

**Construction Specifications**

Note: Prior to construction, the contractor shall notify DigSafe (1-888-DIGSAFE), and the engineer will pre-approve all materials, including stone.

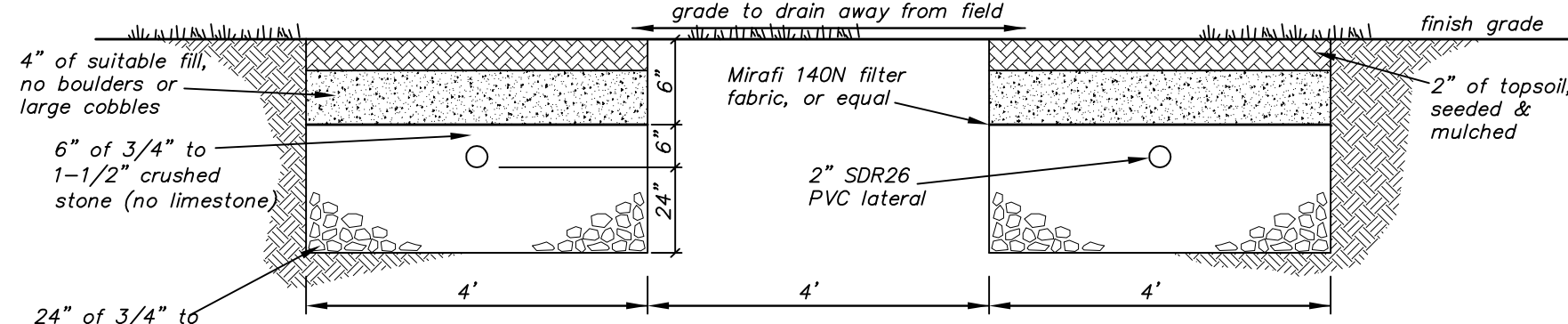
- The outlet pipe from the septic tank to the distribution box shall be 4 inches SDR35 PVC, at a minimum slope of 1/8 inch/FT. The pipe shall be laid on undisturbed ground or properly bedded.
- Each distribution line shall connect individually to the manifold. The pipe connecting the manifold to the distribution lines shall be watertight and laid on undisturbed ground or properly bedded.
- When the trenches have been excavated, the sides and bottom shall be raked to loosen any smeared soil surfaces.
- Construction equipment shall be kept off the area to be used for sewage disposal as much as possible to prevent compaction of the soils.
- Placement of crushed stone in the trenches shall be initiated immediately after trench excavation is completed. This will require that the engineer and authorized Town Representative be present at the time of completion of trench excavation (see inspection specifications).
- 24 inches of clean crushed stone (3/4 to 1-1/2 inches) shall be placed in the bottom of the trenches in accordance with the plans. The distribution line shall be carefully placed on the bedding at a uniform slope (1/8 inch per 10 feet), and covered with at least 2 inches of stone. The ends of the distribution lines shall be capped.
- The grading shall direct run-off away from the septic system areas and be smooth and free of pockets with sufficient slope to ensure drainage.

**Inspection Requirements**

- Stake out the system on this site so that the trenches or bed run perpendicular to the direction of the slope. Reference stakes are recommended in case corner stakes are disturbed. LaRose Surveys, P.C., must stakeout or verify this task.
- The contractor shall notify the engineer and authorized Town Representative a minimum of 24 hours in advance for inspection of the bottom of the trenches prior to placement of stone and piping.
- The contractors shall notify the engineer and authorized Town Representative a minimum of 24 hours in advance for inspection of the system prior to backfilling, including the distribution box (levelness check) and septic tank.
- Lots requiring pump stations: witnessing of pump on, off and alarm operation. Check of pumping rate and emergency storage volume.
- The well must allow be staked out and verified by the Engineer.
- This design must be inspected by LaRose Surveys, P.C., Bristol, Vermont to ensure compliance with these plans. LaRose Surveys, P.C. waives any and all responsibility and liability for problems that arise from failure to follow specifications, and the design intent that the plans convey, and from failure to have been notified by the contractor for inspections.

