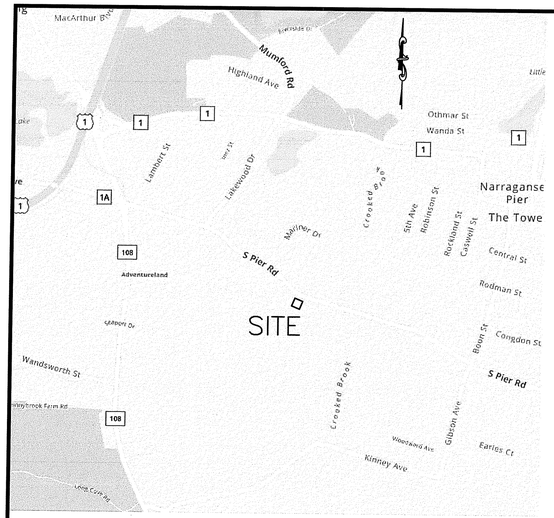


LOCUS MAP

SCALE: AS SHOWN

NOTES:

1. THIS PLAN HAS BEEN PREPARED FOR THE PROPOSED SEPTIC SYSTEM ONLY AND SHOULD NOT BE USED FOR ANY OTHER PURPOSE. BUILDING ARCHITECTURAL DRAWINGS ARE PREPARED BY THE PRIME DESIGN PROFESSIONAL AND ARE NOT PART OF THIS PLAN SET.
2. REFERENCE IS MADE TO SOIL EVALUATION #2020-1849.

MAGNETIC 07-26-21

UNDEVELOPED FOREST AREA

OWTS #7120230 2-BEDROOM

DWELLING #222

A.P. P / LOT 45 N/F RICHARD J. & DAVE PERRY CITRONE

DWELLING #221 A.P. H / LOT 88

C.B.

HYDRANT

DRIVEWAY

RETAINING WALL

IRON ROD SET

130.44'±

RAIN GARDEN, 325 SQ. FT. @ 8" DEEP, SEE DETAIL. PIPE ROOF RUNOFF TO RAIN GARDEN.

CRUSHED STONE DRIVEWAY, SEE DETAIL

CRUSHED STONE CONSTRUCTION ENTRANCE, SEE DETAIL

4"DRAIN INV.=101.7

RAIN GARDEN BOTTOM EL.=101.7

EXIST. PLAY HOUSE

CRUSHED STONE DRIVE

PROPOSED DWELLING 3-BEDROOM SLAB=104.0

BUILDING SEWER SLEEVE, SEE DETAIL

4"DRAIN INV.=102.5

4"DRAIN INV.=102.3

WALK

SF#1

A.P. P / LOT 43 12,756 S.F. 0.2928 AC.

A.P. P / LOT 41 N/F DANIEL R. HARROP

DWELLING #219 A.P. H / LOT 89

OWTS #0920-0473 2-BEDROOM

KEEP WATER LINE 10' OFF OWTS PIPE/TANK AND 25' OFF OWTS LEACHFIELD

VEGETATED SWALE, DIRECT WALK RUNOFF INTO SWALE, MIN. AREA = 20 SQ.FT.

1,500 GALLON TWO COMPARTMENT OSI SEPTIC TANK WITH ADVANTEX AX-20, SEE DETAILS

ATLANTIC WHITE CEDAR (CHAMAECYPARIS THYOIDES) 4 FT. TALL, SPACED 8 FT. ON-CENTER

WETLAND EDGE

100.00'±

100.25'±

16.0'

BSF 101.64

SF#2

20.6'

31.1'

50.6'

15.3'

13.2'

128.58'±

UPH1200 S/34-84

C.B.

SOUTH PIER ROAD (50' PUBLIC)

LIMIT OF DISTURBANCE AND COMPOST FILTER SOCK, SEE DETAIL

CATCH BASIN B.M. = 98.744 ASSUMED DATUM

DRAIN IS DIRECTLY CONNECTED TO CROOKED BROOK WHICH IS DIRECTLY CONNECTED TO NARROW RIVER CRITICAL RESOURCE AREA

FLORAL AVENUE (50.11' UNDEVELOPED)

50' PERIMETER WETLAND

5' FILL PERIMETER, MAINTAIN EL.=102.70

BOTTOMLESS SAND FILTER DRAINFIELD, SEE DETAIL

A.P. P / LOT 23 N/F SUSAN BURGLUND

OWTS #7120097 2-BEDROOM

DWELLING #210

FOREST

BALL FIELDS

TOWN BALL FIELDS

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM

NOTE PER DEM:

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

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATED: OCT 05 2022 FILE #: 22-0341
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Nancy L. Freeman

OWTS APPLICANT:
SHORELINE PROPERTIES, INC.
400 SOUTH COUNTY TRAIL, UNIT A207
EXETER, RI 02822

ABBREVIATIONS

A.P.	ASSESSORS PLAT
BIT.	BITUMINOUS CONCRETE
CB	CATCH BASIN
CONC.	CONCRETE
DMH	DRAIN MANHOLE
EL.	ELEVATION
ELEV.	ELEVATION
E.O.P.	EDGE OF PAVEMENT
EXIST.	EXISTING
F.F.	FINISH FLOOR ELEVATION
GAL.	GALLON
MIN.	MINIMUM
P-1	POLE #1
PROP.	PROPOSED OR PROPERTY
P.T.	PRESSURE TREATED
RWALL	RETAINING WALL
S	SLOPE
SMH	SANITARY MANHOLE
T.O.W.	TOP OF FOUNDATION ELEV.
TYP.	TYPICAL

LINETYPE LEGEND

SUBJECT PROPERTY LINE
ABUTTING PROPERTY LINE
BUILDING SETBACK LINE
EXISTING ELEVATION CONTOUR
PROPOSED ELEVATION CONTOUR
PROPOSED DRAIN LINE
PROPOSED WATER LINE
COMPOST FILTER SOCK
LIMIT OF DISTURBANCE
50 FOOT PERIMETER WETLAND
WETLAND EDGE & FLAG
PROPOSED PLANTING

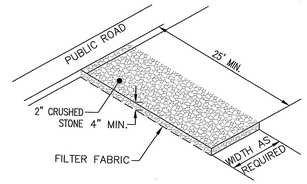
OWTS PLAN

SCALE: 1"=20'

GRAPHIC SCALE

20' 0' 10' 20' 40'

1" = 20 FEET



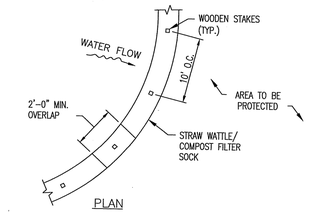
MATERIALS SIZE

SQUARE MESH SIEVES	2"CRUSHED STONE OR GRAVEL	ASTM C-33 NO. 2	ASTM C-33 NO. 3
	% FINER	% FINER	% FINER
2-1/2 INCHES	100	90-100	100
2 INCHES	95-100	35-70	90-100
1-1/2 INCHES	30-55	0-15	35-70
1-1/4 INCHES	0-25	–	–
1 INCH	0-5	–	0-15
3/4 INCH	–	0-5	–
1/2 INCH	–	–	0-5
3/8 INCH	–	–	–

NOTE:
STABILIZATION PAD TO BE IN COMFORMANCE WITH STANDARDS SET FORTH IN THE "RHODE ISLAND GUIDELINES FOR SOIL & SEDIMENT CONTROL."

