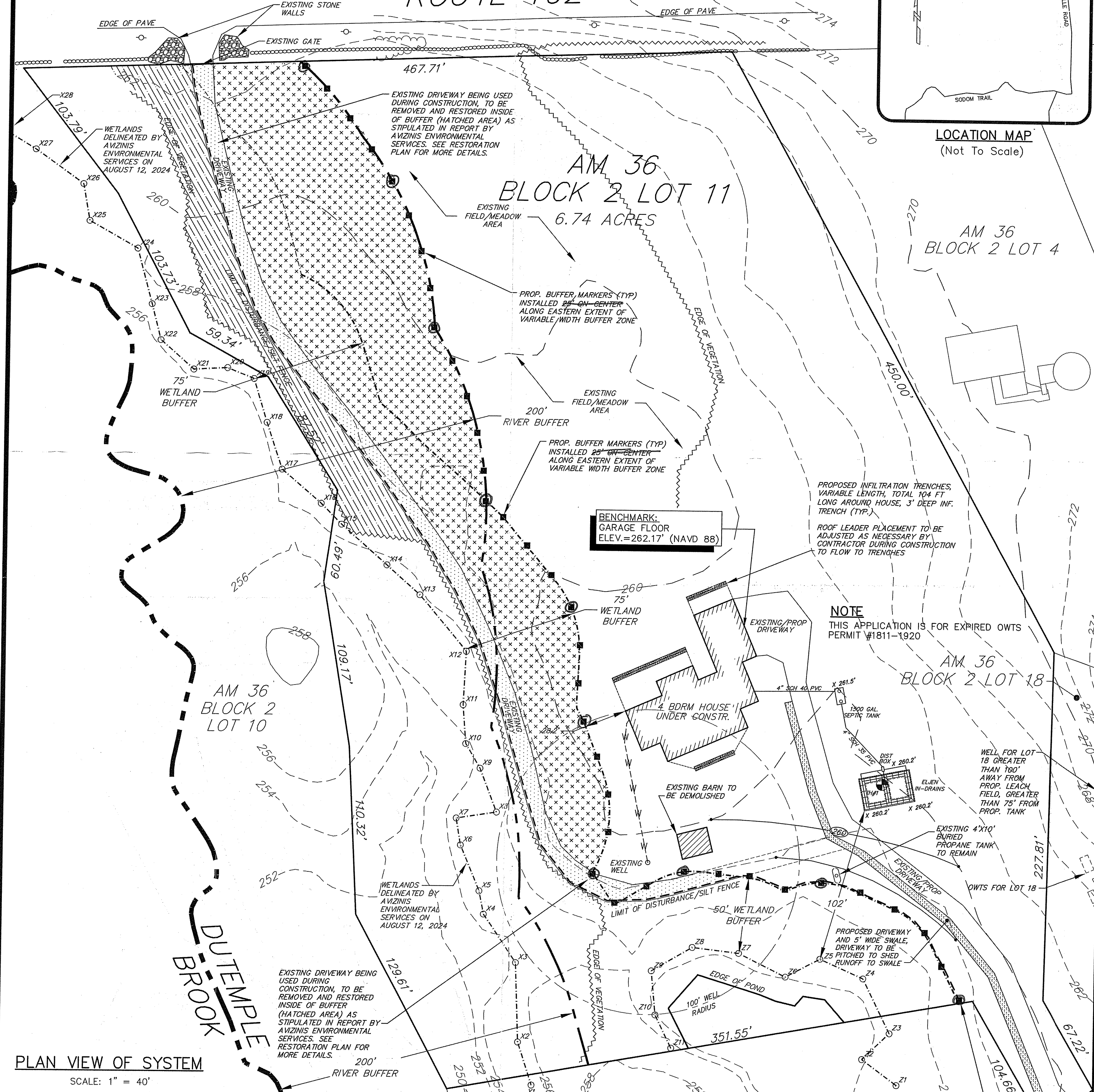


**BUFFER RESTORATION LEGEND:**

- AREA TO REVEGETATE NATURALLY (8,995 SF)
- DRIVEWAY RESTORATION AREA (8,637 SF)
- NATIVE MEADOW BUFFER RESTORATION AREA (37,181 SF)

