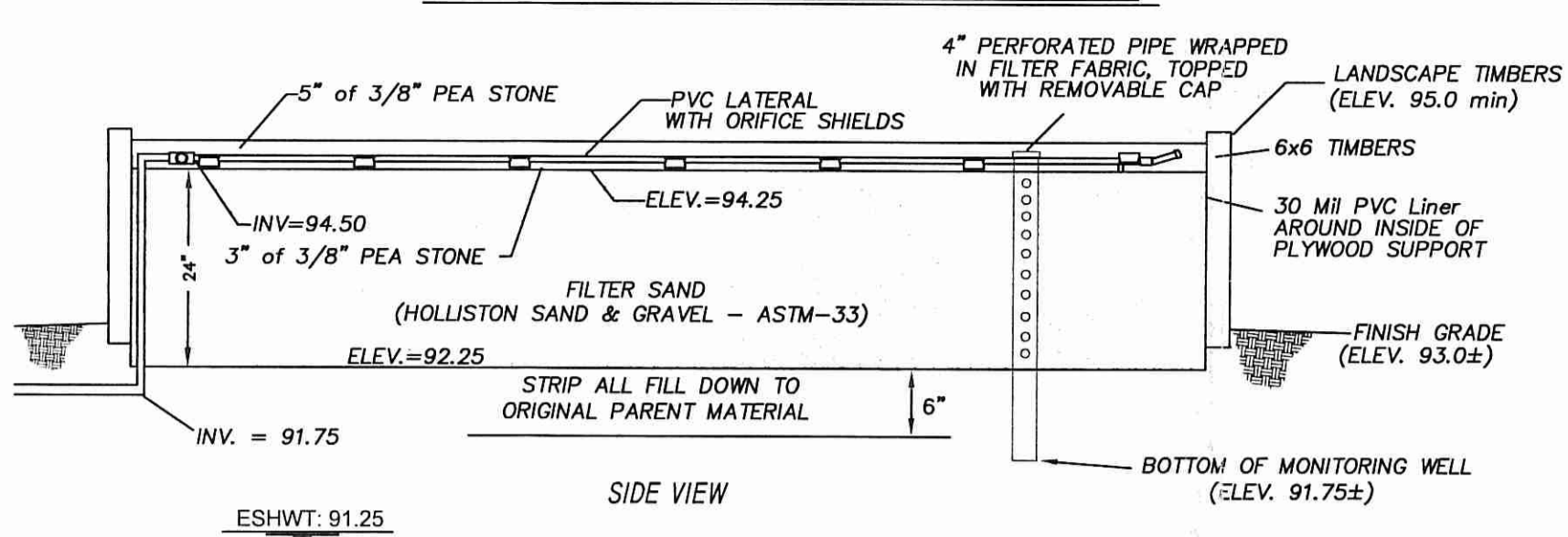


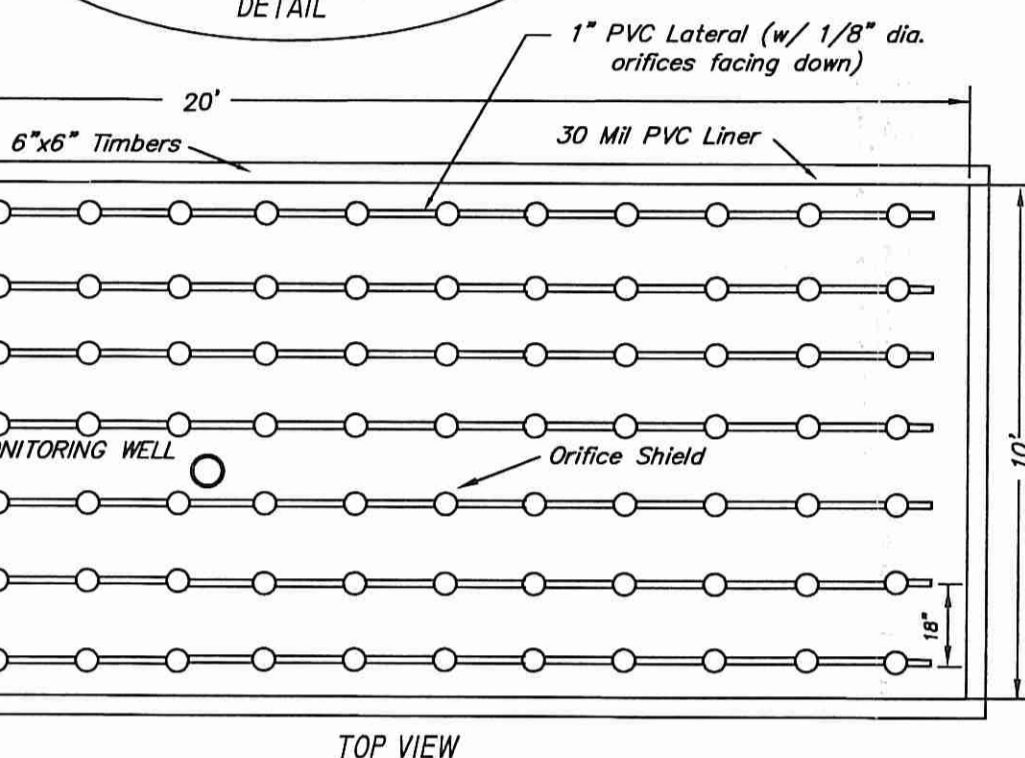
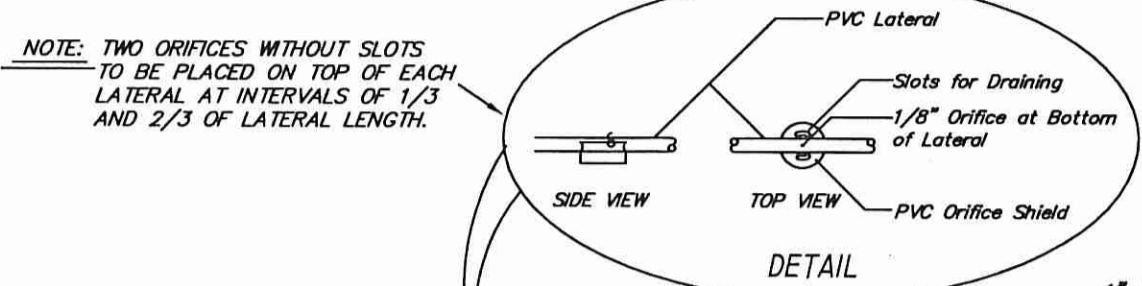
BOTTOMLESS SAND FILTER NOT TO SCALE



