

General Notes

- DIPRETE ENGINEERING CERTIFIES TO THE SOIL CONDITIONS AND LOADING RATE ONLY IN AREA TESTED. INSTALLER TO NOTIFY DESIGNER IF SOIL CONDITIONS ARE FOUND DIFFERENT THAN STATED ON OWTS APPLICATION.
- THE BOUNDARY LINES DEPICTED HEREON ARE APPROXIMATE ONLY UNLESS OTHERWISE NOTED. THIS PLAN DOES NOT REPRESENT A BOUNDARY OPINION.
- TOPOGRAPHY OBTAINED FROM XXXXXXXX ELEVATIONS IN U.S. SURVEY FEET ARE REFERENCED TO NAVD 88 DATUM.
- NO DRAINS OR WATERLINES TO BE INSTALLED WITHIN 25' OF LEACHING AREA.
- NO GARBAGE GRINDERS SHALL BE INSTALLED.
- THERE ARE NO EXISTING OR PROPOSED WELLS WITHIN 200' OF THE PROPOSED OWTS.
- THERE ARE NO KNOWN EXISTING OR PROPOSED DRAINS WITHIN 200 FEET OF THE PROPOSED OWTS OTHER THAN SHOWN.
- THERE ARE NO EXISTING OR PROPOSED OWTS WITHIN 100' OF A PROPOSED OR EXISTING WELL.
- THERE ARE NO PROPOSED OR EXISTING PUBLIC WELLS WITHIN 500' OF THE PROPOSED OWTS.
- THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING FINISH GRADING AND DRAINAGE AROUND THE BUILDING TO ENSURE SURFACE WATER AND/OR GROUND WATER ARE DIRECTED AWAY FROM THE STRUCTURE. THIS PLAN SHOWS GENERAL GRADING ONLY AND ADDITIONAL TO THIS DESIGN ARE TO BE IDENTIFIED BY THE HOMEOWNER IN WRITING TO THE DESIGN ENGINEER FOR APPROVAL AND POSSIBLE RESUBMISSION TO THE RIDEN.
- THE FINAL LANDSCAPING, SOIL STABILIZATION AND EROSION CONTROL IS TO BE COMPLETED BY THE OWNER PER THE APPROVED PLAN. ALTERATIONS TO THIS DESIGN ARE TO BE IDENTIFIED BY THE HOMEOWNER IN WRITING TO THE DESIGN ENGINEER FOR APPROVAL AND POSSIBLE RESUBMISSION TO THE RIDEN.
- THE CONTRACTOR SHALL COORDINATE WITH ALL OF THE APPROPRIATE UTILITY COMPANIES FOR AGREEMENTS TO SERVICE THE PROPOSED BUILDING. THIS SHALL BE DONE PRIOR TO CONSTRUCTION. NO REPRESENTATIONS ARE MADE BY DIPRETE ENGINEERING THAT UTILITY SERVICE IS AVAILABLE.
- ALL EXISTING UTILITIES SHOWN ARE FROM VISIBLE INFORMATION, DRAWINGS BY OTHERS, OR INFORMATION PROVIDED TO DIPRETE ENGINEERING AND ARE SUBJECT TO CHANGE. NO ONE SHOULD RELY ON THE UTILITY LOCATIONS SHOWN FOR CONSTRUCTION AND DIG SAFE MUST BE NOTIFIED PRIOR TO ANY WORK.
- THIS SITE IS REVIEWED UNDER RIDEN WETLANDS APPLICATION # 16-0027. DATED: PENDING.
- THERE IS NO 100 YEAR FLOOD PLAIN LOCATED ON SITE (ZONE O) AS PER (F.C.M.A.) COMMUNITY PANEL NO. 440000044L, DATED 4-5-2010 TOWN OF MIDDLETOWN.
- ALL OWTS SHOULD BE MAINTAINED BY THE HOMEOWNER ON AN ANNUAL BASIS OR MORE FREQUENTLY ID REQUIRED BY LOCAL REGULATIONS.
- DESIGNER REQUIRES A MINIMUM OF THREE (3) INSPECTIONS: BOTTOM INSPECTION, COVER INSPECTION, & FINAL INSPECTION.

Design Calculations

SHALLOW NARROW DRAINFIELD W/AX20 MODE 3B TREATMENT

- DESIGN FLOW = 4 BEDROOMS (BR) HOME X 115 GAL/BR = 460 GALLONS/DAY
- DESIGN GWT = 3.0'
- DESIGN DEPTH TO IMPERVIOUS = 8.5'
- LOADING RATE = 1.9 GAL/SF/DAY
- MINIMUM LEACHING AREA = 460 GAL/DAY ÷ 1.9 GAL/SF/DAY = 243 S.F.
 USE: 5 TRENCHES, 49 L.F. LONG
- LEACHING AREA PROVIDED = 245 S.F.

