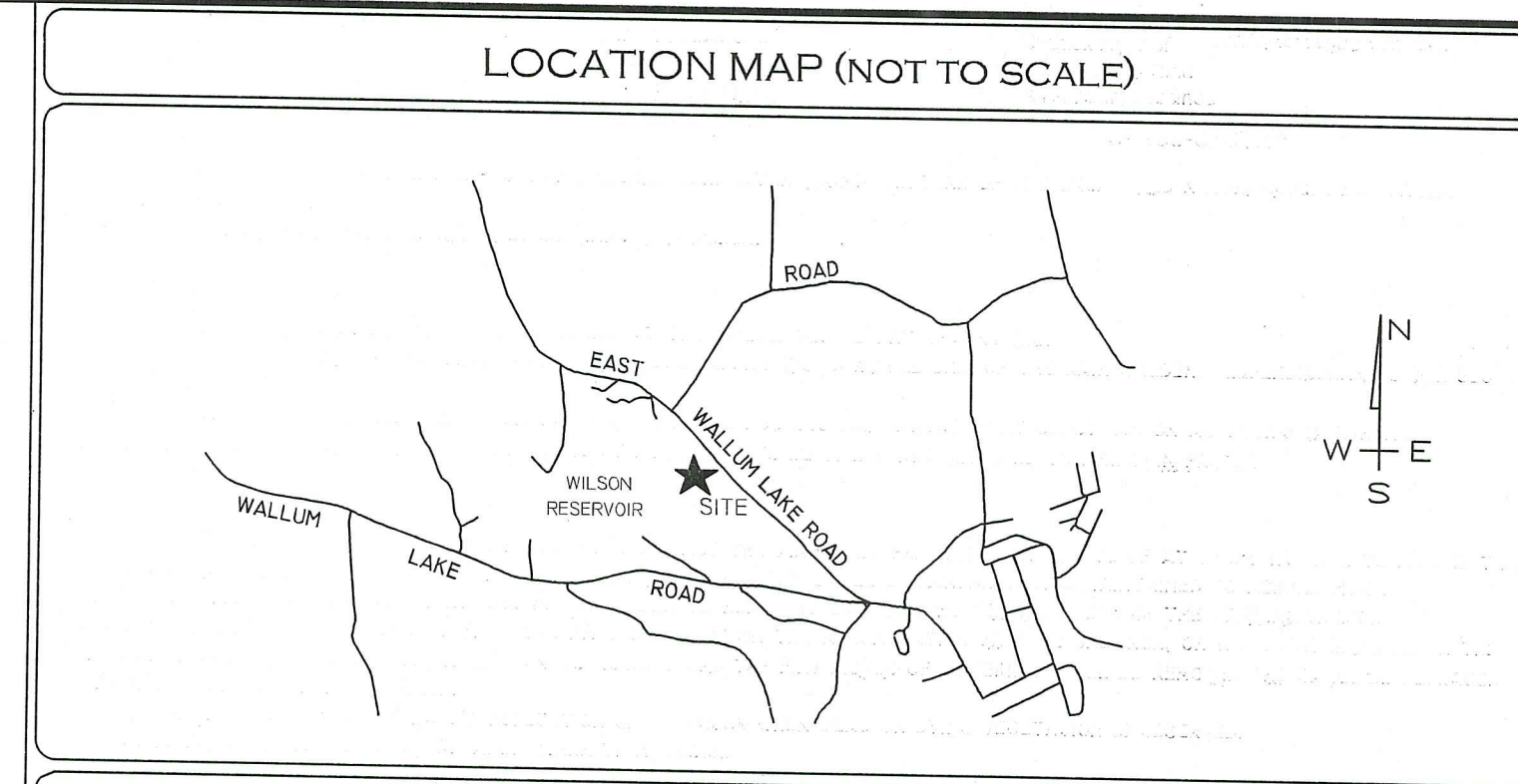
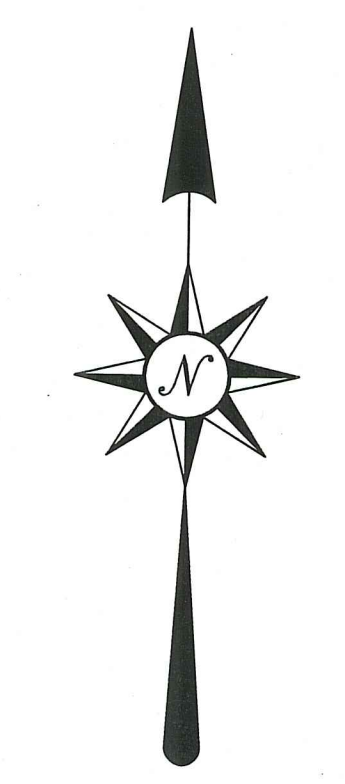
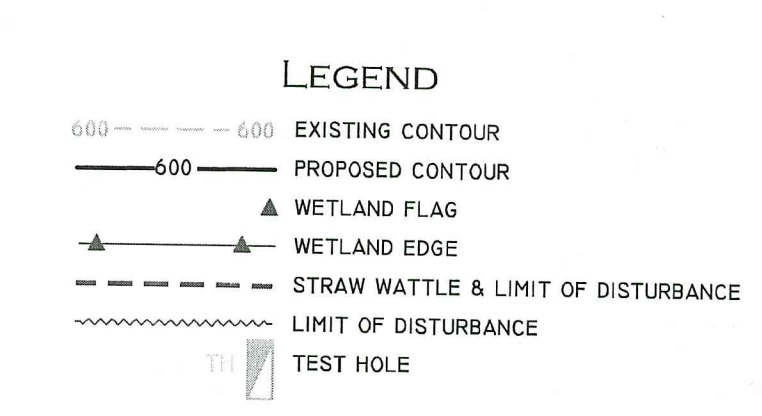
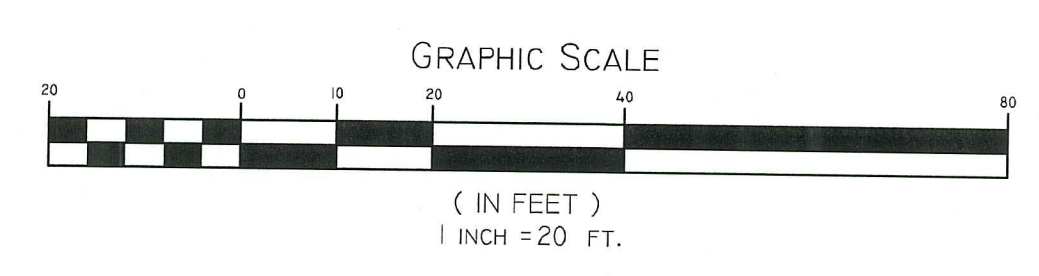