**Operation & Maintenance Recommendations**

- The septic tank's purpose is to settle out solids, contain the scum and pass treated effluent. Bacteria within the septic tank helps decompose the solids. Should any solids pass through the septic tank into the system, premature clogging of the piping, stone or native soil beneath the system is likely to occur. Only human wastes should enter the sewage system, water use should be conservative and cleaning agents cannot enter the system, as they kill bacteria.
- Once per year, the depth of scum and sludge in the septic tank should be measured and the tank shall be pumped if:
  - The sludge level is within 12 inches of the bottom of the outlet.
  - The scum layer is within 3 inches of the top of the outlet.
  - If A or B is anticipated to occur prior to the next inspection.
  - In any case, the tank shall be pumped at a maximum 4-year interval.
- Once a year, the septic tanks, pump chambers, distribution box and effluent filter should be inspected by a qualified professional. The person that performs the inspection is cautioned to consult with a health professional prior to performing the above items. Any settled solids should be removed from the distribution box and the effluent filter should be cleaned.
- Above items 1-3 are intended to prolong the life of the system, not guarantee it.
- The Designer is not responsible for use of the system in ways that are not consistent with the design of the system such as but not limited to chemicals, septic system additives, garbage disposals, backwash from softeners or other water treatment devices, poor maintenance, or abnormal weather.