Soil Testing

R.I.D.E.M. DIVISION OF OWTS APPROVAL

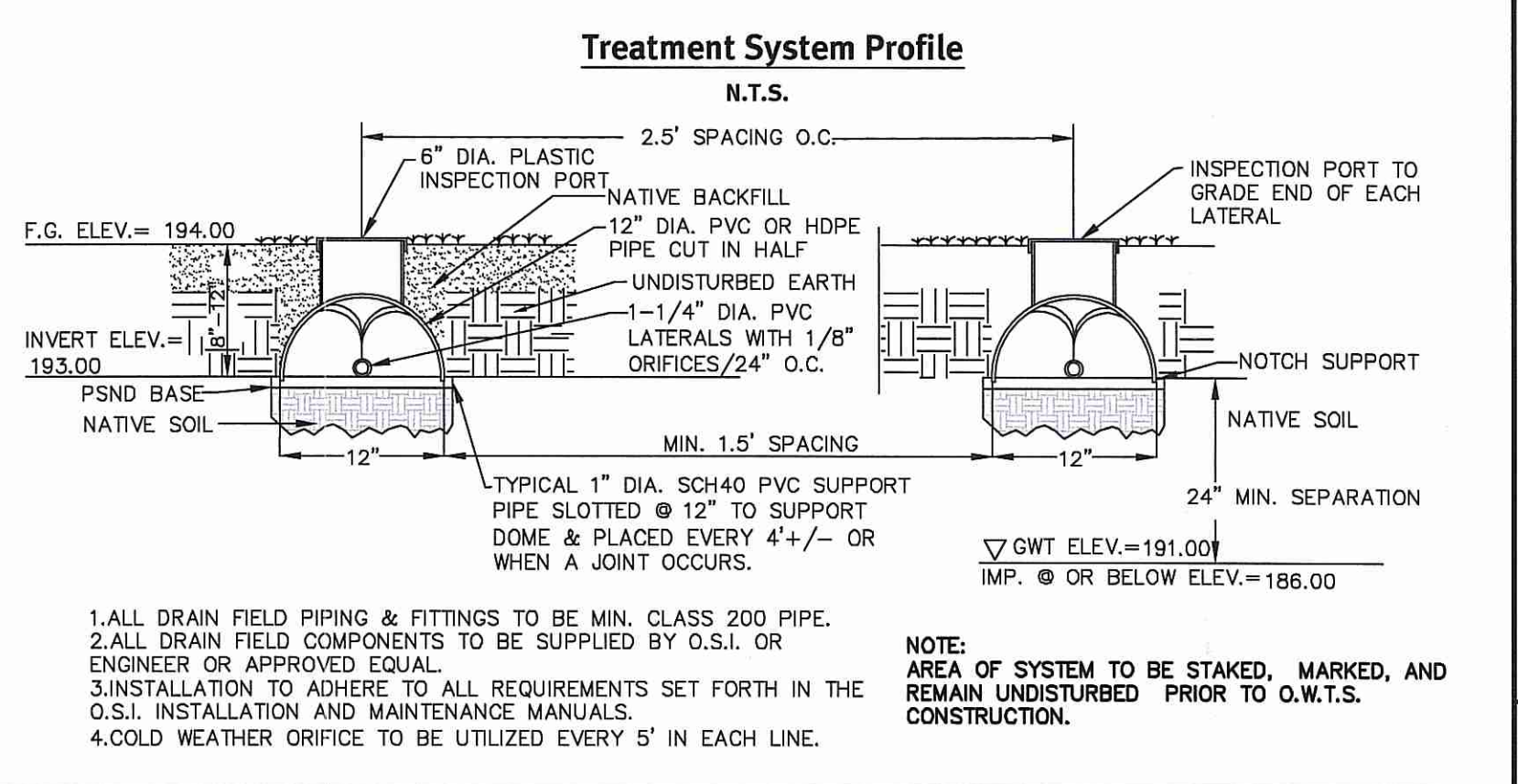
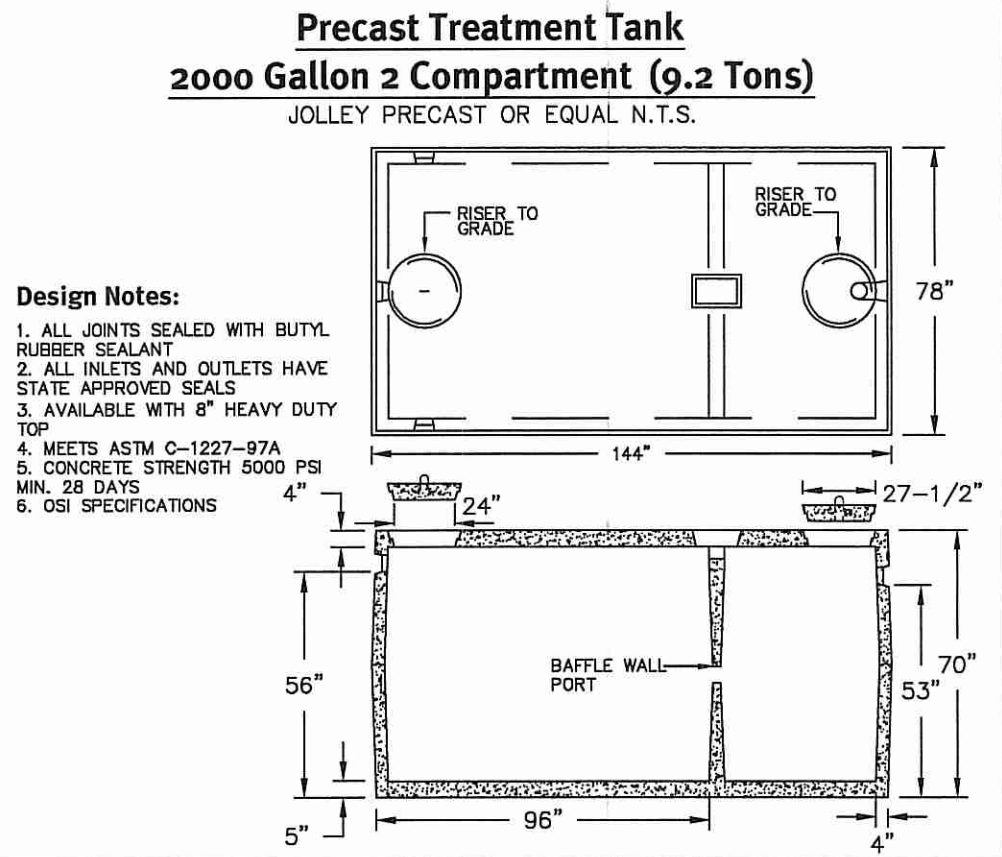
