Thurber, 2848 Greenbush Road, Charlotte, Site Plan Review application, January ~~2016~~ 2017

SOIL DATA

Test Pit #1

0" - 6" Topsoil
6" - 17" Light Brown Fine Sandy Loam (Mottled at 17")
17" - 48" Dark Brown Loam with Stones
Seepage at 17"

Test Pit #2

0" - 7" Topsoil
7" - 20" Brown Sandy Loam (Firm)
20" - 34" Light Brown Stoney Loam
34" - 36" Coarse Sand - Very Wet
36" - 60" Very Firm Silty Loam

Test Pit #3

0" - 7" Topsoil
7" - 24" Light Brown Sandy Loam - Firm
24" - 56" Brown Silty Loam - Very Moist (Mottled at 24")

Test Pit #4

0" - 6" Topsoil
6" - 34" Light Brown Stoney/Sandy Loam
34" - 48" Coarse Sand (Shells) - Very Wet with Seepage at 34"
48" - 60" Silty Clay - Very Wet

Test Pit #5

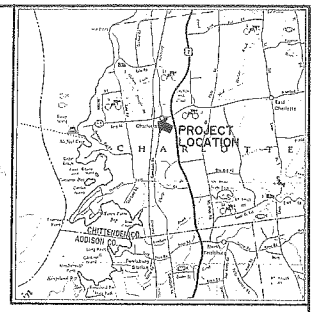
0" - 8" Topsoil
8" - 37" Light Brown Stoney Sandy Loam
37" - 60" Very Stoney Sand with Shells - Very Wet with Seepage at 40"

Test Pit #6

0" - 8" Topsoil
8" - 28" Light Brown Stoney Sandy Loam
28" - 60" Very Stoney Loam with Shells - Very Wet