LOT AREA:
61,614 SF±

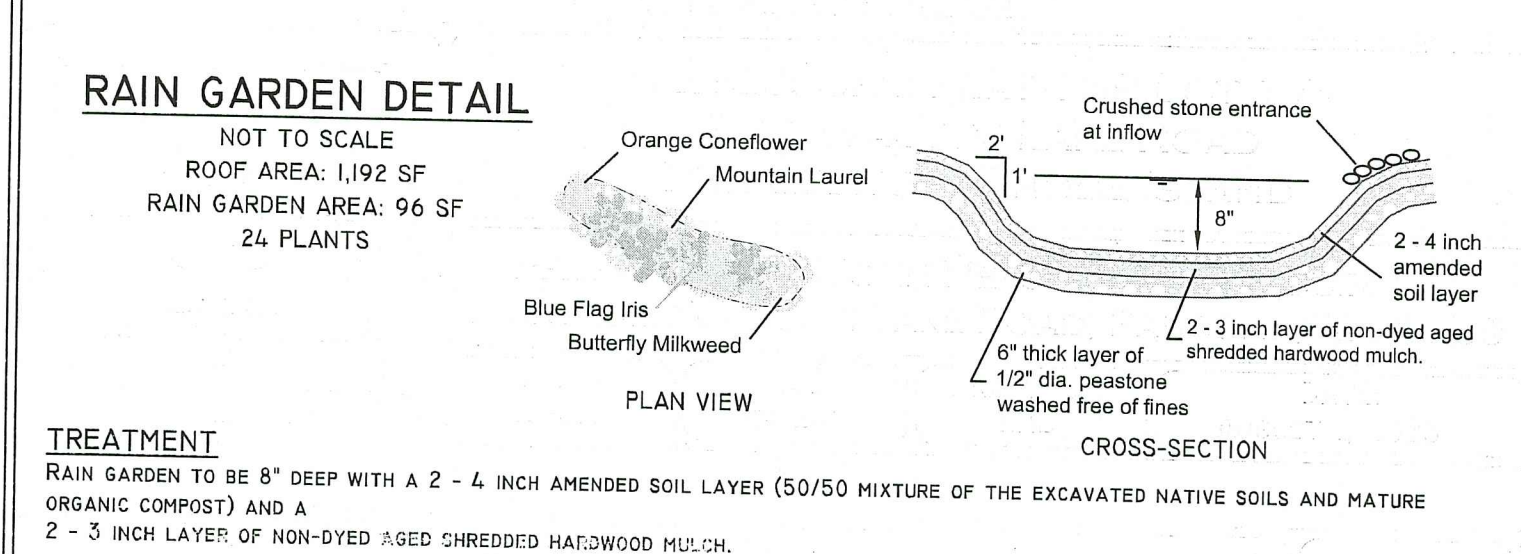
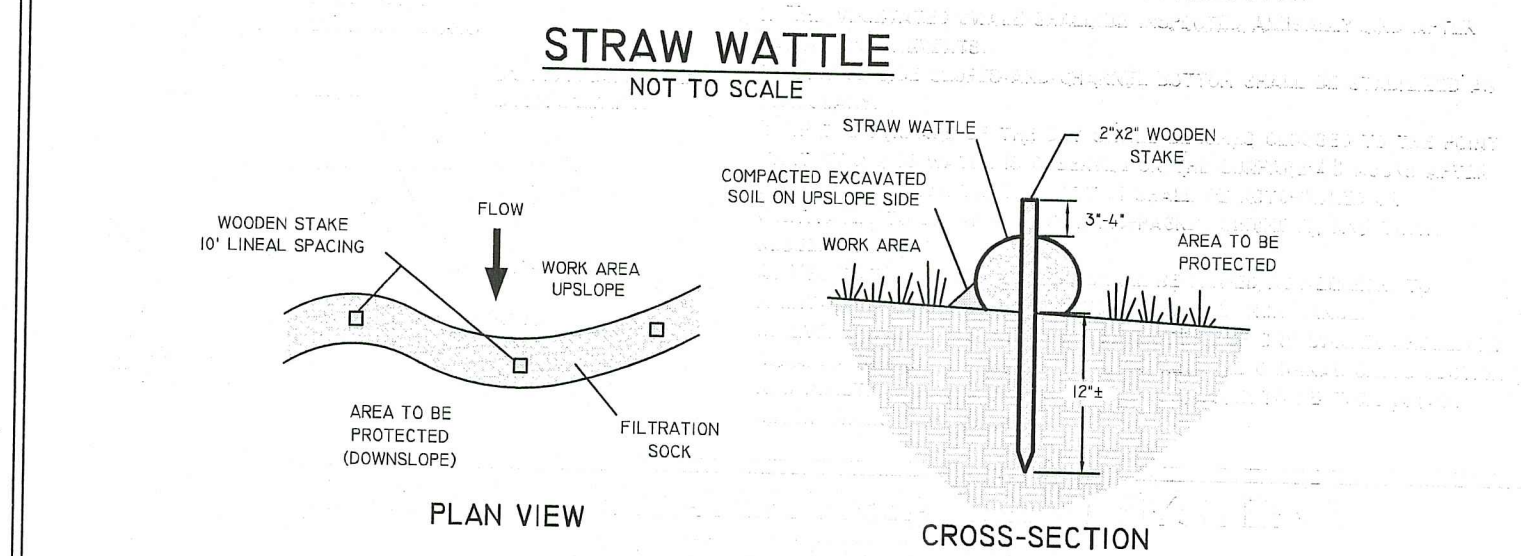
The Depicted "East Drive"
Has not been Approved Per RIDEM.

