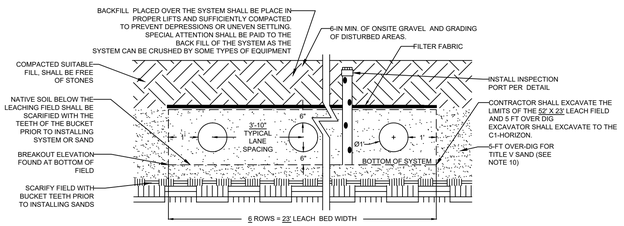
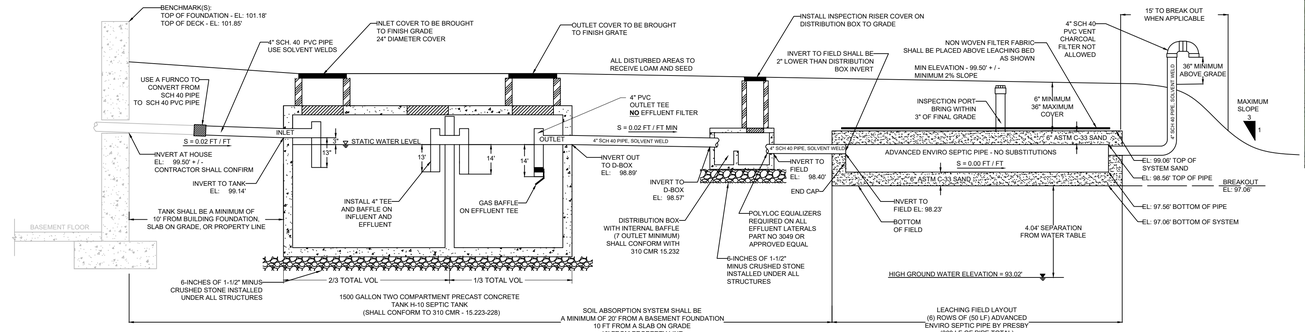


PROPOSED FIELD CONFIGURATION

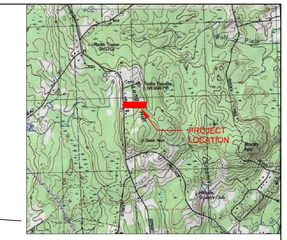
NOT TO SCALE

GENERAL NOTES:
1. INVERT OUT OF THE EXISTING FOUNDATION SHALL BE VERIFIED FROM THE CONTRACTOR PRIOR TO CONSTRUCTION. ENGINEER SHALL BE NOTIFIED IF ANY DISCREPANCIES ARE FOUND ON THE CONTRACT PLANS.
2. ALL COVERS SHALL BE WATER TIGHT, AND SECURABLE PER TITLE V REQUIREMENTS.
3. ALL PIPE SHALL BE BEDDED WITH APPROPRIATE BEDDING MATERIAL. FREE FROM ROCKS AND COBBLES EXCEEDING 2" IN SIZE.
4. SPECIAL ATTENTION SHALL BE PAID TO BE CAREFUL NOT TO DRIVE ON THE TANK OR APPLY SURCHARGE LOADS ON THE EDGES OF THE TANK.
5. NO CONSTRUCTION EQUIPMENT OR VEHICULAR TRAFFIC SHALL PASS OVER THE SEPTIC SYSTEM