**TEN ROD ROAD  
ROUTE 102**



SCALE: 1" = 40'

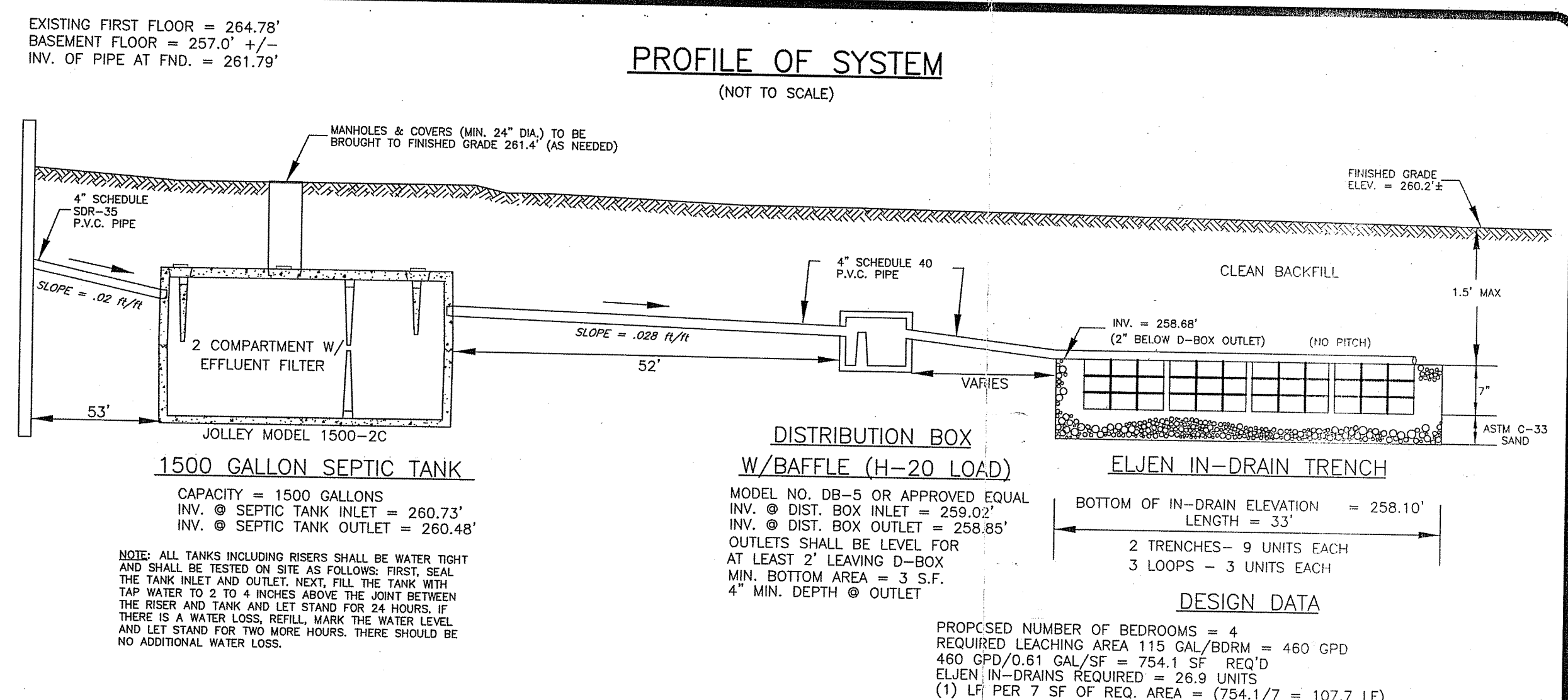
GRAPHIC SCALE: 0' 20' 40' 80' 120'

ZONING CLASSIFICATION = RU-4  
SETBACKS: FRONT- 40' SIDE- 20' REAR- 40'