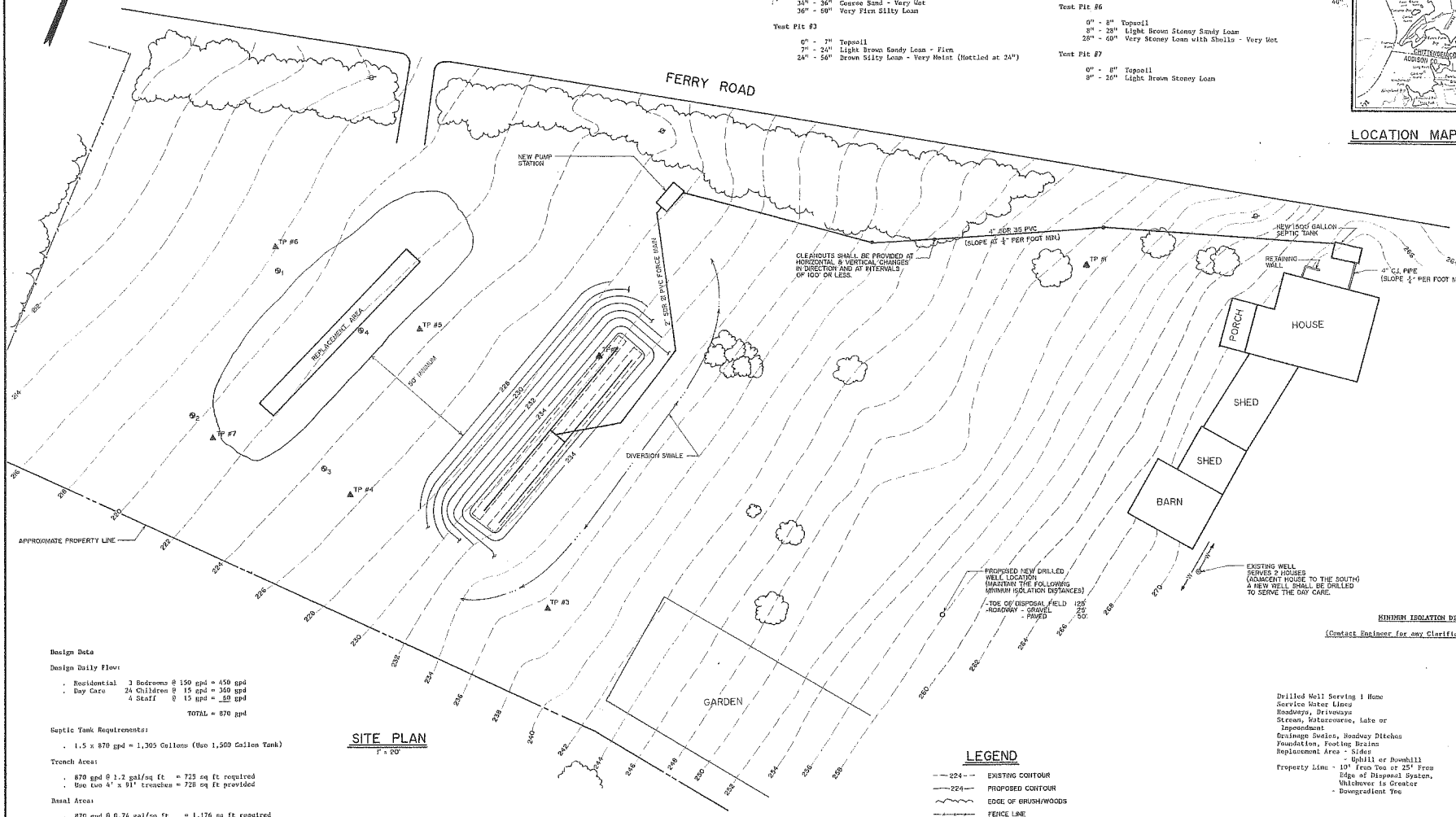
Test Pit #7

0" - 8" Topsoil
8" - 26" Light Brown Stoney Loam



LOCATION MAP:

SCALE: 1" = 9240'



SITE PLAN

1" = 20'

Design Data

Design Daily Flow:

- Residential 3 Bedrooms @ 150 gpd = 450 gpd
- Day Care 24 Children @ 15 gpd = 360 gpd
  4 Staff @ 15 gpd = 60 gpd

TOTAL = 870 gpd

Septic Tank Requirements:

- 1.5 x 870 gpd = 1,305 Gallons (Use 1,500 Gallon Tank)

Trench Area:

- 870 gpd @ 1.2 gal/sq ft = 725 sq ft required
- Use two 4' x 91' trenches = 728 sq ft provided

Basal Area:

- 870 gpd @ 0.74 gal/sq ft = 1,176 sq ft required
- Effective area of 91' x 24' = 2,184 sq ft provided

Pump Requirements:

- (26) 5/16" oriface hole @ 7' O/C (Provide 3' of Residual Head)
- 2.0 gpm/oriface x 26 = 52 gpm
- TDH - Friction = 14'
  Elevation = 13'
  Residual = 3'

  TOTAL = 30'

Percolation Test (Method A)
3/12/91
(Depth - 30"-34")

Percolation Test #1 - 8 min/inch
Percolation Test #2 - 6 min/inch
Percolation Test #3 - 7 min/inch
Percolation Test #4 - 9 min/inch

LEGEND

- 224 EXISTING CONTOUR
- 224 PROPOSED CONTOUR
- EDGE OF BRUSH/WOODS
- FENCE LINE
- POWER POLE
- PERC TEST
- TEST PIT
- DECIDUOUS TREE
- CLEANOUT

MINIMUM ISOLATION DISTANCES

(Contact Engineer for any Clarifications or Conflicts)

	HORIZONTAL DISTANCE (FT.) TOE OF MOUND	SEPTIC TANK
Drilled Well Serving 1 Home	100	50
Service Water Lines	25	25
Roadways, Driveways	10 (25 Downslope)	5
Stream, Watercourse, Lake or Impoundment	50	25
Drainage Swales, Roadway Ditches	25	
Foundation, Footing Drains	35 (75 Downslope)	10
Replacement Area - Sides	10	
- Uphill or Downhill	50	
Property Line - 10' From Toe or 25' From Edge of Disposal System, Whichever is Greater		
- Downgradient Toe	25	

Date	Ch'k'd	Revision
SAV	5/91	ADDED LOCATION OF NEW WELL
SAV	5/91	MOVED LOCATION OF SYSTEM