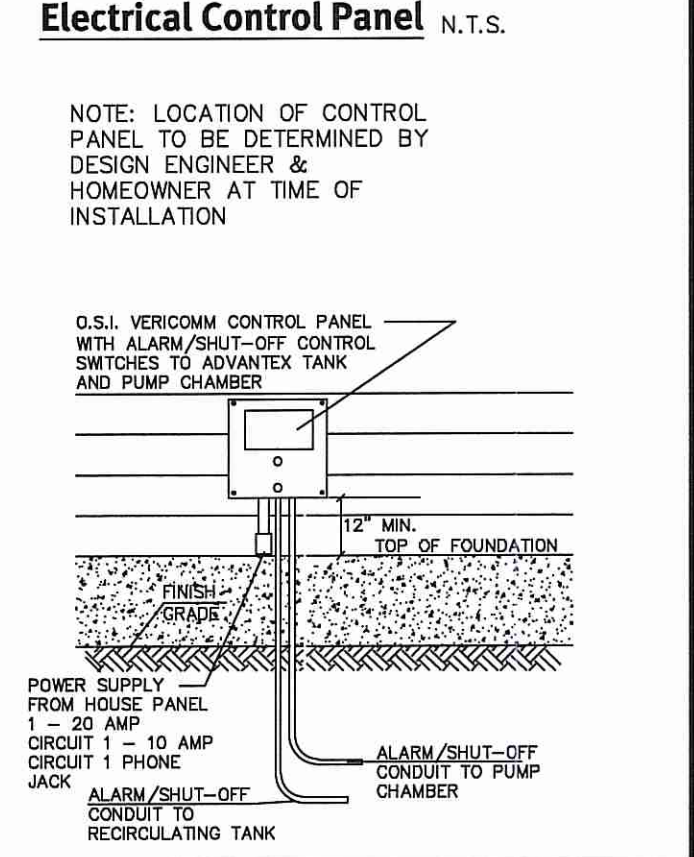
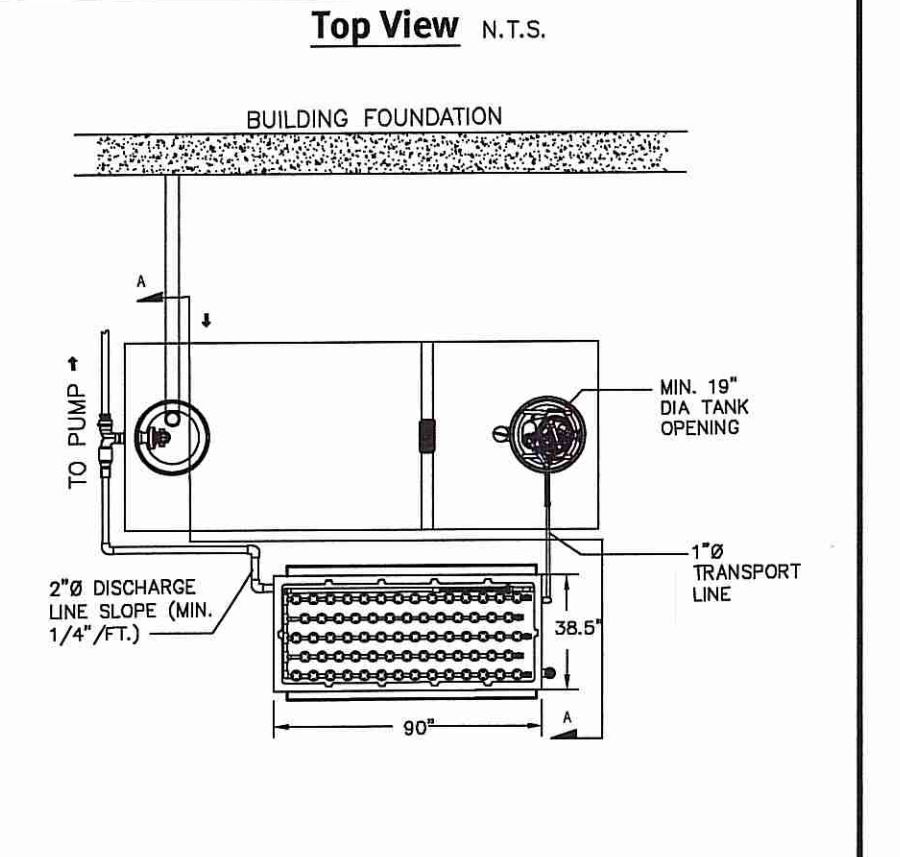
- SITE SUITABILITY NO. _____ DATE: _____
- SITE TESTING DATE OF EXCAVATION 5/10/14