ESHWT: 91.25

SIDE VIEW

10'x20' BOTTOMLESS SAND FILTER
2.3 LOADING RATE
NUMBER OF ORIFICES PER LATERAL: 13
TOTAL NUMBER OF ORIFICES: 91

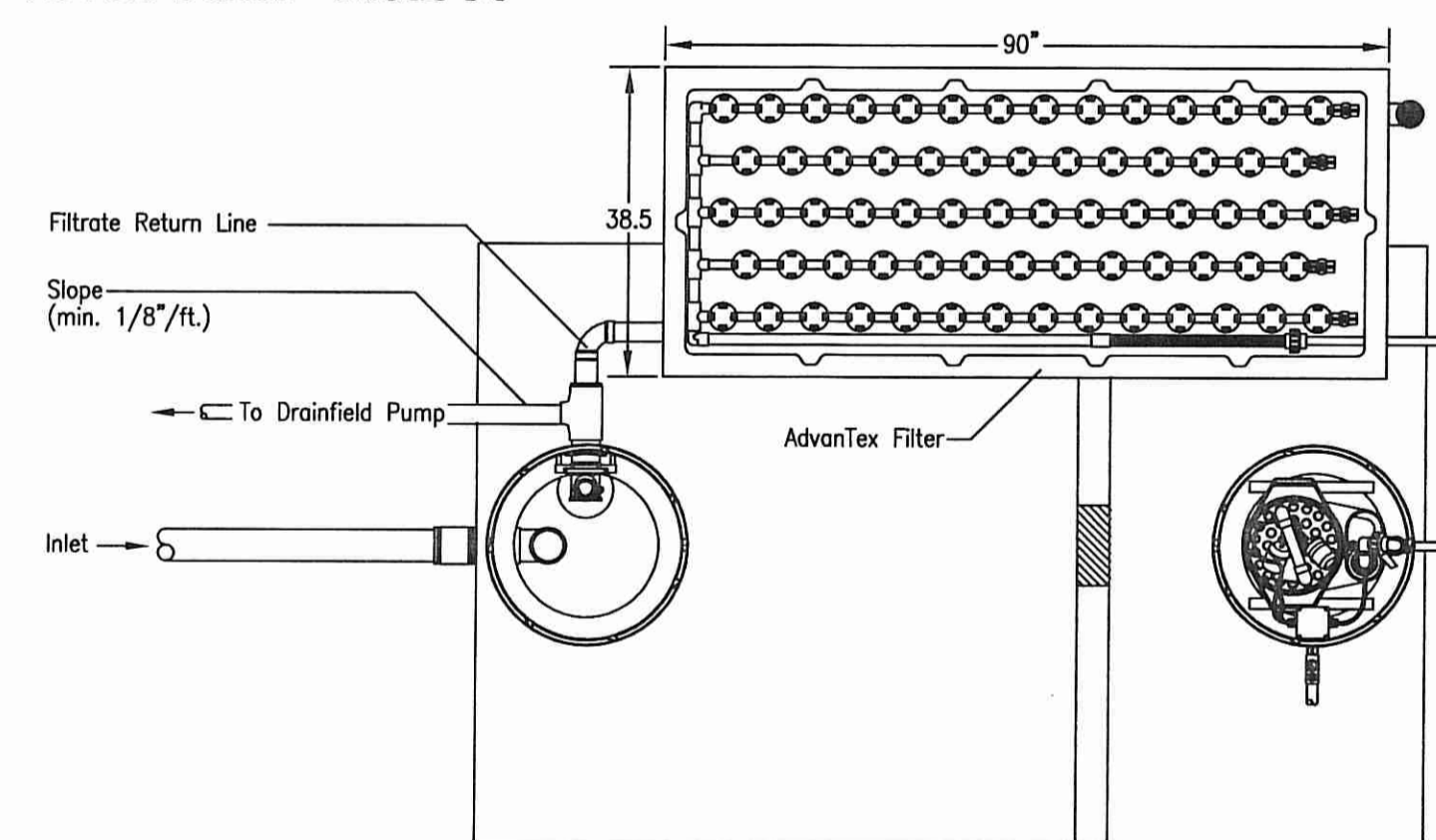


