

**O.W.T.S. DESIGN DATA**

(3 BEDROOM DWELLING @ 115 gal./BR./day)

3 BR x 115 gal./BR./day = 345 gallons/day

DESIGN SOIL CATEGORY = 8

APPLICATION RATE = 1.9 gal./S.F./day

AREA REQUIRED = 182 S.F.

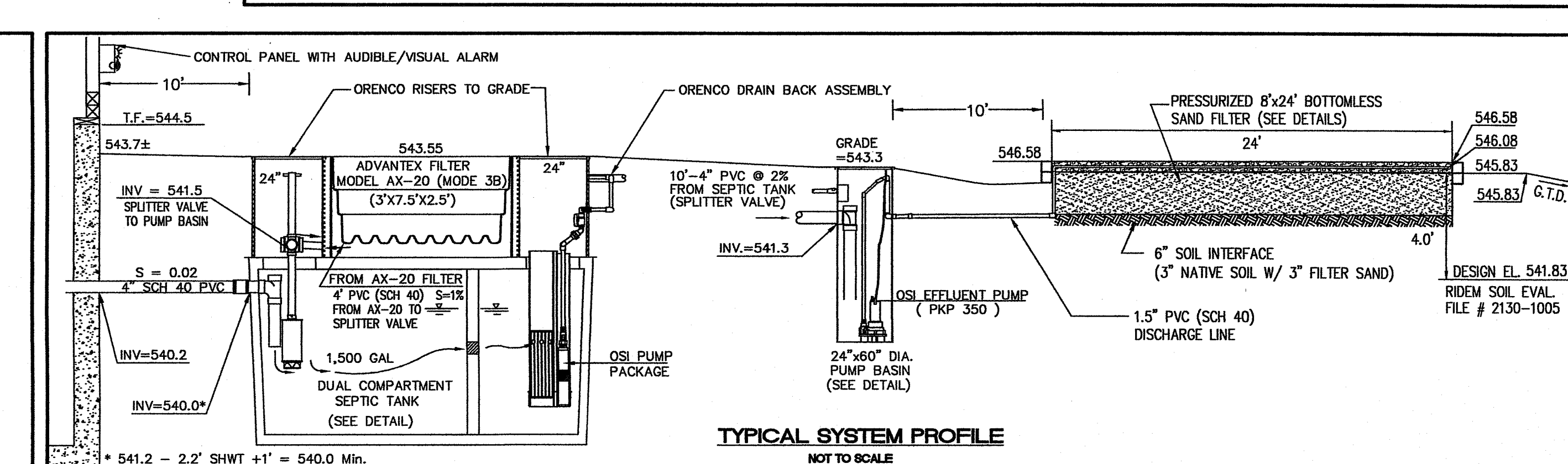
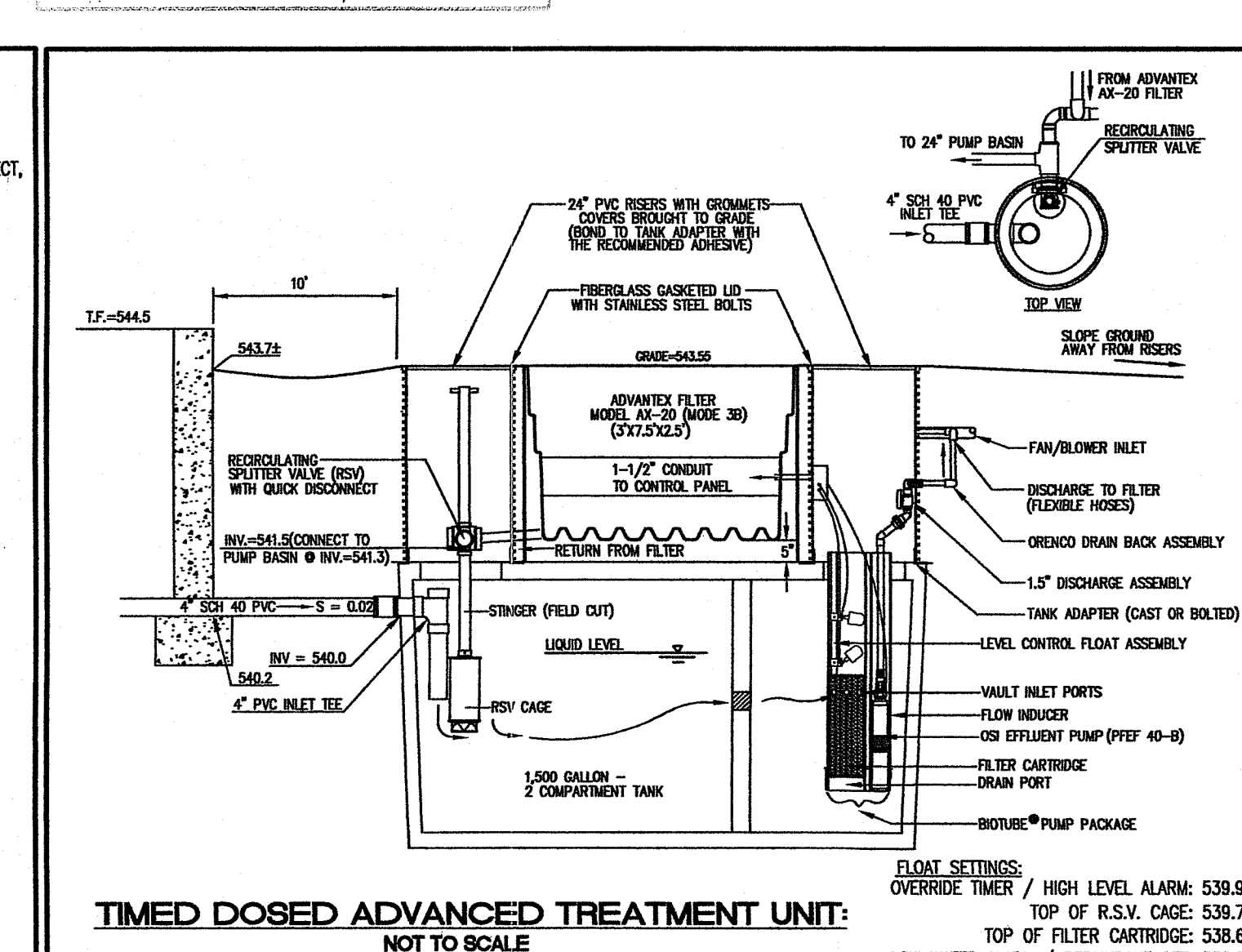
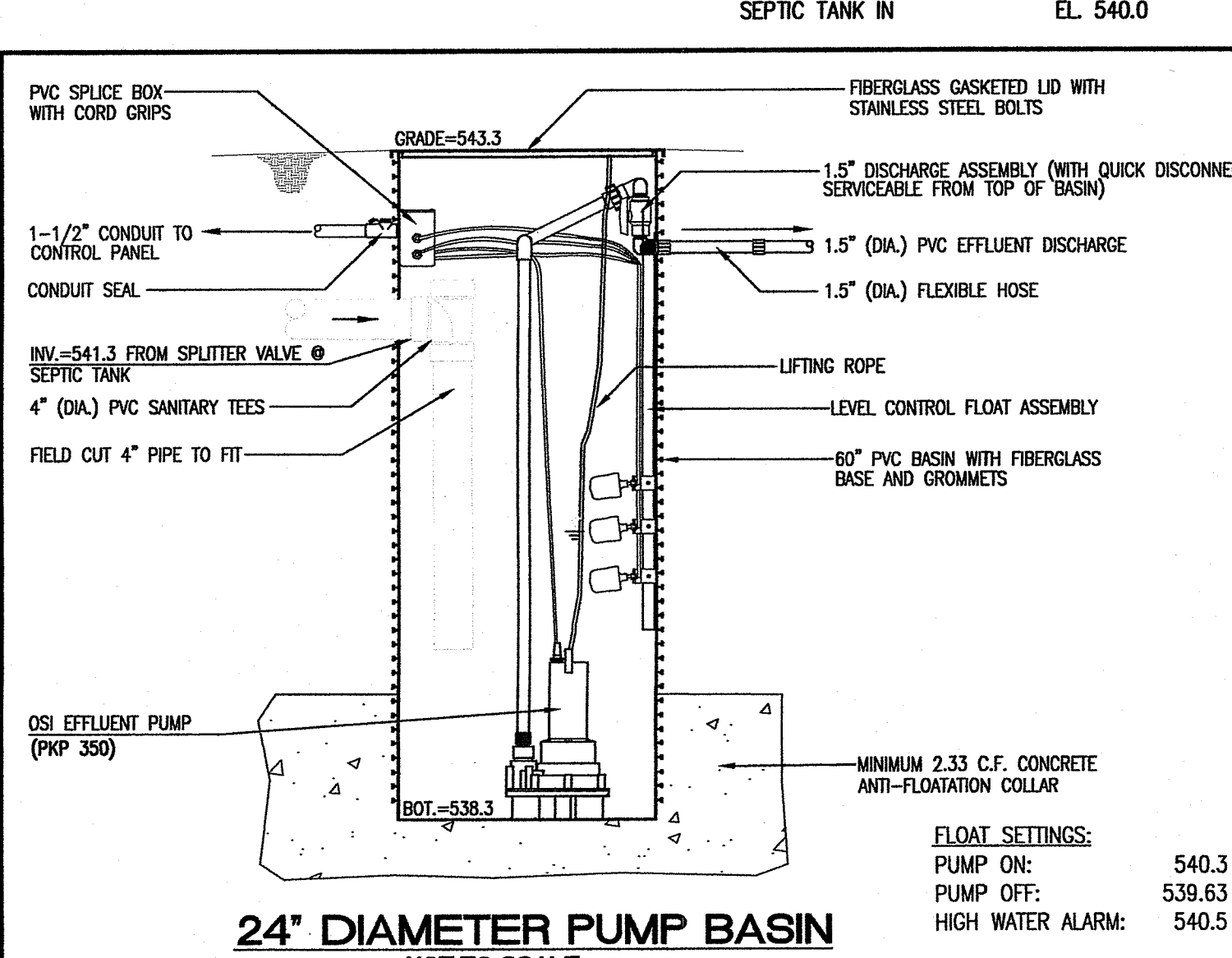
BSF DIMENSIONS = 8' x 24'