SEV 14-1

SOIL STRATA:
 HTM 6-0"

Ap 0-7" 10YR 3/3 fal 1-sbk fri 4
 Bw 7-17" 10YR 4/6 fal 1-sbk fri 4
 C1 26-42" 2.5Y 6/4 s 0-sg L 1
 C2 42-8.0' 5Y 3/2 gsl 0-m fri 6

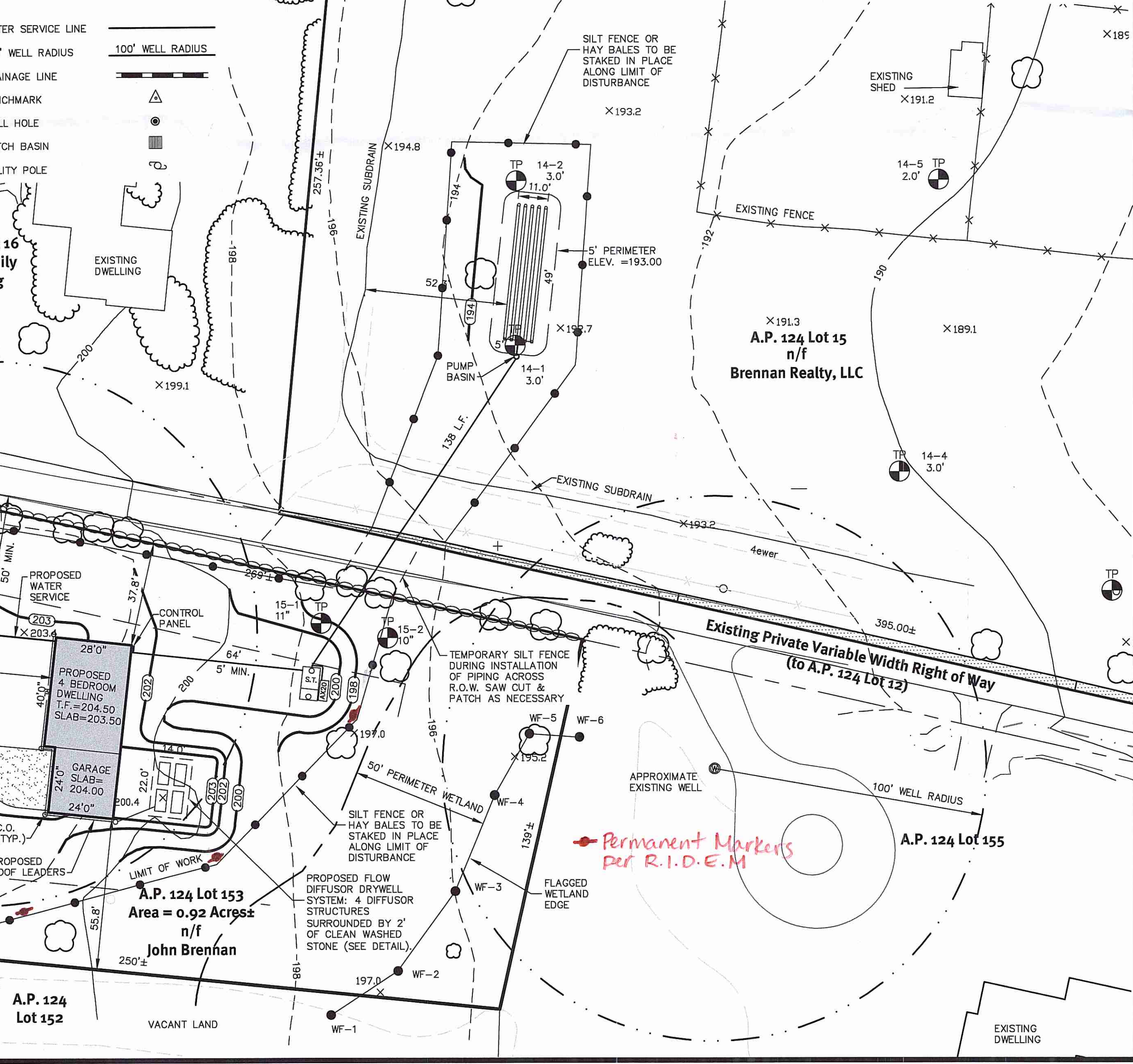
SOIL CATEGORY: _____



Legend

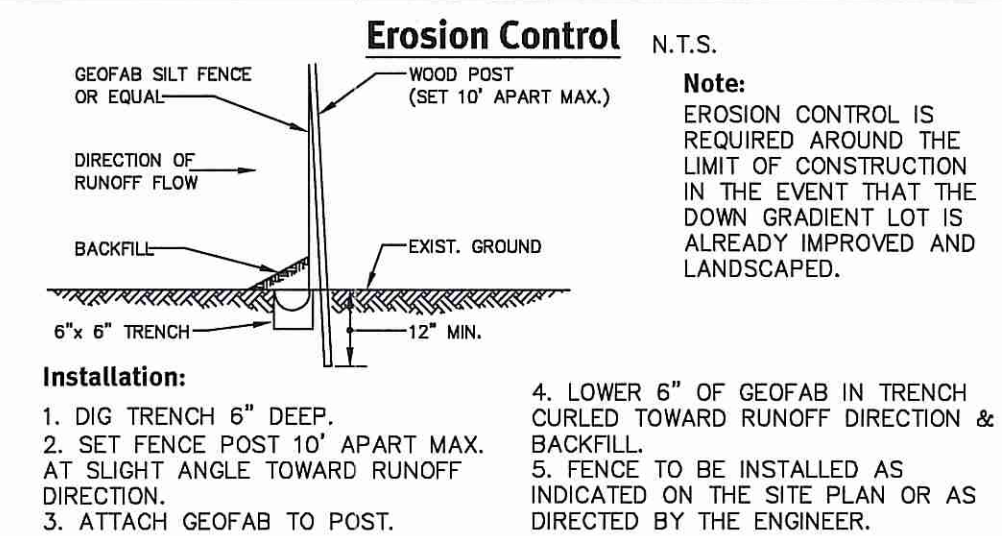
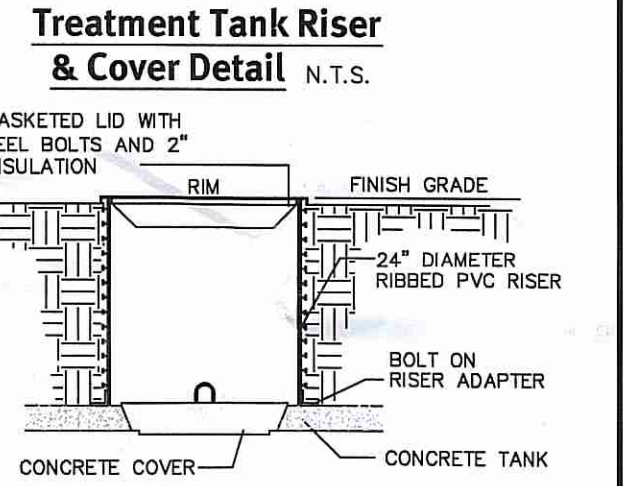
EXIST./PROPOSED WELL
 SOIL EVAL./TEST PIPE
 LEDGE TESTING
 EXISTING CONTOUR
 PROPOSED CONTOUR
 PROPOSED SPOT GRADE
 EXISTING SPOT GRADE
 PROPOSED BOUND

