERODE WITHIN A ONE (1) YEAR

EROSION CONTROL, SOIL STABILIZATION AND SEDIMENT CONTROL PLAN

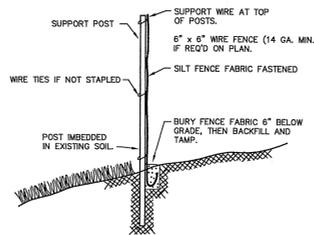
- PRIOR TO THE COMMENCEMENT OF ANY CLEARING, GRUBBING, DEMOLITION OR EARTHWORK ACTIVITY, TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE PLANS ARE TO BE INSTALLED BY THE CONTRACTOR.
- CONSTRUCTION ACCESS STABILIZATION ENTRANCE PADS ARE TO BE INSTALLED PRIOR TO THE COMMENCEMENT OF SITE GRUBBING OR EARTHWORK ACTIVITY.
- EXISTING CATCH BASINS ARE TO BE PROTECTED WITH HAY BALES AND/OR SILT SACS PRIOR TO THE START OF SITE GRUBBING, EARTHWORK OR UNDERGROUND UTILITY AND DRAINAGE INFRASTRUCTURE INSTALLATION TO SERVE THE DEVELOPMENT SITE.
- THE PROJECT CONSTRUCTION SEQUENCE, TO THE EXTENT PRACTICAL, SHOULD REQUIRE THE INSTALLATION OF DOWN GRADE AND OFF SITE STORM DRAINAGE SYSTEM IMPROVEMENTS BEFORE THE START OF SITE GRUBBING AND EARTHWORK ACTIVITY.
- TEMPORARY SITE SLOPE TREATMENTS FOR SOIL STABILIZATION SHALL CONSIST OF HAY, STRAW, FIBER MULCH, RIP RAP OR PROTECTIVE COVERS SUCH AS MAT OR FIBER LINING (BURLAP, JUTE, FIBERGLASS NETTING, AND EXCELSTOR OR EQUAL PRODUCTS). THESE AND OTHER ACCEPTABLE MEASURES SHALL BE INCORPORATED INTO THE SITE WORK AS WARRANTED OR AS ORDERED BY THE ENGINEER.
- CONSTRUCTION SITES ARE DYNAMIC, THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND OR MOVEMENT AND MAINTENANCE OF EROSION CONTROLS, SOIL STABILIZATION AND SEDIMENT CONTROL MEASURES AS NEEDED TO MAXIMIZE THE INTENT OF THE PLAN FOR ALL SITE CONDITIONS THROUGHOUT THE CONSTRUCTION PERIOD.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERIODIC INSPECTION, MAINTENANCE, REPAIR, AND REPLACEMENT OF EROSION CONTROLS, SOIL STABILIZATION AND SEDIMENT CONTROL DEVICES UNTIL AN ACCEPTABLE PERMANENT VEGETATIVE GROWTH IS ESTABLISHED. THE CONTRACTOR SHALL MAINTAIN A DETAIL LOG OF ALL EROSION CONTROL INSPECTIONS, COMPLAINTS RELATED TO EROSION OR SEDIMENT, AND CORRECTIVE REMEDIAL MEASURES TAKEN THROUGHOUT THE COURSE OF THE PROJECT CONSTRUCTION.
- SOIL EROSION AND SEDIMENT CONTROL IS NOT LIMITED TO DAMAGES CAUSED BY WATER BUT ALSO INCLUDES EROSION AND SEDIMENT RESULTING FROM WINDS. MEASURES, SUCH AS TEMPORARY GROUND COVERS, WATER AND CALCIUM APPLICATIONS ARE TO BE UNDERTAKEN AS NEEDED TO MINIMIZE WIND RELATED SOIL AND DUST CONTROL.
- STOCK PILES OF EARTH MATERIALS SHALL NOT BE LOCATED NEAR WATERWAYS OR WETLANDS. STOCK PILES SHALL HAVE SIDE SLOPES NO GREATER THAN THIRTY PERCENT (30%). STOCK PILES SHALL BE SURROUNDED ON THE DOWN GRADIENT OF THE EXISTING GROUND SURFACE BY HAY BALES OR SILT FENCE. THE STOCK PILES SHALL ALSO BE SEEDED OR STABILIZED IN SOME MANNER TO PREVENT SOIL EROSION.
- THE SMALLEST POSSIBLE SITE AREAS SHALL BE DISTURBED OR EXPOSED AT ONE TIME AND DENUDED SLOPES OR WORK AREAS SHALL NOT BE LEFT EXPOSED FOR EXCESSIVE PERIODS OF TIME, SUCH AS INACTIVE PERIODS OR SITE WORK SHUT DOWNS.
- TO THE EXTENT POSSIBLE, ALL DISTURBED AREAS MUST BE SEEDED OR STABILIZED WITHIN THE CONSTRUCTION SEASON. STABILIZATION OF ONE FORM OR ANOTHER SHALL BE ACHIEVED WITHIN FIFTEEN (15) DAYS OF FINAL GRADING.
- EXPOSED STEEP OR LONG SLOPES SHOULD BE TREATED WITH "CRIMPING" OR "TRACKING" TO REDUCE EROSION AND SEDIMENT AND TO TACK DOWN SEEDING OR MULCH APPLICATIONS.
- IF CONCRETE IS TO BE USED ON SITE, THE CONTRACTOR MUST ESTABLISH AND MAINTAIN SPECIFIC WASHOUT AREAS FOR THE CONCRETE TRUCKS WITH APPROPRIATE PROTECTION CONTROLS.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND MAINTAINING COLLECTION AND STORAGE LOCATIONS ON-SITE FOR ALL CONSTRUCTION DEBRIS AND TRASH SO THAT THIS MATERIAL DOES NOT BECOME A NEIGHBORHOOD NUISANCE.
- EXISTING TREES AND VEGETATION WILL BE RETAINED WHENEVER FEASIBLE.
- SITE SOIL EROSION AND SOIL STABILIZATION AND SEDIMENT CONTROLS MUST CONFORM TO ALL REQUIREMENTS OF THE APPLICABLE LOCAL COMMUNITY ORDINANCES AND STATE REGULATIONS.