CRUSHED STONE CONSTRUCTION ENTRANCE

NOT TO SCALE



NOTES:
1. ALL MATERIAL TO MEET REQUIREMENTS OF RIDOT STANDARD SPECIFICATIONS.

MAXIMUM LENGTH ABOVE COMPOST FILTER SOCK (FEET) AND CORRESPONDING DIAMETER OF SOCK REQUIRED:

UPGRADIENT SLOPE	8"ø	12"ø	18"ø	24"ø
2%	300'	375'	500'	650'
5%	200'	250'	275'	325'
10%	100'	125'	150'	200'
20%	50'	65'	70'	130'
30%	30'	40'	45'	85'
40%	30'	40'	45'	50'
50%	20'	25'	30'	35'

COMPOST FILTER SOCK

NOT TO SCALE

NOTE: THIS IS NOT A SURVEY BOUNDARY PLAN. REFERENCE IS MADE TO SURVEY BOUNDARY PLAN PREPARED BY EAST GREENWICH SURVEYORS, 2022.

OWTS PLAN

TIMOTHY J. BEHAN
No 6278
REGISTERED PROFESSIONAL ENGINEER

REVISIONS

No.	DATE	DRWN	CHKD

COMMONWEALTH
ENGINEERS & CONSULTANTS, INC.
400 SMITH STREET
PROVIDENCE, RHODE ISLAND 02908
401-273-6600

RI Department of Environmental Management
JUN 30 2022
Office of Water Resources

OWTS PLAN
A.P. P LOT 43
LOCATION
SOUTH PIER ROAD
NARRAGANSETT, RHODE ISLAND

SCALE: AS NOTED	SHEET NO: 1 OF 2	
DRAWN BY: TB	DESIGN BY: TB	CHECKED BY: TB
DATE: 06/29/22	PROJECT NO.: 21036.00	

STANDARD OWTS NOTES:

1. THIS PLAN WAS PREPARED FOR RIDEM SEPTIC SYSTEM PERMIT ONLY AND SHOULD NOT BE USED FOR ANY OTHER PURPOSE WITHOUT WRITTEN AUTHORIZATION FROM THE ENGINEER.
2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE "RULES ESTABLISHING MINIMUM STANDARDS RELATING TO LOCATION, DESIGN, CONSTRUCTION AND MAINTENANCE OF ONSITE WASTEWATER TREATMENT SYSTEMS", LATEST REVISION, AS REGULATED THROUGH THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT. THESE ARE REFERRED TO AS THE 'RULES'.
3. THE PROPOSED ACTIVITIES (ARE ____) OR (ARE NOT _X_) UNDER THE RHODE ISLAND COASTAL RESOURCE MANAGEMENT COUNCIL'S JURISDICTION.
4. PUBLIC SEWERS (ARE ____) OR (ARE NOT _X_) LOCATED WITHIN 200 FEET OF THE PROPERTY LINE.
5. DRINKING WATER LINES (ARE _X_) OR (ARE NOT ____) LOCATED WITHIN 50 FEET OF THE PROPOSED OWTS. ALL DRINKING WATER LINES WITHIN 50 FEET OF THE PROPOSED OWTS HAVE BEEN SHOWN, IF PRESENT.
6. WATER SUPPLY IS BY (PUBLIC WATER SYSTEM _X_) OR (PRIVATE WELL ____).
7. THERE (ARE ____) OR (ARE NOT _X_) EXISTING AND PROPOSED PRIVATE DRINKING WATER WELLS LOCATED WITHIN THE SPECIFIED SETBACK DETAILED IN THE 'RULES' + 100 FEET. IF WELL(S) ARE PRESENT, THEY HAVE BEEN SHOWN ON THE PLAN.
8. THERE (ARE ____) OR (ARE NOT _X_) EXISTING AND PROPOSED WELLS SERVING NON-POTABLE USES WITHIN 100' OF THE OWTS. IF WELL(S) ARE PRESENT, THEY HAVE BEEN SHOWN ON THE PLAN.
9. THERE (ARE ____) OR (ARE NOT _X_) EXISTING AND PROPOSED PUBLIC DRINKING WATER SUPPLY WELLS WITHIN 500 FEET OF THE PROPOSED OWTS. IF WELL(S) ARE PRESENT, THEY HAVE BEEN SHOWN ON THE PLAN. THE TYPE OF PUBLIC WELL, IF PRESENT, IS NOTED NEXT TO THE WELL.
10. THERE (ARE _X_) OR (ARE NOT ____) WATERCOURSES, WETLANDS, AND DRAINS WITHIN 200 FEET OF THE PROPOSED OWTS. IF PRESENT, THE LOCATIONS ARE SHOWN ON THE PLAN.
11. THERE (ARE _X_) OR (ARE NOT ____) STORM AND SUBSURFACE DRAINS WITHIN 200 FEET OF THE PROPOSED OWTS. SAID DRAINS (DO _X_) OR (DO NOT ____) DISCHARGE DIRECTLY OR INDIRECTLY INTO A CRITICAL RESOURCE AREA AS IDENTIFIED IN THE 'RULES'.
12. THE PROPOSED OWTS (IS ____) OR (IS NOT _X_) LOCATED WITHIN THE WATERSHED OF A PUBLIC WATER SUPPLY.
13. THE PROPOSED OWTS (IS _X_) OR (IS NOT ____) LOCATED WITHIN A CRITICAL RESOURCE AREA AS IDENTIFIED IN THE 'RULES'. THE DISTANCE TO THE NEAREST CRITICAL RESOURCE OF CONCERN IS 31 FT FROM OWTS TO DRAIN PIPE.
14. THERE (ARE ____) OR (ARE NOT _X_) EXISTING OWTS'S WITHIN 200 FEET OF ANY PROPOSED WELL. IF PRESENT, THE LOCATION AND SIZE HAS BEEN SHOWN ON THE PLAN.
15. EXISTING OWTS'S WITH A DESIGN FLOW GREATER THAN 1,000 GAL/DAY (ARE ____) OR (ARE NOT _X_) LOCATED WITHIN 400 FEET OF THE PROPOSED WELL. IF PRESENT, THE LOCATION AND SIZE HAS BEEN SHOWN ON THE PLAN.
16. THERE (ARE ____) OR (ARE NOT _X_) AREAS ON SUBJECT PROPERTY WHERE SOIL HAS BEEN EXCAVATED AND/OR WHERE STORM DEPOSITED SAND IN THE BACKDUNE ENVIRONMENT OR WHERE HUMAN TRANSPORTED MATERIAL HAS BEEN DEPOSITED.
17. A REPLACEMENT DISPERSAL FIELD AREA MEETING THE HORIZONTAL SETBACK REQUIREMENTS IN THE 'RULES' (IS ____) OR (IS NOT _X_) SHOWN ON THE PLAN. IF NOT SHOWN, A SUITABLE AREA DOES NOT EXIST OR INSUFFICIENT DATA IS KNOWN TO MAKE A DETERMINATION AT THIS TIME.
18. THE POTENTIAL FOR FLOODING WITHIN 100 FEET OF THE PROPOSED OWTS DOES NOT EXIST.
19. THE PROPOSED WELL, IF APPLICABLE, (DOES ____) OR (DOES NOT _X_) REQUIRE A VARIANCE FROM RIDEM'S "RULES AND REGULATIONS GOVERNING THE ENFORCEMENT OF CHAPTER 46-13.2 RELATING TO THE DRILLING OF DRINKING WATER WELLS".
20. THIS APPLICATION (IS ____) OR (IS NOT _X_) PART OF A SUBDIVISION OF FIVE (5) LOTS OR LESS WITH EXISTING ROAD FRONTAGE (PREVIOUS APPLICATION IT WAS).
21. THE SUBJECT PROPERTY (IS ____) OR (IS NOT _X_) SERVED WITH AN OWTS & PRIVATE WELL. THE NITROGEN LOADING RATE SHALL NOT EXCEED 345 GAL/DAY PER 20,000 SQUARE FEET OF PROPERTY WHEN SERVED WITH AN OWTS & PRIVATE WELL.

