CONSTRUCTION INSPECTION

CONSTRUCTION OF SYSTEM SHALL BE INSPECTED AT IMPORTANT POINTS BY DESIGNER. THE FOLLOWING INSPECTIONS ARE REQUIRED:
1. INSPECTION OF PREPARED MOUND AREA BEFORE PLACEMENT OF MOUND SAND.
2. COMPLETED PRESBY SYSTEM BEFORE COVERING WITH REMAINING 3" OF SYSTEM SAND.
3. SEPTIC TANK, PUMP STATION AND SEWER LINES BEFORE BACKFILL. PUMP TO D-BOX TO BE TESTED.
4. COMPLETED SYSTEM, BACKFILLED, SEEDED AND MULCHED. CONTRACTOR TO DELIVER LETTER TO DESIGNER CERTIFYING THAT THE WASTEWATER SYSTEM HAS BEEN INSTALLED PER PLAN AND SPEC, STATING ANY DEVIATIONS. SAND GRADATIONS TO BE DELIVERED TO DESIGNER IN WRITING.
DESIGNER TO PROVIDE CERTIFICATION LETTER TO OWNER, FOR RECORDING IN THE TOWN LAND RECORDS, UPON COMPLETION, PER PERMIT CONDITIONS.

CONSTRUCTION NOTES

1. THIS PLAN IS NOT A BOUNDARY SURVEY. PROPERTY BOUNDARIES SHOWN ARE AS DEPICTED BY OWNER AND THE ENVIRONMENTAL INTEREST LOCATOR.
2. ELEVATION DATUM WAS ASSUMED. A BENCH MARK NEAR THE MOUND SYSTEM IS SHOWN ON THE PLAN. DO NOT DISTURB THE BENCH MARK OR PROPERTY CORNER PINS.
3. REASON FOR THIS DESIGN: NEW CONSTRUCTION
4. THIS PLAN IS FOR THE PURPOSE OF WATER AND WASTE WATER PERMITTING. USE OF THE PLAN FOR ANY OTHER PURPOSE IS NOT INTENDED NOR ADVISED. IT IS IMPORTANT THAT ADDITIONAL DESIGN BE COORDINATED WITH PROVISIONS OF THE SEPTIC PERMIT TO INSURE COMPLIANCE WITH THAT PERMIT.
5. EROSION CONTROL PROCEDURES TO BE IMPLEMENTED IN CONFORMANCE WITH THE BEST PRACTICE SOIL EROSION AND SEDIMENT CONTROL. VEGETATION TO BE RE-ESTABLISHED IN ALL DISTURBED AREAS AS SOON AFTER COMPLETION OF CONSTRUCTION AS POSSIBLE.

CONSTRUCTION NOTES

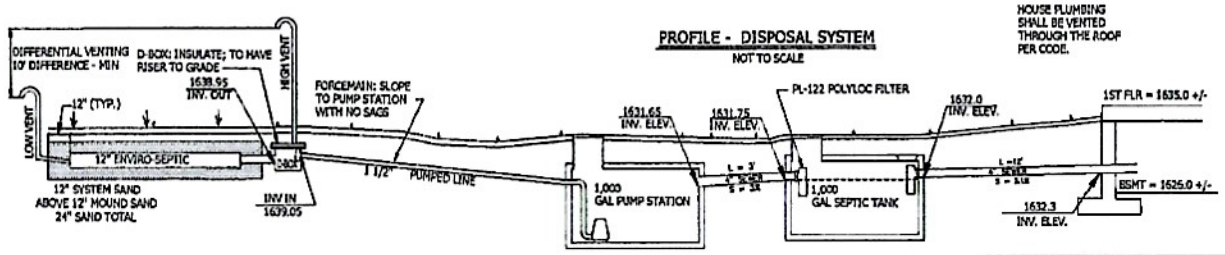
1. EXERCISE CAUTION DUE TO UNDERGROUND AND OVERHEAD ELECTRIC, TELEPHONE, DATA. CONTRACTOR RESPONSIBLE FOR LOCATION OF UNDERGROUND UTILITIES. NO KNOWN UNDERGROUND UTILITIES IN THE AREA OF THE PROPOSED DISPOSAL MOUND, SEPTIC TANK, SEWER LINE OR WELL AND WATER LINE.
2. DO NOT DRIVE VEHICLES WITHIN 10' OF MOUND, SIDES AND UPHILL, OR WITHIN 25' DOWNHILL.
3. DO NOT DRIVE OVER OR WITHIN 6' OF SEPTIC TANK.

MOUND CONSTRUCTION PROCEDURE

1. FOR THE ENTIRE FOOT PRINT OF THE MOUND, CUT ALL TREES AND BRUSH FLUSH WITH THE GROUND, REMOVE ALL WOOD/BRUSH FROM THE AREA. DO NOT REMOVE STUMPS AND ROOTS. ENTIRE FOOT PRINT OF THE MOUND TO BE PLOWED WITH EXCAVATOR TEETH.
2. EARTH MOVING EQUIPMENT SHALL NOT PASS OVER MOUND AREA UNTIL A MINIMUM OF 6' OF SAND HAS BEEN PLACED.
3. IF A SAMPLE OF SOIL FROM 9' BELOW EXISTING GRADE CAN EASILY BE ROLLED INTO A WIRE, MOISTURE CONTENT IS TOO HIGH TO PROCEED WITH MOUND CONSTRUCTION.
4. MOUND FILL TO BE PLACED ON THE PLOWED AREA WITHIN 24 HOURS OF PLOWING, AND BEFORE THE PREPARED AREA IS RAINED ON.
5. GRADE CAREFULLY UPHILL OF MOUND TO AVOID LOW SPOTS THAT COULD HOLD RUNOFF. CONSTRUCT SURFACE WATER DIVERSION DITCH UPHILL OF MOUND, IF ONE IS SHOWN IN THIS DESIGN.