ZONING DISTRICT: R-20
MINIMUM SETBACKS: FRONT - 30'
SIDE - 10'
REAR - 30'

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
OWRS & FRESHWATER WETLANDS
JOINT PERMIT APPROVAL
OWRS# 1703-1212 PROJECT# 23-0181
APPROVED: [Signature] DATE: 12/12/24
No Changes Allowed Without RIDEM Approval
Approved Plans/Permit Must Be Kept at Construction Site



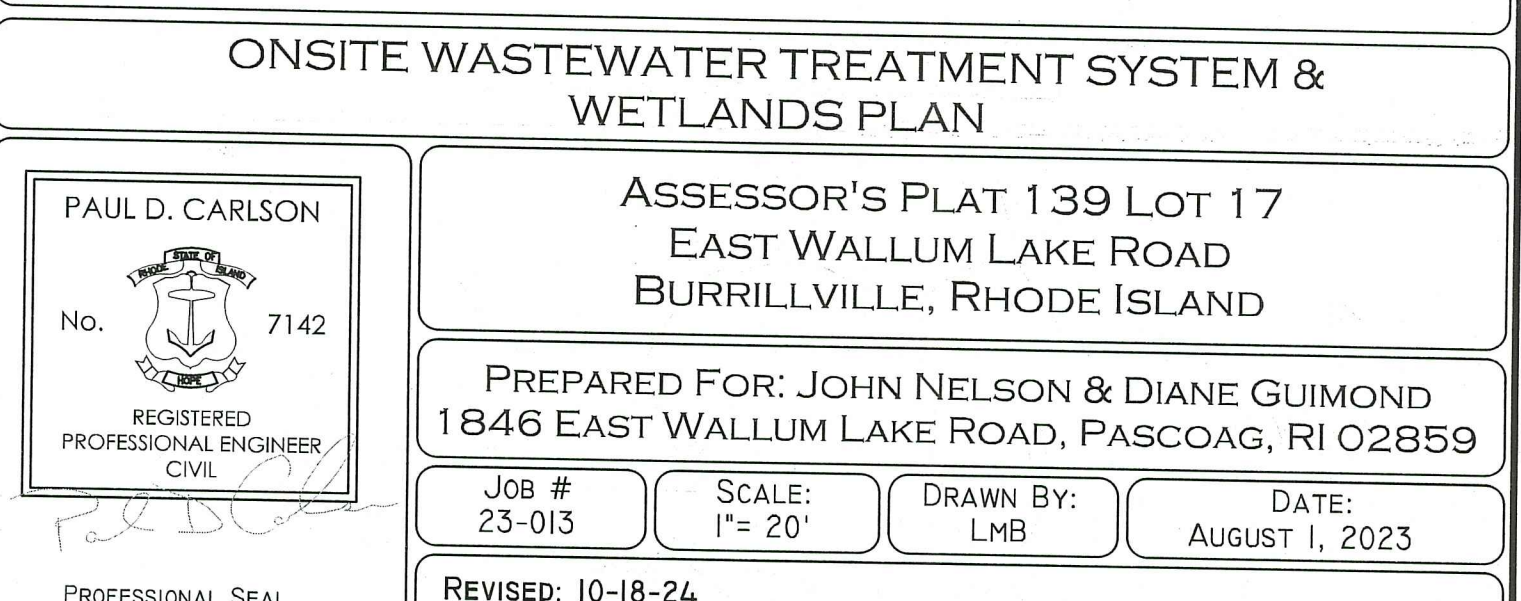
NOTES AND SPECIFICATIONS:
1. WETLAND DELINEATION BY NATURAL RESOURCE SERVICES, INC.
2. STRAW WATTLE TO BE INSTALLED PRIOR TO START OF ANY CONSTRUCTION AND TO REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE AND AREA HAS STABILIZED. STRAW WATTLE TO BE INSPECTED PERIODICALLY OR AFTER SIGNIFICANT RAINFALL, AND REPAIRED OR REPLACED AS NECESSARY.



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 CHREDDOED HARDWOOD MULCH.

CONSTRUCTION
1. A CRUSHED STONE ENTRANCE SHOULD BE INSTALLED AT THE INFLOW TO PREVENT CHANNELING.
2. A BERM TO DETAIN STORMWATER SHOULD BE CONSTRUCTED ALONG THE DOWNHILL SIDE OF THE RAIN GARDEN, PERPENDICULAR TO THE SLOPE OF THE LAWN.
3. 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
1. 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.
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 NOT BE APPLIED TO PLANTS WITHIN RAIN GARDENS.
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.