STATE OF VERMONT SUSAN A. VAIL NO. 5129 REGISTERED PROFESSIONAL ENGINEER

Drawn by MJW | Date APRIL, 1991
Checked by SAV | Scale 1" = 20'
Approved by ____ | Project No. 90255

THE DEERPATH SCHOOL
WASTEWATER DISTRIBUTION SYSTEM

CHARLOTTE VERMONT

CIVIL ENGINEERING ASSOCIATES, INC.
SHELBURNE, VERMONT

SHEET 1

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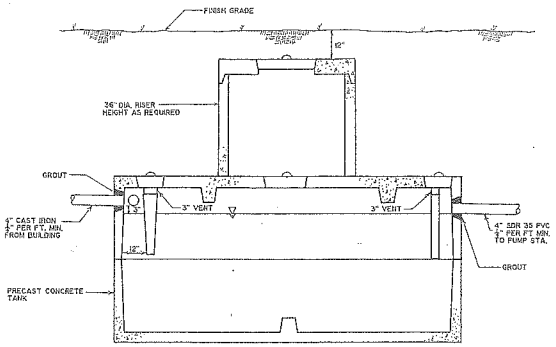
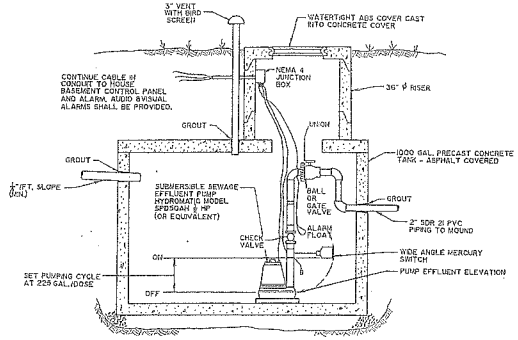
Thurber, 2848 Greenbush Road, Charlotte, Site Plan Review application, January 2017

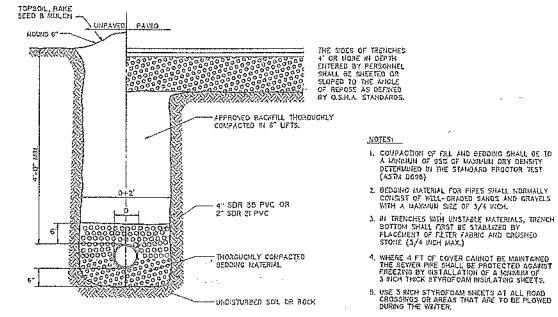


1500 GALLON SEPTIC TANK
N.T.S.

* TANK SHALL BE A TWO COMPARTMENT TANK WHERE AVAILABLE



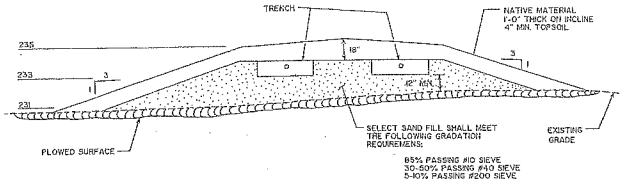
EFFLUENT PUMP STATION
N.T.S.



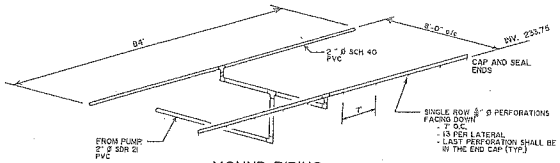
NOTES:

1. COMPACTION OF FILL AND BEDDING SHALL BE TO A MINIMUM OF 95% OF MAXIMUM DRY DENSITY DETERMINED IN THE STANDARD PROCTOR TEST (ASTM D698)
2. BEDDING MATERIAL FOR PIPES SHALL NORMALLY CONSIST OF WELL-GRADED SANDS AND GRAVELS WITH A MAXIMUM SIZE OF 3/4 INCH.
3. IN TRENCHES WITH UNSTABLE MATERIALS, TRENCH BOTTOM SHALL FIRST BE STABILIZED BY PLACEMENT OF FILTER FABRIC AND CRUSHED STONE (3/4 INCH MAX.)
4. WHERE 4 FT OF COVER CANNOT BE MAINTAINED THE SEWER PIPE SHALL BE PROTECTED AGAINST FREEZING BY INSTALLATION OF A MINIMUM OF 3 INCH THICK STYROFOAM INSULATING SHEETS.
5. USE 3 INCH STYROFOAM SHEETS AT ALL ROAD CROSSINGS OR AREAS THAT ARE TO BE PLOWED DURING THE WINTER.