PROFILE - DISPOSAL SYSTEM

NOT TO SCALE

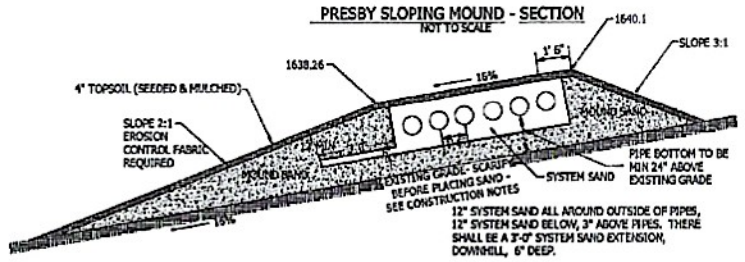


HOUSE PLUMBING SHALL BE VENTED THROUGH THE ROOF PER CODE.

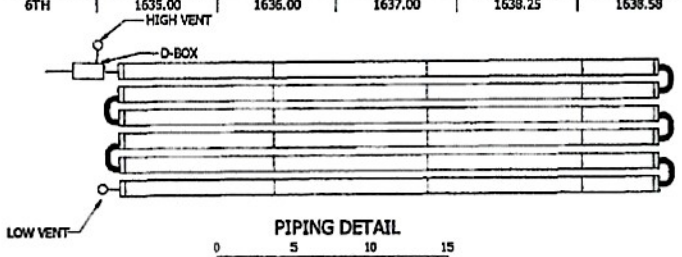
OWNER MAINTENANCE PROCEDURES:
1. CLEAN EFFLUENT FILTER ONCE TO TWICE PER YEAR BY HOSING IT OFF OVER THE SEPTIC TANK. ALLOWING FILTER TO PLUG WILL CAUSE BACKUPS AND STOP NECESSARY AIR VENTILATION FLOW. LACK OF VENTILATION COULD FAIL THE MOUND SYSTEM PRE-MATURELY.
2. HAVE A SEPTIC TANK PUMPING CONTRACTOR PUMP AND AND CLEAN SEPTIC TANK EVERY 3 YEARS OR WHEN SLUDGE DEPTH EXCEEDS 40% OF THE TANK DEPTH, WHICH EVER COMES FIRST.
3. NEVER INTRODUCE TOXIC WASTES, EXCESSIVE ANTI BACTERIAL AGENTS, WATER SOFTENER BACKWASH, OR EXCESSIVE VOLUMES OF WATER INTO THE SYSTEM.
4. MOUND SYSTEM SHOULD BE CHECKED ONCE PER YEAR FOR ANY WITNESS IN THE AREA BELOW THE MOUND. MOW MOUND MINIMUM ONCE PER YEAR, DO NOT ALLOW BRUSH TO GROW ON OR WITHIN 10' OF MOUND TOES.
5. CHECK GRADING FOR POSITIVE DRAINAGE. WATER SHOULD NOT PUDDLE ON OR NEAR THE MOUND.
6. CHECK LOW VENT. MAKE SURE IT IS CONNECTED TO THE SYSTEM AND THE INLET IS CLEAR.

PRESBY SLOPING MOUND - SECTION

NOT TO SCALE



System Slope 16.0%	PRESBY ENVIRO-SEPTIC ELEVATIONS				Existing Slope 16.0%
	EXISTING GRADE	BOT. SYS. SAND	BOT. PRESBY	TOP SYS SAND	FINISH GRADE
1ST	1636.20	1637.20	1638.20	1639.45	1639.78
2ND	1635.96	1636.96	1637.96	1639.21	1639.54
3RD	1635.72	1636.72	1637.72	1638.97	1639.30
4TH	1635.48	1636.48	1637.48	1638.73	1639.06
5TH	1635.24	1636.24	1637.24	1638.49	1638.82
6TH	1635.00	1636.00	1637.00	1638.25	1638.58