ONSITE WASTEWATER TREATMENT SYSTEM & WETLANDS PLAN

PAUL D. CARLSON
No. 7142
REGISTERED PROFESSIONAL ENGINEER
CIVIL
PROFESSIONAL SEAL

ASSESSOR'S PLAT 139 LOT 17
EAST WALLUM LAKE ROAD
BURRELLVILLE, RHODE ISLAND

PREPARED FOR: JOHN NELSON & DIANE GUIMOND
1846 EAST WALLUM LAKE ROAD, PASCOAG, RI 02859

JOB # 23-013 SCALE: 1" = 20' DRAWN BY: LMB DATE: AUGUST 1, 2023

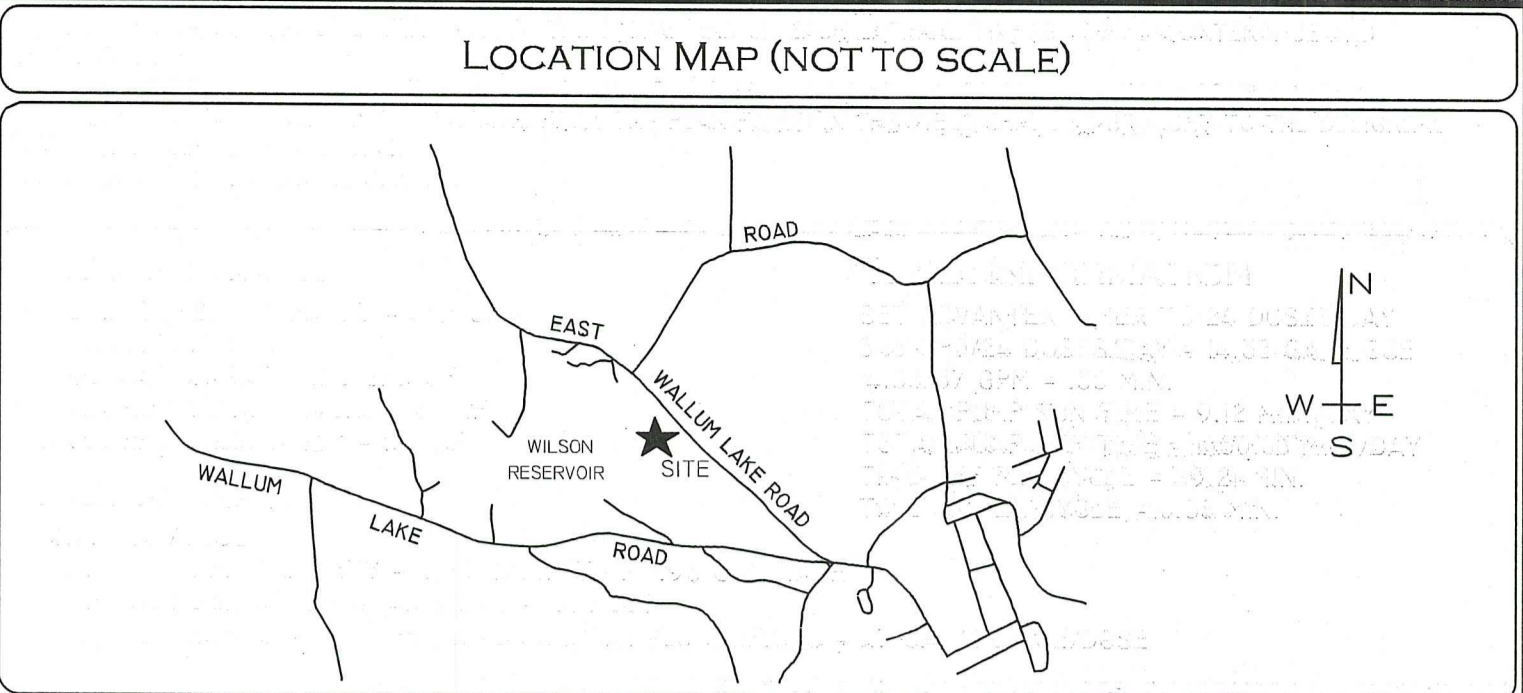
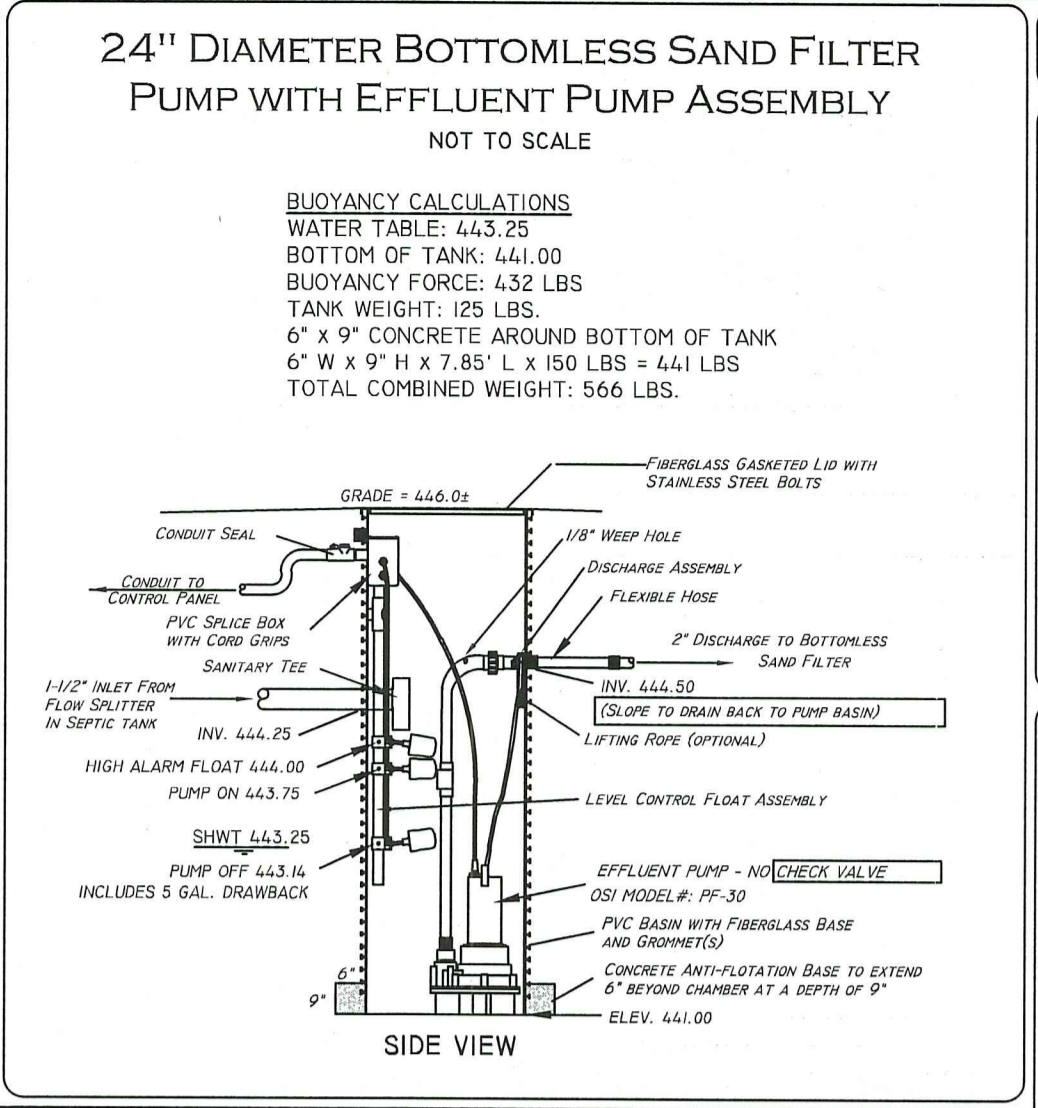
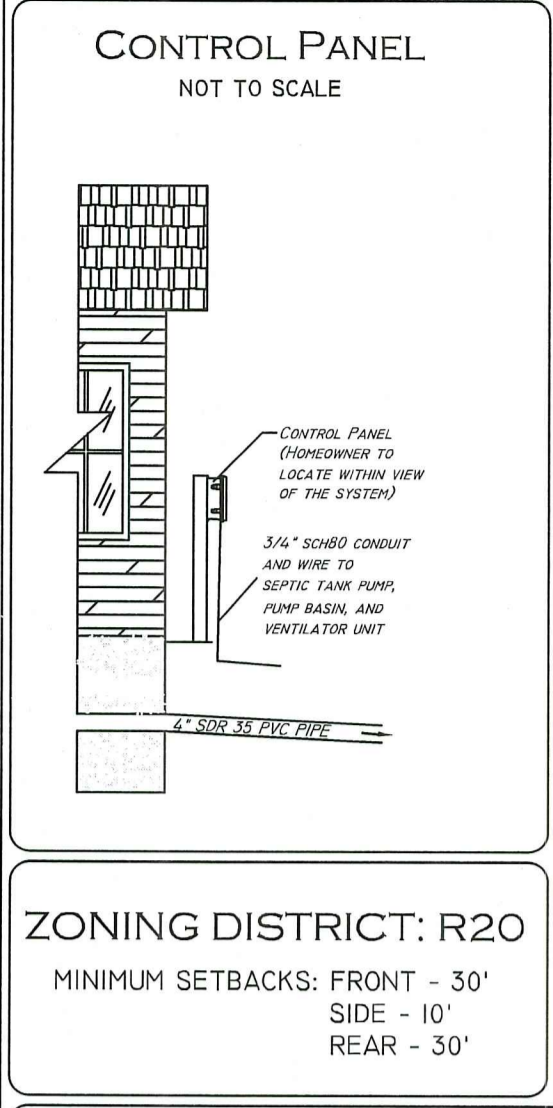
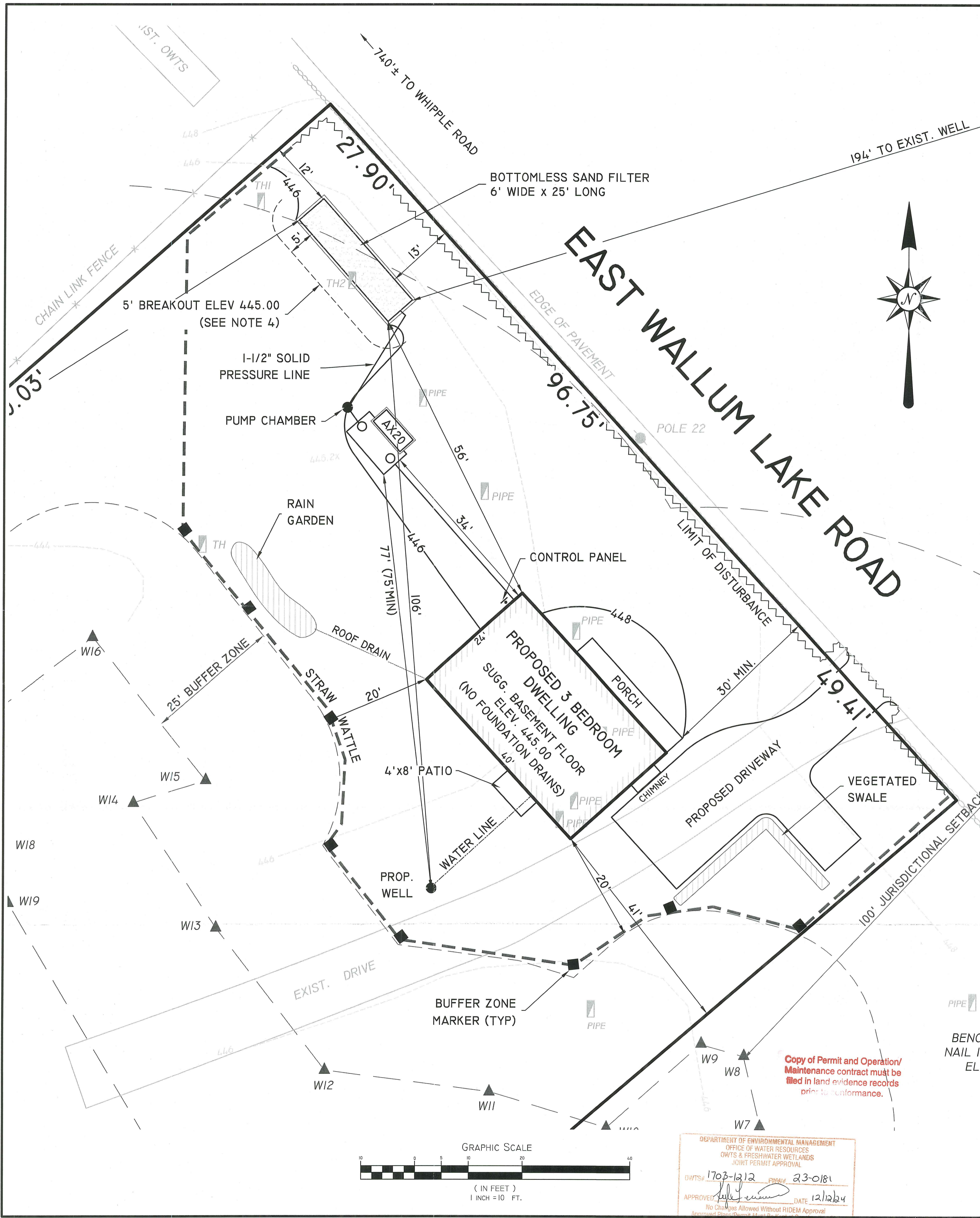
REVISED: 10-18-24