TOTAL AREA PROVIDED = 192 SF

**INVERT SCHEDULE**

HIGH PT. WITHIN SYSTEM	EL. 544.0
DESIGN ELEVATION (GWT)	EL. 544.0-2.17=541.83
BSF STONE INTERFACE	EL. 541.83 + 4' = 545.83
BOTTOM OF BSF SAND	EL. 543.83
5' PERIMETER GRADE REQ'D	EL. 543.83
5' PERIMETER GRADE PRVD.	EL. 544.0
BSF LATERAL INVERT	EL. 546.08
TOP OF FOUNDATION	EL. 544.5
BLDG. SEWER @ BUILDING	EL. 540.2
SEPTIC TANK IN	EL. 540.0

- NOTES:**
- FIELD WORK PERFORMED ON SITE JUNE 2022.
  - VERTICAL DATUM NAVD 88
  - UTILITIES SHOWN HAVE BEEN PROVIDED BASED UPON THE BEST AVAILABLE INFORMATION AND SHOULD BE CONSIDERED APPROXIMATE IN NATURE. THE CONTRACTOR SHALL VERIFY IN THE FIELD EXACT LOCATIONS PRIOR TO COMMENCING WITH THE WORK.
  - PROPERTY LINES ARE BASED UPON ASSESSOR'S MAP AND SHALL BE CONSIDERED APPROXIMATE

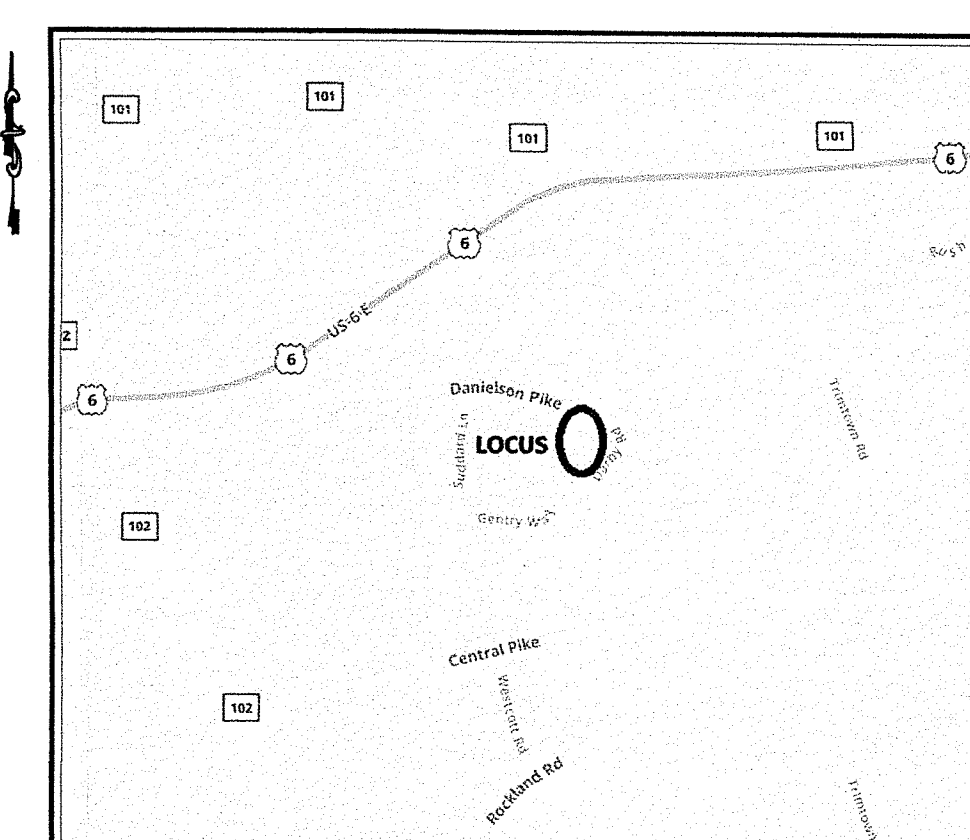
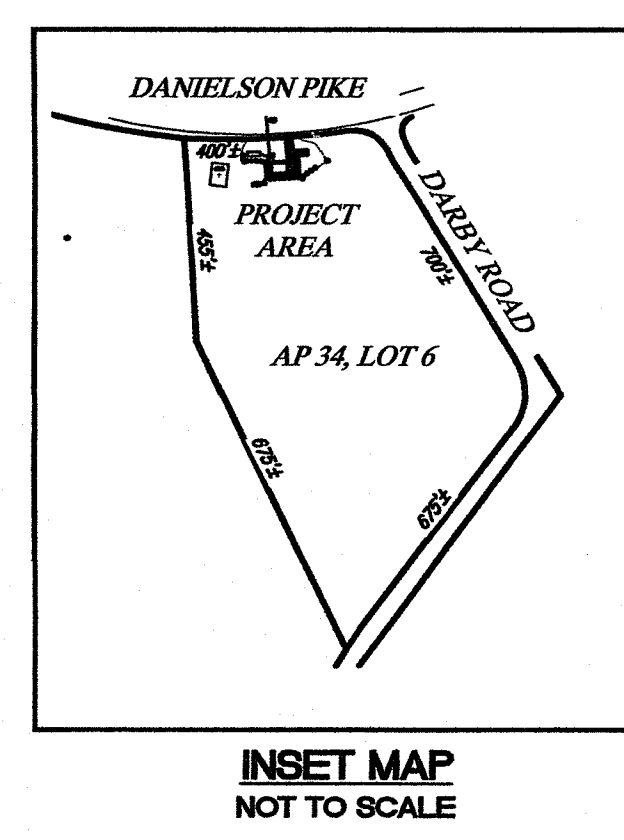