PIPING DETAIL

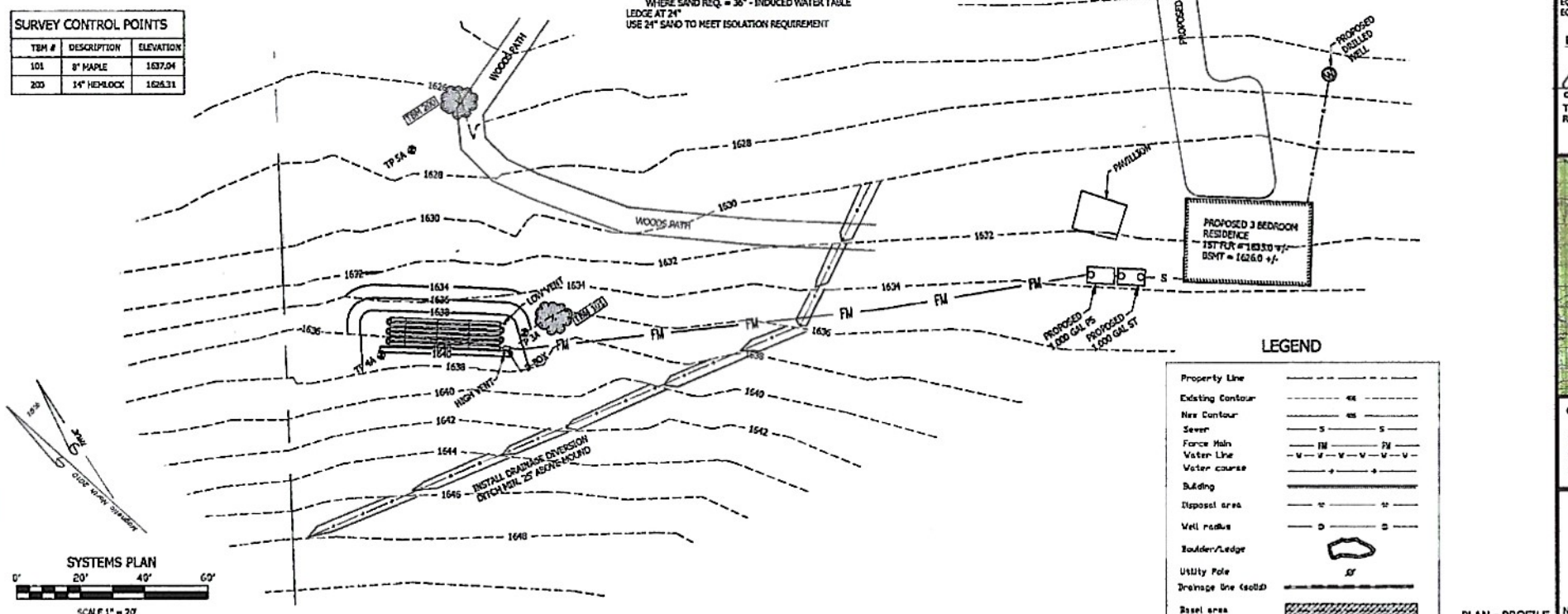
0 5 10 15

SCALE 1" = 5'

PERFORMANCED BASED SYSTEM:
DESIKTOP MOUNDING ANALYSIS
LLR = (h) * (f)
SLOPE = 16%
SOIL TYPE = FSL
LINEAR LOADING FACTOR FROM TABLE (f) = 26.2 (FSL)
LLR = 420 GAL/DAY / 35 FEET = 12 GAL/DAY/LF
WHERE LLR = DF/LF
h = (12/26.2) = 0.45 FT OR 6"
WHERE h = LLR / f
INDUCED WATER TABLE = 18" - 6" = 12"
WHERE INDUCED WATER TABLE = SHWT - h
SAND REQUIRED= 36" - 12" = 24"
WHERE SAND REQ. = 36" - INDUCED WATER TABLE
LEDGE AT 24"
USE 24" SAND TO MEET ISOLATION REQUIREMENT

SURVEY CONTROL POINTS

TBM #	DESCRIPTION	ELEVATION
101	8" MAPLE	1637.04
203	14" HEMLOCK	1626.31



LEGEND

Property Line
Existing Contour
New Contour
Sewer
Force Main
Water Line
Water course
Building
Disposal area
Well radius
Boulder/Ledge
Utility Pole
Drainage line (solid)
Basal area

SYSTEM SPECIFICATIONS

1. SEWER LINE SHALL BE 4" SDR 35 PIPE WITH GASKETS AND COMPATIBLE GASKETED FITTINGS. SCH 40 PVC WITH GLUED JOINTS MAY ALSO BE USED. SEWER LINE TO HAVE CLEANOUT EVERY 100' MIN.
FORCE MAIN TO BE SDR 26 GASKETED OR CLASS 160 MINIMUM ROLLED WATER LINE. ALL JOINTS SHALL BE THRUST RESISTANT.
2. SEPTIC TANK SHALL BE PRECAST OR PLASTIC 1,000 GAL TANK AS MANUFACTURED BY LE WEED IN HARTFORD OR EQUAL, OR EXISTING IF IT MEETS SPECS, OUTLET TO BE EQUIPPED WITH PL-122 POLYLOC OUTLET FILTER. INLET PIPE BAFFLE SHALL PENETRATE LIQUID 8". SECURE BAFFLES TO PIPES WITH STAINLESS SCREWS. ALL ACCESS HATCHES TO BE CHILD PROOF, AIRTIGHT GASKETTED COVERS AT LEAST 24" IN DIAMETER. INLET AND OUTLETS SHALL HAVE WATER PROOF PIPING CONNECTIONS. A PLASTIC TANK IS CONSIDERED AN EQUAL. CONTRACTOR TO PROTECT TANK FROM FLOATATION. CONTACT DESIGNER WITH QUESTIONS.
3. SYSTEM SAND AND MOUND SAND SHALL MEET PRESBY SPECIFICATIONS.
4. DISTRIBUTION PIPING TO BE PRESBY ENVIRO PIPE, AVAILABLE FROM LE WEED, FERGUSON, EJ PRESCOTT, AND OTHER SOURCES. ENVIRO PIPING TO BE LAID LEVEL AT GRADES SHOWN IN ELEVATION TABLE. PRESBY SYSTEM TO BE VENTED PER PRESBY MANUAL AND THIS DRAWING. HIGH VENT SHALL BE HOUSE STACK, LOW VENT INSTALLED AT END OF SYSTEM.
5. TOPSOIL TO BE LOAM WITH ROCKS NO LARGER THAN 1"
6. SEEDING AND MULCHING TO BE ADEQUATE TO ESTABLISH GRASS GROWTH AND TO PREVENT EROSION OF THE TOPSOIL SURFACE BEFORE GROWTH IS ESTABLISHED. USE OF EROSION CONTROL FABRIC IS REQUIRED ON MOUND SLOPES GREATER THAN 3:1.
7 SLOPE STABILIZATION FABRIC TO BE MIRAFI TH13C OR EQUAL. GRASS SEED TO BE CONSERVATION MIX OR EQUAL.

