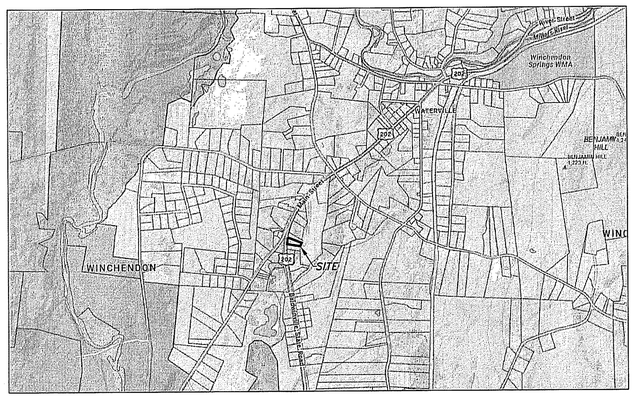
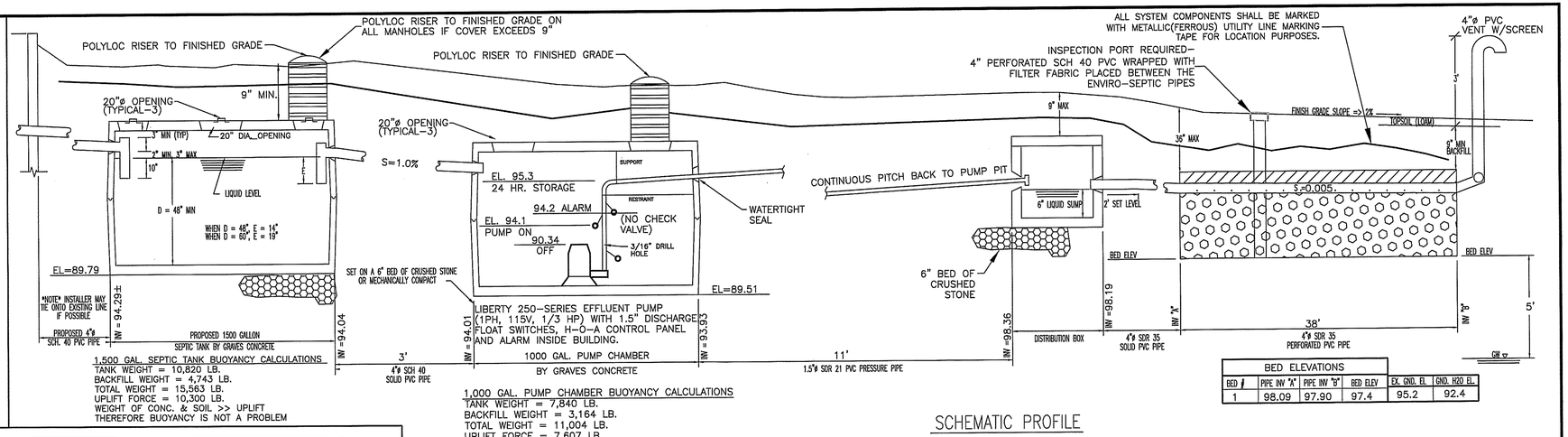


LOCUS NTS



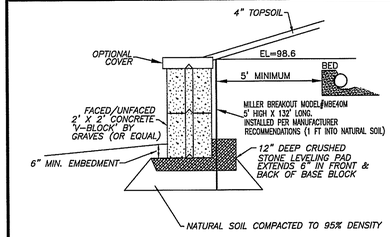
BED ELEVATIONS					
BED #	PIPE INV "A"	PIPE INV "B"	BED ELEV	EX. GND. EL	GND. H20 EL.
1	98.09	97.90	97.4	95.2	92.4

SCHEMATIC PROFILE

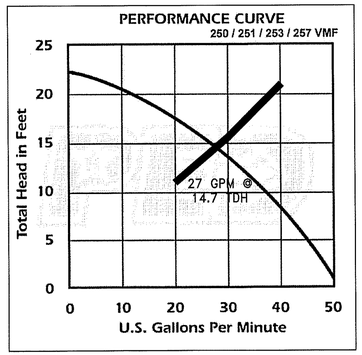
N.T.S.

1,500 GAL. SEPTIC TANK BUOYANCY CALCULATIONS
TANK WEIGHT = 10,820 LB.
BACKFILL WEIGHT = 4,743 LB.
TOTAL WEIGHT = 15,563 LB.
UPLIFT FORCE = 10,300 LB.
WEIGHT OF CONC. & SOIL >> UPLIFT
THEREFORE BUOYANCY IS NOT A PROBLEM

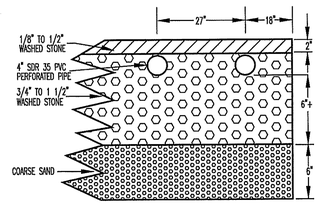
1,000 GAL. PUMP CHAMBER BUOYANCY CALCULATIONS
TANK WEIGHT = 7,840 LB.
BACKFILL WEIGHT = 3,164 LB.
TOTAL WEIGHT = 11,004 LB.
UPLIFT FORCE = 7,607 LB.
WEIGHT OF CONC. & SOIL >> UPLIFT
THEREFORE BUOYANCY IS NOT A PROBLEM



CONCRETE BLOCK BREAKOUT WALL DETAIL



PUMP CURVE

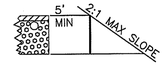


TYPICAL LEACH BED SECTION

N.T.S.