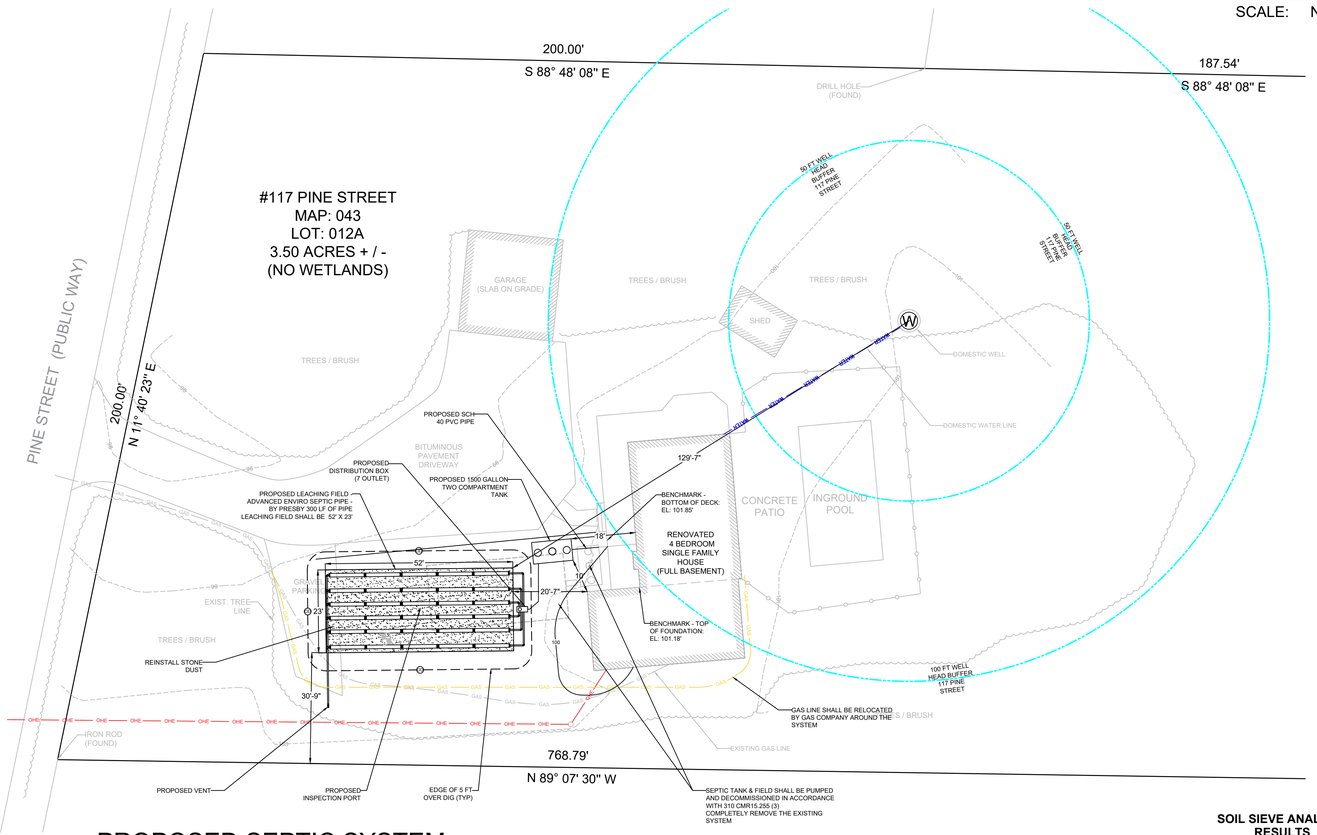
PROPOSED SEPTIC SYSTEM PROFILE AND NOTES

SCALE: NOT TO SCALE



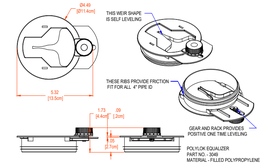
PROJECT LOCUS

Know what's below. Call before you dig.



PROPOSED SEPTIC SYSTEM SITE PLAN

SCALE: 1" = 20'



POLYLOK EQUALIZER

REQUIRED AT ALL OUTLET INVERTS TO PRESBY TUBES

NOTE:
1. THERE ARE NO PUBLIC WELLS WITHIN 500 FEET; PRIVATE WELLS WITH IN 100 FEET; SURFACE WATER WITHIN 150 FEET; SURFACE DRAINS WITHIN 50 FEET; OPEN, SURFACE, SUBSURFACE OR FOUNDATION DRAINS WHICH INTERCEPT HIGH GROUND WATER WITHIN 50 FEET; VERNAL POOLS WITHIN 100 FEET; STORM DRAINAGE LEACHING CATCH BASINS OR DRY WELLS WITHIN 50 FEET, AND ANY BOUNDARY OF A REGULATORY FLOODWAY OR 100 YEAR FLOOD WITHIN 150 FEET UNLESS AS SHOWN ON THIS PLAN.
2. I CERTIFY THAT I THE CURRENT HOUSE IS ON A DOMESTIC WELL AND TO THE BEST OF OUR KNOWLEDGE IS CORRECTLY SHOWN.
3. CONTRACTOR SHALL SUBMIT TO THE ENGINEER A SIEVE ANALYSIS ON THE PROPOSED SEPTIC SAND TO BE USED ON THIS PROJECT.