DESIGN CERTIFICATION

09.27.24
CHRISTOPHER C. LESTER LIC #152.0125468 DATE

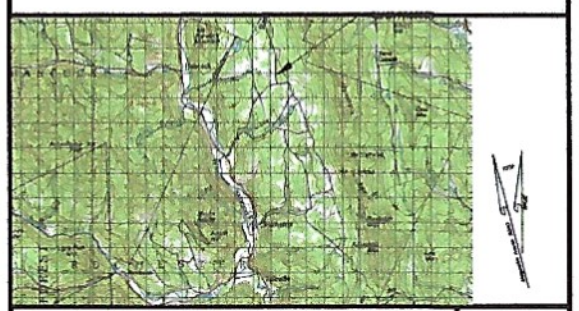
THIS DESIGN CERTIFIED PER 1-306 OF VERMONT RULES

DESIGN CRITERIA

PROPOSED 3 BEDROOM RESIDENCE
DAILY FLOW = (3 X 140) = 420 GAL/DAY
FSL = GR SOILS
USE PRESBY ENVIRO PIPING.
EXISTING SLOPE = 16.0%
SYSTEM SLOPE = 16.0%
LENGTH OF TUBES REQ = 210 TABLE A
USE 6 LINES 35' LONG = 210 LF
SQUARE FEET SAND REQ. = 420 SQ FT
BED AREA USED = 37 X 13.5 = 499.5 SQ FT (OK)
USE 1,000 GAL SEPTIC TANK
USE 1,000 GAL PUMP TANK
NO WATER SOFTENER SHALL BE CONNECTED TO THIS DISPOSAL SYSTEM.
A KITCHEN SINK GARBAGE GRINDER IS NOT ALLOWED ON THIS SYSTEM.

CONSTRUCTION CERTIFICATION

1-311 (b) SUBSEQUENT TO THE SUBSTANTIAL COMPLETION OF A POTABLE WATER AND WASTEWATER DISPOSAL SYSTEM AND PRIOR TO THE USE AND OPERATION.. INSTALLER OR DESIGNER.... TO SUBMIT A SIGNED DATED INSTALLATION CERTIFICATE STATING:
"I HEREBY CERTIFY THAT IN THE EXERCISE OF MY REASONABLE PROFESSIONAL JUDGEMENT THE INSTALLATION-RELATED INFORMATION SUBMITTED IS TRUE AND CORRECT AND THAT THE POTABLE WATER SUPPLY AND WASTEWATER SYSTEM WERE INSTALLED IN ACCORDANCE WITH THE PERMITTED DESIGN (OR RECORD DRAWINGS) AND ALL PERMIT CONDITIONS."
(I) SEE PERMIT FOR INSPECTION REQUIRED - BY DESIGNER OR INSTALLER. DESIGNER REQUIRED IF RECORD DRAWINGS ARE NEEDED.
SEE "CONSTRUCTION INSPECTION" SECTION, THIS SHEET. PROGRESS INSPECTIONS REQUIRED, BY PERMIT.



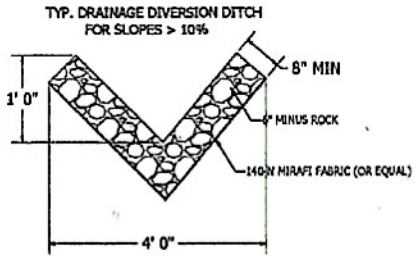
OWNER: RONALD & LESLIE BLAIR

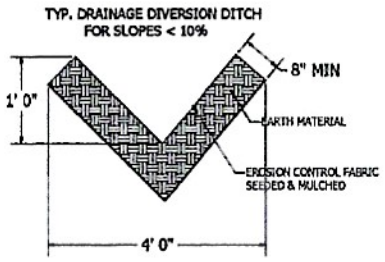
TAX ID: NH201 BOOK/PAGE: N/A
ADDRESS: 240 TOWN LINE RD
CITY: ROCHESTER
DATE: SEPTEMBER 27 2024

REVISIONS:
1. _____
2. _____
3. _____
4. _____
5. _____

PLAN - PROFILE
SHEET 1 OF 3

HOGG HILL
DESIGN, L.L.C.
PO BOX 325
BETHEL VT 05032
chris@hogghilldesign.com 802-431-0502
NEW HAMPSHIRE DESIGNERS LICENSE #1674
VERMONT DESIGNERS LICENSE #152.0125468





VT Mound Fill Sand Specification:

SHALL BE ONE OF THE THREE FOLLOWING SPECS:

	SIEVE #	PERCENT PASS BY WEIGHT
(1)	3/8"	85-100
	40	25-75
	60	0-30
	100	0-10
	200	0-5
(2)		
	4	95-100
	8	80-100
	16	50-85
	30	25-60
	50	10-30
	100	2-10
(3)		
	3/8	85-100
	40	30-50
	200	0-5