**PLANTING NOTE:**  
EVERGREEN PLANTINGS CAN BE NORTHERN WHITE CEDAR (THUJA OCCIDENTALIS) OR EASTERN RED CEDAR (JUNIPERUS VIRGINIANA). PLANTINGS SHALL BE AT LEAST 4-6 FEET TALL AFTER PLANTING AND SPACED 10-FEET ON CENTER.

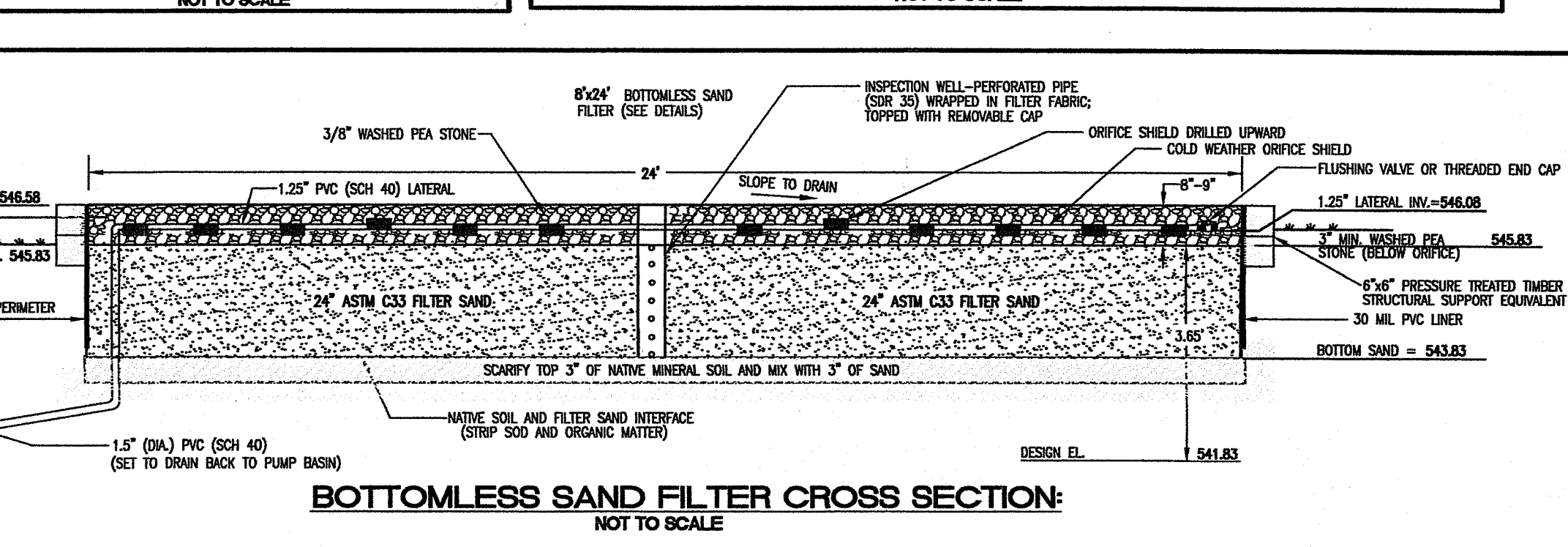
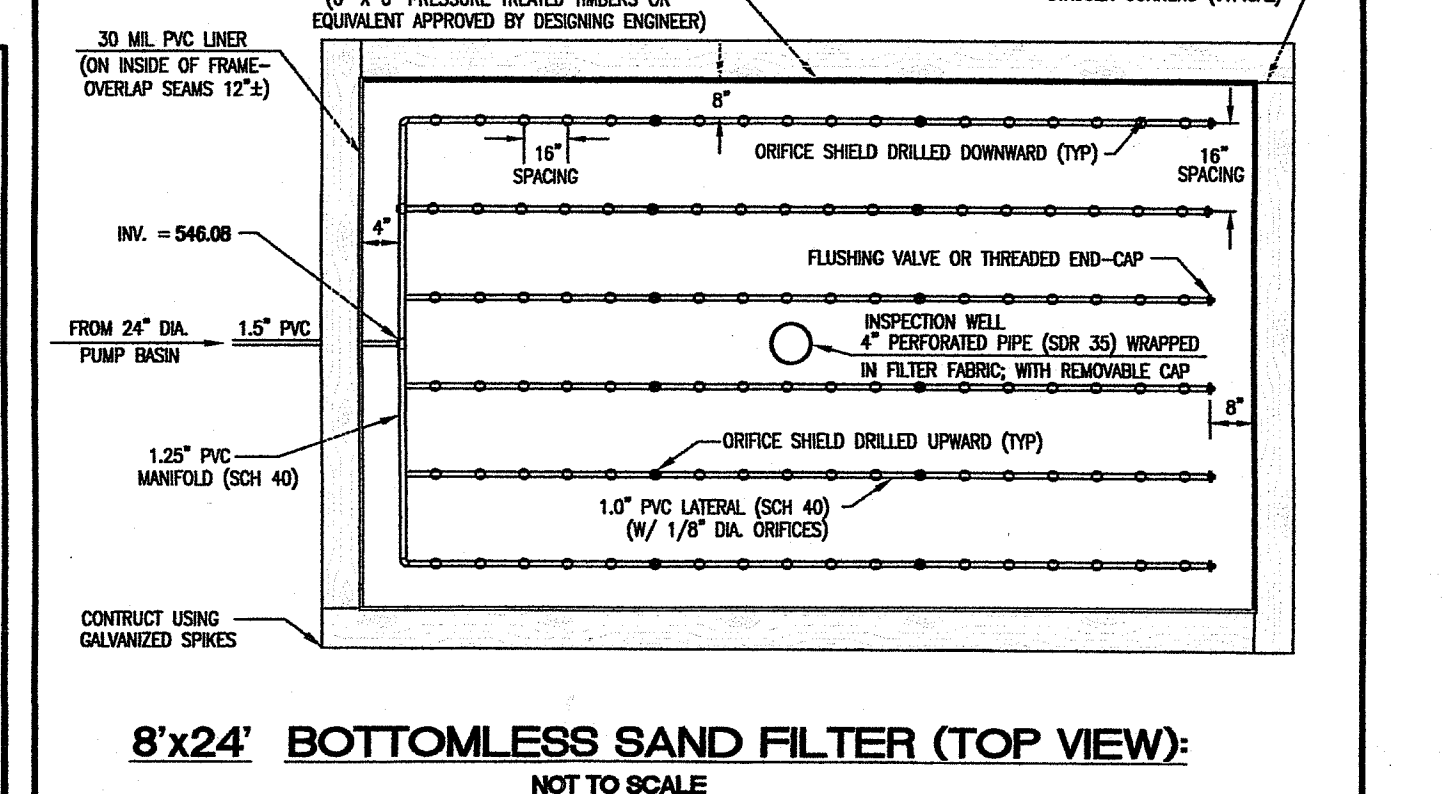
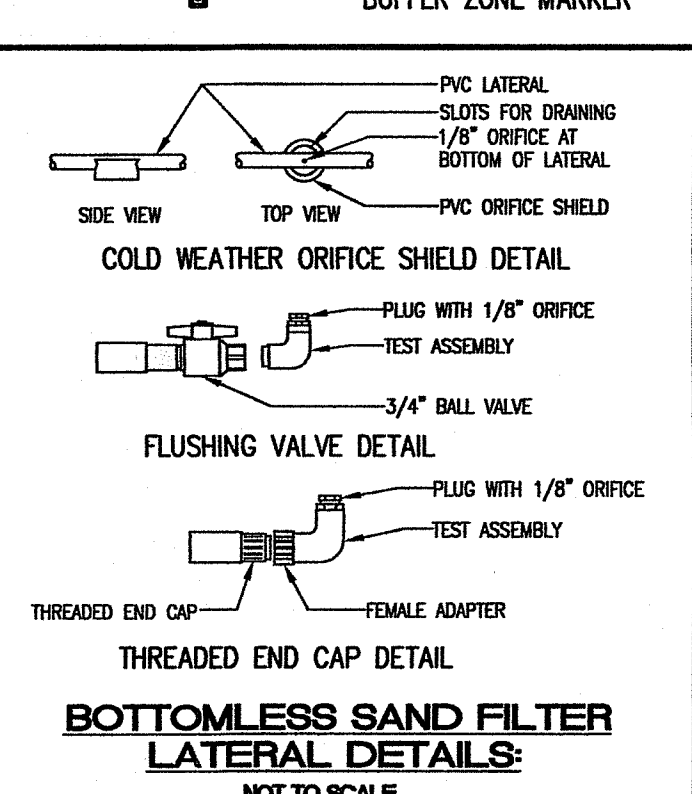
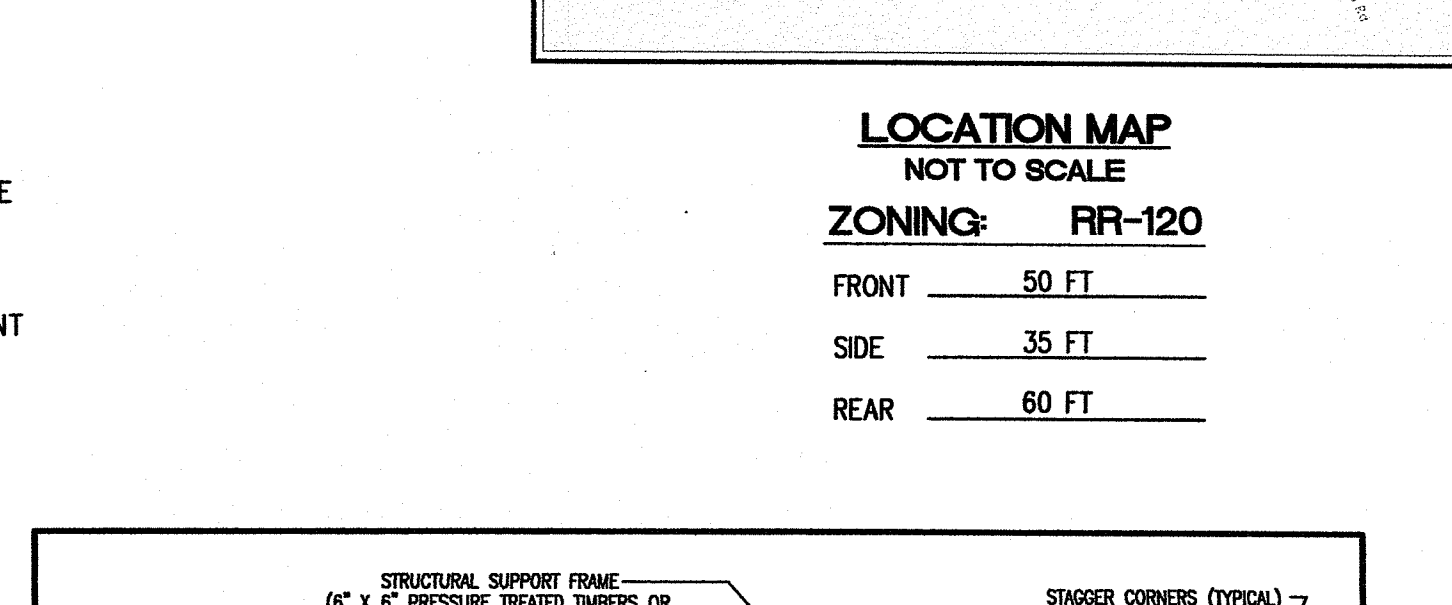
**FLOOD NOTE:**  
THE PROPERTY LIES WITHIN ZONE X "AREAS TO BE DETERMINED ARE OUTSIDE OF THE 0.02% CHANCE FLOOD PLAIN" AS SHOWN ON FIRM MAP, TOWN OF CUMBERLAND, RHODE ISLAND, PROVIDENCE COUNTY, COMMUNITY MAP NUMBER 44007C01836, REVISED MARCH 2, 2009.

**REFERENCES:**

- TOWN OF SCIATUATE GEOGRAPHIC INFORMATION SYSTEM (GIS).



- LEGEND:**
- PROPERTY LINE
  - ZONING SETBACK LINE
  - WETLAND FLAG
  - FRESHWATER WETLAND EDGE
  - JURISDICTIONAL SETBACK
  - EXISTING STONE WALL
  - EXISTING EDGE OF PAVEMENT
  - EXISTING CURB/BERM
  - EXISTING CULVERT
  - UTILITY POLE
  - TEST HOLE
  - ASSESSOR'S PLAT, LOT
  - BUFFER ZONE MARKER



NO.	DATE	REVISION
1.	11/23/22	RIDEM COMMENTS

**JEFFREY C. HANSON**  
No. 5238  
11/23/22  
REGISTERED PROFESSIONAL ENGINEER

**ILLSTONE ENGINEERING, P.C.**  
CIVIL ENGINEERING LAND PLANNING  
250 Centerville Road, Building E-12  
Warwick, Rhode Island 02886  
p. (401) 921-3344 f. (401) 921-3303  
www.IllstoneEng.com