GENERAL NOTES:

1. SEPTIC TANK, PUMP BASIN, & RISERS SHALL BE WATERTIGHT. CONTRACTOR TO TEST BY FILLING WITH WATER, WITNESSED BY ENGINEER (IN ACCORDANCE WITH RULES).
2. SEPTIC TANK SHALL BE MANUFACTURED FOR ANTI-FLOTATION ASSUMING WATER TABLE AT INVERT IN ELEVATION.
3. BUILDING SEWER TO SEPTIC TANK SHALL HAVE NO BENDS EXCEEDING 45°.
4. VEHICLE PARKING OR TRAFFIC OVER THE LEACHFIELD/SEPTIC TANK AREA IS PROHIBITED.
5. FINISH GRADE SHALL PITCH AWAY FROM ALL MANHOLES.
6. THE CONTRACTOR SHALL REMOVE ALL TREES AND TREE ROOTS WITHIN 10 FEET OF THE PROPOSED SEPTIC SYSTEM.
7. THE CONTRACTOR SHALL STRIP ALL TREES, ROOTS, GRASS SOD, AND LOAM IN THE LEACHFIELD AREA PRIOR TO PLACING ANY MATERIAL. LEACHFIELD BOTTOM SHALL BE INSPECTED BY THE ENGINEER. IF BOTTOM IS UNACCEPTABLE TO ENGINEER, CONTRACTOR SHALL EXCAVATE TO THE ELEVATION SPECIFIED BY THE ENGINEER AT NO ADDITIONAL COST.

LEACHFIELD SIZING CALCULATIONS:

BLDG. USE = 3 BEDROOMS
FLOW TO LEACHFIELD = 3 BEDS X 115 GAL/BED = 345 GAL/DAY
LOADING RATE = 1.50 GAL/SF/DAY (CATEGORY 9 SOIL IS THE MOST RESTRICTIVE SOIL WITHIN 3.0 FEET OF BSF BASE)
SQUARE FEET REQ'D. = 345 / 1.5 = 230 SQUARE FEET REQ'D
SELECT LEACHFIELD = USE 11' X 21' BOTTOMLESS SAND FILTER = 231 SQ. FT. PROVIDED

SEPTIC TANK SIZING CALCULATIONS:

ADVANTEX REQUIRES 2/3 DESIGN FLOW IN FIRST COMPARTMENT
USE 1,500 GAL. TANK SINCE DESIGN FLOW IS LESS THAN VOLUME OF FIRST COMPARTMENT

GENERAL SITE, SOILS & DESIGN DATA:

1. PROPOSED B.S.F. LEACHFIELD IS LOCATED BETWEEN TEST HOLE SE2. E.S.H.W.T. IS 12 INCHES BELOW ORIGINAL GRADE. THE HIGHEST ELEVATION OF ORIGINAL GROUND AT THE CORNERS OF THE PROPOSED B.S.F. IS 102.2; THEREFORE, THE E.S.H.W.T. UNDER THE PROPOSED LEACHFIELD IS 101.2.
2. USE SLOWEST B.S.F. LOADING RATE = 1.50 GAL/SF/DAY, BASED ON CATEGORY 9 SOIL. (BSF REGS. STATE SLOWEST RATE WITHIN 3.0 FEET OF PROPOSED BOTTOM SHALL BE USED).

CONTRACTOR'S NOTES – CONSTRUCTION:

1. NOTIFY ENGINEER 5 DAYS PRIOR TO START OF CONSTRUCTION.
2. INSTALLATION OF PIPING/PUMP EQUIPMENT TO & FROM ADVANTEX POD AND PUMP SHALL BE PERFORMED BY A ORENCO SYSTEMS APPROVED AGENT.
3. CONSTRUCTION OF THE BOTTOMLESS SAND FILTER (BSF) CAN ONLY OCCUR DURING DRY PERIODS WHEN THE GROUNDWATER TABLE IS LOWER THAN ANY PROPOSED WORK.
4. PRODUCT & MATERIAL SPECIFICATION SHEETS FOR ALL COMPONENTS SHALL BE PROVIDED TO ENGINEER PRIOR TO ENGINEER NOTIFYING RIDEM FOR START OF CONSTRUCTION. THIS INCLUDES: 1) SEPTIC TANK AND 2) SAND SIEVE ANALYSIS.
5. STAKE OUT LEACHFIELD CORNERS FOR REVIEW AND APPROVAL BY ENGINEER.
6. ENGINEER TO APPROVE BOTTOM OF LEACHFIELD BED PRIOR TO PLACEMENT OF SAND.
7. SCARIFY LEACHFIELD BOTTOM IMMEDIATELY PRIOR TO PLACEMENT OF SAND, NOT THE DAY BEFORE. MIX THE TOP 3" OF NATIVE SOIL WITH SAND.
8. ENGINEER TO INSPECT SEPTIC TANK PRIOR TO BACKFILLING. CONTRACTOR SHALL PERFORM A WATER PRESSURE TEST ON THE TANK & TANK RISERS OR VACUUM TEST REPORT. COORDINATE TESTING WITH ENGINEER.
9. ENGINEER TO INSPECT COMPLETED SYSTEM PRIOR TO BACKFILLING.
10. CONTRACTOR TO REVIEW FIELD CONDITIONS PRIOR TO BIDDING.