PERCOLATION TEST DATA				SOIL TEST DATA			
PERC. NO.	DATE	DEPTH	ELEV.	RATE	DEEP TEST PIT NO.	7/21/10	DEEP TEST PIT NO.
NA					SURFACE ELEVATION = 259.8'		SURFACE ELEVATION =
					DEPTH/SOIL	SOIL DESCRIPTION	DEPTH/SOIL
DESIGN APPLICATION RATE: 0.61 GAL/SF/DAY				SEE ATTACHED SOIL EVALUATION			
DESIGN SOIL CATEGORY: 1m				SEE ATTACHED SOIL EVALUATION			
NO GROUND WATER @ DEPTH OF 54"				NO GROUND WATER @ DEPTH OF			
ELEVATION = 255.1' VERIFIED WT=511-56				ELEVATION = VERIFIED WT=			

**LEGEND:**

- PROP. CONTOUR
- PROP. FIN. GRADE
- EXIST. CONTOUR
- EXIST. SPOT GRADE
- VERIFIED TEST HOLE
- PERCOLATION TEST
- PROPERTY LINE
- WATER SERVICE
- STORM DRAIN



- BUFFER ZONE RESTORATION NOTES (PROVIDED BY AVIZINIS ENVIRONMENTAL SERVICES. SEE ATTACHED VARIANCE NARRATIVE)**
- ALL WORK SHALL BE OVERSEEN BY A QUALIFIED WETLAND BIOLOGIST/SOIL SCIENTIST.
  - AN EROSION CONTROL LINE WILL BE ESTABLISHED BETWEEN THE DRIVEWAY RESTORATION AREA AND ADJACENT AREA TO REVEGETATE NATURALLY OR HAY-FIELD AS APPLICABLE. THESE CONTROLS SHALL REMAIN IN PLACE THROUGHOUT THE RESTORATION WORK AND SUBSEQUENT RE-GROWTH/ACCRETION PERIOD UNTIL SUCH A POINT THAT THE SITE HAS STABILIZED. THE WETLAND BIOLOGIST SHALL MAKE THE DETERMINATION FOR REMOVAL OF THE CONTROLS.
  - EROSION CONTROLS SHALL BE MONITORED FOR EFFICACY THROUGHOUT THE RESTORATION PROCESS.
  - THE RESTORATION PROTOCOL SHALL TAKE PLACE AS SOON AS DEM GRANTS APPROVAL OF THIS PLAN BUT NO SOONER THAN 3 DAYS AFTER A 1-INCH RAINFALL AND NOT LESS THAN 3 DAYS FROM A PROJECTED 1-INCH RAINFALL.
  - THE OWNER SHALL REMOVE ALL FILL DEPOSITS FROM THE DRIVEWAY RESTORATION AREA (CRUSHED STONE/GRAVEL) DOWN TO ORIGINAL GRADE WHICH IS REPRESENTED BY A HEMIC-SAPRIC O-HORIZON, AS IDENTIFIED BY THE OVERSEEING WETLAND BIOLOGIST.
  - THE DRIVEWAY RESTORATION AREA SHALL BE SCARIFIED AND AMENDED WITH SCREENED LOAM AS NEEDED IN ORDER TO ENSURE A PLANTABLE SURFACE.
  - ONCE FILL IS COMPLETELY REMOVED AND A PLANTABLE SURFACE ACHIEVED, THE AREA SHALL BE TOPPED WITH A WEED-FREE LOOSE STRAW MULCH.
  - AN APPROVED CONSERVATION SEED MIX (SHOWY WILDFLOWER SEED MIX, NEW ENGLAND WETLAND PLANTS, INC. OR SIMILAR) SHALL BE APPLIED TO RESTORE NATIVE GRASSES IN THE DRIVEWAY RESTORATION AREA AND NATIVE MEADOW BUFFER RESTORATION AREA. CONSERVATION TILLING/SEEDING IMPLEMENTS MAY BE UTILIZED INITIALLY TO SEED THE AFOREMENTIONED AREAS IF DESIRED.
  - WHITE PINE (*Pinus strobus*) SHALL BE PLANTED AS SCREENING VEGETATION ALONG CENTER AND AT LEAST 36" IN HEIGHT ALONG THE EASTERN AND WESTERN EXTENT OF THE DRIVEWAY RESTORATION AREA TO DELINEATE THE FORESTED/SHRUB BUFFER AND THE NATIVE MEADOW HABITAT BUFFER.
  - BUFFER ZONE MARKERS CONSISTENT WITH RIDEM SIZING AND LETTERING SHALL BE INSTALLED ALONG THE LENGTH OF THE EASTERN EXTENT OF THE BUFFER ZONE ASSOCIATED WITH THE DUTEMPLE BROOK. A MONITORING REPORT SHALL BE PREPARED BY THE WETLAND BIOLOGIST AND SUBMITTED TO THE DEM OFFICE OF COMPLIANCE AND INSPECTION AT THE CONCLUSION OF THE RESTORATION WORK.