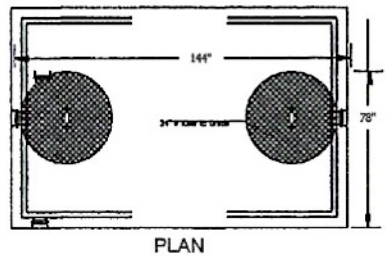
TABLE 9-9
Mound Fill Material #2

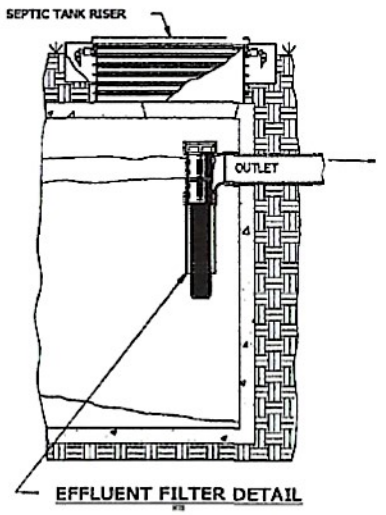
Sieve Number	Percent Passing
4	95-100
8	80-100
16	50-85
30	25-60
50	10-30
100	2-10

CONTRACTOR SHALL SUBMIT MOUND SAND TEST REPORTS TO DESIGNER IN WRITING FOR APPROVAL PRIOR TO PLACING ANY SAND IN MOUND AREA.

Enviro System Sand Specification:

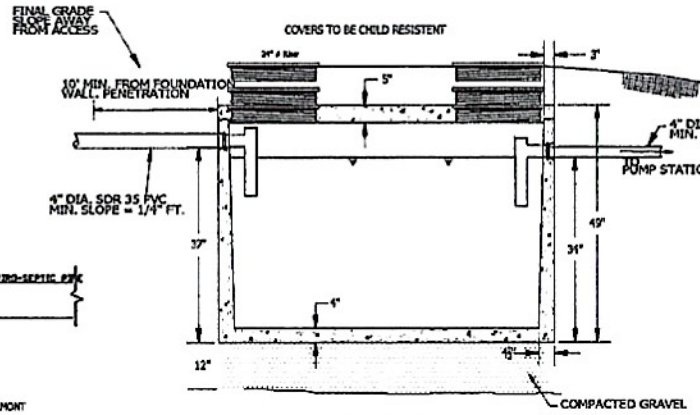
15.23 System sand Requirements for All Beds
It is critical to the proper function of Presby system that the proper amount and type of sand is used. Sand must be clean, granular and free from organic materials. Fill must meet standers set in Vermont 1-921 (g).(1) Table 9-9 fill sand, except a maximum of 3% may pass though a #200 sieve. ASTM c-33 is acceptable if no more than 3% can pass though a #200 sieve.





EFFLUENT FILTER DETAIL

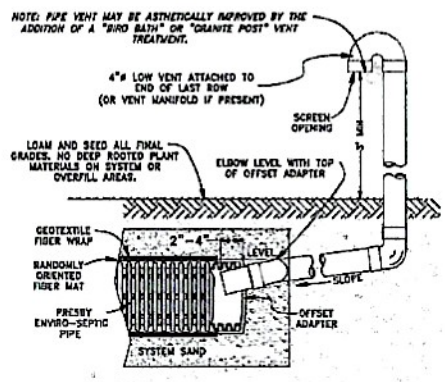
USE POLYLOK PL-122 FILTER (OR EQUAL) CLEAN FILTER ONCE PER YEAR BY HOSING OFF OVER SEPTIC TANK ACCESS COVER. PUMP SEPTIC TANK A MINIMUM OF ONCE PER 3 YEARS. MORE OFTEN FOR HEAVY USE. THIS SEPTIC TANK IS NOT SIZED FOR A GARBAGE DISPOSAL.



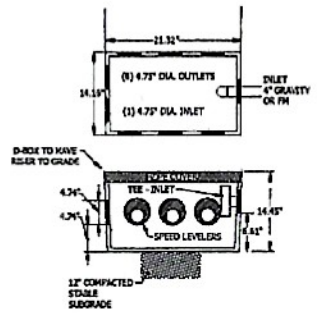
SECTION

1,000 GAL PRECAST SEPTIC TANK DETAIL

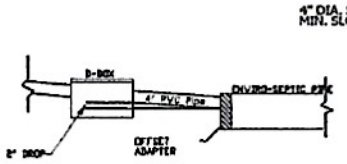
NOTE: DO NOT DRIVE VEHICLES WITHIN 6' OF A SEPTIC TANK UNLESS IT IS CONSTRUCTED WITH AN H-20 RATING.



LOW VENT DETAIL

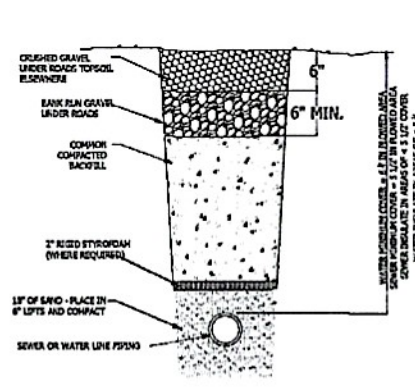


HDPE D-BOX - TUFF TITE MODEL 9HD2
N.T.S.