TOP VIEW

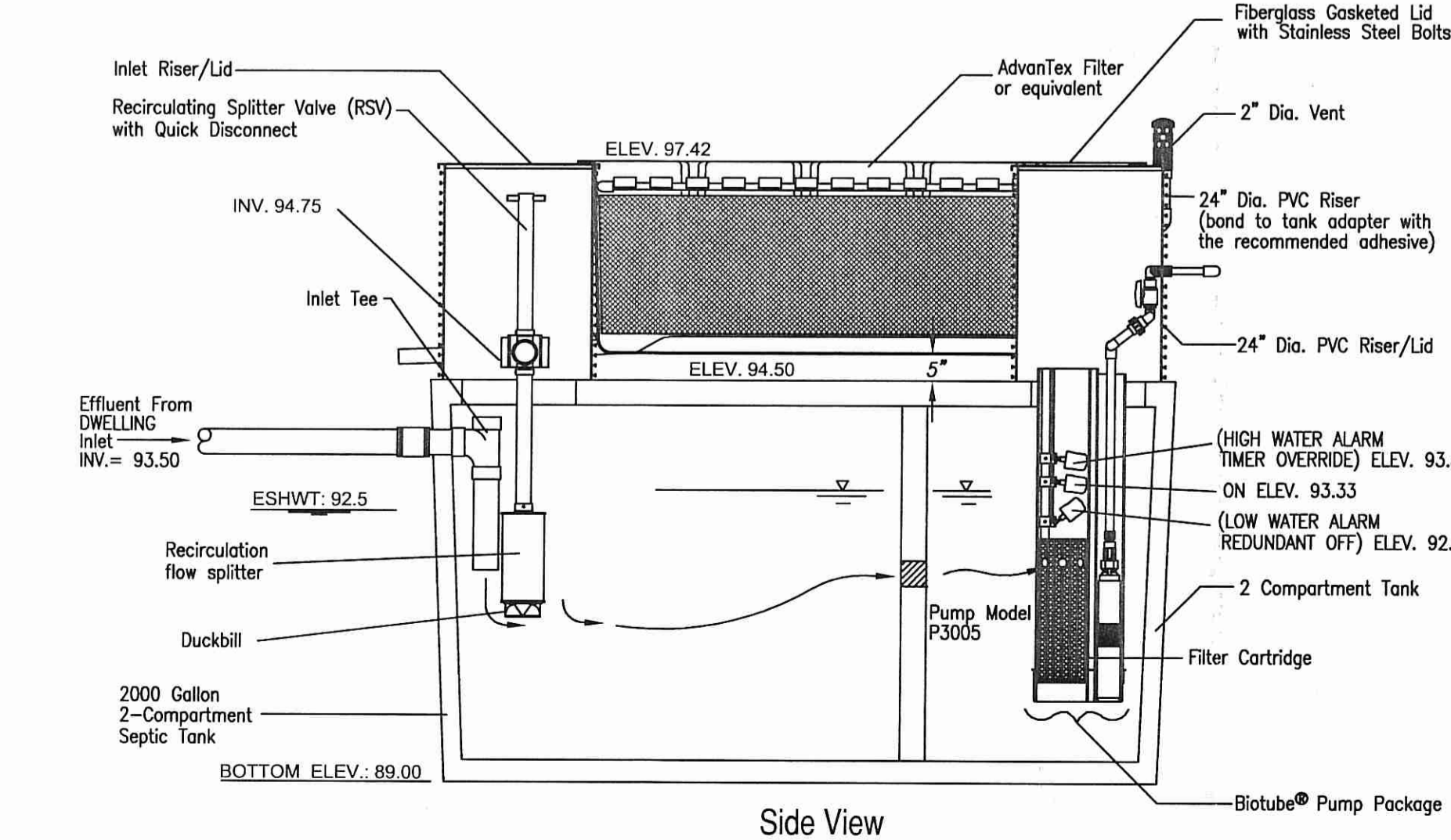
RECIRCULATING EFFLUENT PUMP SYSTEM (REPS)
(2 COMPARTMENT 2,000 GALLON SEPTIC TANK
AX 20 ADVANTEX TEXTILE FILTER)