WATER SERVICE LINE
 100' WELL RADIUS
 DRAINAGE LINE
 BENCHMARK
 DRILL HOLE
 CATCH BASIN
 UTILITY POLE



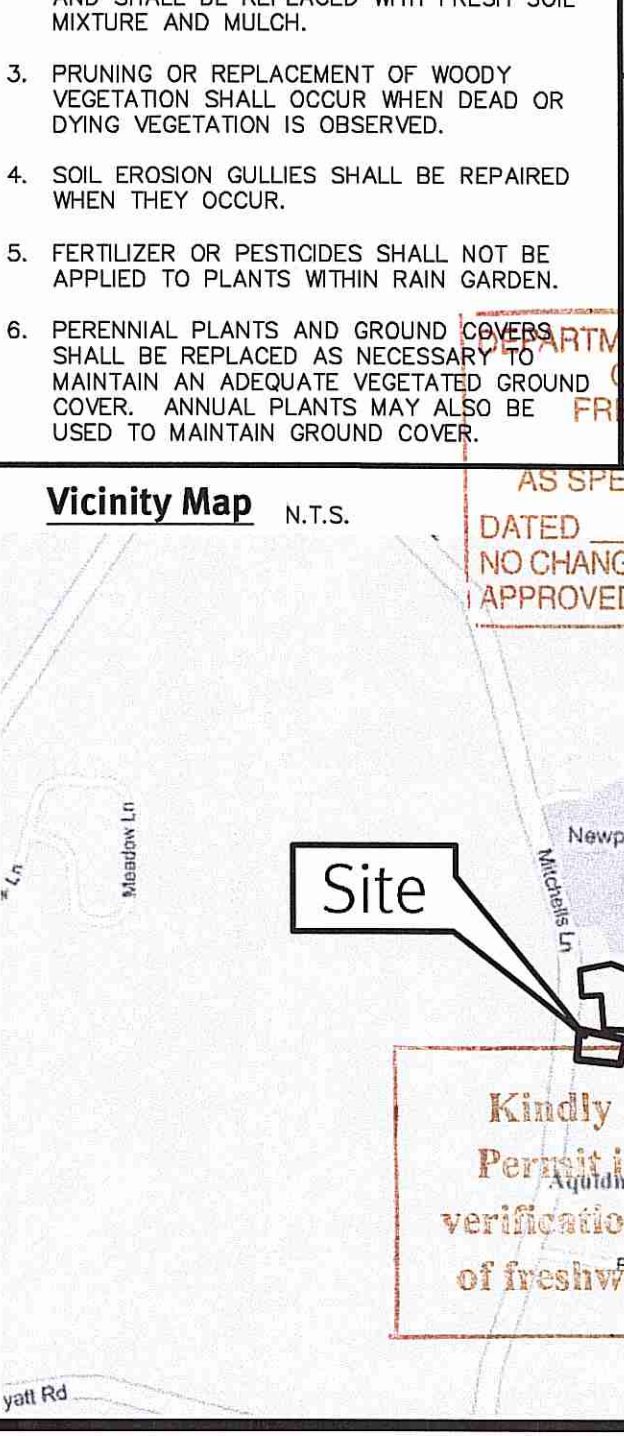
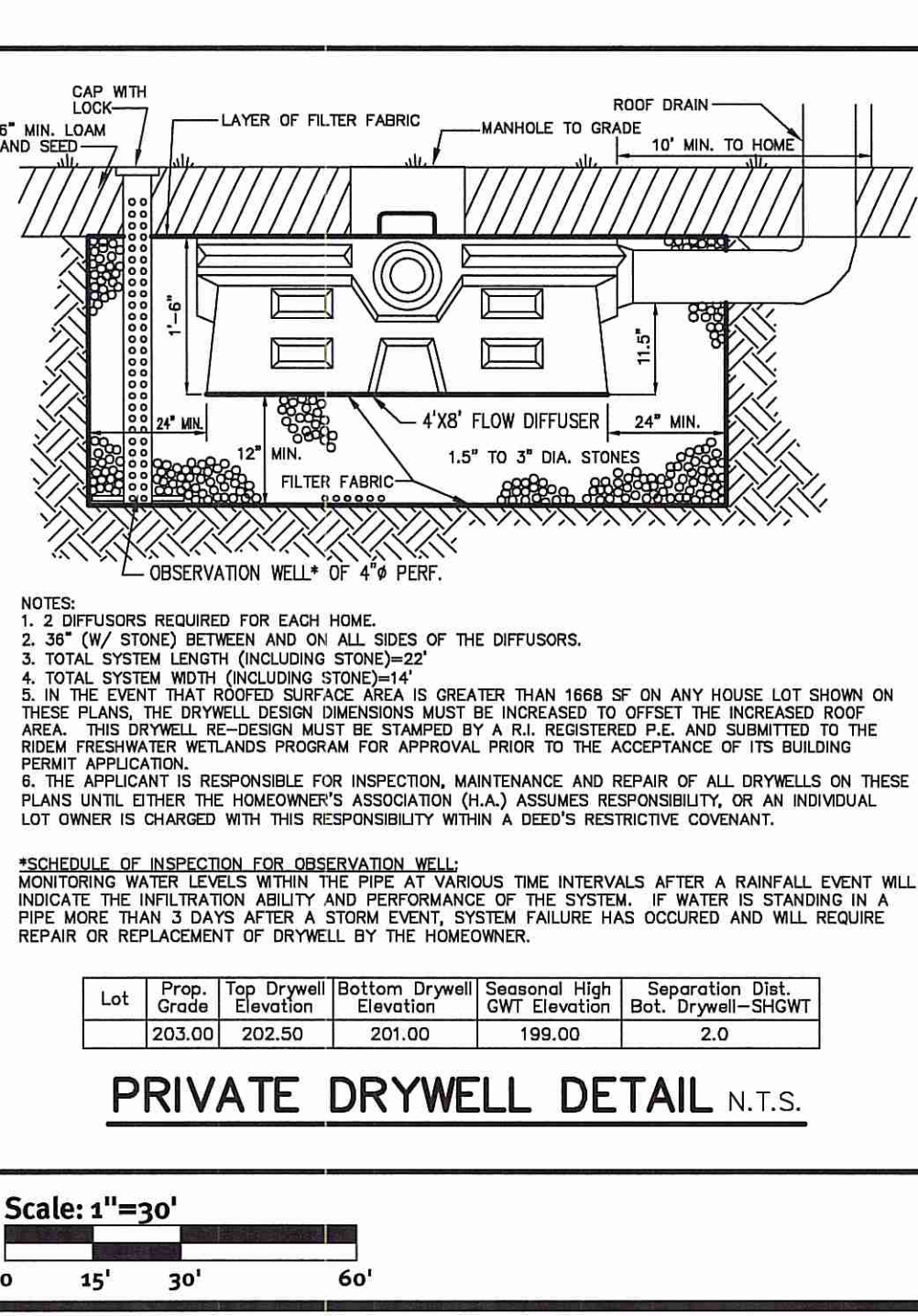
Rain Garden Installation Notes

- LAYERS BENEATH RAIN GARDEN BOTTOM SHALL CONSIST OF A 2-3" NON-DYED AGED SHREDDED HARDWOOD MULCH ATOP A 2"-4" AMENDED SOIL LAYER CONSISTING OF A 50/50 MIXTURE OF THE EXCAVATED NATIVE SOILS AND MATURE ORGANIC COMPOST.
- PLANTINGS SHALL BE INSTALLED ACCORDING TO APPENDIX B OF THE RI STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL. THE LAYOUT OF PLANTS SHALL FOLLOW THE EXAMPLE PLANTING PLANS SHOWN ON PAGE 12 OF 17 OF THE STATE OF RI STORMWATER MANAGEMENT GUIDANCE FOR INDIVIDUAL SINGLE-FAMILY RESIDENTIAL LOT DEVELOPMENT.
- THE RAIN GARDEN SHALL BE HAND COMPACTED ONLY, AND THE CONTRACTOR SHALL NOT ALLOW HEAVY MACHINERY TO BE DRIVEN OR USED WITHIN THE RAIN GARDEN LIMITS.