**PLAN of PROPOSED ON-SITE WASTEWATER TREATMENT SYSTEM**

AP 34, LOT 6 DANIELSON PIKE SCIATUATE, RI

PREPARED FOR: ANNE ARIETA TRUST

SCALE: 1" = 20' JUNE 2022

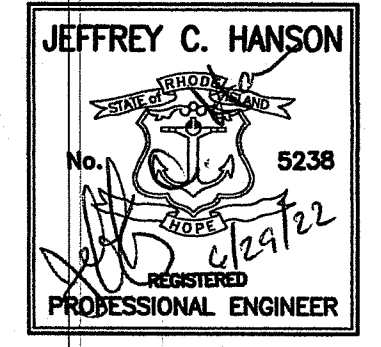
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Checked By: JCH  
Sheet 1 of 2  
NOV 9 2022

**OWNER / APPLICANT**  
ANNE ARIETA TRUST  
20 TANGLEWOOD DRIVE  
CUMBERLAND, RI 02864

FILE NO.: 21.440.655

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NO.	DATE	REVISION



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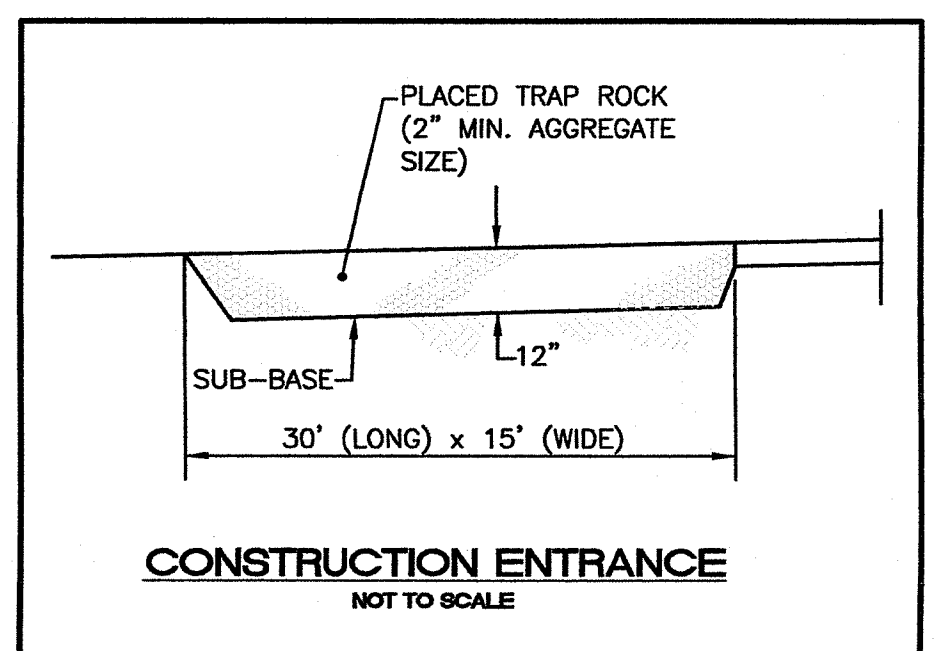
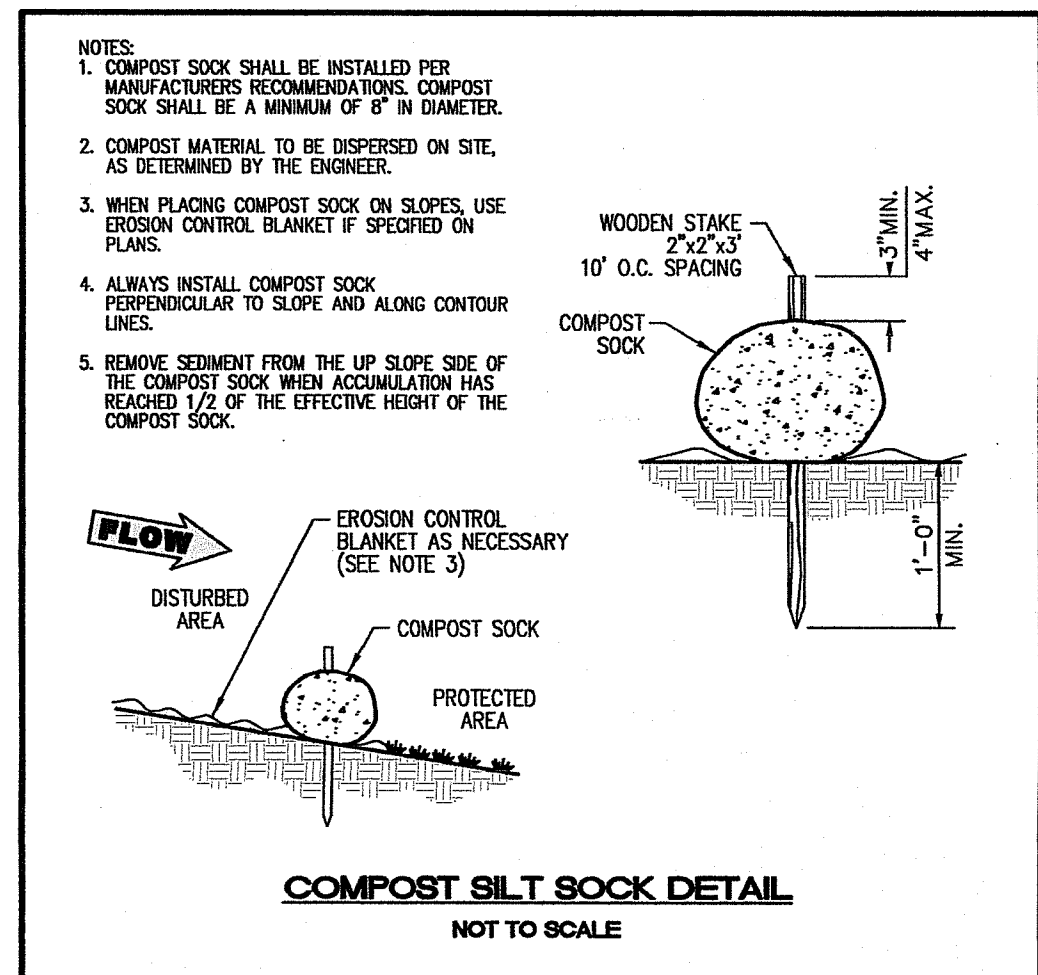
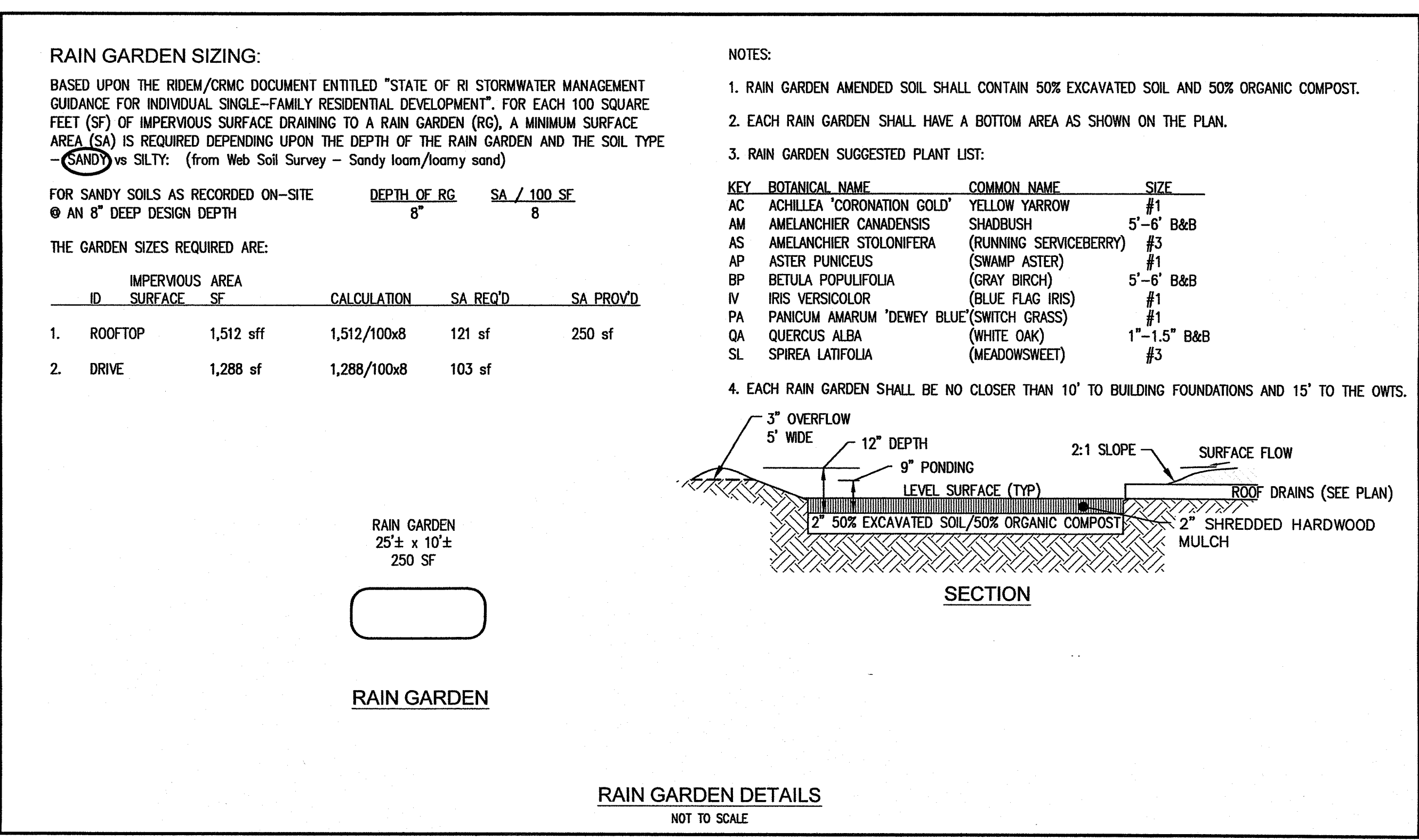
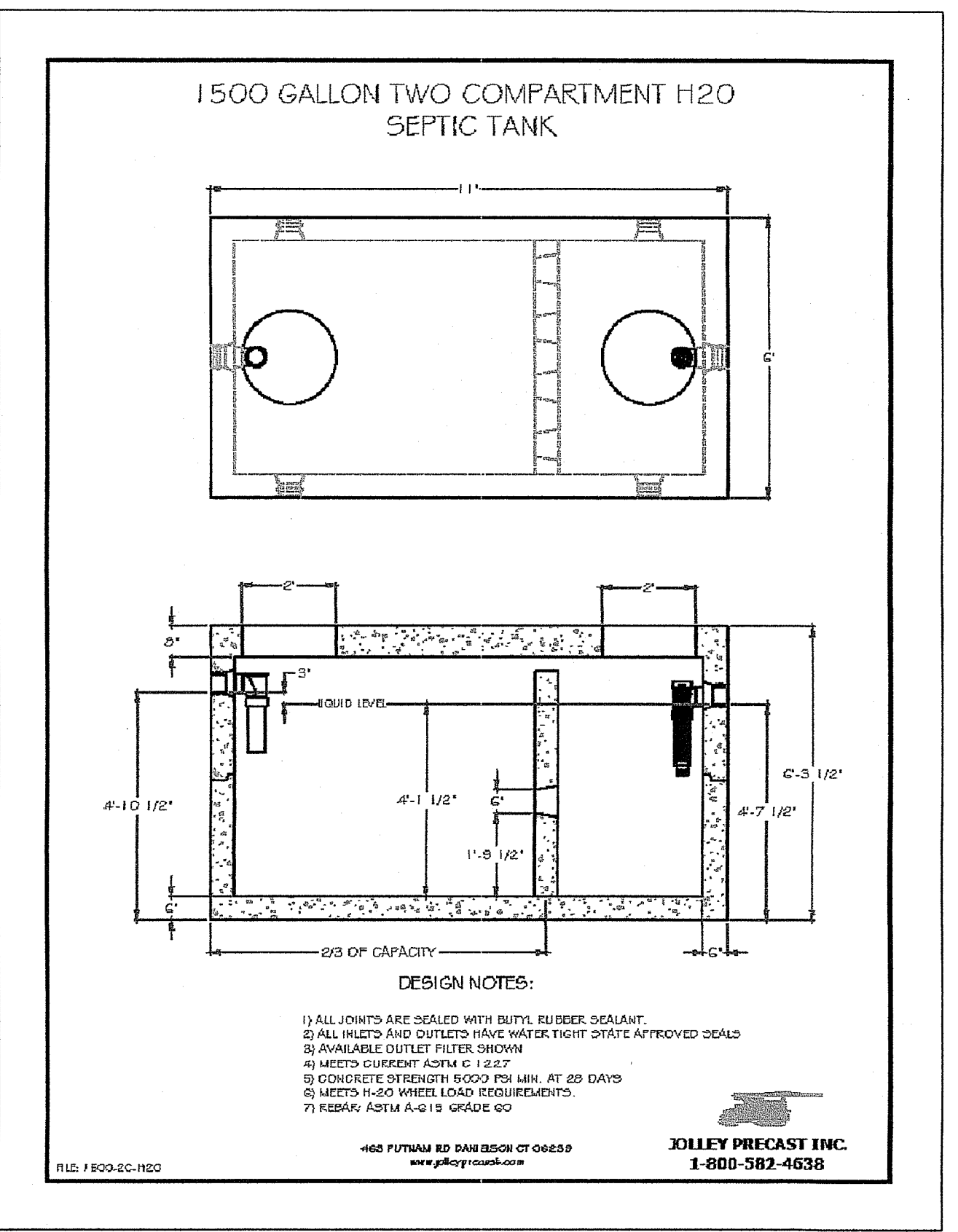
**PLAN of PROPOSED  
ON-SITE WASTEWATER  
TREATMENT SYSTEM**

**AP 34, LOT 6  
DANIELSON PIKE  
SCITUATE, RI**

PREPARED FOR:  
**ANNE ARIETA TRUST**

SCALE: 1" = 20'  
JUNE 2022

Drawn By: **MJV**  
Checked By: **JCH**  
Sheet



- SITE NOTES:**
- SOD, VEGETATION OR DEAD/DECAYING ORGANIC LITTER SHALL BE REMOVED FROM THE AREA PLANNED FOR THE BOTTOMLESS SAND FILTER INSTALLATION. THREE (3) INCHES OF THE NATIVE SOIL MATERIAL SHALL BE SCARIFIED AND MIXED WITH THREE (3) INCHES OF THE SAND MEDIA.
  - THE SAND MEDIA SHALL BE PLACED IN LEVEL, 8" LIFTS WITHIN THE BOTTOMLESS SAND FILTER AND "WETTED" SLIGHTLY DURING INSTALLATION.
  - ALL ROOF DRAINS AND DRIVEWAY SHALL BE DIRECTED TO DRAIN INTO RAIN GARDEN.