NOT TO SCALE

AdvanTex Treatment System
AX 20 Series - Mode 3b



Top View

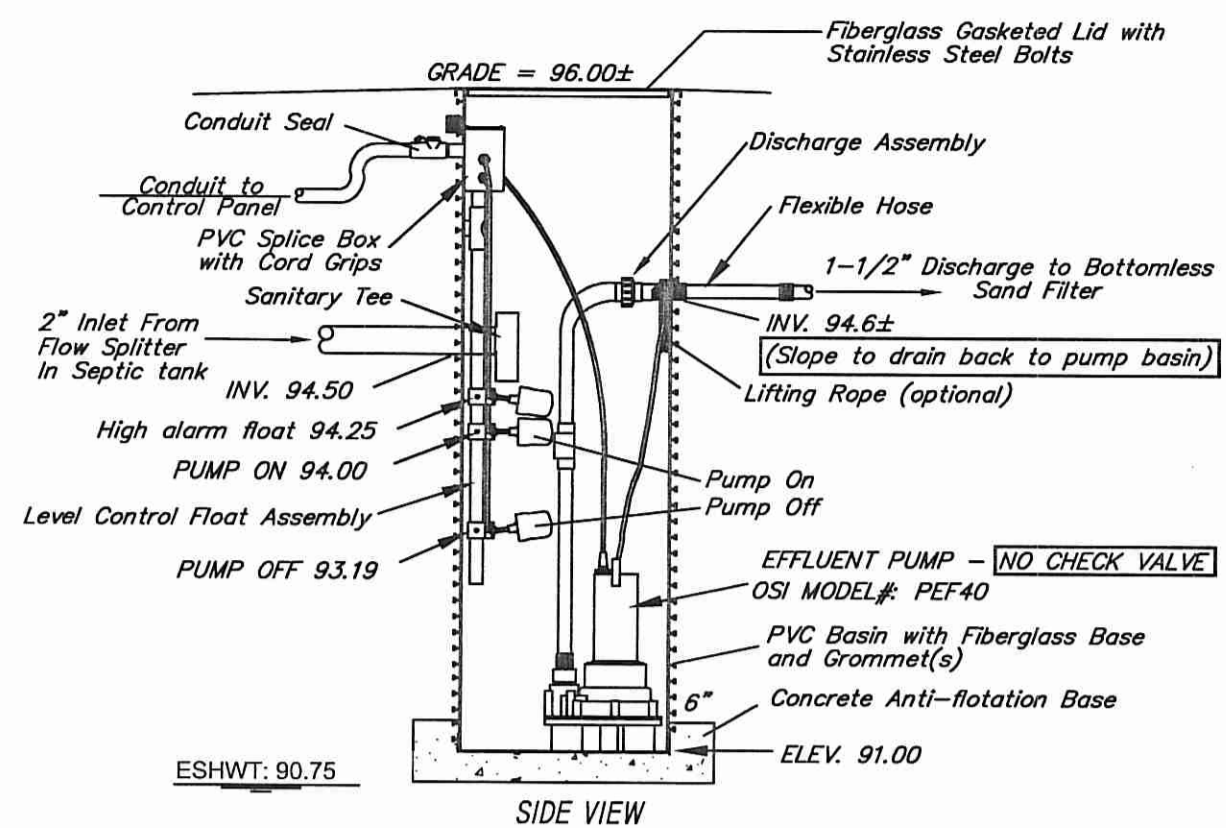


Side View

BUOYANCY CALCULATIONS
ESHWT: ELEV. 92.50
BOTTOM OF TANK: ELEV. 89.00
BUOYANCY FORCE: 13,213 lbs±
SEPTIC TANK WEIGHT: 18,260 lbs±
ADVANTEX WEIGHT: 600 lbs±
TOTAL COMBINED WEIGHT: 24,860 lbs±
(NEGLECTS ADDITIONAL WEIGHT OF SOIL)
STABILIZING NOT REQUIRED

24" DIA. BOTTOMLESS SAND FILTER PUMP BASIN

WITH EFFLUENT PUMP ASSEMBLY NOT TO SCALE



SIDE VIEW

SYSTEM COMPONENTS

- 2,000 GALLON 2-COMPARTMENT CONCRETE SEPTIC TANK WITH PUMP VAULT AND RECIRCULATING SPLITTER VALVE AND WOSIP3005 (6 STAGE) PUMP TANK.
- 5' DEEP - 24" DIAMETER PUMP BASIN.
- AX-20 ADVANTEX TEXTILE FILTER.
- 20' LONG x 10' WIDE BOTTOMLESS SAND FILTER
- ORENCO SYSTEMS, INC. CONTROL PANEL.

TEST HOLE DATA
DATE 6/3/04

TH #1
0'-9" A, SIL, 10YR 3/8
9'-30" Bw, CB, G, SL, 10YR 4/6
30'-40" C, ST, CB, G, SL, 10YR 4/4
40'-120" C2, ST, CB, G, SL, 2.5YR 5/3
ESHWT: 37' ELEV. 90.32
NO LEDGE AT 120'

TH #2
0'-9" A, SIL, 10YR 3/8
9'-30" Bw, CB, G, SL, 10YR 4/6
30'-47" C, ST, CB, G, SL, 10YR 4/4
47'-102" C2, ST, CB, G, SL, 2.5YR 5/3
ESHWT: 27' ELEV. 90.0
NO LEDGE AT 102'

LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- TEST HOLE
- WETLAND FLAG
- STRAW BALES OR SILT FENCE AND LIMIT OF DISTURBANCE