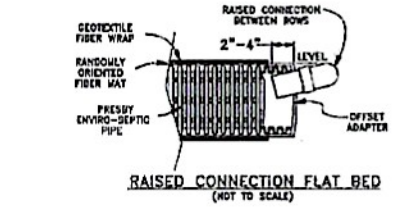


PRESBY SYSTEM NOTES:

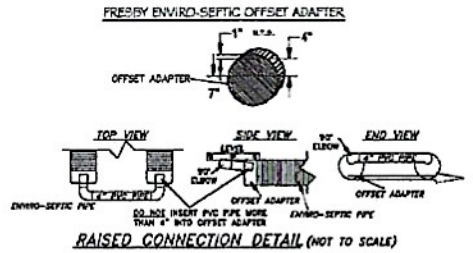
1) SYSTEM TO BE INSTALLED IN ACCORDANCE WITH ENVIRO-SEPTIC WASTEWATER TREATMENT SYSTEM VERMONT DESIGN AND INSTALLATION MANUAL, STATE AND LOCAL REGULATIONS. INSTALLER SHALL BE CERTIFIED BY PRESBY ENVIRONMENTAL AS AN INSTALLER. FOR PRODUCT INFORMATION OR THE NEAREST DEALER CONTACT PRESBY ENVIRONMENTAL, INC. 143 AIRPORT ROAD, WHITEFIELD, NH 03598 PHONE 1-603-471-3298 -WWW.PRESBYENVIRONMENTAL.COM
2) DO NOT INSTALL SYSTEM ON EXTREMELY WET OR FROZEN GROUND OR LEAVE SYSTEM UNCOVERED FOR EXTENDED PERIODS OF TIME.
3) NO FLOOR DRAINS, HOT TUBS, WATER SOFTENERS, SHALL BE INCORPORATED INTO THIS SYSTEM WITHOUT CONSULTING DESIGNER.
4) NO SOLIDS SHOULD BE DISCHARGED INTO THE PRESBY SYSTEM. ALL SOLIDS TO BE REMOVED AT SEPTIC TANK. CLEAN TANK FILTER TO MAINTAIN PRESBY SYSTEM VENTILATION AND AVOID BACKUPS IN THE SEPTIC TANK.
5) CHECK SURFACE GRADING PERIODICALLY TO INSURE DIVERSION OF SURFACE RUNOFF AND AVOID PONDING NEAR HOUSE.



SEWER & WATER LINE TRENCH DETAILS
N.T.S.



RAISED CONNECTION FLAT BED
(NOT TO SCALE)



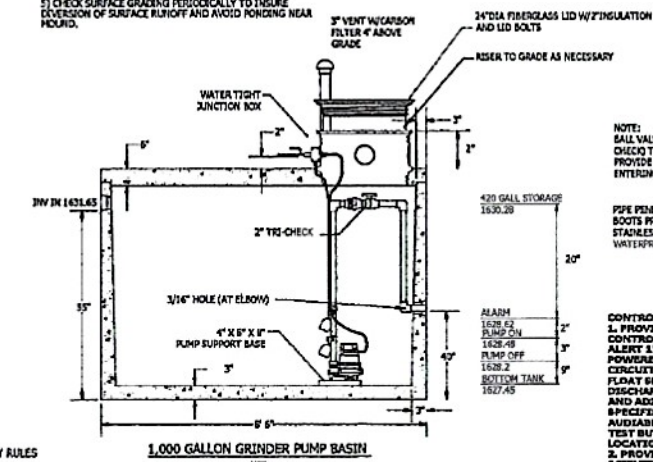
RAISED CONNECTION DETAIL (NOT TO SCALE)

PUMP DESIGN
3 BEDROOM RESIDENCE - 420 GPD
PUMP REQUIREMENTS:
PROVIDE ZOELLER PUMP MODEL 152
CAPABLE OF 15 GPM @ 33 FT HEAD (115 VOLT)
SYSTEM REQUIRES 15 GPM @ 27.23 FT HEAD

HEADLOSS:
ELEVATION
D-BOX= 1639.05
PUMP OFF = 1628.2
10.85

FRICTION:
185 LF 1 1/2" FM @ 15 GPM = 4'
FITTINGS = 3'
ADD RESIDUAL HEAD = 3'
TDH 10.85 + 2 (3) + 4 = 20.85'

VOLUME OF FORCE MAIN (100% DRAINBACK)
185 * (1.5/12/2*2*PI)*7.48 GAL/CF = 17
MINIMUM NUMBER OF DOSES PER DAY = 6 PER PRESBY RULES
DAILY FLOW = 420 GAL MAX DOSE = 70 GALLONS
USE 63 GAL - 17 GAL DRAINBACK = 46 GAL
420/46 = 9.13 DOSES/DAY



1,000 GALLON GRINDER PUMP BASIN
NTS

TANK DIMENSIONS (INSIDE)
LENGTH : 96"
WIDTH : 52"
HEIGHT : 52" (INSIDE TO INLET)

BOTTOM AREA = 34.5 S.F.
VOLUME : 252 GAL/VF

NOTE:
BALL VALVE, UNION AND CHECK VALVE (TRI CHECK) TO BE AS HIGH AS POSSIBLE TO PROVIDE ACCESSIBILITY WITHOUT ENTERING THE TANK.

PIPE PENETRATIONS TO CAST IN RUBBER BOOTS PROVIDED WITH PRE-CAST. TIGHTEN STAINLESS STEEL BAND TO MAKE WATERPROOF CONNECTION

CONTROLS:
1. PROVIDE ALARM FLOAT, CABLE AND CONTROL BOX BY SJE RHOMBUS MODEL "TANK ALERT 1" OR EQUAL. ALARM SHALL BE POWERED BY A DEDICATED ELECTRICAL CIRCUIT. DO NOT CONNECT TO PUMP CIRCUIT. FLOAT SHALL BE ATTACHED TO PUMP DISCHARGE PIPE OR SEPARATE FLOAT TREE AND ADJUSTED TO ACTIVATE ALARM AT SPECIFIED LEVEL. ALARM BOX SHALL HAVE AN AUDIABLE ALARM, RED WARNING LIGHT AND TEST BUTTON. MOUNT CONTROL BOX IN A DRY LOCATION.
2. PROVIDE MODEL "SOLO-FLOAT" BY ANCHOR SCIENTIFIC CONTROL FLOAT AND BOX FOR PUMP CONTROL. FLOAT SHALL BE ATTACHED TO PUMP DISCHARGE PIPE OR SEPARATE FLOAT TREE AND ADJUSTED TO TURN PUMP ON AND OFF AT SPECIFIED LEVELS.