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: OCT 0 5 2022 FILE #: 22-0341
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Nancy L. Freeman

ADVANTEX AX-20 NOTES:

1. ALL WORK AND INSTALLATION PROCEDURES SHALL CONFORM TO RIDEM'S "GUIDELINES FOR THE DESIGN AND USE OF BOTTOMLESS SAND FILTERS, LATEST REVISION". ONLY RIDEM APPROVED INSTALLERS ARE PERMITTED TO INSTALL THIS OWTS.
2. THE 6"x6" P.T. TIMBERS AROUND THE BSF SHALL BE SECURED WITH IRON PINS, OR REBARS FASTENED TO THE SUPPORT WALLS TO PREVENT MOVEMENT TO THE SATISFACTION OF THE ENGINEER.
3. THIS BOTTOMLESS SAND FILTER IS AND SHALL ALWAYS BE PRESSURE DOSED UTILIZING PROGRAMMABLE TIMERS. SINCE THE ADVANCED TREATMENT UNIT IS TIME-DOSED (CATEGORY 1 OPTION) THE TIMER SHALL ALSO CONTROL THE APPLICATION OF INFLUENT TO THE BSF.
4. THE ADVANTEX UNIT & ASSOCIATED COMPONENTS (PUMPS, FLOATS, VALVES, PIPE CONNECTIONS, ETC.) SHALL BE INSTALLED BY AN ORENCO SYSTEMS MANUFACTURES REPRESENTATIVE. THE O.S. REPRESENTATIVE SHALL PROVIDE CERTIFICATION TO THE ENGINEER THAT THE SYSTEM WAS INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.
5. THE LAND SURFACE ELEVATION 2 FEET BELOW THE PEASTONE/SAND MEDIA INTERFACE SHALL BE MAINTAINED FOR A DISTANCE OF 5 FEET FROM THE EDGE OF THE BSF. LAND SURFACE REGRADING ADJOINING THIS 5-FOOT PERIMETER MUST MAINTAIN A MINIMUM OF 3H:1V SLOPE DOWN GRADIENT.
6. ALL PIPING AND FITTINGS SHALL BE INSTALLED TO ENSURE DRAIN-BACK INTO THE PUMP BASIN.
7. ADVANTEX POD SHALL BE EQUIPPED WITH ANTI-FLOTATION FLANGES.
8. PUMP VAULT SHALL BE ORENCO SYSTEMS MODEL PVU57-1819 OR APPROVED EQUAL.
9. THE PUMP DOSING THE AX-20 POD SHALL BE ORENCO SYSTEMS MODEL PF3005 OR APPROVED EQUAL.
10. THE PUMP DOSING THE BSF SHALL BE ORENCO SYSTEMS MODEL PF2005 OR APPROVED EQUAL.
11. DISCHARGE ASSEMBLY SHALL BE ORENCO SYSTEMS MODEL HV125 BX-DB OR APPROVED EQUAL.
12. FLOAT ASSEMBLY SHALL BE ORENCO SYSTEMS MODEL MF3A OR APPROVED EQUAL.
13. ORENCO SYSTEMS CONTROL & ALARM PANEL SHALL BE VERICOM WITH ELAPSE TIME METER, EVENT COUNTER AND PROGRAMMABLE TIMER OPTIONS OR APPROVED EQUAL.

OWNER'S NOTES:

1. FOOD/GARBAGE GRINDERS ARE PROHIBITED FROM BEING CONNECTED TO THE SEPTIC SYSTEM.
2. VEHICLE PARKING OR TRAFFIC OVER THE LEACHFIELD AND SEPTIC TANK IS PROHIBITED.
3. BACKWASH WATER FROM WATER TREATMENT SYSTEMS SHALL NOT BE DISCHARGED INTO THE SEPTIC SYSTEM.
4. SEPTIC TANKS SHALL BE PUMPED OUT EVERY 24 MONTHS UNLESS RECOMMENDED SOONER BY ORENCO SYSTEMS AND SYSTEM MAINTAINED BY AN APPROVED ORENCO SYSTEMS APPROVED MAINTENANCE SERVICE PROVIDER.
5. ONLY WASTEWATER AS DEFINED IN THE RIDEM OWTS REGULATIONS IS ALLOWED TO BE DISCHARGED INTO THE SEPTIC SYSTEM. ABSOLUTELY NO CHEMICALS, OILS, FATS, GREASE, OR PAINTS ARE ALLOWED.
6. NO TREES OR LARGE SHRUBS SHALL BE PLANTED WITHIN 10 FEET OF THE LEACHFIELD.
7. NO SUBSURFACE DRAINS OR SUBDRAINS SHALL BE INSTALLED ON SUBJECT PROPERTY UNLESS IN ACCORDANCE WITH OWTS RULES.

SEPTIC TANK NOTES:

1. SEPTIC TANK SHALL BE WATER TIGHT AND CONSTRUCTED OF PRECAST REINFORCED CONCRETE.
2. PRECAST REINFORCED CONCRETE TANKS SHALL CONFORM WITH ASTM C-1227-02, LATEST EDITION.
3. TANKS SHALL BE PERMANENTLY MARKED AT THE INLET END OF THE TANK WITH DATE OF MANUFACTURER; NAME OF MANUFACTURER; CAPACITY; AN EXTERNAL LOADS FOR WHICH TANK IS DESIGNED TO RESIST.
4. A WARNING LABEL AT ALL OPENINGS SHALL BE PROVIDED WHICH READS "ENTRANCE INTO THE TANK COULD BE FATAL".
5. TANK SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS.
6. TANK SHALL BE INSTALLED ON A LEVEL, STABLE BASE THAT WILL NOT SETTLE.
7. SURFACE WATER SHALL BE DIVERTED AWAY FROM THE TANK OPENINGS.
8. TANK SHALL NOT BE DAMAGED DURING BACKFILLING. BACKFILL MATERIAL SHALL BE FREE OF LARGE STONES, STUMPS, WASTE, CONSTRUCTION MATERIAL, RUBBISH, ORGANIC MATERIAL, AND FROZEN SOILS.
9. TANK AND RISERS SHALL BE TESTED FOR WATER TIGHTNESS BY EITHER VACUUM TESTING OR WATER PRESSURE TEST AS SPECIFIED IN THE 'RULES'. CONTRACTOR SHALL PROVIDE WRITTEN CERTIFICATION THAT THE TEST PASSED PRIOR TO C.O.C.
10. JOINTS OF ALL CONCRETE TANKS SHALL BE SEALED WITH A 1" DIA. BUTYL RUBBER SEALANT OR APPROVED EQUAL.
11. MANHOLE OPENINGS SHALL BE 20 INCH MINIMUM.
12. PROVIDE VENT OPENING AT TOP OF BAFFLE WALL EQUAL TO 4" PIPE OR GREATER.