INSITE Engineering Services, LLC
PROFESSIONAL ENGINEERS | LAND SURVEYORS
Precision. Clarity. Certainty.

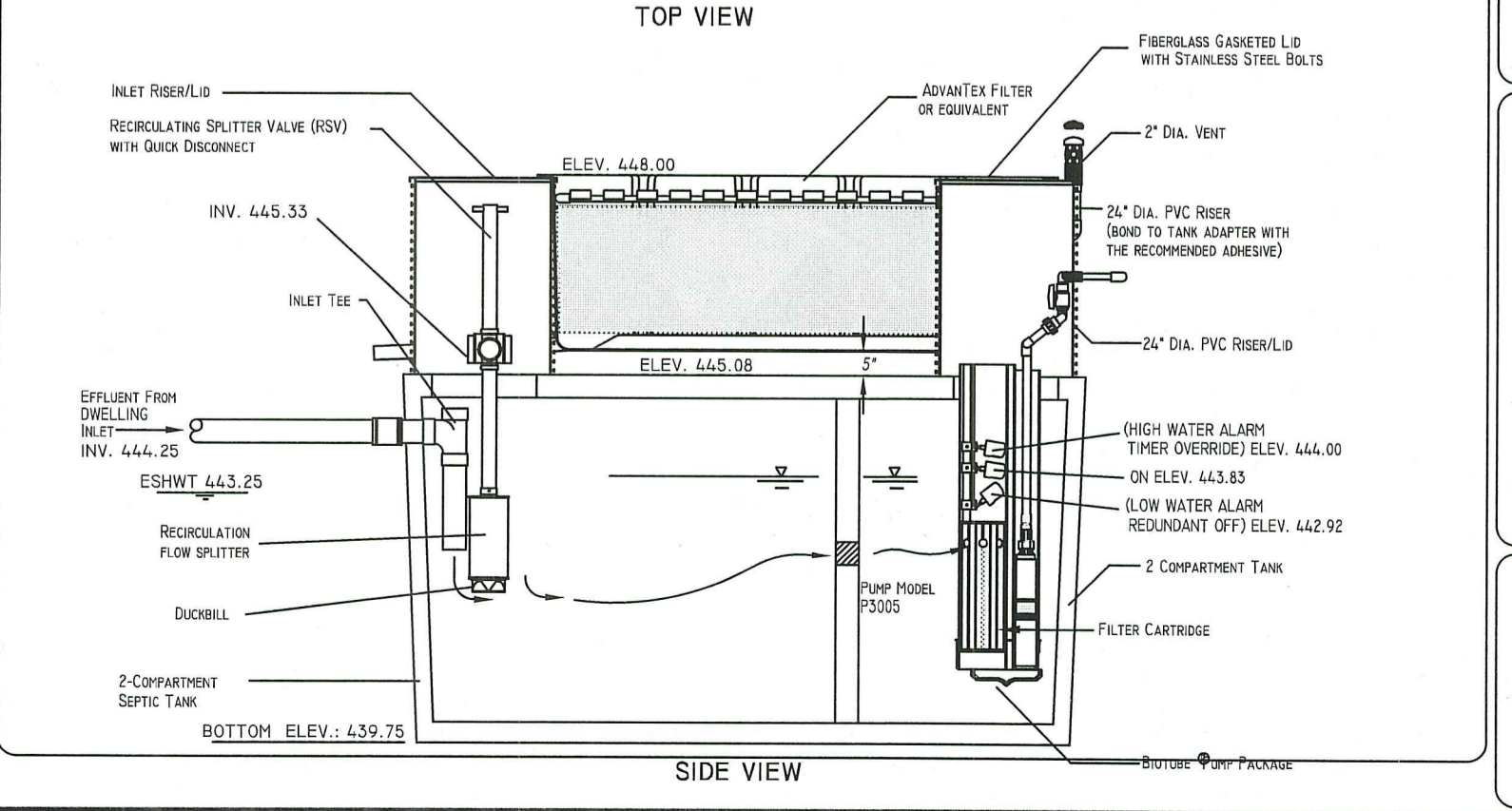
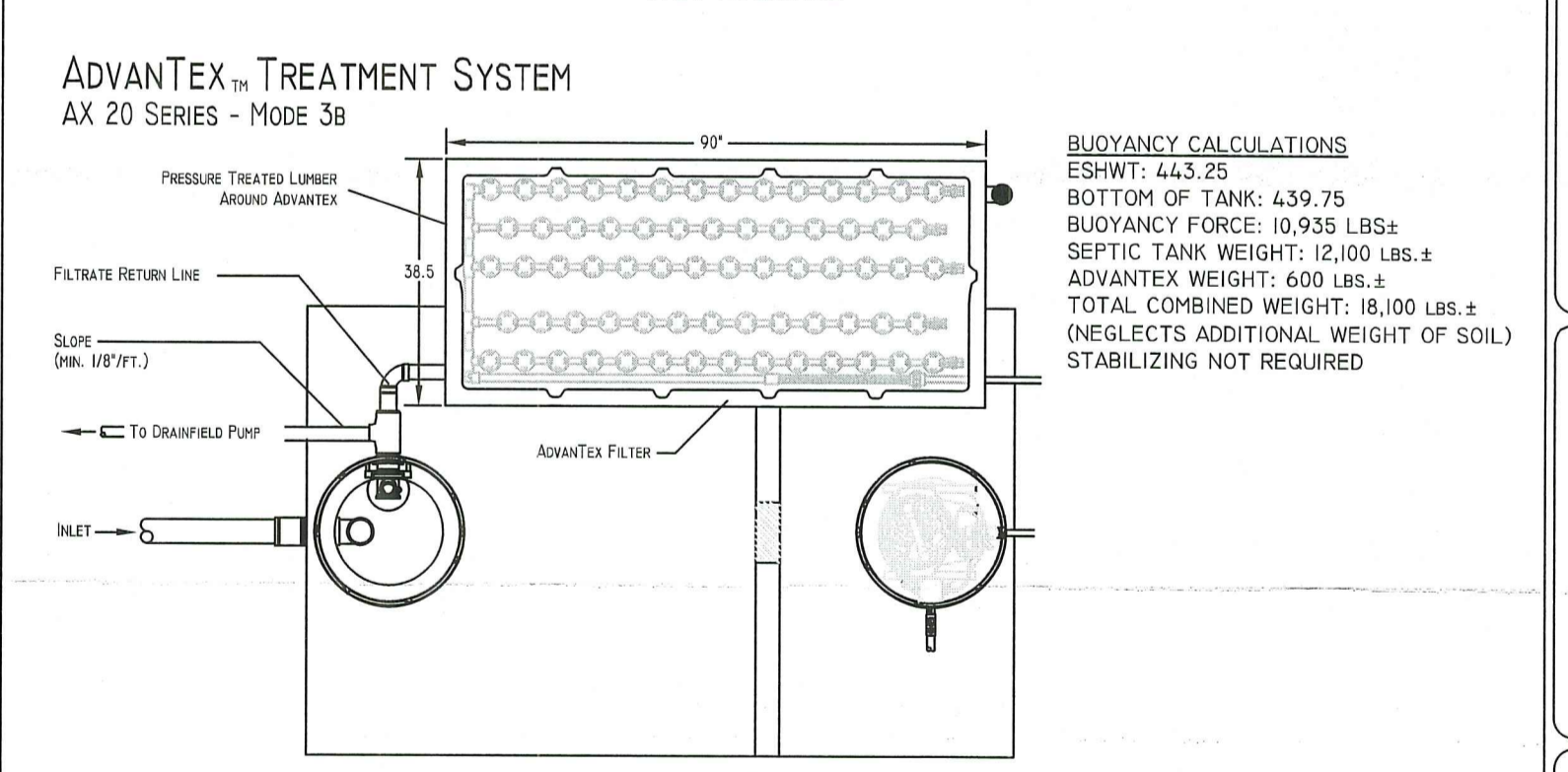
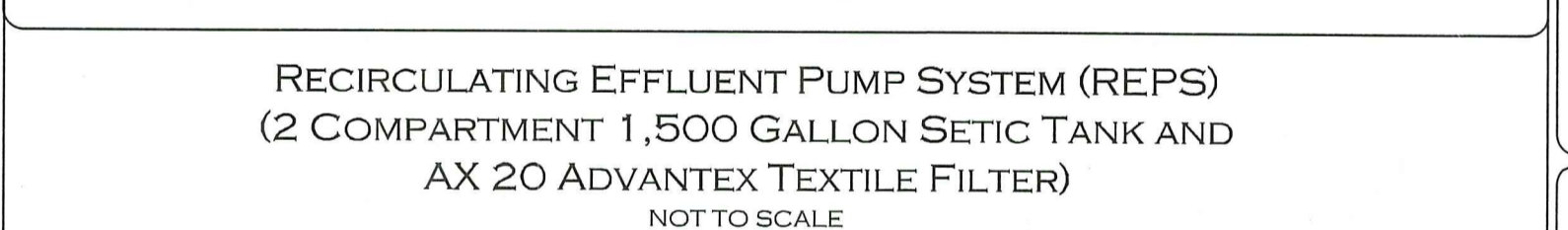
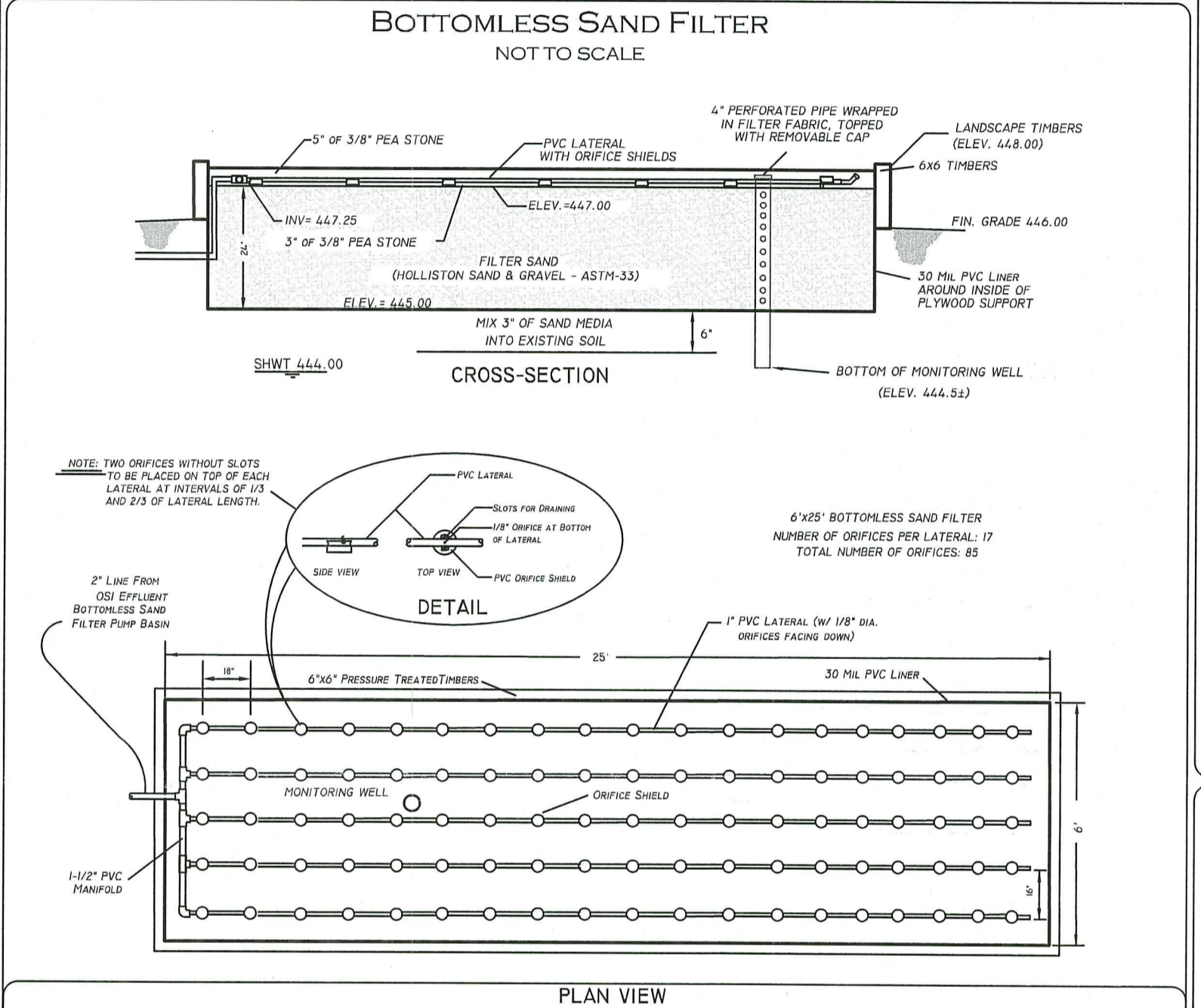
501 Greel Road, Unit 104
North Smithfield, Rhode Island
Phone: (401) 782-2870 Fax: (401) 782-2871
RI Web Address: insiteengineers.com