DESIGN CERTIFICATION

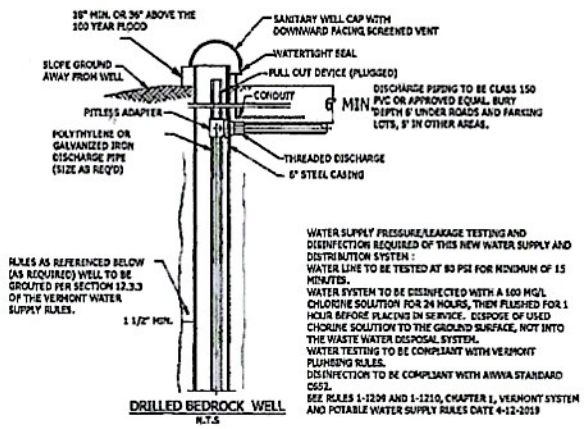
CHRISTOPHER C. LESTER LIC #152.0125468 — 09-27-24 DATE

THIS DESIGN CERTIFIED PER 1-306 OF VERMONT RULES

OWNER: RONALD & LESLIE BLAIR
TAX ID: NH201 BOOK/PAGE: N/A
ADDRESS: 240 TOWN LINE RD
CITY: ROCHESTER
DATE: SEPTEMBER 27 2024

REVISIONS:
1. _____
2. _____
3. _____
4. _____
5. _____

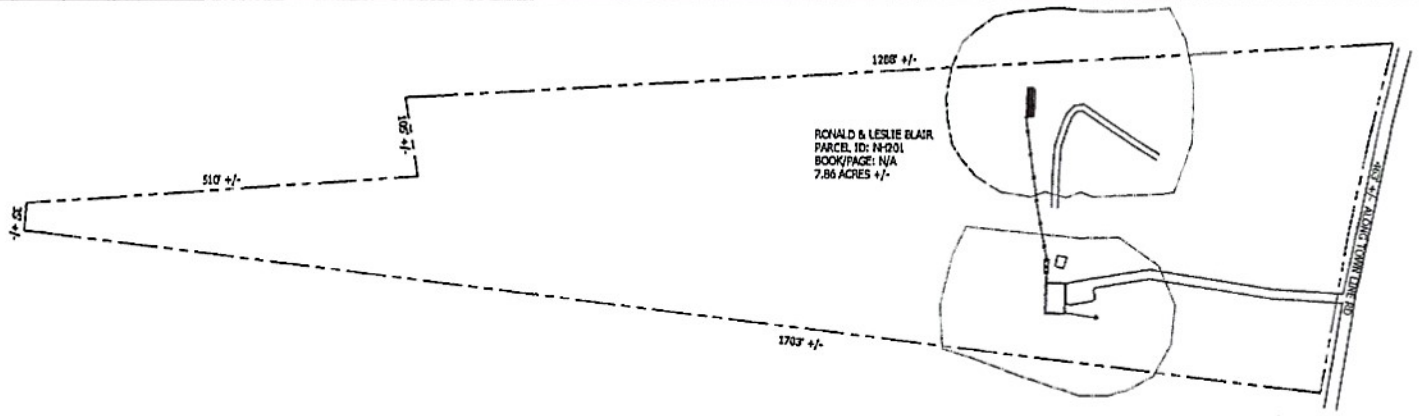
HOGG HILL
DESIGN, L.L.C.
NEW HAMPSHIRE DESIGNERS LICENSE #1674
PO BOX 535
BETHEL, VT 05032
chris@hogghilldesign.com 802-431-0102
VERMONT DESIGNERS LICENSE #152.0125468



DRILLED BEDROCK WELL
N.T.S

WATER SUPPLY PRESSURE/LEAKAGE TESTING AND DISINFECTION REQUIRED OF THIS NEW WATER SUPPLY AND DISTRIBUTION SYSTEM :
WATER LINE TO BE TESTED AT 80 PSI FOR MINIMUM OF 15 MINUTES.
WATER SYSTEM TO BE DISINFECTED WITH A 100 MG/L CHLORINE SOLUTION FOR 24 HOURS, THEN FLUSHED FOR 1 HOUR BEFORE PLACING IN SERVICE. DISPOSE OF USED CHORINE SOLUTION TO THE GROUND SURFACE, NOT INTO THE WASTE WATER DISPOSAL SYSTEM.
WATER TESTING TO BE COMPLIANT WITH VERMONT PLUMBING RULES.
DISINFECTION TO BE COMPLIANT WITH AWWA STANDARD C652.
SEE RULES 1-1209 AND 1-1210, CHAPTER 1, VERMONT SYSTEM AND POTABLE WATER SUPPLY RULES DATE 4-12-2019

SUBJECT TO MIN. CONSTRUCTION STANDARDS AS SET FORTH IN THE VERMONT WATER SUPPLY RULES CHAPTER 1 PART 11 & 12 (EFFECTIVE 11/23).