Rain Garden Maintenance Notes

- 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 GARDEN.
- 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.



Construction Notes

- CONSTRUCTION SHALL CONFORM TO THE RHODE ISLAND SPECIFICATIONS SET FORTH IN THE "DEPARTMENT OF ENVIRONMENTAL MANAGEMENT - RULES AND REGULATIONS" ESTABLISHING MINIMUM STANDARDS RELATING TO LOCATION & CONSTRUCTION OF ONSITE WASTEWATER TREATMENT SYSTEMS, LATEST EDITION.
- THE FILL AROUND THE SYSTEM SHALL BE COARSE SAND, OR BANK RUN GRAVEL.
- INSTALLER TO REMOVE ALL TREES AND SHRUBS FROM LEACHING AREA, AND 10' ON ALL SIDES.
- BUILDING SEWER PIPE TO BE MINIMUM 4" SCH 40 PVC. ALL OWTS PIPING TO BE MINIMUM 4" SDR 35.
- TREATMENT TANK RISERS TO BE AT FINISH GRADE.
- INSTALLER TO MAINTAIN OWTS INVERT ELEV. 193.00 FOR 5' FILL PERIMETER PROVIDED A 3:1 SLOPE BE MAINTAINED BEYOND THE 5 FEET TO ORIGINAL GRADE.
- BENCH MARK = XXX
 ELEV. = XXX
- ALL STAGES OF THE OWTS INSTALLATION MUST BE SUPERVISED BY THE DESIGN ENGINEER.
- DIG SAFE IS REQUIRED TO BE NOTIFIED PRIOR TO START OF ANY CONSTRUCTION.

Sequence of Construction

- CONTRACTOR TO OBTAIN ALL REQUIRED FEDERAL, STATE AND MUNICIPAL PERMITS, AND TO NOTIFY "DIG SAFE" PRIOR TO CONSTRUCTION.
- SET EROSION CONTROL AT LIMIT OF WORK. MAINTAIN CONTINUOUS FENCE LINE DURING CONSTRUCTION AND REPAIR AS NEEDED.
- CONTACT DESIGNER 24 HR. PRIOR TO OWTS CONSTRUCTION.
- BEGIN OWTS BOTTOM EXCAVATION.
- CONTACT DESIGNER 24 HR. PRIOR TO OWTS BOTTOM EXCAVATION COMPLETION FOR INSPECTION.
- BEGIN OWTS CONSTRUCTION.
- CONTACT DESIGNER 24 HR. PRIOR TO OWTS COMPLETION FOR INSPECTION.
- COVER OWTS COMPONENTS AND COMPLETE FINISH GRADING.
- CONTACT DESIGNER 24 HR. PRIOR TO OWTS FINAL GRADING FOR INSPECTION.
- COMPLETE SOIL STABILIZATION BY LOAM AND SEEDING DISTURBED AREAS.

Minimum Lot Requirements

MIN. LOT AREA	SO. FT.
FRONTAGE	150
FRONT YARD	40
SIDE YARD	30
REAR YARD	30
REAR YARD	XX

AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED APR 15 2015 FILE # 16-0027
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

Nancy L. Freeman

APRIL 15 2015
 Carter P. 2015

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

Diprete Engineering
 Two Stafford Court Cranston, RI 02906
 Tel: (401) 943-1000 Fax: (401) 946-6006 www.Diprete-Eng.com

Engineers - Planners - Surveyors

CHRISTOPHER A. DUHAMEL
 REGISTERED PROFESSIONAL ENGINEER
 CIVIL

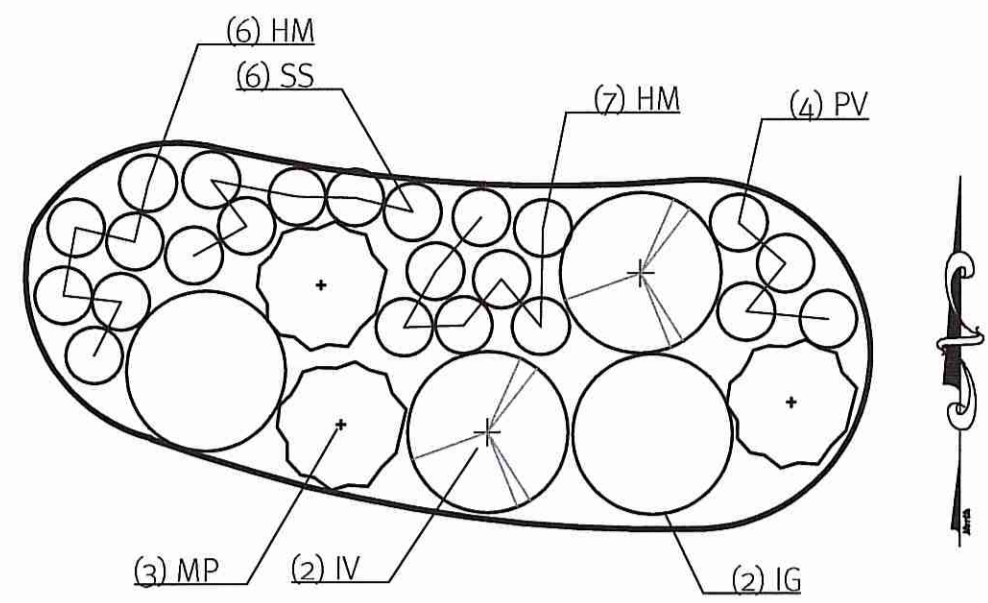
Onsite Wastewater Treatment System
Mitchells Lane
 A.P. 124, Lot 153
 Middletown, Rhode Island