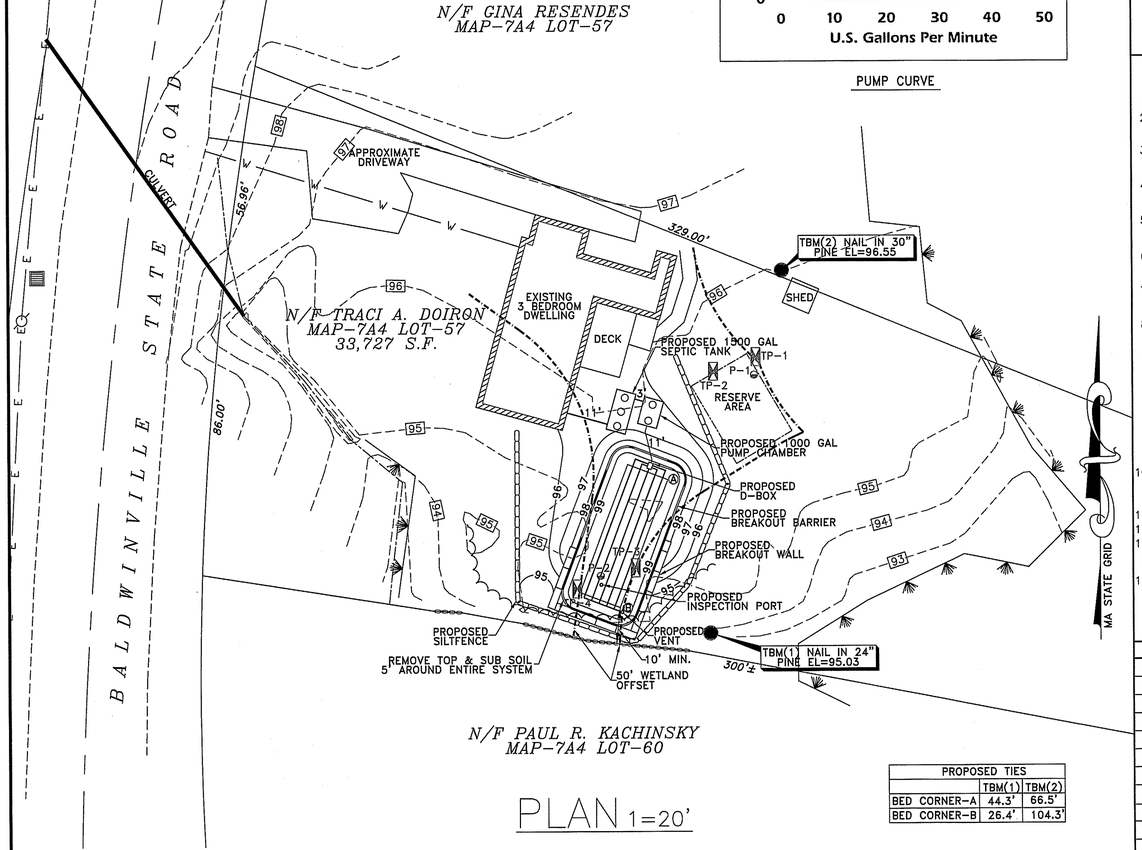
DESIGN CRITERIA

1. Estimated Hydraulic Loading
   3 bedrooms at 110 gals/day/bedroom = 330 gpd
   Garbage disposal shall not be allowed with this system.
2. Prop. Septic tank size = 1500 gallons.
   Pump chamber size = 1000 gallons.
3. Leaching Area Design Criteria
   Percolation Rate = ≤ 2 mpi
   Soil Class Type = I (SAND)
   Allowable Loading Rate = 0.74 gpd/sf
   Required Leaching Area = 330 gpd / 0.74 gpd/sf = 446 sf
   Leaching Area Provided = 1 bed X 38 ft bed length X 12 ft bed width = 456 sf
4. Breakout
   Breakout Elevation = 98.6
   Breakout Distance = 15 ft (5' w/ barrier)
   Distance Provided = 5 ft



LEGEND

- 242 — EXISTING CONTOUR
- 242 — PROPOSED CONTOUR
- TP-1 — DEEP HOLE TEST PIT
- PT-1 — PERCOLATION TEST
- + 238.6 — SPOT ELEVATION
- W — WATER SERVICE



PLAN 1=20'