DOSING DATA TO B.S.F.:

MAX. DOSE TO ORIFICES = 19.5 GAL. (0.25 GAL/ORIFICE X 78 ORIFICES)
DRAINBACK TO PUMP = 2.4 GAL. (TRANSPORT LINE AND MANIFOLD)
MAX. DOSE TO BSF = 19.5 GAL + 2.4 GAL = 21.9 GAL.
PUMP SETTING: PUMP SYSTEM SHALL DOSE NO MORE THAN 21.9 GALLONS PER DOSE TO THE BSF. SET FLOAT SETTING BETWEEN ON/OFF AT 0.60 FEET (23.5 GAL/VERTICAL FOOT IN PUMP BASIN X 0.60 FEET = 14.1 GAL/DOSE < 21.9 GAL/DOSE; THEREFORE, DESIGN OK).
\# OF DOSES/DAY = 24

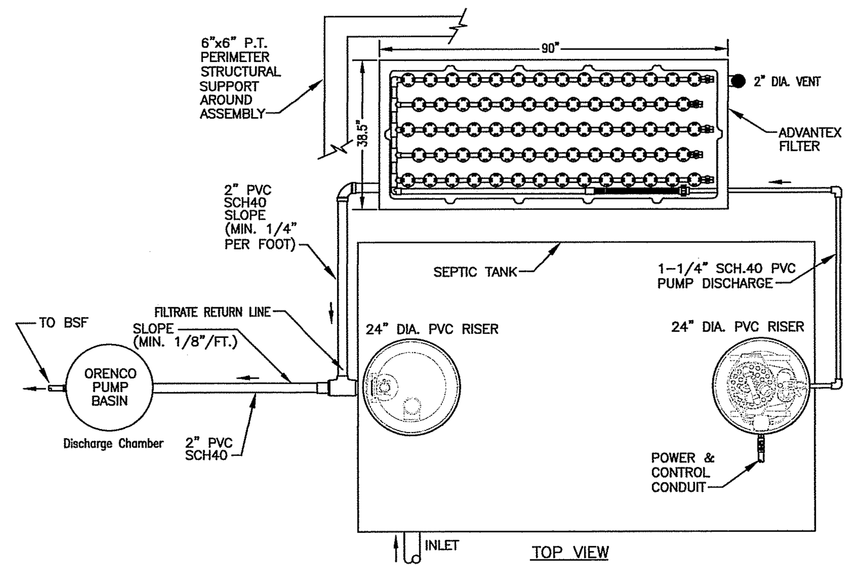
WASTEWATER STRENGTH:

THE ADVANTEX SYSTEM REQUIRES THE FOLLOWING WASTEWATER STRENGTH. THE PROPOSED USE TYPICALLY PRODUCES WASTEWATER STRENGTHS WHICH MEET THE CRITERIA BELOW. SHOULD WASTEWATER STRENGTH NOT MEET THE BELOW CRITERIA, ADDITIONAL MEASURES MAY NEED TO BE INCORPORATED INTO THE SYSTEM. OWNER IS RESPONSIBLE FOR INCORPORATING SUCH MEASURES.

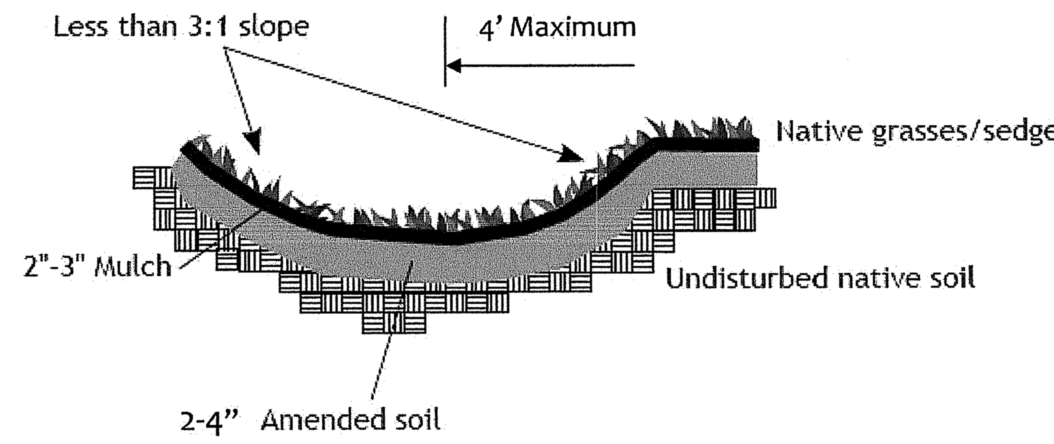
	AVERAGE (mg/L)	WEEKLY PEAK (mg/L)	RARELY EXCEEDS (mg/L)
BOD	150	250	500
TSS	40	75	150
TKN	65	75	150
FOG	20	25	30

EROSION CONTROL & SOIL STABILIZATION PROGRAM:

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARDS AND PROCEDURES SET FORTH IN THE LOCAL SOIL EROSION AND SEDIMENT CONTROL ORDINANCE AND RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST REVISION.
2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE RHODE ISLAND STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION 2004 EDITION AND ALL ADDENDUMS.
3. EXTREME CARE SHALL BE EXERCISED AS AS TO PREVENT ANY MATERIALS FROM ENTERING WETLANDS, THE ROADWAYS, ROADWAY DRAINAGE SYSTEMS, AND ADJACENT PROPERTY.
4. STAKED COMPOST FILTER SOCKS, STRAW BALES OR SILT FENCE SHALL BE INSTALLED WHERE SHOWN ON THE PLAN AND AS REQUIRED TO PREVENT SEDIMENTATION ONTO ADJACENT PROPERTIES, WETLANDS AND THE ROADWAY DRAINAGE SYSTEM.
5. DENUDED SLOPES SHALL NOT BE UNATTENDED OR EXPOSED FOR MORE THAN 2 WEEKS OF TIME OR FOR THE INACTIVE WINTER SEASON.
6. NO UNDISTURBED AREAS SHALL BE CLEARED OF EXISTING VEGETATION AFTER OCTOBER 15 OF ANY CALENDAR YEAR OR DURING ANY PERIOD OF FULL OR LIMITED WINTER SHUTDOWN. ALL DISTURBED SOILS EXPOSED PRIOR TO OCTOBER 15 OF ANY CALENDAR YEAR SHALL BE SEEDED OR PROTECTED BY THAT DATE. ANY SUCH AREAS THAT DO NOT HAVE ADEQUATE VEGETATIVE STABILIZATION, AS DETERMINED BY THE RESIDENT ENGINEER OR ENVIRONMENTAL INSPECTOR, BY NOVEMBER 15 OF ANY CALENDAR YEAR, MUST BE STABILIZED THROUGH THE USE OF EROSION CONTROL MATTING OR HAY MULCH, IN ACCORDANCE WITH SPECIFICATIONS CONTAINED WITHIN THE R.I. SOIL EROSION AND SEDIMENT CONTROL HANDBOOK. IF WORK CONTINUES WITHIN ANY OF THESE AREAS DURING THE PERIOD FROM OCTOBER 15 THROUGH APRIL 15, CARE MUST BE TAKEN TO ENSURE THAT ONLY THE AREA REQUIRED FOR THAT DAY'S WORK IS EXPOSED, AND ALL ERODIBLE SOIL MUST BE RESTABILIZED WITHIN 5 WORKING DAYS. ANY WORK TO CORRECT PROBLEMS RESULTING FROM FAILURE TO COMPLY WITH THIS PROVISION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THERE WILL BE NO SEPARATE PAYMENT FOR THIS PROVISION, IT SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION OPERATIONS. STABILIZATION OF ONE FORM OR ANOTHER AS DESCRIBED ABOVE SHALL BE ACHIEVED WITHIN 2 WEEKS OF FINAL GRADING.