DESIGN CALCULATIONS / DESIGN PARAMETERS:

1. ESTIMATED DESIGN FLOW:
   4 BEDROOMS X 110 GPD / BEDROOM = 440 GPD
   REHOBOTH BY LAW 25% INCREASE = 1.25 X 440 GPD = 550 GPD
2. SEPTIC TANK REQUIRED CAPACITY = 200 % DAILY FLOW
   550 GPD X 200 % = 1100 GPD
   USE 1500 GALLONS - TWO COMPARTMENT
   TANK SHALL BE H-10 LOADING
3. LEACHING AREA REQUIREMENTS: USE 30 M.P.I - 4 FT SEPARATION REQUIRED
   EFFLUENT LOADING RATING = 33 GPD/S.F (CLASS III)
   WITH A LEACHING FIELD AREA REQUIRED:
   550 GPD / 0.33 GPD / S.F = 1,667.00 S.F
4. LEACHING AREA PROVIDED:

   PIPE PROVIDED:
   ADVANCED ENVIRO SEPTIC PIPE = 70 L.F / BEDROOM
   ADVANCED ENVIRO SEPTIC PIPE REQUIRED = 70 L.F X 4 BEDROOMS = 280 L.F
   ADVANCED ENVIRO SEPTIC PIPE PROVIDED = 6 LANES X 50 L.F / LANE = 300 LF.

   SAND BED:
   MINIMUM AREA = 60% AGGREGATE BED SIZE = 550 GPD X 0.483 (FROM MANUAL) = 1,139 SF
   MINIMUM BED SIZE = 400 SF (PER PRESBY GUIDELINES)
   BED SIZE: 52 FT X 23 FT = 1,196 SF > 1,139 SF REQUIRED
   DESIGN FLOW CAPACITY = 1,196 SF X 0.483 GPD / SF (FROM MANUAL) = 577 GPD PROVIDE > 550 GPD REQUIRED

NO PRODUCT SUBSTITUTIONS WILL BE PERMITTED WITHOUT WRITTEN AUTHORIZATION FROM THE DESIGN ENGINEER AND THE LOCAL APPROVING AGENT. CHANGE IN SYSTEM PRODUCT MAY BE SUBJECT TO REDESIGN.

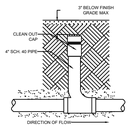
CONTRACTOR NOTES / GENERAL NOTES:

1. ALL CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION SANITARY CODE, TITLE 5, AND LOCAL MUNICIPAL BOARD OF HEALTH CODES, AND REGULATIONS
2. THE CONTRACTOR IS RESPONSIBLE TO CONTACT THE BOARD OF HEALTH AGENT AND THE DESIGN ENGINEER WITHIN A TIMELY MANNER TO ALLOW FOR INSPECTIONS OF ALL CONSTRUCTION PHASES; INCLUDING BUT NOT LIMITED, TO OBSERVATION OF THE OPEN HOLE PRIOR TO THE PLACEMENT OF FILL MATERIAL AND THE COMPLETION OF THE SYSTEM PRIOR TO FINAL COVER.
3. THERE ARE NO KNOWN WELLS WITHIN 100 FEET OF THE PROPOSED LEACHING FIELD.
4. SEPTIC THANK SHALL BE H-10 DESIGN WITH A MINIMUM CAPACITY OF 1500 GALLONS, TWO COMPARTMENT TANK, IF VEHICLE TRAFFIC IS PRESENT USE H-20 LOADED CAPACITY TANK.
5. USE OF A DOMESTIC GARBAGE GRINDER IS PROHIBITED WITH THIS DESIGN.
6. DISTRIBUTION BOX TO BE H-10 DESIGN, IF VEHICLE TRAFFIC IS PRESENT, USE H-20 LOADING CAPACITY TANK
7. ALL DESIGN COMPONENTS SHALL BE MARKED WITH MAGNETIC MARKING TAPE OR APPROVED EQUAL PER 310 CMR 15.221 (12).
8. PER 310 CMR 15.246(2), FROM THE DATE OF INSTALLATION OF THE SOIL ABSORPTION SYSTEM UNTIL RECEIPT OF A CERTIFICATE OF COMPLIANCE FROM THE APPROVING AUTHORITY IN ACCORDANCE WITH 310 CMR 15.021, THE PERIMETER OF THE SOIL ABSORPTION SYSTEM SHALL BE STAKED AND FLAGGED TO PREVENT THE USE OF SUCH AREA FOR ALL ACTIVITIES WHICH MIGHT DAMAGE THE SOIL ABSORPTION SYSTEM. SUCH FLAGGING IS INTENDED TO PREVENT HEAVY EQUIPMENT FROM COMPROMISING THE SYSTEM.
9. LOCATION OF UTILITIES IS APPROXIMATE AND CONTRACTORS SHALL NOTIFY DIGSAFE, (811) AT LEAST 72 HOURS PRIOR TO THE ONSET OF CONSTRUCTION TO HAVE ALL EXISTING UTILITIES LOCATED AND CLEARLY MARKED.
10. UNSUITABLE SOIL AS INDICATED ON THE CONTRACT PLANS, SUCH AS TOPSOIL, SUBSOIL, AND OTHER IMPERVIOUS MATERIALS SHALL BE REMOVED AND REPLACED WITH CLEAN GRANULAR SAND, FREE FROM ORGANIC MATTER AND OTHER DELETERIOUS SUBSTANCES GRADE AS FOLLOWS:
    10.1. NO MATERIAL LARGER THAN 2 INCHES.
    10.2. UP TO 45% BY WEIGHT MAY BE RETAINED ON A #4 SIEVE.
    10.3. OF THE FRACTION PASSING THE #4 SIEVE, THE FOLLOWING CRITERIA APPLY:

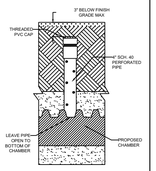
SIEVE SIZE	EFFECTIVE PARTICLE SIZE	% THAT MUST PASS SIEVE
#4	4.75 mm	100%
#50	0.30 mm	10% - 100%
#100	0.15 mm	0% - 20%
#200	0.075 mm	0% - 5%

    10.4. A SIEVE ANALYSIS OF THE MATERIAL SHALL BE PERFORMED TO DETERMINE THAT IT MEETS THE GRADATION REQUIREMENTS NOTED ABOVE. THE INSTALLER SHALL PROVIDE A COPY OF THE SIEVE ANALYSIS RESULTS TO THE DESIGN ENGINEER.
11. ALL PIPING COMPONENTS IN THIS PROPOSED SYSTEM SHALL BE SOLID SCHEDULE 40 PVC, PIPE SIZE INSTALLED IN ACCORDANCE WITH PLANS. PIPING SHALL BE SOLVENT WELDED WITH APPROPRIATE GLUE.
12. SEPTIC SYSTEM OWNER SHALL HAVE THE SEPTIC TANK AND OUTLET FILTER INSPECTED ANNUALLY AND CLEANED AND PUMPED AS NECESSARY.
13. DESIGN ENGINEER ASSUMES NO LIABILITY FOR DAMAGES AS A RESULT OF FAULTY CONSTRUCTION OR ANY DEVIATION OF ALIGNMENT AND GRADE SPECIFIED HEREIN WITHOUT PRIOR WRITTEN NOTIFICATION AND WRITTEN APPROVAL FROM THE DESIGN ENGINEER.
14. SEPTIC TANK SHALL HAVE A ZABEL A1800 FILTER OR APPROVED EQUIVALENT INSTALLED IN OUTLET TEE.
15. TOPOGRAPHIC INFORMATION TAKEN FROM FIELD SURVEY BY OAKHILL ENGINEERING ON FEBRUARY 2020, THIS IS AN EXISTING CONDITIONS SURVEY AND DOES NOT CONSTITUE AS A PROPERTY BOUNDS SURVEY.
16. CONTRACTOR TO PERFORM DUE DILIGENCE ON LOCATING BURIED UTILITIES, BURIED STRUCTURES, OVERHEAD WIRES, AND OBSTRUCTIONS. CONTRACTOR SHALL FOLLOW ALL OSHA, LOCAL, AND STATE REGULATIONS.
17. CONTRACTOR SHALL PROPERLY GRADE SITE TO PREVENT WATER SHEDDING FROM SEPTIC FIELD, STRUCTURES, AND NEIGHBORING PROPERTIES.
18. NO WETLANDS FOUND WITHIN 100 FT OF ANY GROUND DISTURBANCE.
19. NO VEHICULAR OR CONSTRUCTION EQUIPMENT SHALL BE ALLOWED ON THE SEPTIC SYSTEM