**LICENSED DESIGNER SYSTEM REQUIREMENTS**

- NOTE TO OWNER & INSTALLER** - THE EXACT LOCATION OF THE PROPOSED LEACHING SYSTEM SHALL BE FIELD STAKED BY THE LICENSED DESIGNER AS PART OF HIS CONSTRUCTION OBSERVATION CONTRACT WITH THE OWNER. A PRE-CONSTRUCTION MEETING BETWEEN THE LICENSED DESIGNER & LICENSED INSTALLER AT THE SITE IS REQUIRED FOLLOWING THE FIELD STAKING OF THE LEACHING SYSTEM.
- THE LICENSED DESIGNER SHALL BE RESPONSIBLE FOR WITNESSING AND INSPECTING THE INSTALLATION OF ANY OWT'S. HE/SHE DESIGNER IN NO CASE SHALL THE PERSON WHO INSTALLS THE SYSTEM, EXCEPT FOR THE REPAIR OF AN EXISTING OWT'S. ANY PERSON ASSISTING A LICENSED DESIGNER IN WITNESSING AND OBSERVING THE INSTALLATION OF OWT'S MUST BE AN EMPLOYEE OF THE SAME BUSINESS ENTITY AS THE LICENSED DESIGNER, AND SUCH PERSON MUST WORK UNDER THE LICENSED DESIGNER'S DIRECT SUPERVISION IN RESPECT TO WITNESSING AND INSPECTING THE INSTALLATION OF THE OWT'S.
  - PRIOR TO INSTALLATION OF AN OWT'S IN AREAS SERVED BY PRIVATE WELLS, THE DESIGNER MUST VERIFY THAT CONDITIONS ON SITE AND ADJACENT TO THE SITE ARE THE SAME AS AT THE ORIGINAL DESIGN. IF CONDITIONS HAVE CHANGED IN A MANNER THAT WOULD AFFECT THE ORIGINAL DESIGN, THE DESIGNER SHALL NOTIFY THE DEPARTMENT PRIOR TO INSTALLATION.
  - THE INSTALLER SHALL NOTIFY THE DESIGNER DURING NORMAL BUSINESS HOURS AT LEAST 72 HOURS PRIOR TO THE PLANNED INSTALLATION OF ANY OWT'S. THE DEPARTMENT, AT ITS DISCRETION, MAY INSPECT ANY ASPECT OF THE INSTALLATION OF THE SYSTEM.
  - THE DESIGNER MUST AT A MINIMUM, INSPECT AND MAKE MEASUREMENTS, WHERE APPROPRIATE, OF THE FOLLOWING COMPONENTS AND STEPS IN THE INSTALLATION OF THE OWT'S:
    - THE EXPOSED BOTTOM OF THE EXCAVATION FOR THE LEACH FIELD;
    - THE SIZE AND CONDITION OF ALL STRUCTURES SUCH AS THE SEPTIC TANK, D-BOX, GALLEYS, FLOW DIFFUSERS, ETC.;
    - THE ELEVATIONS OF ALL PIPE INVERTS;
    - ALL SAND MEDIA AND AGGREGATE IS IN ACCORDANCE WITH SPECIFICATIONS AND IS PLACED IN ACCORDANCE WITH THE DESIGN PLAN;
    - COMPLETED INSTALLATION PRIOR TO COVERING;
    - THE TYPE OF BACKFILL AND THAT THE BACKFILL IS PROPERLY PLACED AND COMPACTED.
    - FINAL SOIL COVER INCLUDING 10 FT PERMETER; AND
    - ALL HORIZONTAL SET-BACKS, INCLUDING FROM THE BUILDING AND ANY WELLS ON-SITE OR ON ADJUTING LOTS.