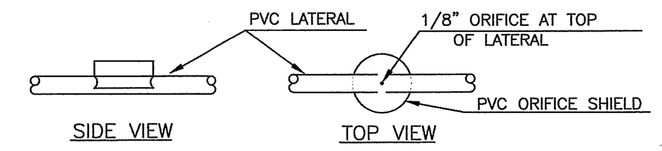


(SHALLOW INSTALL)
ADVANTEX TREATMENT SYSTEM AX20 SERIES MODE 3
N.T.S.



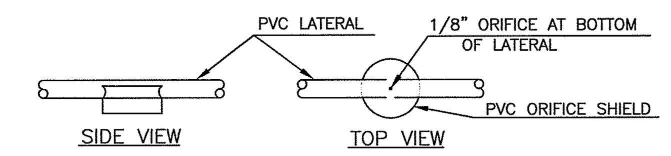
NOTE: WIDTH OF SWALE TO BE BETWEEN 2' AND 8' AND DEPTH TO BE 8".

VEGETATED SWALE DETAIL
NOT TO SCALE



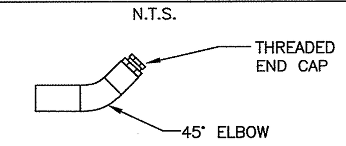
NOTE: VACUUM BREAK ORIFICE SHIELDS SHALL BE LOCATED AS SHOWN ON THE B.S.F. ORIFICE LAYOUT DETAIL AND ORIFICE SHIELDS SHALL BE PLACED ON TOP OF PIPE LATERAL. DO NOT DRILL THROUGH TOP & BOTTOM OF LATERAL PIPE WHEN DRILLING THE 1/8" 'VACUUM BREAK' ORIFICES, DRILL A TOP HOLE ONLY.

VACUUM BREAK
ORIFICE SHIELD DETAIL
N.T.S.

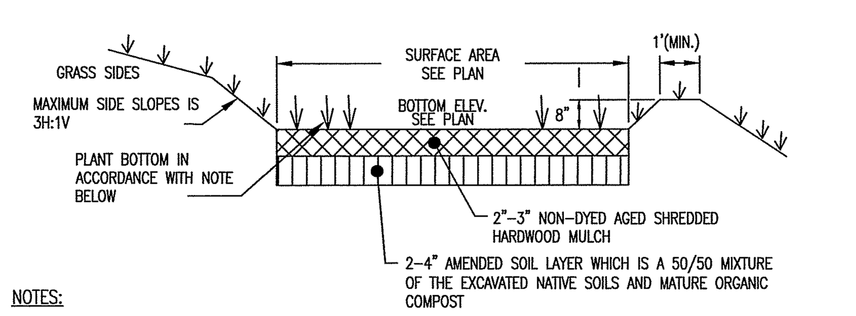


NOTE: COLD WEATHER ORIFICE SHIELDS SHALL BE LOCATED AS SHOWN ON THE B.S.F. ORIFICE LAYOUT DETAIL AND ORIFICE SHIELDS SHALL BE PLACED ON BOTTOM OF PIPE LATERAL. DO NOT DRILL THROUGH TOP & BOTTOM OF LATERAL PIPE WHEN DRILLING THE 1/8" ORIFICES, DRILL A BOTTOM HOLE ONLY.

COLD WEATHER
ORIFICE SHIELD DETAIL
N.T.S.



THREADED END CAP DETAIL
N.T.S.



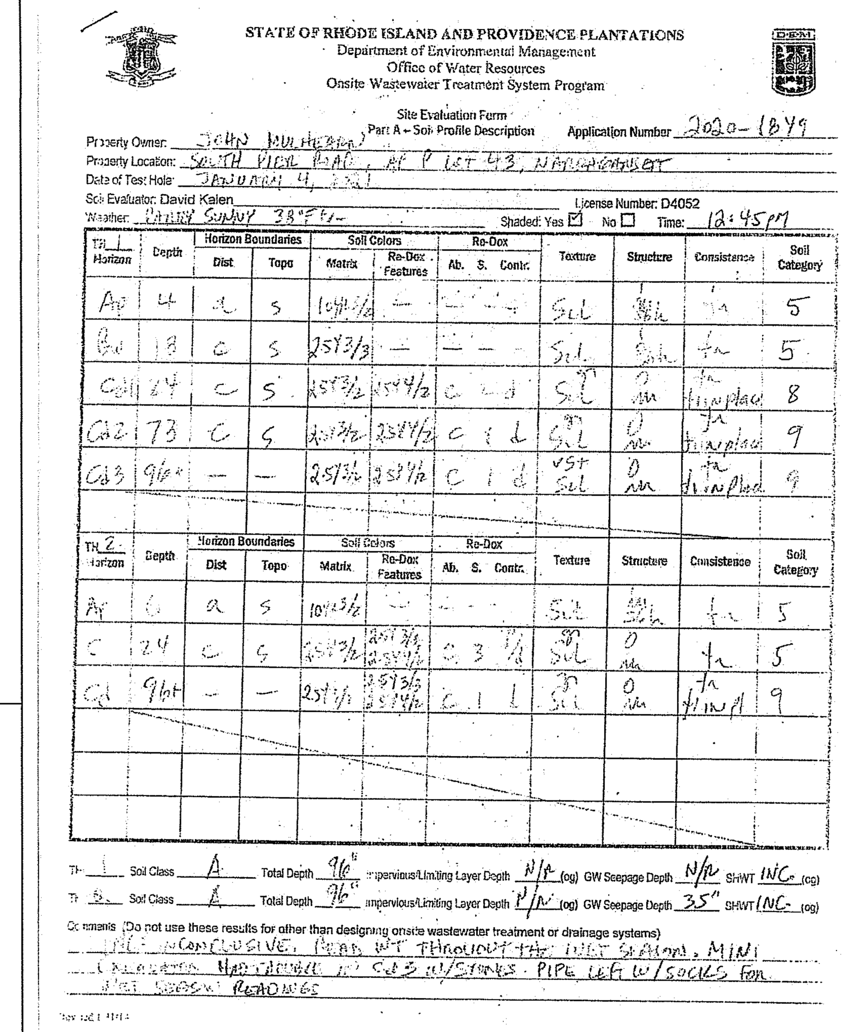
NOTES:

1. PIPE ROOF RUNOFF INTO THE RAIN GARDENS.
2. PROTECT RAIN GARDENS AGAINST SEDIMENT LADEN RUNOFF DURING CONSTRUCTION BY USE OF BERMS AND/OR COMPOST FILTER SOCK.
3. CONSTRUCT RAIN GARDEN AT END OF CONSTRUCTION ACTIVITIES (AFTER HOUSE/DRIVEWAY IS CONSTRUCTED). DO NOT COMPACT SOILS.
4. KEEP RAIN GARDEN 25 FEET AWAY FROM DRINKING WATER WELLS, AND 15 FEET FROM OWTS"S.
5. RAIN GARDEN BOTTOM SHALL BE LEVEL.
6. ANY AREAS OF CONCENTRATED RUNOFF SHALL BE PROTECTED AGAINST EROSION BY PLACING CRUSHED STONE (RIP RAP) OVER A LAYER OF DRAINAGE FILTER FABRIC (MIRAFI 140N) AT THOSE AREAS.
7. A BERM TO DETAIN THE STORMWATER SHOULD BE CONSTRUCTED ALONG THE DOWNHILL SIDE OF THE RAIN GARDEN, PERPENDICULAR TO THE SLOPE OF THE LAWN.
8. SELECT PLANTS FOR RAIN GARDENS USING THE COASTAL PLANT GUIDE AT WWW.URI.EDU/CELS/CEOC/COASTALPLANTS/COASTALPLANTGUIDE.HTM OR APPENDIX B OF THE RI STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL.

RAIN GARDENS SHALL BE MAINTAINED IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:

1. 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.
2. 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.
3. PRUNING OR REPLACEMENT OF WOODY VEGETATION SHALL OCCUR WHEN DEAD OR DYING VEGETATION IS OBSERVED.
4. SOIL EROSION GULLIES SHALL BE REPAIRED WHEN THEY OCCUR.
5. FERTILIZER OR PESTICIDES SHALL NOT BE APPLIED TO PLANTS WITHIN RAIN GARDENS.
6. 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.

RAIN GARDEN DETAIL
NOT TO SCALE



STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
Department of Environmental Management
Office of Water Resources
Onsite Wastewater Treatment System Program

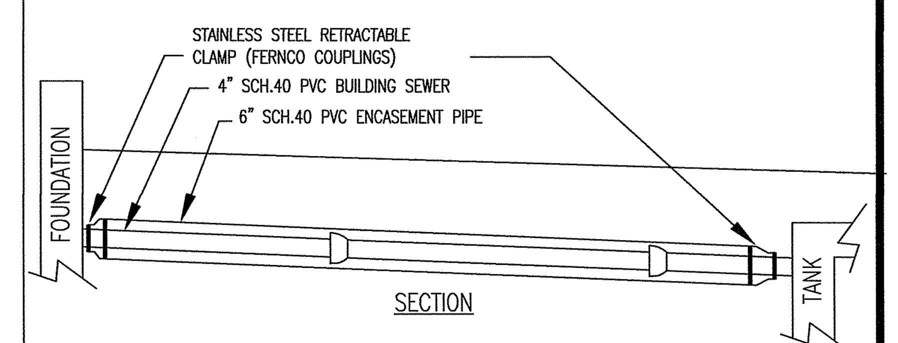
Site Evaluation Form
Part A – Soil Profile Description
Application Number 2020-1849

Property Owner: John Mulhearn
Property Location: South Pier Road, AP P Lot 43, Narragansett
Date of Test Hole: January 4, 2021
Soil Evaluator: David Kalen — License Number: D4052
Weather: Partly Sunny 38°F — Shaded: Yes ☑ No ☐ — Time: 12:45 PM

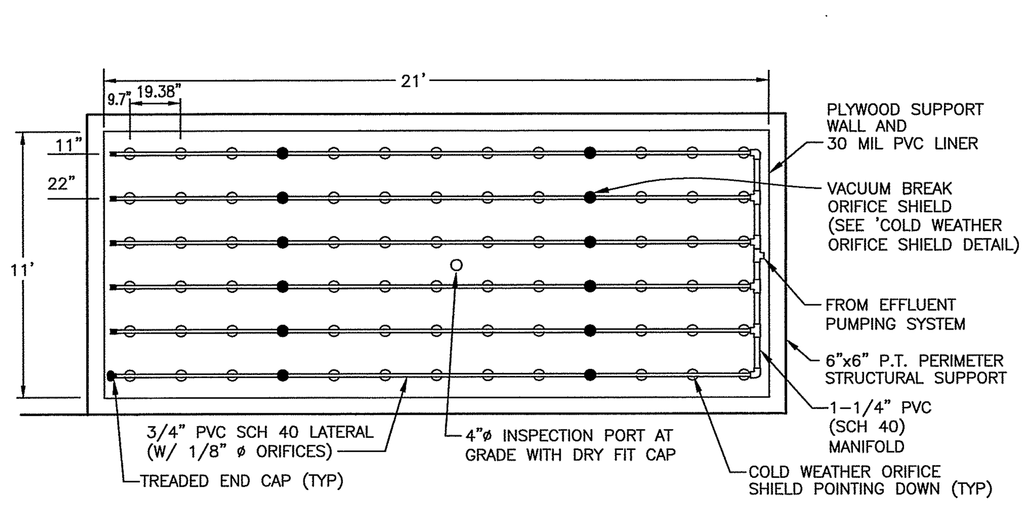
TH 1 Horizon	Depth	Dist	Topo	Matrix	Re-Dox Features	Ab. S. Contr.	Texture	Structure	Consistence	Soil Category
Ap	4	a	s	10YR3/2	—	—	SiL	3gr	fr	5
Bw	18	c	s	2.5Y3/3	—	—	SiL	[illegible]	fr	5
Cd1	24	c	s	2.5Y3/2	2.5Y4/2	c 2 d	SiL	0 m	fr in place	8
Cd2	73	c	s	2.5Y3/2	2.5Y4/2	c 1 d	SiL	0 m	fr in place	9
Cd3	96+	—	—	2.5Y3/2	2.5Y4/2	c 1 d	vfSL	0 m	fr in place	9

TH 2 Horizon	Depth	Dist	Topo	Matrix	Re-Dox Features	Ab. S. Contr.	Texture	Structure	Consistence	Soil Category
Ap	6	a	s	10YR3/2	—	—	SiL	SiL	fr	5
C	24	c	s	2.5Y3/2	2.5Y4/3 2.5Y4/2	c 3 d	SiL	0 m	fr	5
Cd	96+	—	—	2.5Y4/1	2.5Y3/3 2.5Y4/2	c 1 l	SiL	0 m	fr in pl	9