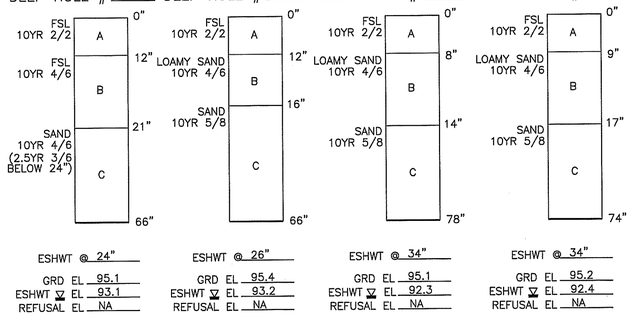
PROPOSED TIES		
	TBM(1)	TBM(2)
BED CORNER-A	44.3'	66.5'
BED CORNER-B	26.4'	104.3'

GENERAL NOTES

1. Unless otherwise noted, property lines shown are compiled from existing plans and deeds of record.
2. Underground utility data is plotted from visible field locations and available records. The locations are approximate only and verification must be made in the field.
3. All construction to conform to 310 CMR 15.000, "The State Environmental Code, Title 5" and the Board of Health requirements for the Town of Winchendon.
4. The contractor shall install the system exactly as shown on this plan. If changes are necessary, the contractor must contact the Engineer in advance.
5. Heavy machinery shall not be permitted to pass over the leaching area and the contractor shall stake and flag the soil absorption/leaching area perimeter upon completion.
6. All piping shall be polyvinyl chloride (PVC) pipe per ASTM D1785 for SCH. 40 and ASTM D3034 for SDR 35 where indicated on the profile, unless otherwise noted.
7. Pump chamber shall be a 1000 gallon reinforced concrete tank of H-10 load design (min.) and watertight conforming to all of the requirements of 310 CMR 15.221, 15.223, 15.226, 15.227, 15.228.
8. The distribution box (D-box) shall be a 5 outlet reinforced concrete box of H-10 load design (min.) with a watertight cover and conform to all the requirements of 310 CMR 15.232.
9. All topsoil, subsoil and impervious material, if any, must be excavated and removed below and 5' beyond the soil absorption system area. Fill material shall consist of a clean granular sand, free from organic matter and deleterious substances. Mixtures and layers of different classes of soil not be used. The sand fill shall not contain any material larger than 2 inches. A sieve analysis, using a #4 sieve, shall be performed on a representative sample of the fill. Up to 45% by weight of the fill sample may be retained on the #4 sieve. Sieve analyses also shall be performed on the fraction of the fill sample passing the #4 sieve, such analyses must demonstrate that the material meets or exceeds each of the following specifications: 100% passing #4 sieve; 10%-100% passing #50 sieve; 0%-20% passing #100 sieve; 0%-5% passing #200 sieve. (11/95 DEP SPEC)
10. For proper performance, septic tank should be inspected at least once a year and pumped when the top of the sludge or solids layer is within 12" or less of the bottom of the outlet tee or the bottom of the scum layer is within 2 inches of the bottom of outlet tee (every 2 or 3 years).
11. There are no wells located within 100 feet of the proposed system.
12. An RDA/NOI is required to be filed with the conservation commission for the work shown hereon.
13. Much of the back yard is occupied by old septic systems, these systems shall be removed/abandoned per 310 CMR 15.354. Leach field in location of proposed septic system shall be removed and the area excavated to the native C soil.
14. Existing dwelling listed as a 2-bedroom on town tax cards, however appears to have operated as a 3-bedroom dwelling since an addition was constructed before 1974.

SOIL TEST DATA

	DEEP HOLE TESTS	PERC TESTS
PERFORMED BY:	TREVOR FLETCHER, P.E.	TREVOR FLETCHER, P.E.
WITNESSED BY:	JAMES ABARE, B.O.H. WINCHENDON	JAMES ABARE, B.O.H. WINCHENDON
DATE:	MARCH 20, 2023	MARCH 20, 2023



PERC TEST NUMBER	DEPTH	PERC RATE	NOTES
PT-1	36"	< 2 MPI	
PT-2	34"	< 2 MPI	

NO.	DESCRIPTION	DATE	BY

COMMONWEALTH OF MASSACHUSETTS
TREVOR FLETCHER
CIVIL
NO. 57043
REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY	TWF
DRAWN BY	TWF
CHECKED BY	PFG
DATE	MARCH 29, 2023
SCALE	AS NOTED
JOB NUMBER	23130

PROPOSED SEPTIC SYSTEM EXPANSION DESIGN
12 BALDWINVILLE STATE ROAD (MAP-7A4 LOT-57)
WINCHENDON, MASSACHUSETTS
PREPARED FOR
TRACI A. DOIRON
12 BALDWINVILLE STATE ROAD; WINCHENDON, MA 01475

GRAZ Engineering, LLC
323 WEST LAKE RD.; FITZWILLIAM, NH 03447; (603) 585-6959

FIELD BOOK NO.
PAGES
SHEET 1 OF 1