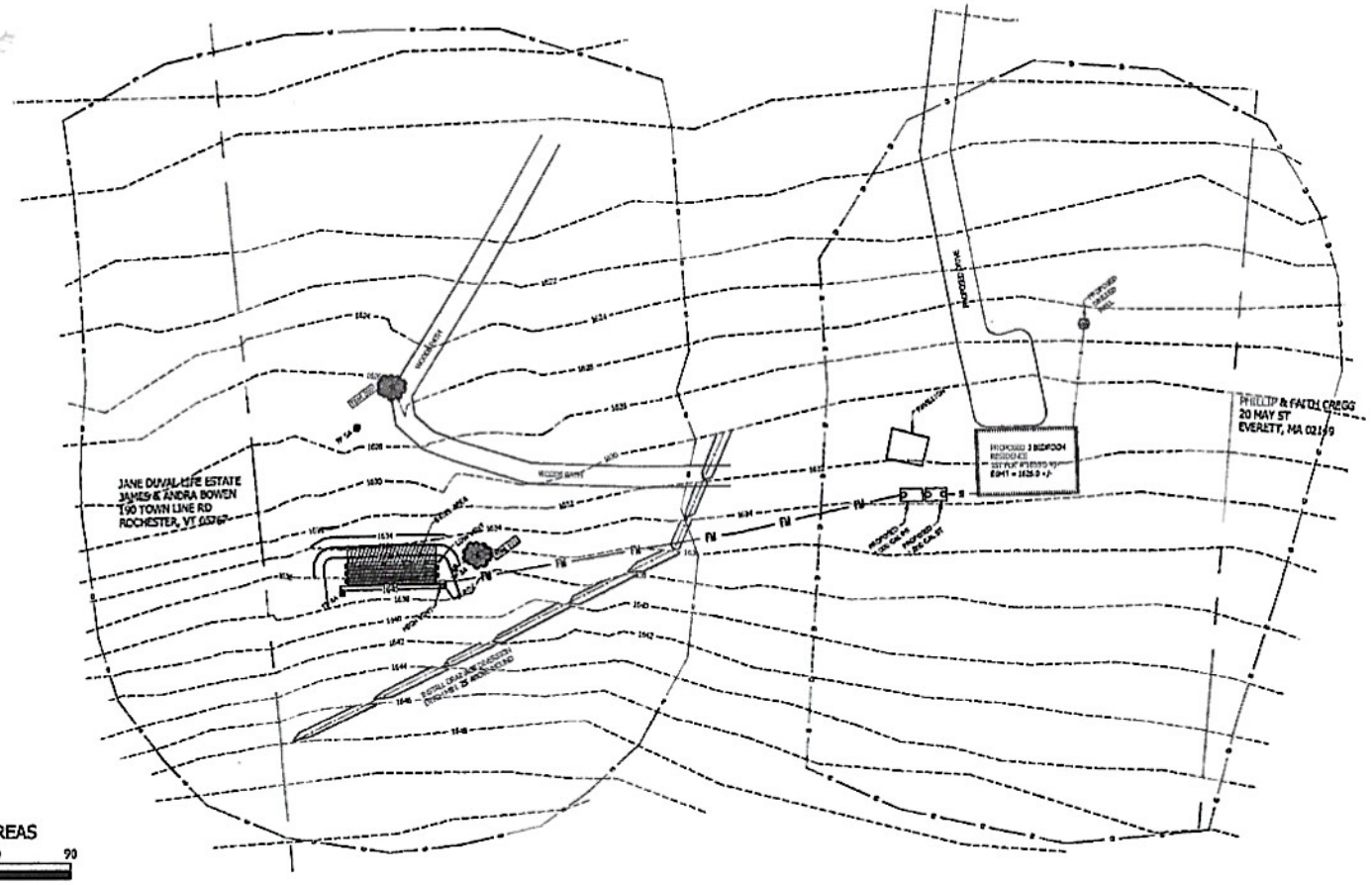
PROPERTY OVERVIEW

0 100 200 300

SCALE 1" = 100'

PROTECTIVE AREAS:
A WELL CANNOT BE DRILLED IN A WASTE WATER AFFECTED AREA.
A WASTE WATER DISPERSAL AREA CANNOT BE LOCATED IN A WELL PROTECTIVE AREA. EXCEPT BY VARIANCE.

PLAN:
DO NOT USE THIS PLAN FOR BOUNDARY LOCATION. CONTACT AN LLS OR USE A SURVEY PLAT. THIS PLAN IS NOT A PROPERTY SURVEY.



PROTECTIVE AREAS

0 30 60 90

SCALE 1" = 30'

LEGEND

Property Line	
Existing Contour	
New Contour	
Sewer	
Force Main	
Water Line	
Water course	
Building	
Disposal area	
Well radius	
Boulder/Ledge	
Utility Pole	
Drainage line (solid)	
Basal area	

DESIGN CERTIFICATION

CHRISTOPHER C. LEISTER LIC #152.0125468 — 09-27-24 DATE

THIS DESIGN CERTIFIED PER 1-306 OF VERMONT RULES

OWNER: RONALD & LESLIE BLAIR

TAX ID: NH201 BOOK/PAGE: N/A
ADDRESS: 240 TOWN LINE RD
CITY: ROCHESTER
DATE: SEPTEMBER 27 2024

REVISIONS:
1.
2.
3.
4.
5.

HOGG HILL
DESIGN, L.L.C.

NEW HAMPSHIRE DESIGNERS LICENSE #1674

PO BOX 625
BETHEL VT 05032
chris@hogghilldesign.com 802-431-0502

VERMONT DESIGNERS LICENSE #152.0125468

PROTECTIVE AREAS - OVERVIEW SHEET 3 OF 3