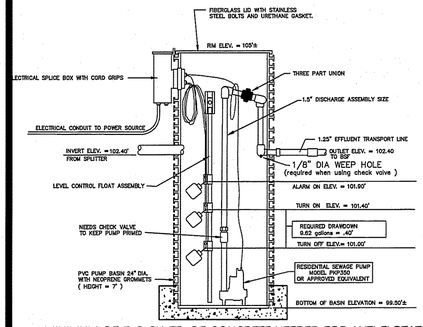
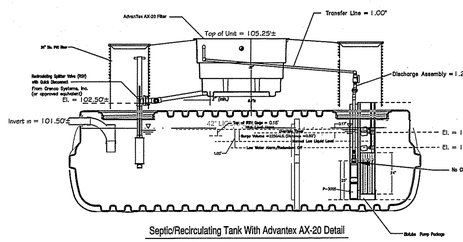


MINIMUM OF 5.0 CU.FT. OF CONCRETE NEEDED FOR ANTI-FLOTATION.

SECTION VIEW

Typical Pump Basin Detail



Septic/Recirculating Tank With Advantex AX-20 Detail

SCHEDULE OF INVERTS

PROPOSED BUILDING SEWER	102.25'±
INVERT INTO 1500 GAL. RECIRCULATION TANK	101.50'
OUTLET OF 1500 GAL. RECIRCULATION TANK	103.50'±
INLET TO ADVANTEX UNIT	104.00'±
OUTLET OF ADVANTEX UNIT	102.30'±
INVERT SPLITTER VALVE	102.50'±
INVERT PUMP CHAMBER INLET	102.40'±
INVERT OF PUMP CHAMBER OUTLET	102.40'±
INVERT MANIFOLD LINE	105.00'

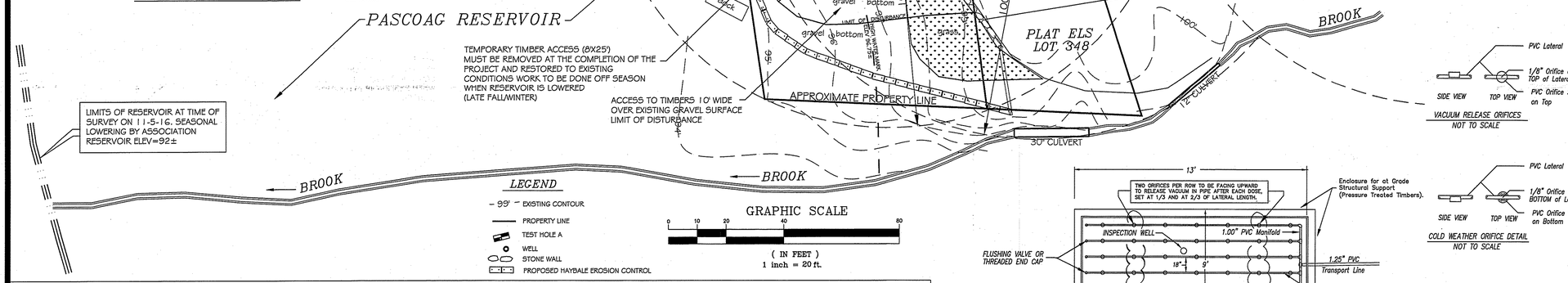
SOIL DATA

TEST HOLE "A"

Abutting Lot 97 (waived for 97A RIDEM)

Grade @ T.H. = 103'± S.H.W.T.=30"

0' - 8" (A) - 10YR 3/4, LOAMY SAND (weak, fine, subangular blocky, very friable)
8" - 16" - (Bw1) - 10YR 4/6 LOAMY SAND (subangular blocky, friable)
16" - 48" - (C1) - 2.5YR 4/6, LOAMY SAND & GRAVEL (coarse, structureless massive)
48" - 72+ - (C2) - 2.5Y 6/4 COARSE SAND



LEGEND

- 99' — EXISTING CONTOUR
- PROPERTY LINE
- TEST HOLE A
- WELL
- STONE WALL
- PROPOSED HAYBALE EROSION CONTROL

GRAPHIC SCALE

0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

SAND FILTER DESIGN :