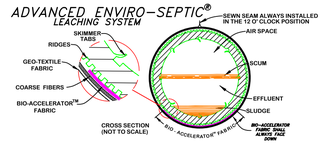
CLEANOUT

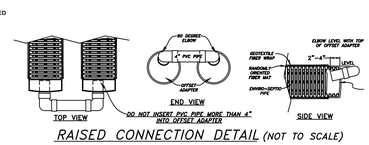


INSPECTION PORT



SCALE: NOT TO SCALE

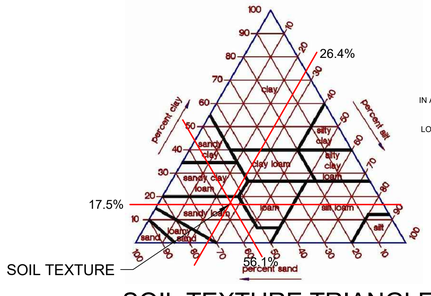




RAISED CONNECTION DETAIL (NOT TO SCALE)

ADVANCED ENVIRO-SEPTIC PIPE

NOT TO SCALE



SOIL TEXTURE TRIANGLE

SOIL SIEVE ANALYSIS RESULTS

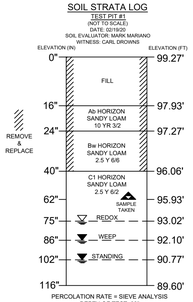
ANALYSIS PERFORMED BY:
SW COLE ENGINEERING CORP.

DATE OF REPORT: 02/26/2020
JOB NO: INST. 19-0144
% SAND = 56.1 %
% SILT = 26.4 %
% CLAY = 17.5 %

IN ACCORDANCE WITH 310 CMR 15.243:
TYPE OF SOIL CLASSES:

LOAMY SAND / SANDY LOAM: CLASS III
LOADING USE: 30 MPI

SOIL STRATA LOG



PERCOLATION RATE = SIEVE ANALYSIS
DEPTH OF TEST: 62"
H20 WEEPING: 86"
STANDING: 102"
LANDFORM: MORAINE
PARENT MATERIAL - COURSE LOAMY
MELT OUT TILL
ELEVATION OF REDOX: 75"
HIGH GROUND WATER: 75"
SAMPLE TAKEN: 62"

I CERTIFY THAT I AM CURRENTLY APPROVED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION IN PURSUANT TO 310 CMR 15.017 TO CONDUCT SOIL EVALUATIONS AND THAT THE ABOVE ANALYSIS HAS BEEN PERFORMED BY ME CONSISTENT WITH THE REQUIRED TRAINING, EXPERTISE, AND EXPERIENCE DESCRIBED IN 310 CMR 15.017. I FURTHER CERTIFY THAT THE RESULTS OF MY SOIL EVALUATION, AS INDICATED ON THE ATTACHED SOIL EVALUATION FORM, ARE ACCURATE AND IN ACCORDANCE WITH 310 CMR 15.100 THROUGH 15.107.

N

SCALE: 1" = 20'

0" 1" 2"
0' 20' 40'

LOCAL UPGRADE APPROVALS REQUIRED

1. 310 CMR 15.405(1)(i) - SIEVE ANALYSIS IN LIEU OF PERCOLATION TEST.

OAKHILL ENGINEERING

LEGEND

- ADJUSTED WATER TABLE
- OBSERVED WATER TABLE
- TEST PIT
- 105 EXISTING GRADE
- 105 PROPOSED GRADE
- GAS LINE
- WATER LINE
- FENCE LINE
- UE UNDERGROUND ELECTRIC
- UT UNDERGROUND TELECOM
- OHE OVERHEAD ELECTRICAL
- UTILITY POLE
- HYDRANT
- BURIED VALVE

APPLICANT:
DENNIS HOSFORD
117 PINE STREET
REHOBOTH, MA 02769

OWNER:
DENNIS HOSFORD
117 PINE STREET
REHOBOTH, MA 02769

REPAIR OF SUBSURFACE SANITARY SEWERAGE DISPOSAL SYSTEM

117 PINE STREET
REHOBOTH, MA 02769
Map: 043
Lot: 012A

OAKHILL ENGINEERING LLC
75 OAK HILL AVE; 2ND FL
SEEKONK, MA 02771

401-574-0871
MARK4026@GMAIL.COM

SHEET NUMBER: C-1
SCALE = 1" = 20'
DATE: 03/09/20

DRAWN BY: MPM
CHECKED BY: MPM

ENGINEER STAMP:

COMMONWEALTH OF MASSACHUSETTS
MARK P. MARIANO
CIVIL
No. 51945
REGISTERED PROFESSIONAL ENGINEER