- OWTS CONFORMANCE NOTE:**
- PRIOR TO RECEIVING A CERTIFICATE OF CONFORMANCE, THE HOMEOWNER SHALL FILE A COPY OF THE APPROVED OWTS PERMIT, OPERATION AND MAINTENANCE AGREEMENT AND MONITORING SCHEDULE OF THE OWTS WITH THE LAND EVIDENCE RECORDS OF THE MUNICIPALITY IN WHICH THE OWTS IS LOCATED. UPON RECORDING, THE HOMEOWNER SHALL SUBMIT TO R.I.D.E.M. A CERTIFIED COPY OF SAID RECORDED MATERIAL SETTING FORTH THE DATE AND TIME OF THE RECORDING AS WELL AS THE BOOK AND PAGE WHERE THIS MATERIAL CAN BE FOUND.

- EQUIPMENT NOTES:**
- SEPTIC TANK SHALL BE PRECAST WATERTIGHT CONCRETE, 1,500 GALLON 2-COMPARTMENT OR EQUIVALENT.
  - ALL COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
  - ALL COMPONENTS AND INSTALLATION MUST BE INSPECTED AND APPROVED BY MILLSTONE ENGINEERING, P.C. ANY COMPONENT SUBSTITUTION MUST BE PRE-APPROVED BY MILLSTONE ENGINEERING, P.C. PRIOR TO INSTALLATION.
  - SEPTIC TANK AND PUMP BASIN INVERTS SHALL BE WATERTIGHT. CAST-IN-SEAL CONNECTORS (OR EQUIVALENT) SHALL BE UTILIZED ALONG WITH EZ-WRAP RUBBER ALONG ALL JOINTS.
  - THE SEPTIC TANK SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM C-1227-02A STANDARDS OR THE LATEST SUPERCEDING VERSION OF THIS STANDARD. UPON FINAL INSPECTION, THE CONTRACTOR SHALL PROVIDE MILLSTONE ENGINEERING, P.C. WITH WRITTEN CERTIFICATION OF WATERTIGHTNESS.
  - 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 AN OCCUPIED AREA OF THE DWELLING.
  - ADVANCED TREATMENT UNITS AND THE PUMP DOSING THE BOTTOMLESS SAND FILTER SHALL BE WIRED ON THE SAME ELECTRICAL CIRCUIT.

- MAINTENANCE NOTES:**
- THE SEPTIC TANK, ADVANTEX FILTER, PUMP SYSTEM AND BOTTOMLESS SAND FILTER SHALL BE MAINTAINED ANNUALLY.
  - MAINTENANCE SHALL BE PERFORMED IN CONFORMANCE WITH THE PROCEDURES SPECIFIED IN THE COMPONENTS OPERATION AND MAINTENANCE MANUAL AND IN ACCORDANCE WITH THE R.I.D.E.M. GUIDELINES FOR THE DESIGN AND USE OF BOTTOMLESS SAND FILTERS, NOVEMBER 2013. AS AMENDED.
  - PUMP, FLOAT ASSEMBLY AND CONTROL PANEL SHALL BE CHECKED FOR PROPER OPERATION AND CYCLE TIMING.
  - SCUM AND SLUDGE DEPTHS IN THE SEPTIC TANKS SHALL BE MEASURED AND LOGGED ANNUALLY. THE TANKS SHALL BE PUMPED IF THE SCUM DEPTH EXCEEDS 5", THE SLUDGE DEPTH EXCEEDS 13" OR THE DEPTH OF THE COMBINED SLUGS (SCUM AND SLUDGE) EXCEEDS 16".

- ON-SITE WASTEWATER TREATMENT SYSTEM (OWTS)**
- OWTS FILE: 2130-1005
- ALL OTHER DESIGN, CONSTRUCTION AND MAINTENANCE REQUIREMENTS, WHETHER NOTED HEREON, OR NOT, SHALL BE IN CONFORMANCE WITH RULES AND REGULATIONS ESTABLISHING MINIMUM STANDARDS RELATING TO LOCATION, DESIGN, CONSTRUCTION AND MAINTENANCE OF ON-SITE WASTEWATER TREATMENT SYSTEMS, NOVEMBER 25, 2018 BY THE R.I. DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, AUTHORITY: CHAPTER 42-35 PURSUANT TO CHAPTERS 42-171, 23-19.5, 23-24.3, 5-56 AND 5-56.1 OF THE RHODE ISLAND GENERAL LAWS OF 1956, AS AMENDED. (OWTS REGULATIONS)
  - COMPLY WITH ANY ADDITIONAL TERMS OF APPROVAL AS MAY BE REQUIRED BY R.I.D.E.M.
  - ONLY A R.I.D.E.M. BOTTOMLESS SAND FILTER TRAINED INSTALLER SHALL BE ENGAGED TO INSTALL THIS OWTS.
  - PRIOR TO THE START OF CONSTRUCTION THE DESIGNER SHALL STAKE OUT AND PROTECT THE PROPOSED BOTTOMLESS SAND FILTER (BSF) LOCATION.
  - CLEAR ALL TREES, STUMPS AND BRUSH WITHIN 10 FEET OF THE BSF. THIS BUFFER AREA SHALL REMAIN FREE OF ANY FUTURE TREES OR SHRUBS UNLESS APPROVED BY R.I.D.E.M.
  - MAINTAIN LAND SURFACE ELEVATION 545.83 (MINIMUM) FOR 5' AROUND THE BSF.
  - ALL NON-PRESSURE PIPING AND FITTINGS SHALL BE SCH 40 PVC, UNLESS OTHERWISE NOTED.
  - ALL PRESSURE PIPING SHALL BE A MINIMUM CLASS 200 PVC, UNLESS OTHERWISE NOTED.
  - THE TWO (2) ORIFICES THAT ARE LOCATED APPROXIMATELY 1/3 AND 2/3, RESPECTIVELY, ALONG THE LENGTH OF EACH LATERAL OR THE 6th AND 12th ORIFICE, SHALL BE DRILLED UPWARD.
  - THERE SHALL BE NO SUBSURFACE, FOUNDATION, OR STORM DRAINS WITHIN 25 FEET OF THE PROPOSED OWTS.
  - NO LOAM OR VEGETATIVE PLANTINGS SHALL BE PLACED OVER THE TOP LAYER OF PEA GRAVEL SURFACE OF THE BSF.
  - DIRECT STORMWATER AWAY FROM BSF.
  - KEEP HEAVY EQUIPMENT AND IMPERMEABLE MATERIALS OFF BSF SURFACE.
  - THERE ARE NO OTHER KNOWN PUBLIC WELLS, EXISTING OR PROPOSED, WITHIN 500 FEET OF THE PROPOSED OWTS OTHER THAN THOSE SHOWN.
  - THERE ARE NO OTHER KNOWN WELLS, EXISTING OR PROPOSED, WITHIN 200 FEET OF THE PROPOSED OWTS NOR ARE THERE ANY OTHER OWTS, EXISTING OR PROPOSED, WITHIN 100 FEET