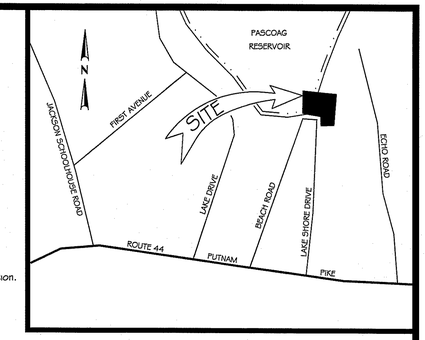
Design Soil Category per Soil Survey of Rhode Island

Lot consists of Canton Charlton complex soil mapping unit

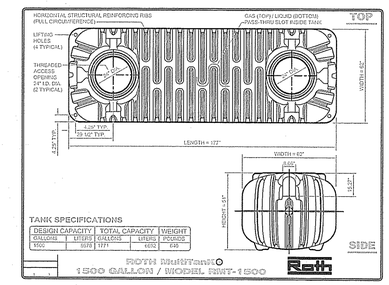
Bottomless Sand Filter Loading Rate
See Bottomless Sand Filter Sizing Calc's
(Guidelines for the Design and Use of Pressurized Drainfields, November 2013)

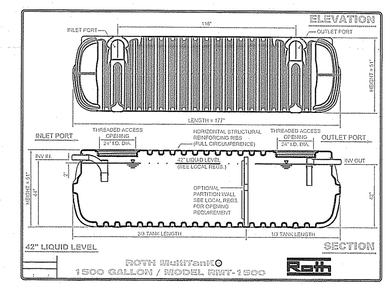
115 Gallons per Bedroom per Day.
115 x 2(Bedrooms) = 230 gallons per day
230 Gals. Divided by 2.30 Gal/Sq.Ft./Day = 100 Sq.Ft. REQUIRED
Sand Filter as Designed 9' x 13' has 117 SqFt.

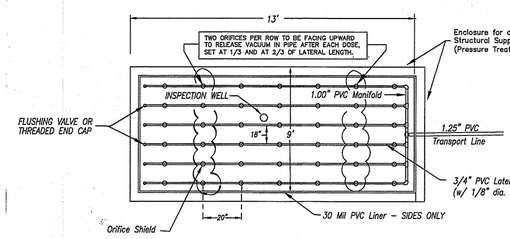
Design water table elevation at 32" below existing grade
OWTS Separation to Peastone/Sand Interface = 3'
Highest elevation in area on BSF = 103.00'±
103.00'± - 2.5' = 101.50'± + 3' = 104.50' Minimum Interface Elevation.
System as designed sand/peastone interface elevation = 104.50'



LOCATION MAP



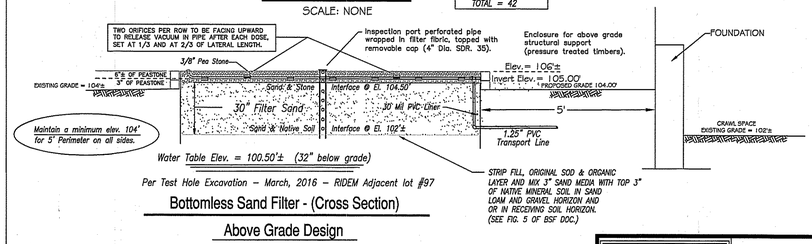




Sand Filter -(Top View)

SCALE: NONE

7 ORIFICES PER LINE. TOTAL = 42

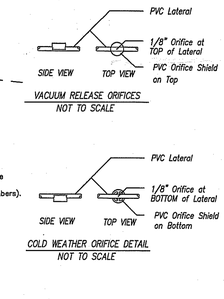


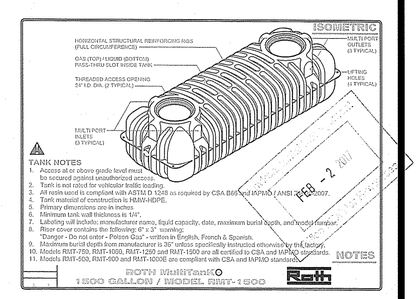
Per Test Hole Excavation - March, 2016 - RIDEM Adjacent lot #97