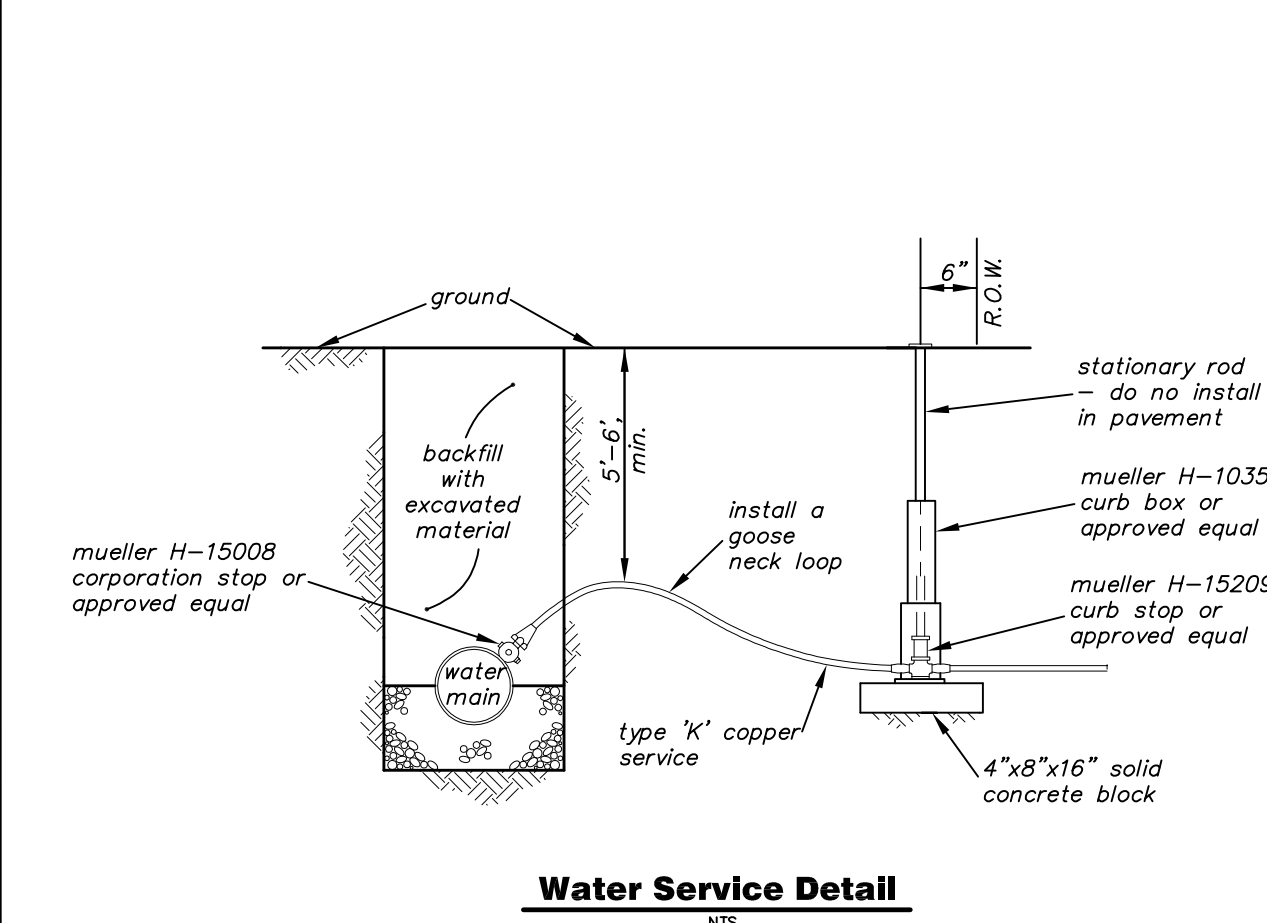
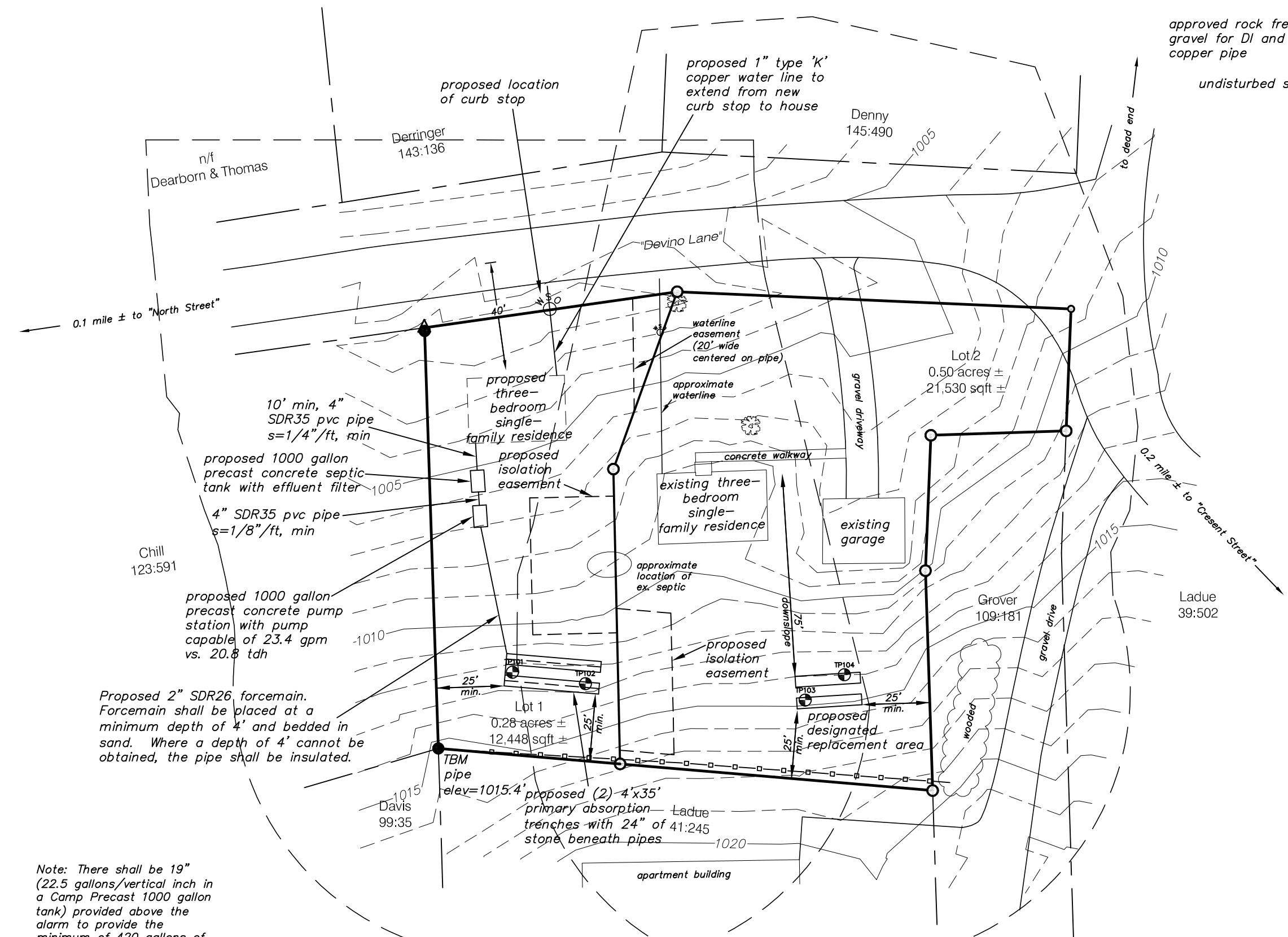
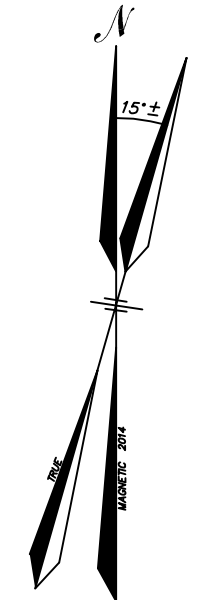