GENERAL NOTES

- SYSTEM INSTALLATION TO BE SUPERVISED BY THE DESIGNER.
- ALL TREES AND/OR STUMPS WITHIN 10 FEET OF PROPOSED SYSTEM TO BE CLEARED.
- NO WELL EXISTS WITHIN 100' OF THE PROPOSED LEACHING SYSTEM.
- NO LEACHING SYSTEM EXISTS WITHIN 100' OF THE PROPOSED WELL.
- ANY PRIVATE WELLS, EXISTING & PROPOSED, WITHIN 200' OF ISDS ARE SHOWN.
- ANY PUBLIC WELLS, EXISTING AND PROPOSED, WITHIN 500' OF ISDS ARE SHOWN.
- SEPTIC TANK TO BE A MINIMUM OF 75' FROM ALL WELLS.
- NO DRAINS OF ANY KIND SHALL BE LOCATED WITHIN 25' OF THE PROPOSED LEACHING SYSTEM.
- ALL SOIL AT LEAST 6"± BELOW EXISTING GRADE AT BOTTOMLESS SAND FILTER SHALL BE STRIPPED AND BACKFILLED WITH FILTER SAND.
- THE SEPTIC TANK SHALL BE A WATERTIGHT, 2,000 GALLON 2-COMPARTMENT TANK WITH 24" DIAMETER INLET AND OUTLET ACCESS RISERS. RISERS SHALL BE PVC WITH SECURE FIBERGLASS LIDS. IF CONCRETE TANK IS USED, ABS TANK ADAPTER SHALL BE CAST IN PLACE. TANK SHALL BE VACUUM TESTED WHEN CONSTRUCTED (W/CERTIFICATE) OR WATER TESTED/VACUUM TESTED ON SITE PRIOR TO ACCEPTANCE FROM THE ENGINEER.
- THE ADVANTEX-AX TREATMENT SYSTEM CONTAINS A PACKED BED FILTER THAT USES SPECIALLY DESIGNED TEXTILE MATERIALS WITHIN A PRE-ASSEMBLED FILTER UNIT.
- 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 SHALL BE LOCATED IN A NORMALLY OCCUPIED AREA OF THE DWELLING OR SHALL BE INSTALLED AT A LOCATION TO BE DESIGNATED BY THE HOMEOWNER.
- THE SEPTIC TANK SHALL BE PROVIDED WITH A PVC INLET TEE AND SCREENING PUMP VAULT IN THE OUTLET END. AN ACCESS RISER SHALL BE INSTALLED DIRECTLY ABOVE THE SCREENED PUMP VAULT AND INLET TEE.
- BOTTOMLESS SAND FILTER MEDIA: HOLLISTON SAND & GRAVEL ASTM-33 SAND, LESS THAN 1% PASSING THE SIEVE WITH AN EFFECTIVE SIZE OF .25mm-.45mm AND WITH A UNIFORMITY COEFFICIENT OF 2.0±.
- IF CONTRACTOR ENCOUNTERS ANY CONDITIONS DURING CONSTRUCTION WHICH INDICATE THE SYSTEM CANNOT BE INSTALLED IN ACCORDANCE WITH THE APPROVED DESIGN, CONSTRUCTION SHALL CEASE AND DESIGNER NOTIFIED.
- THE DESIGNER IS NOT RESPONSIBLE FOR ANY NEGLIGENT ACT OF OMISSION OF AN ISDS USER, INCLUDING BUT NOT LIMITED TO, FAILURE TO PROPERLY USE AND MAINTAIN THE SYSTEM, WHICH CAUSES DAMAGE TO THE SYSTEM.
- LOCAL SUPPLIER OF OSI EQUIPMENT: ATLANTIC SOLUTIONS, 2417 EAST MAIN ROAD, PORTSMOUTH, RI 02871 TEL: (401) 293-0176
- 5 FEET FROM SAND FILTER NOT TO BE LOWER THAN ELEVATION 92.25.

SYSTEM SIZING:

4 BEDROOMS: 115 GPD x 4 = 460 GPD
SOIL CATEGORY: 6
APPLICATION RATE: 2.3 GPD/SF
AREA REQUIRED: 460/2.3 = 200 SF

TIMER INFO:

SET ADVANTEX TIMER TO 24 DOSES/DAY
460 GPD/24 DOSES/DAY = 19.16 GAL/DOSE
19.16/30.6 GPM = .62 MIN.
TOTAL PUMP RUN TIME = 14.88 MIN./DAY
TOTAL PUMP OFF TIME = 1439.38 MIN./DAY
TIME OFF PER CYCLE = 59.38 MIN.
TIME ON PER CYCLE = 0.62 MIN.