RAIN GARDEN REQUIREMENTS:

- The bottom of the rain gardens should be level to encourage the even distribution of stormwater and increase infiltration capacity.
- Rain gardens should be 6 inches deep with a 2 - 4 inch amended soil layer and a 2 - 3 inch layer of non-dyed aged shredded hardwood mulch.
- The amended soil layer of the rain gardens should be a 50/50 mixture of the excavated native soils and mature organic compost.
- A crushed stone entrance should be installed at the inflow to prevent channeling.
- A berm to detain stormwater should be constructed.
- Be sure that the soil within the rain garden areas does not become compacted by construction activities (i.e. heavy machinery). If soil becomes severely compacted it may need to be tilled and amended to maintain proper drainage.

RAIN GARDEN MAINTENANCE:

- Rain gardens shall be inspected following at least the first two precipitation events of at least 1.0 inch to ensure that the system is functioning properly. Thereafter, the rain garden shall be monitored and maintained to assure proper functioning, plant growth and survival. Plants shall be replaced on an as-needed basis during the growing season.
- Silt/sediment shall be removed from the rain garden when the accumulation exceeds one inch, or when water ponds on the surface of the rain garden for more than 48 hours). The top few inches of material shall be removed and shall be replaced with fresh soil mixture and mulch.
- Pruning or replacement of woody vegetation shall occur when dead or dying vegetation is observed.
- Soil erosion gullies shall be repaired when they occur.
- Fertilizer or pesticides shall not be applied to plants within rain gardens.
- Perennial plants and ground covers shall be replaced as necessary to maintain an adequate vegetated ground cover. Annual plants may also be used to maintain ground cover.



Copy of Permit and Operation Maintenance contract must be filed in land evidence records prior to conformance.

PROPOSED ONSITE WASTEWATER TREATMENT SYSTEM

NEW CONSTRUCTION APPLICATION
 A.P. 10 LOT 144 - RESERVOIR ROAD

GLOCESTER, RI
 Prepared For:
EVAN THOMPSON



Ocean State Planners, Inc.

SURVEYORS • DESIGNERS
 1255 OAKLAWN AVENUE CRANSTON, RI 02920
 PHONE (401) 463-9696 EMAIL: info@osplanners.com

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REVISION:
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SHEET
2
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