SHEET 1 OF 2

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



- NOTES AND SPECIFICATIONS:**
- 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.
 - 5 FEET FROM SAND FILTER NOT TO BE LOWER THAN ELEVATION 445.00.
 - ALL EXISTING AND PROPOSED PRIVATE WELLS WITHIN 200' OF OWTS OR PUBLIC WELLS WITHIN 500' OF OWTS ARE SHOWN.
 - SEPTIC TANK TO BE A MINIMUM OF 75' FROM ALL WELLS.
 - NO DRAINS OF ANY KIND SHALL BE WITHIN 25' UPGRADIENT OR SIDE GRADIENT OR 50' DOWNGRADIENT OF THE 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, 1,500 GALLON 2-COMPARTMENT TANK, MEETING H-20 WHEEL LOADS, WITH 24" DIAMETER INLET AND OUTLET ACCESS RISERS. RISERS SHALL BE PVC WITH SECURE FIBERGLASS LIDS. IF CONCRETE TANK IS USED, ADS 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 VISIBILE 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.
 - ALL MEDIA WITHIN THE ENCLOSURE AND BELOW THE COVER STONE SHALL HAVE AN EFFECTIVE SIZE (D) OF 0.33 MM (+/-) AND UNIFORMITY COEFFICIENT (D₆₀/D₁₀) OF 3.0 TO 4.0. THE MAXIMUM ALLOWABLE PERCENTAGE OF FINES PASSING THROUGH A NUMBER 200 SIEVE SHALL BE 1%. OTHER THAN THE GRADATION AND FINE CONTENT SPECIFIED ABOVE, THE SAND MEDIA SHALL MEET OTHER ASTM C-33 SAND SPECIFICATIONS.
 - IF CONTRACTOR ENCOUNTERS ANY CONDITIONS DURING CONSTRUCTION WHICH INDICATE THE SYSTEM CANNOT BE INSTALLED IN ACCORDANCE WITH THE APPROVED DESIGN, OR FIND CONFLICTING INFORMATION ON THE PLAN, CONSTRUCTION SHALL CEASE AND DESIGNER BE 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.
 - NO STRUCTURES, PERMANENT FEATURES, OR LARGE, HEAVY OR NUMEROUS DECORATIONS SHALL BE PLACED ON TOP OF THE BOTTOMLESS SAND FILTER THAT WOULD OBSTRUCT, PREVENT OR HINDER OPERATION AND MAINTENANCE OR ACCESS TO THE BSE.
 - ACCESS PORTS OR MAN-HOLES SHALL BE REQUIRED FOR SEQUENCING VALVES AND SHALL BE SUFFICIENTLY SIZED TO FACILITATE MAINTENANCE.
 - TIMER SETTINGS SHALL BE CHECKED AT EVERY ESTABLISHED MAINTENANCE AND INSPECTION VISIT AND WHEN HOME OCCUPANCY CHANGES AND ADJUSTED AS NEEDED.
 - THE PANEL BOX MUST BE WITHIN VIEW OF THE SYSTEM LOCATION TO HELP FACILITATE OPERATION AND MAINTENANCE.
 - THE SPACE FROM THE ENDS OF THE LATERALS TO THE LINER SHALL BE CLOSE TO HALF THE ORIFICE SPACING AND BE ABLE TO ACCOMMODATE THE FITTINGS AND HAVE SUFFICIENT SPACE FOR MAINTENANCE ACTIVITIES.
 - SWEEP ELBOWS SHALL BE ATTACHED TO THE DISTAL END OF EACH LATERAL TO FACILITATE MAINTENANCE AND INSPECTION.
 - REFER TO OPERATION & MAINTENANCE AGREEMENT FOR PROPER MAINTENANCE OF ALL SYSTEM COMPONENTS.
 - DURING INSTALLATION, ANY DEVIATIONS FROM THE PLAN FOUND IN THE FIELD SHALL BE BROUGHT TO THE DESIGNERS ATTENTION BEFORE PROCEEDING.
 - BOUNDARY IS A CLASS IV SURVEY.