Bottomless Sand Filter - (Cross Section)

Above Grade Design

SCALE: NONE





NOTES:

1. ALL OTHER DESIGN, CONSTRUCTION AND MAINTENANCE REQUIREMENTS WHETHER NOTED HEREON, OR NOT, SHALL BE IN CONFORMANCE WITH RULES & REGULATIONS ESTABLISHING MINIMUM STANDARDS RELATING TO LOCATION, DESIGN, CONSTRUCTION AND MAINTENANCE OF ONSITE WASTEWATER TREATMENT SYSTEMS, DATED: JUNE 2016 , AND THE GUIDELINES FOR THE DESIGN AND USE OF BOTTOMLESS SAND FILTERS.
2. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
3. ALL SEWER PIPES A GRAVITY AND SHALL BE 4" DIAMETER, SCH 40 FROM HOUSE TO TANK
4. SEE ATTACHED PUMP CALCULATION FOR SPECIFIED PUMPS.
5. THE SAND FILTER SHALL BE COMPRISED OF ONE CELL WITH SIX LATERALS.
6. THE OWNER SHALL BE AWARE THAT SEPTIC SYSTEMS REQUIRE MAINTENANCE AND A SERVICE CONTRACT WILL BE REQUIRED UPON COMPLETION OF THE INSTALLATION
7. THE PROPOSED STRUCTURE AS SHOWN IS A TWO BEDROOM DWELLING WITH A CRAWL SPACE AND WALK-OUT BASEMENT. CROSS SECTION OF SYSTEM AND BASEMENT GRADE PROVIDED.
8. DEM REQUIRES CLEARING OF ALL TREES AND STUMPS WITHIN 10' OF SYSTEM.
9. THERE SHALL BE NO SUBSURFACE, FOUNDATION OR STORM DRAINS WITHIN 25' OF THE SYSTEM.
10. UNLESS SHOWN THERE ARE NO KNOWN DRAINS WITHIN 200' OF THE PROPOSED LEACH FIELD.
11. MAINTAIN ELEVATION 2' BELOW SAND/PEASTONE INTERFACE FOR MINIMUM OF 5' FT. AROUND SYSTEM.
12. THERE ARE NO EXISTING OR PROPOSED PRIVATE DRINKING WATER WELLS WITHIN 200' OF THE PROPOSED OWTS EXCEPT AS SHOWN ON THIS SITE PLAN.
13. THERE ARE NO KNOWN PUBLIC DRINKING WELLS WITHIN 500' OF PROPOSED ISDS.
14. THE ADVANTEX - AX TREATMENT SYSTEM USES SPECIALLY DESIGNED TEXTILE MATERIALS WITHIN A PRE-ASSEMBLED FILTER UNIT.
15. PUMPS FOR THE ADVANTEX SHALL BE AS MANUFACTURED BY ORENCO SYSTEMS, INC. OR APPROVED EQUAL PUMP - Advantex Pump P3005 and PKP350 Respectively.
16. ALL PUMPS SHALL BE EQUIPPED WITH A HIGH WATER LEVEL VISIBLE AND AUDIBLE ALARM POWERED BY A CIRCUIT SEPARATE FROM THE PUMP POWER. THE ALARM AND CONTROL PANEL SHALL BE LOCATED IN A NORMALLY OCCUPIED AREA OF THE FACILITY AND HAVE VISIBILITY OF TANK AND FILTER.
17. THE CONTRACTOR IS TO COORDINATE THE SYSTEM START-UP WITH THE MAINTENANCE CONTRACTOR, ELECTRICIAN, AND THE ENGINEER PRIOR TO START-UP.
18. THE SEPTIC TANK SHALL BE A WATERTIGHT, 1,500 GALLON 2-COMPARTMENT TANK WITH 24" DIAMETER MANUFACTURED BY ROTH MULTITANK OR APPROVED EQUAL. TANK SHALL HAVE ROTH THREADED SEPTIC ACCESS RISER SYSTEM AS PROVIDED BY MANUFACTURER AND INCLUDE A SCREENED, PUMP VAULT IN OUTLET. INSTALLATION SHALL MEET MANUFACTURERS INSTRUCTIONS PROVIDED. THE TANK SHALL BE VACUUM TESTED WHEN CONSTRUCTED OR WATER TESTED/VACUUM TESTED ON SITE.