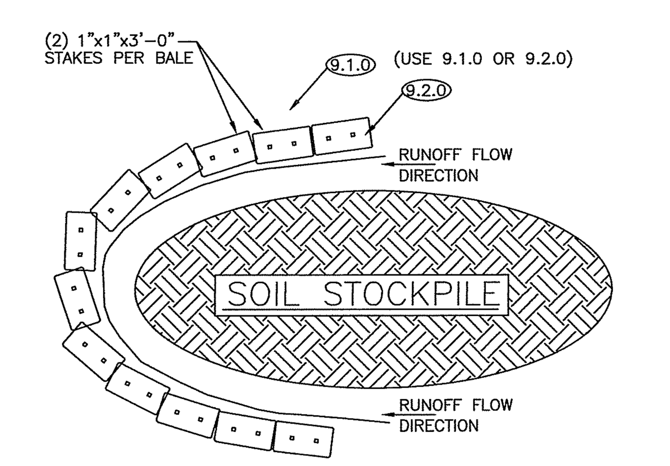
TH 1 Soil Class A Total Depth 96" Impervious/Limiting Layer Depth N/A (og) GW Seepage Depth N/A SHWT INC (og)
TH 2 Soil Class A Total Depth 96" Impervious/Limiting Layer Depth N/A (og) GW Seepage Depth 35" SHWT INC (og)
Comments (Do not use these results for other than designing onsite wastewater treatment or drainage systems): INCONCLUSIVE. READ WT THROUGHOUT THE WET SEASON. MINI ... PIPE LEFT W/ SOCKS FOR WET SEASON READINGS



BUILDING SEWER SLEEVE
NOT TO SCALE



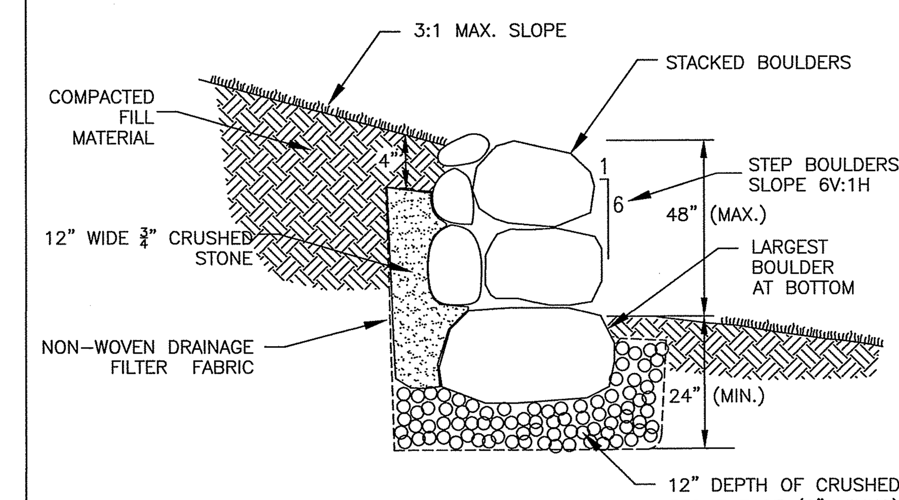
11'x21' (231 S.F.) SINGLE ZONE
BOTTOMLESS SAND FILTER–78 ORIFICES



NOTES:

THE DOWNGRADIENT SIDE OF ALL STOCKPILES SHALL BE PROTECTED WITH A CONTINUOUS ROW OF SILT FENCE OR BALED STRAW.

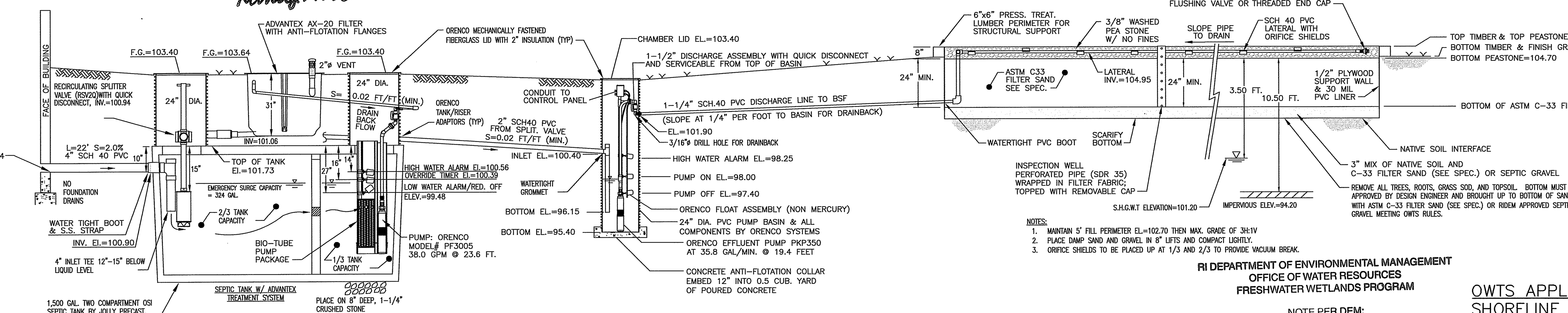
SOIL STOCKPILE AREA DETAIL
WITH DOUBLE EROSION PROTECTION
(TYPICAL ALL STOCK PILES)



NOTES:
1. USE RIDOT STANDARD DETAIL 10.1.0 WHEN EXPOSED WALL HEIGHT IS GREATER THAN 4 FEET.

BOULDER RETAINING WALL
NOT TO SCALE

OWTS PLAN



NOTES:
1. MAINTAIN 5' FILL PERIMETER EL.=102.70 THEN MAX. GRADE OF 3H:1V
2. PLACE DAMP SAND AND GRAVEL IN 8" LIFTS AND COMPACT LIGHTLY.
3. ORIFICE SHIELDS TO BE PLACED UP AT 1/3 AND 2/3 TO PROVIDE VACUUM BREAK.

SYSTEM PROFILE

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
NOTE PER DEM:
Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site

OWTS APPLICANT:
SHORELINE PROPERTIES, INC.
400 SOUTH COUNTY TRAIL, UNIT A207
EXETER, RI 02822

TIMOTHY J. BEHAN
STATE OF RHODE ISLAND
No 6278
HOPE
REGISTERED
PROFESSIONAL ENGINEER

REVISIONS

No.	DATE	DRWN	CHKD

COMMONWEALTH
ENGINEERS & CONSULTANTS, INC.
400 SMITH STREET
PROVIDENCE, RHODE ISLAND 02908
401-273-6600

OWTS PLAN
A.P. P LOT 43
LOCATION
SOUTH PIER ROAD
NARRAGANSETT, RHODE ISLAND

RI Environmental Management
JUN 3 0 2022
Office of Water Resources

SCALE: AS NOTED		SHEET NO: 2 OF 2
DRAWN BY: TB	DESIGN BY: TB	CHECKED BY: TB
DATE: 06/29/22		PROJECT NO.: 21036.00