DOSING RATE:

19.16 GAL/DOSE
PUMP CHAMBER CAPACITY = 23.5 GAL./FT OR 1.96 GAL./INCH
PUMP CHAMBER DEPTH @ 19.16 GAL = .81 FEET
DOSE PER ORIFICE = 460 GPD/(24 DOSES/DAY)/91 ORIFICES = .21 GAL./ORIFICE/DOSE

RAIN GARDEN

TREATMENT

Rain garden to be 8" deep with a 2 - 4 inch amended soil layer (50/50 mixture of the excavated native soils and mature organic compost) and a 2 - 3 inch layer of non-dyed aged shredded hardwood mulch.

CONSTRUCTION

- A crushed stone entrance should be installed at the inflow to prevent channeling.
- A berm to detain stormwater should be constructed along the downhill side of the rain garden, perpendicular to the slope of the lawn.
- Be sure that the soil within the rain garden area 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

MAINTENANCE

- The rain garden 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.

WETLANDS NOTES

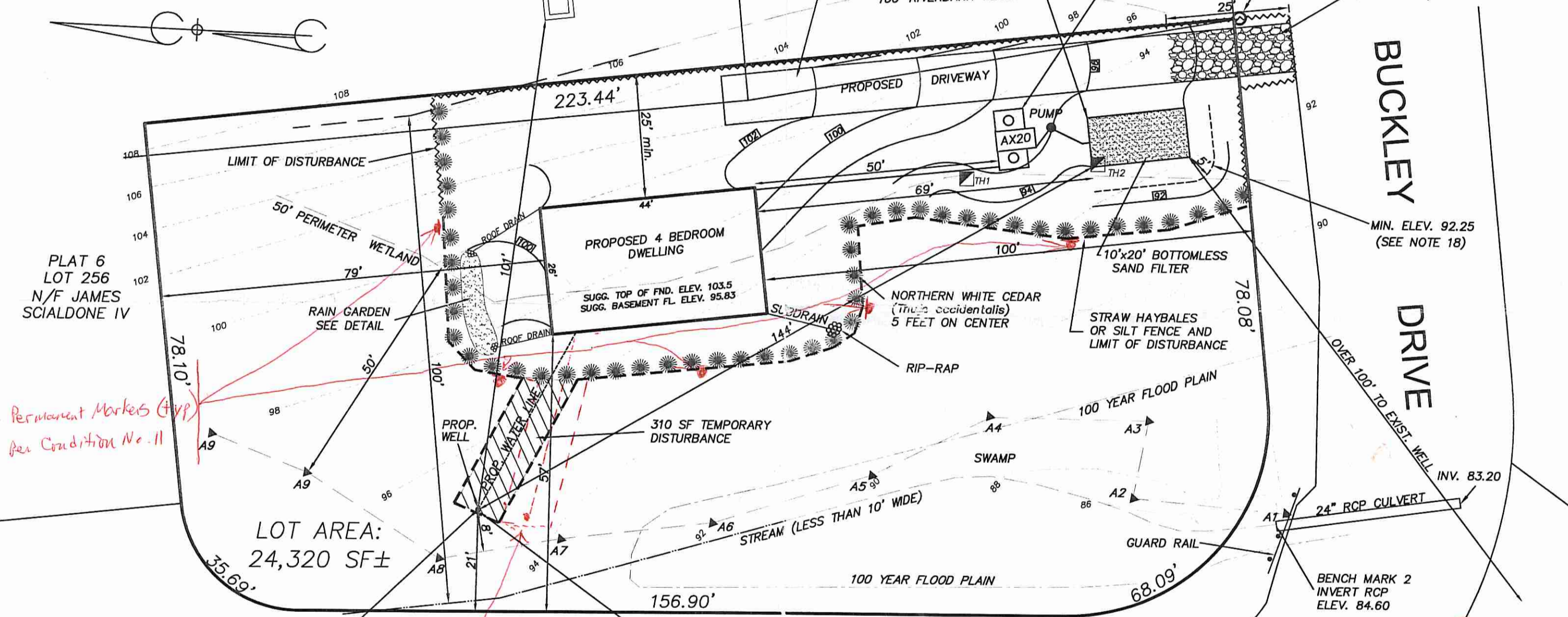
- EROSION CONTROL TO BE INSTALLED PRIOR TO START OF CONSTRUCTION. IT IS TO BE INSPECTED BY THE OWNER OR CONTRACTOR AFTER ANY RAIN EVENT AND REPAIRED OR REPLACED AS NECESSARY UNTIL CONSTRUCTION IS COMPLETE AND AREA HAS STABILIZED.
- WETLAND DELINEATION BY: NATURAL RESOURCE SERVICES, INC.
- FLOOD PLAN DELINEATION BY: JCS, INC.
- 8,265 SF RIDEM JURISDICTIONAL DISTURBANCE.
- 310 SF TEMPORARY RIDEM JURISDICTIONAL DISTURBANCE.