The Trust of John J. Brennan & Westend
 68 Lonsdale Wharf, Newport, Rhode Island 02840
 Tel: (401) 561-8642

DESIGNER: ELL
 DRAWN BY: JH
 DATE: 4/15/15

Department of Environmental Management
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS

SHEET 1 OF 2

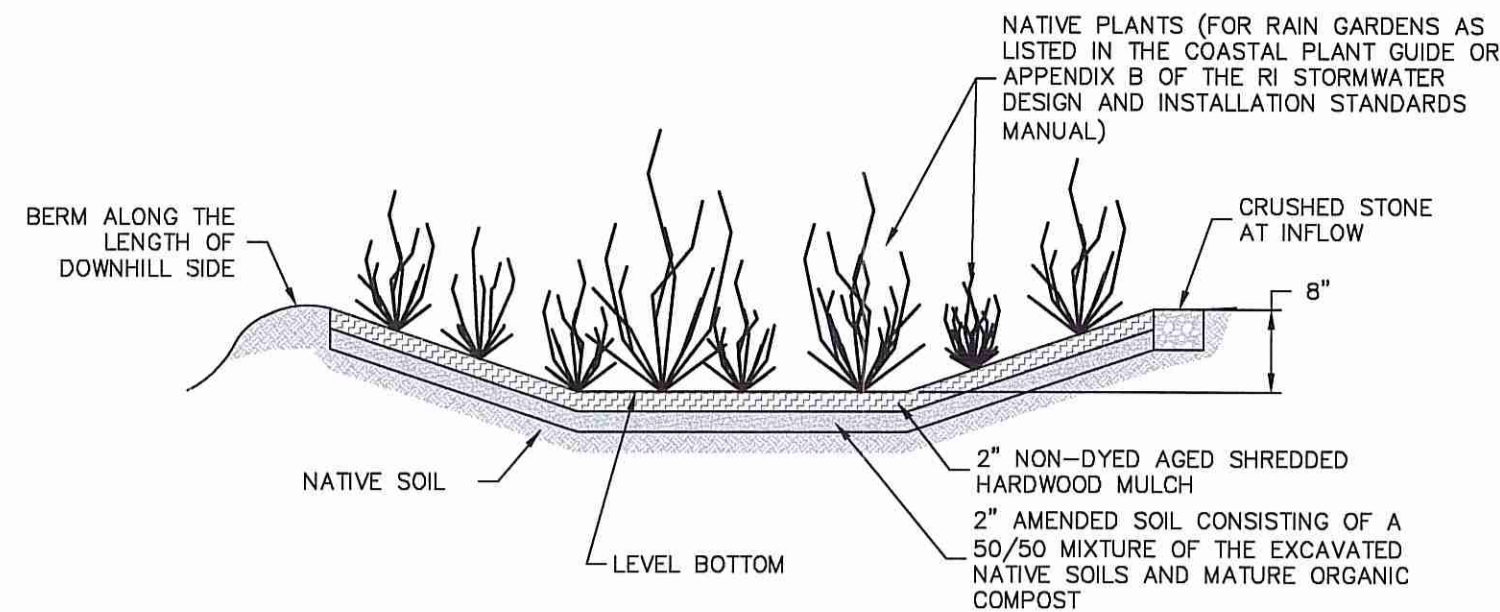


RAIN GARDEN PLANTING DETAIL

NOT TO SCALE

Rain Garden Planting Schedule

Key	Qty.	Botanical Name	Common Name	Size/Cont
HM	13	Hibiscus moscheutos	Swamp Rose Mallow	#1 CONT
IG	2	Ilex glabra 'Shamrock'	Shamrock Inkberry	#3 CONT
IV	2	Ilex verticillata	Winterberry	#3 CONT
MP	3	Myrica pensylvanica	Northern Bayberry	#5 CONT
PV	4	Panicum virgatum	Switch grass	#1 CONT
SS	6	Schizachyrium scoparium	Little Bluestem Grass	#1 CONT



TYPICAL RAIN GARDEN 8" DEEP CROSS SECTION

NOT TO SCALE

CRMC Structural Lot Coverage Calculations:

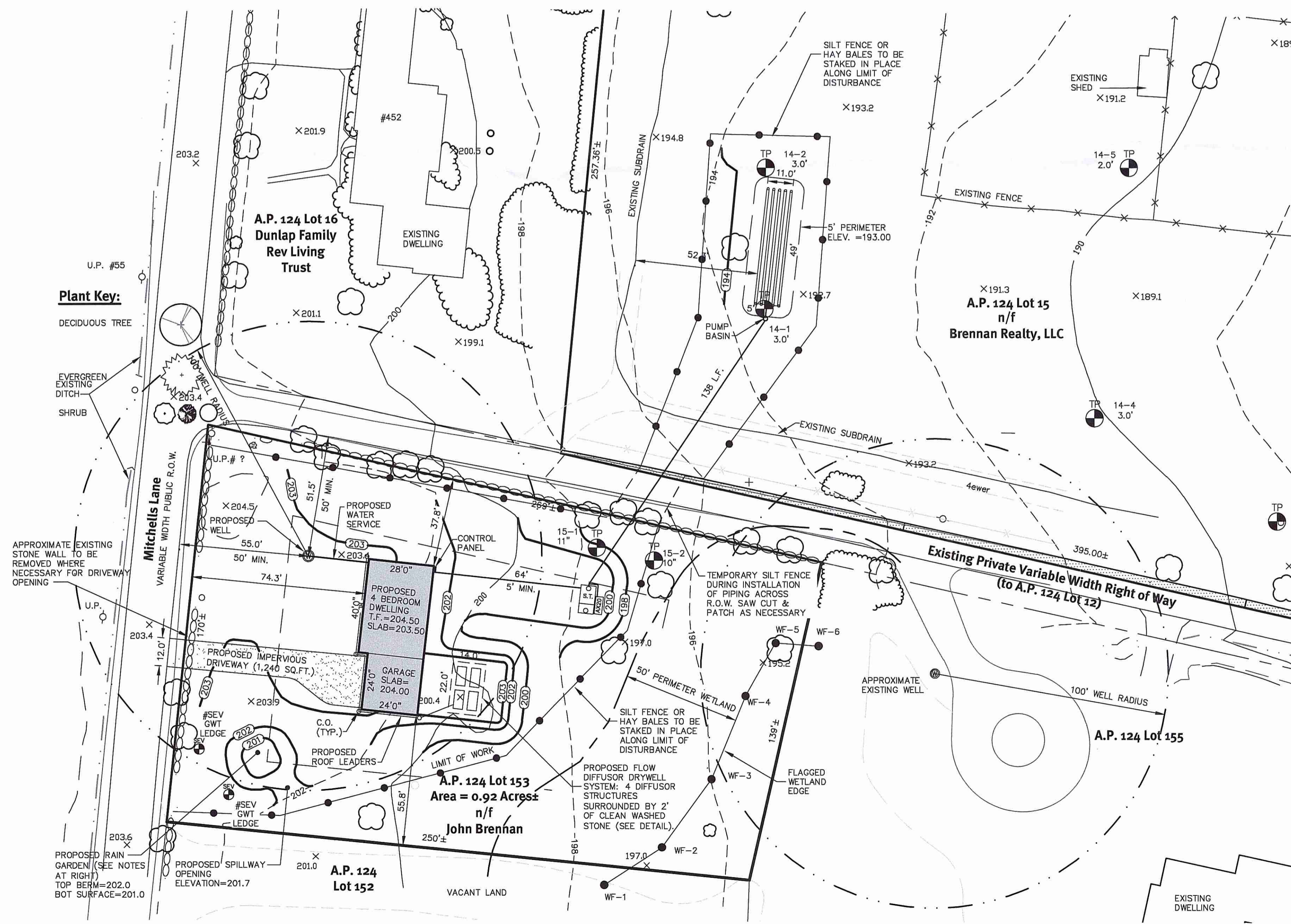
EXISTING SITE STRUCTURAL LOT COVERAGE
 EXISTING 3 BEDROOM DWELLING: 591 S.F. (BEING RAZED)
 PROPOSED SITE STRUCTURAL LOT COVERAGE
 PROPOSED DWELLING: 885 S.F.
 TOTAL ALLOWABLE S.F. PER CRMC SECTION 150.E.3.C IS CALCULATED AS FOLLOWS:
 .591 S.F. + 295.5 (50% INCREASE) = 886.50 S.F.
 THE SITE PROPOSES A TOTAL STRUCTURAL LOT COVERAGE OF 885 S.F.
 AND IS LESS THAN 50% INCREASE, THEREFORE NO NEW COASTAL BUFFER
 ZONE SHALL BE REQUIRED PER CRMC SECTION 150.E.3.C.

General Notes

1. THE SITE IS FOUND ON TOWN OF MIDDLETOWN ASSESSOR'S PLAT 124 LOT 153. CURRENT OWNER OF RECORD IS NOW OR FORMERLY JOHN BRENNAN. REFERENCE DEED BOOK XXX PAGE XXX IN THE TOWN OF PORTSMOUTH LAND EVIDENCE RECORDS.
2. THERE IS NO 100 YEAR FLOOD PLAIN LOCATED ON SITE (ZONE C) PER FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP 440050094H, DATED 4-5-2010.
3. THE CURRENT ZONING OF THE SITE IS R10: DIMENSIONAL REGULATIONS
 MINIMUM FRONT YARD SETBACK: 40 FEET
 MINIMUM SIDE YARD SETBACK: 30 FEET
 MINIMUM REAR YARD SETBACK: 50 FEET
 ADDITIONAL REGULATIONS APPLY, CONSULT TOWN OF PORTSMOUTH ZONING ORDINANCE
4. ALL UNDERGROUND UTILITIES SHOWN ON THIS PLAN HAVE BEEN LOCATED FROM FIELD SURVEY OBSERVATIONS ONLY TOGETHER WITH EXISTING PLANS BY OTHERS. DIPRETE ENGINEERING IS NOT RESPONSIBLE FOR MISSING UNDERGROUND UTILITIES, EITHER IN SERVICE OR ABANDONED, NOT OBSERVED AT THE TIME OF THE SURVEY. (PLEASE CONTACT DIGSAFE 72 WORKING HOURS PRIOR TO ANY CONSTRUCTION AT 1-800-344-7233).
5. THE SOILS ON THE SITE ARE:
 CoC - CANTON-CHARLTON-ROCK OUTCROP COMPLEX-3-15% SLOPES
 (REFERENCE: SOIL SURVEY OF RHODE ISLAND, U.S.D.A. SOIL CONSERVATION SERVICE)

Drainage Notes

1. FINAL GRADING SHALL DIRECT ROOF RUNOFF FROM DOWNSPOUTS BY OVERLAND FLOW OR ROOF LEADERS INTO THE RAIN GARDEN.
2. ROOF RUNOFF MITIGATION PROVIDED THROUGH A RAIN GARDEN SIZED TO ACCOMMODATE 885 SF OF ROOF RUNOFF PER TABLE 7. RAIN GARDEN SIZING GUIDANCE FOR SANDY SOILS FOUND IN THE 'STATE OF RHODE ISLAND STORMWATER MANAGEMENT GUIDANCE FOR INDIVIDUAL SINGLE-FAMILY RESIDENTIAL LOT DEVELOPMENT', UPDATED FEBRUARY 13, 2013.
3. RAIN GARDEN SIZING CALCULATION:
 RAIN GARDEN:
 IMPERVIOUS AREA = 885 SF ROOF
 SURFACE AREA-REQUIRED FOR 8" RAIN GARDEN: 80 SF/1,000 SF IMPERVIOUS AREA
 885 SF/1,000 SF = 0.885
 0.885 X 80 SF = 71 (70.8) SF
 RAIN GARDEN SURFACE AREA PROVIDED: 75 SF



Plant Key:

- DECIDUOUS TREE
- EVERGREEN
- EXISTING DITCH
- SHRUB

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Legend

- + (312) PROPOSED SPOT GRADE
- 98 - - - - EXISTING CONTOUR
- 82 - - - - PROPOSED CONTOUR