**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS**  
Department of Environmental Management  
Office of Water Resources

**Site Evaluation Form**  
Part A - Soil Profile Description      Application Number **2130-1005**

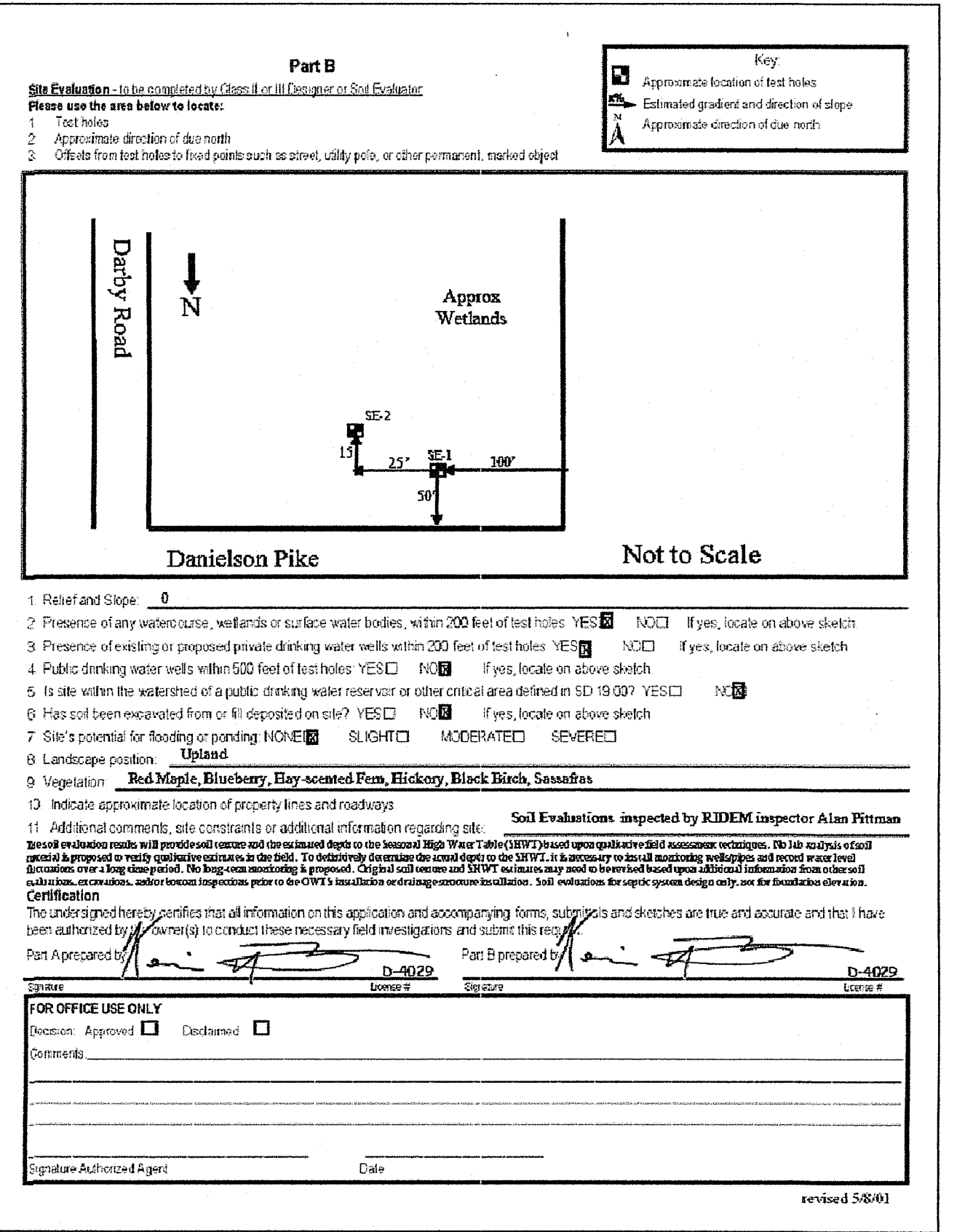
Property Owner: **Joseph Langton**  
Property Location: **Danielson Pike, AP 34 Lot 6, Scituate**  
Date of Test Hole: **August 18, 2021**  
Soil Evaluator: **Kevin Feltzer**      License Number: **D-4029**  
Weather: **Clear - sunny 75 degrees**      Shaded:  Yes  No      Time: **0900**

Horiz	Depth	Horizon Boundaries	Soil Colors	Re-Des Features	Re-Des Description	Texture	Structure	Consistence	Soil Category
Ap	0-10	a s	10YR 2/2			fsl	1 sbk f	vfr	4
Bw1	10-19	c s	10YR 3/6			fsl	1 sbk f	vfr	4
Bw2	19-26	a w	10YR 4/6			fsl	1 sbk f	vfr	4
2C	26-96		2.5Y 4/3 7.5YR 5/6		c-m-p	lfs	O-m	firm	8

Horiz	Depth	Horizon Boundaries	Soil Colors	Re-Des Features	Re-Des Description	Texture	Structure	Consistence	Soil Category
Ap	0-10	a s	10YR 2/2			fsl	1 sbk f	vfr	4
Bw1	10-18	c s	10YR 3/6			fsl	1 sbk f	vfr	4
Bw2	18-26	a w	10YR 4/6			fsl	1 sbk f	vfr	4
2Cg	26-32	a s	2.5Y 5/1 7.5YR 5/6		c-m-p	lfs	O-m	fr	6
2Cd	32-96		2.5Y 5/1			lfs	O-m	firm	8

Soil Class: **Firm Alkation III**      Total Depth of each Test Hole: **96" - 96"**  
Depth to Groundwater Seepage:      Depth to Impervious or Limiting Layer: **No Ledger Observed**  
Estimated Seasonal High Water Table: **26" - 26"**      Comments:



- NOTES:**
- LOCATION AND DEPTH OF EXISTING UTILITIES ARE APPROXIMATE AND HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL CHECK AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITIES BOTH UNDERGROUND AND OVERHEAD. THE CONTRACTOR SHALL CONDUCT TEST PITS AS NECESSARY TO VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS. ANY DAMAGE TO EXISTING UTILITIES AS SHOWN OR NOT SHOWN ON THE PLANS SHALL BE THE CONTRACTOR'S RESPONSIBILITY. COSTS OF SUCH DAMAGE SHALL BE BORNE BY THE CONTRACTOR. NO EXCAVATION SHALL BE DONE UNTIL ALL INVOLVED UTILITY COMPANIES ARE NOTIFIED 72-HOURS IN ADVANCE. THE CONTRACTOR SHALL BE RESPONSIBLE TO NOTIFY DIG-SAFE (1-888-344-7233) A MINIMUM OF 72 WORKING HOURS, EXCLUDING WEEKENDS AND HOLIDAYS, PRIOR TO THE START OF ANY EXCAVATION AND/OR BLASTING WORK. THE NAME OF THE COMPANY PERFORMING THE EXCAVATION AND/OR BLASTING WORK MUST BE SUPPLIED TO DIG-SAFE, IF IT IS DIFFERENT FROM THE CALLER.
  - ROOFTOP RUNOFF SHALL BE DIRECTED TO SURFACE VIA DOWN SPOUTS, NO UNDERGROUND ROOF DRAINS NOR FOUNDATION DRAINS ALLOWED WITHIN 25' OF THE PROPOSED OWTS.