SYSTEM SIZING
3 BEDROOMS: 115 GPD x 3 = 345 GPD
SOIL CATEGORY: 6
APPLICATION RATE: 2.3 GPD/SF
AREA REQUIRED: 345/2.3 = 150 SF
AREA PROVIDED: 6' x 24' = 150 SF

TIMER INFORMATION
SET ADVANTEX TIMER TO 24 DOSES/DAY
345 GPD/24 DOSES/DAY = 14.38 GAL/DOSE
14.38/37 GPM = .38 MIN.
TOTAL PUMP RUN TIME = 9.12 MIN./DAY
TOTAL PUMP OFF TIME = 14.30.88 MIN./DAY
TIME OFF PER CYCLE = 59.21 MIN.
TIME ON PER CYCLE = 0.38 MIN.

DOSE RATE
14.38 GAL/DOSE
PUMP CHAMBER CAPACITY = 23.5 GAL./FT OR 1.96 GAL./INCH
PUMP CHAMBER DEPTH @ 14.38 GAL. = .61 FEET
DOSE PER ORIFICE = 345 GPD/(24 DOSES/DAY)/85 ORIFICES = .17 GAL/ORIFICE/DOSE

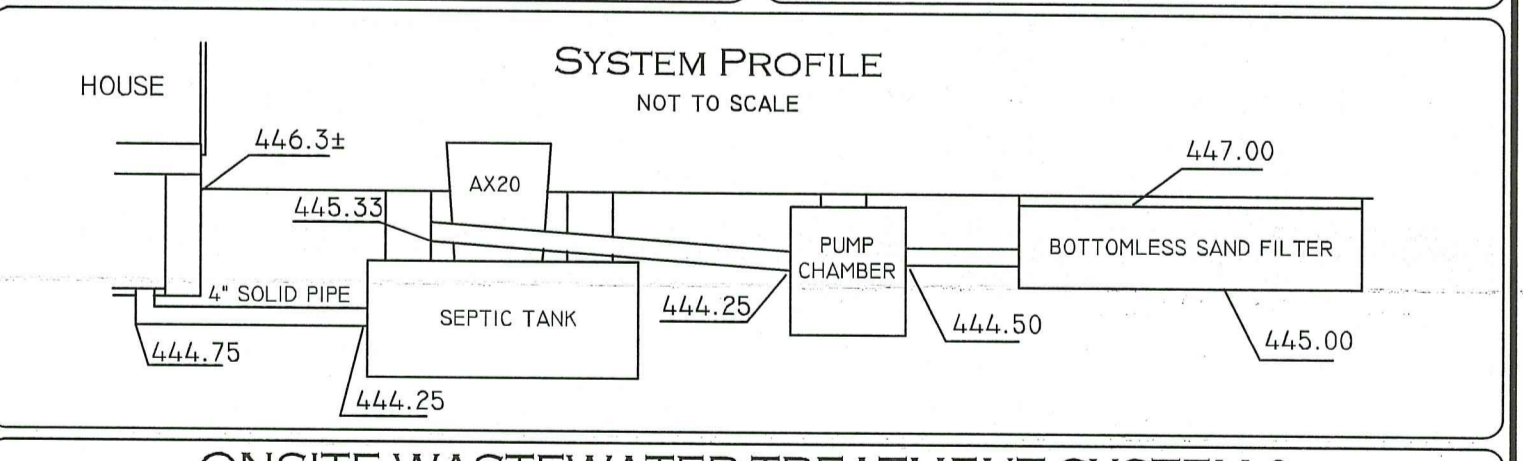
TEST HOLE DATA
DATE: 5-8-23
TH 1
0'-8" A. SL, 10YR 3/2
8'-24" Bw. SL, 10YR 5/6
24'-96" C. SL, 2.5YR 6/3
SHWT: 24'
NO LEDGE 96'

TH 2
0'-6" A. SL, 10YR 3/2
6'-24" Bw. SL, 10YR 5/6
24'-96" C. SL, 2.5YR 6/3
SHWT: 24'
NO LEDGE 96'

LEGEND

- 600 - 600 EXISTING CONTOUR
- 600 - 600 PROPOSED CONTOUR
- ▲ WETLAND FLAG
- ▲ WETLAND EDGE
- STRAW WATTLE & LIMIT OF DISTURBANCE
- LIMIT OF DISTURBANCE
- TH TEST HOLE

NOTE: TEST HOLES SHOWN OTHER THAN 1 AND 2 ARE BY OTHERS. PIPES EXIST IN FIELD BUT DATA AVAILABLE CANNOT BE DISCERNED.



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North Smithfield, Rhode Island
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SHEET 2 OF 2