19. THE CONTRACTOR MUST FOLLOW ALL ITEMS CIRCLED IN THE LOWER RIGHT HAND AREA OF THE OWTS APPLICATION LABELED--IMPORTANT AND NOTIFY ENGINEER DURING THE DIFFERENT STAGES OF CONSTRUCTION TO ALLOW THE ENGINEER TO OBSERVE COMPLIANCE WITH THE APPROVED PLANS (AS REQUIRED BY DEM).
20. THE CONTRACTOR MUST NOTIFY LICENSED DESIGNER 48 HOURS PRIOR TO START OF CONSTRUCTION WITH VALID INSTALLERS LICENSE NUMBER. DESIGNER MUST NOTIFY DEM 24 HOURS PRIOR TO START OF CONSTRUCTION IN ACCORDANCE WITH SD 27.00 (g).
21. IF CONTRACTOR ENCOUNTERS UNANTICIPATED CONDITIONS DURING CONSTRUCTION WHICH INDICATED THAT THE SYSTEM CANNOT BE INSTALLED IN ACCORDANCE WITH THE APPROVED DESIGN, INSTALLER SHALL STOP CONSTRUCTION AND NOTIFY THE LICENSED DESIGNER RESPONSIBLE FOR WITNESSING AND INSPECTING THE INSTALLATION IN ACCORDANCE WITH SD 27.00 (c).
22. THE LICENSED DESIGNER SHALL WITNESS AND INSPECT ALL ASPECTS OF THE INSTALLATION, KEEP RECORDS, AND PREPARE THE CERTIFICATE OF COMPLETION.
23. THE DESIGNER IS NOT RESPONSIBLE FOR ANY NEGLIGENT ACT OF OMISSION OF A USER OF AN OWTS, INCLUDING BUT NOT LIMITED TO, FAILURE TO PROPERLY USE AND MAINTAIN THE SYSTEM, WHICH CAUSES DAMAGE TO THE OWTS.
24. CONTRACTOR TO NOTIFY ENGINEER DURING THE DIFFERENT STAGES OF CONSTRUCTION TO ALLOW THE ENGINEER TO OBSERVE COMPLIANCE WITH THE APPROVED PLANS (AS REQUIRED BY DEM).
25. THE CONTRACTOR SHALL PROVIDE DESIGNER WITH MATERIAL RECEIPTS FOR ALL CONSTRUCTION MATERIALS PRIOR TO DESIGNER ISSUING CERTIFICATE OF CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN A COPY OF THE APPROVED PLAN ON-SITE AT ALL TIMES.
26. LOT AREA : 0.26 ACRES.
27. PROPERTY LINE DETERMINED FROM PLAN OF 97 & 97A LAKE SHORE DRIVE, GLOCESTER PREPARED BY ROBERT OLIVER JR. P.L.S. DATED AUGUST 30, 1999. TOPOGRAPHY BASED UPON A LIMITED GROUND SURVEY PERFORMED IN SEPT. 2009.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
REVIEWED SITE PLAN APPLICATION NO.: 17-009
DATED FEB 13 2017
SEE LETTER OF SAME DATE.

MICHAEL C. GRAY
No. 7457
REGISTERED PROFESSIONAL ENGINEER
2-1-17
SCALE: AS SHOWN

TITLE: *OWTS REPAIR PLAN*

PROJECT:
JAMES GIARRUSSO
A.P. ELS, LOT 403
97A LAKE SHORE DRIVE
GLOCESTER, RI

MICHAEL C. GRAY, PE
146 DOUGLAS HOOK ROAD
CHEPACHET, RI

PROJ. NO: 11-16
DATE : DEC 2016

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