TYPICAL TRENCH DETAIL
NTS



MOUND SECTION A-A
1/4" = 1'-0"



MOUND PIPING
NTS

MOUND CONSTRUCTION

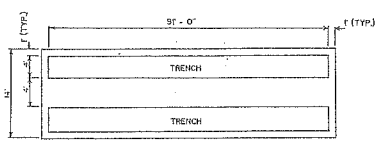
1. The mound system shall be inspected during critical stages of construction by a qualified consultant from Civil Engineering Associates. This shall include the staking of the mound, the plowed surface prior to sand placement, installation and pressure test of the distribution piping and a final inspection of the entire system. The Contractor will be responsible for contacting the Engineer to set up the inspection schedule.

2. Above-ground vegetation shall be closely cut and removed from the ground surface throughout the area to be utilized for the placement of the fill material. Prior to plowing, the dosing pump discharge line from the pump chamber or dosing chamber to the point of connection with the distribution piping header shall be installed. The area shall then be plowed to a depth of seven (7) to eight (8) inches, parallel to the land contour with the plow throwing the soil upslope to provide a proper interface between the fill and natural soils. Tree stumps should be cut flush with the surface of the ground and roots should not be pulled. Once plowing of the mound area is completed, the area shall be fenced to prevent vehicles and equipment from entering the plowed area.

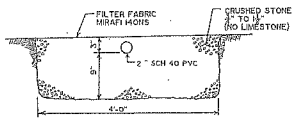
3. To prevent compaction, construction equipment shall not be moved across the plowed surface or the effluent disposal area. However, after placement of a minimum of six (6) inches of sand fill over the plowed area, construction equipment may be driven over the protected surface to expedite construction. Construction and/or plowing shall not be initiated when the soil moisture content is high.

4. Construction should be initiated immediately after preparation of the soil interface by placing all of the sand fill needed for the mound to a minimum depth of twenty-one (21) inches. This depth will permit excavation of trenches to accommodate the crushed stone (9") necessary for the distribution piping. After hand leveling of the absorption area, the stone shall be placed into the trench, hand leveled and the distribution pipe installed. After installation of the distribution system, crown the entire mound with cover of soil less permeable than the mound fill, covering the twelve (12) inches on the side slopes, and a minimum of eighteen (18) inches over the center of the mound. Native soil from the site is normally suitable for cover material, though the top 2"-4" of this cover should be topsoil. The entire mound shall be seeded, sodded, or otherwise provided with vegetative cover, to assure stability of the installation.

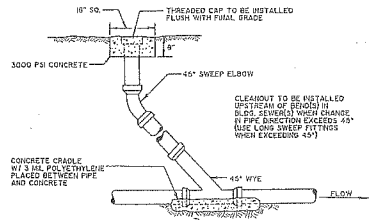
5. The area surrounding the mound shall be graded to provide diversion of surface run-off waters.



TRENCH PLAN
NTS



TYPICAL TRENCH PLAN
NTS



TYPICAL CLEANOUT DETAIL
N.T.S.

Date	Ch'k'd	Revision
SAV	6/94	ADDED LOCATION OF NEW WELL
SAV	5/94	MOVED LOCATION OF SYSTEM

Drawn by MJW Date APRIL, 1994
Checked by SJM Scale AS NOTED
Approved by ____ Project No. 90259

THE DEERPATH SCHOOL
WASTEWATER DISTRIBUTION SYSTEM
CHARLOTTE VERMONT

CIVIL ENGINEERING ASSOCIATES, INC.
SHELBURNE, VERMONT

SHEET 2

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