PLANTING NOTES

- DISTURBED AREAS SHALL BE LOAMED WITH 4"-6" OF SUITABLE TOPSOIL THEN SEEDED WITH A CONSERVATION GRASS MIXTURE.
- THE AREA SHALL BE MULCHED WITH LOOSE HAY TO RETAIN MOISTURE AND RETARD EROSION.
- NORTHERN WHITE CEDAR SHALL BE PLANTED IN AREAS AS SHOWN. 3" HIGH; 5' O.C.
- OWNER TO ENSURE PLANT FOR ONE FULL GROWING SEASON OR REPLANT.

TEMPORARY DISTURBANCE NOTES

- ALL DRILLING TAILS SHALL BE REMOVED FROM THE AREA UPON COMPLETION OF THE WELL INSTALLATION.
- THE AREA SHALL BE LOAMED WITH 4"-6" OF SUITABLE SOIL AND SEEDED WITH A WILDLIFE CONSERVATION GRASS MIX.
- AREA OF TO BE REPLANTED WITH: TEN (10) ARROWWOOD (*Viburnum dentatum*) 5' on center
TEN (10) PEPPERBUSH (*Clethra alnifolia*)

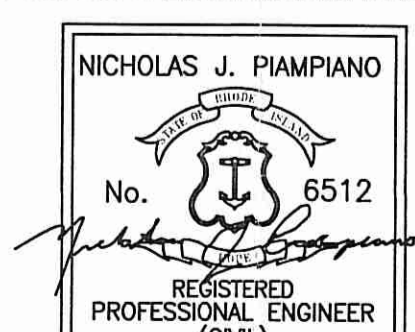


DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
APR 24 2016 FILE # 17-0258
DATED NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

ONSITE WASTEWATER TREATMENT SYSTEM and WETLANDS PLAN for MARK BRIZARD
PLAT 6, LOT 297
BUCKLEY DRIVE
NORTH SMITHFIELD, RHODE ISLAND
DATE: OCTOBER, 2017
SHEET 1 OF 1 SHEET
SCALE: 1" = 20'

No.	DESCRIPTION	DATE
1	WELL LOCATION	11-8-17

THIS STAMP IS FOR WETLANDS APPLICATION ONLY



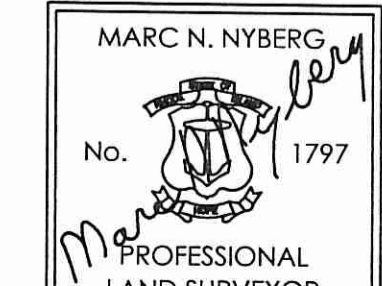
ADVANCED CIVIL DESIGN, INC.
CIVIL ENGINEERS

Marc N. Nyberg Associates, Inc.
Land Surveyors
Planners
GPS

7 COUNTRYSIDE LANE
SCITUATE, RI 02857

P1: (401) 644-8656
P2: (401) 473-4404

301 Great Road
North Smithfield, RI 02896
Tel: (401) 762-2870
Fax: (401) 762-2871
Email: mail@marcnyberg.com



PLAN FOR NOTICE

BRIZARD