  - IF CONDITIONS ARE ENCOUNTERED DURING CONSTRUCTION WHICH INDICATE THAT THE SYSTEM CANNOT BE INSTALLED OR IS NOT INSTALLED IN ACCORDANCE WITH THE PERMIT, OR ANY TERMS AND CONDITIONS CONTAINED THEREIN, THE DESIGNER SHALL NOTIFY THE DIRECTOR AS SOON AS POSSIBLE, BUT NO LATER THAN 24 HOURS AFTER DISCOVERY. THE DEPARTMENT SHALL ISSUE WRITTEN GUIDANCE ON SPECIFICATION TOLERANCES AS WELL AS CONDITIONS UNDER WHICH AS-BUILT PLANS AND REDESIGNED PLANS ARE REQUIRED. THE INSTALLER SHALL STOP CONSTRUCTION IF CONDITIONS ARE SUCH THAT A REDESIGN IS REQUIRED. NOTIFICATION IS NOT REQUIRED IF ALL DESIGN ELEMENTS ARE WITHIN THE TOLERANCES ESTABLISHED BY THE DEPARTMENT THROUGH WRITTEN GUIDANCE. IN RESPONSE TO THE DESIGNER'S NOTIFICATION, THE DIRECTOR SHALL EITHER:
    - AUTHORIZE THE INSTALLER TO PROCEED WITH THE WORK ON-SITE AND REQUIRE THE DESIGNER TO PROVIDE APPROPRIATE DOCUMENTATION TO THE DEPARTMENT AS MAY BE REQUIRED BY THE DIRECTOR;
    - REQUIRE THE DESIGNER TO SUBMIT AS-BUILT PLANS WITHIN 10 BUSINESS DAYS AFTER THE OWT'S IS INSTALLED TO RECORD CHANGES THAT ARE IN COMPLIANCE WITH THE STANDARDS IN THESE REGULATIONS, BUT WHICH NEED TO BE DOCUMENTED; OR
    - REQUIRE THE DESIGNER TO SUBMIT REDESIGNED PLANS AND SPECIFICATIONS TO THE DIRECTOR FOR APPROVAL, SHOWING CHANGES FROM THE ORIGINAL APPROVED APPLICATION, PLAN AND SPECIFICATIONS.
  - THE LICENSED DESIGNER SHALL PROVIDE:
    - DAILY INSPECTION REPORT (WEATHER CONDITIONS, PERSONS ON-SITE, WORK ACCOMPLISHED AND OTHER INFORMATION CUSTOMARILY INCLUDED IN INSPECTION REPORTS);
    - A MINIMUM OF TWO PHOTOGRAPHS OF THE SYSTEM AS INSTALLED;
  - THE INSTALLER SHALL PROVIDE THE LICENSED DESIGNER THE INFORMATION BELOW THAT CAN BE USED TO VERIFY THAT THE INSTALLATION OF THE OWT'S WAS PERFORMED AS SPECIFIED:
    - LIST OF ALL MATERIALS USED, THEIR SOURCE, AND THE DATES DELIVERED TO THE SITE; AND
    - PRODUCT SPECIFICATION SHEETS, IF DIFFERENT FROM THOSE SPECIFIED IN THE APPROVED DESIGN.
  - CERTIFICATE OF CONSTRUCTION
    - THE DESIGNER THAT IS RESPONSIBLE FOR THE SYSTEM INSTALLATION IN ACCORDANCE WITH RULE 44 SHALL COMPLETE A CERTIFICATE OF CONSTRUCTION THAT CERTIFIES THAT THE ISDS WAS INSTALLED IN CONFORMANCE WITH THE APPROVED APPLICATION, PLANS, SPECIFICATIONS, APPLICABLE STATUTES AND REGULATIONS AND THAT HE OR SHE IS RESPONSIBLE FOR HAVING OBSERVED THE INSTALLATION. THE CERTIFICATE OF CONSTRUCTION SHALL BE ON FORMS PROVIDED BY THE DEPARTMENT BELOW THAT CAN BE USED TO VERIFY THAT THE INSTALLATION OF THE OWT'S WAS PERFORMED AS SPECIFIED:
    - THE CERTIFICATE OF CONSTRUCTION SHALL BE SUBMITTED TO THE DIRECTOR WITHIN FIVE BUSINESS DAYS AFTER THE OWT'S BUILDING FOUNDATION, DRINKING WATER WELL, AND OTHER APPURTENANCES AS MAY BE SPECIFIED IN WRITTEN DEPARTMENT GUIDANCE HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE DESIGN PLAN. THE DESIGNER SHALL PROVIDE A COPY OF THE CERTIFICATE OF CONSTRUCTION TO THE PROPERTY OWNER.
    - IN ADDITION TO THE CERTIFICATION IN RULE 44 ABOVE, THE CERTIFICATE OF CONSTRUCTION SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:
      - NAME AND LICENSE NUMBER OF THE DESIGNER;
      - NAME AND LICENSE NUMBER OF THE INSTALLER;
      - DISTANCES FROM TWO BUILDING FOUNDATION CORNERS TO THE SEPTIC TANK MANHOLE, TO THE DISTRIBUTION BOX, AND TO THE LEACH FIELD CORNERS.
  - ONCE THE DESIGNER HAS CERTIFIED THAT THE OWT'S HAS BEEN PROPERLY INSTALLED, THE DESIGNER SHALL PROVIDE INFORMATION AND RECOMMENDATIONS TO THE OWNER OF THE OWT'S ON SYSTEM SPECIFIC OPERATION AND MAINTENANCE PRACTICES TO PREVENT AGAINST PREMATURE SYSTEM FAILURE AND POLLUTION OF THE WATERS OF THE STATE.
  - THE DESIGNER IS NOT RESPONSIBLE FOR ANY NEGLIGENT ACT OR OMISSION OF A USER OF AN OWT'S, INCLUDING BUT NOT LIMITED TO, FAILURE TO PROPERLY USE AND MAINTAIN THE SYSTEM, WHICH CAUSES DAMAGE TO THE ISDS.

**PROPOSED ON-SITE WASTEWATER TREATMENT SYSTEM**

DESIGNED FOR A 4 BEDROOM DWELLING  
A.M. 36 BLOCK 2 LOT 11  
SITUATED IN THE TOWN OF EXETER, R.I.

**APPLICANT:**  
PAUL AND DONNA MASSE  
152 ALLEGRA LANE  
NORTH KINGSTOWN, RI 02852

NO.	REVISION	DATE

MARK L. DOWDELL  
10/9/24

REGISTERED PROFESSIONAL ENGINEER  
CIVIL

**DE DOWDELL ENGINEERING**

DOWDELL ENGINEERING ASSOCIATES, LLC  
CIVIL & ENVIRONMENTAL ENGINEERS  
SURVEYORS & LAND PLANNERS

P.O. BOX 1684 • 3949 OLD POST ROAD  
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RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
OR CEDAR POSTS  
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED: Dec 19, 2024 FILE # 24-0254  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Office of Water Resources  
OCT 9 2024

JOB NO. 2096  
DWG. NO. 2096-R01

SCALE: 1"=40'

SHEET: 1

DRAWN BY: R.L.C.  
CHECKED: M.L.D.  
APPROVED: M.L.D.

DATE: OCT 9, 2024