**Typical System Detail**

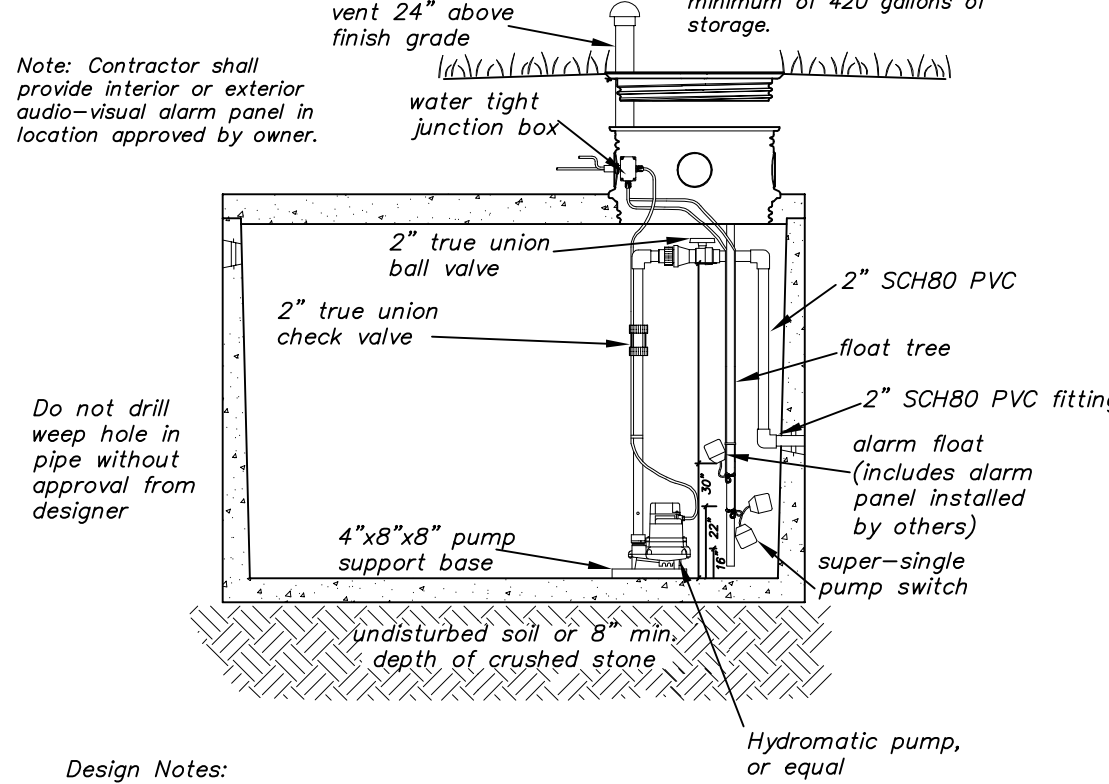
NOTE: LaRose Surveys, PC makes no representations or warranties whatsoever, and disclaim all liability and responsibility for any representation on what the final grading/aesthetics of the septic tank, pump station, septic system and any other earthwork done as part of this plan.

NOTE: The existing septic areas shown hereon are based solely on information provided by the property owner. No liability is assumed by the undersigned as to the location of said septic areas and/or their design/use.

NOTE: Contour interval is 2 feet and is based on a combination of Lidar and topographic survey.



**Water Service Detail**



- Design Notes:**
- 4000 psi concrete, 28 day strength.
  - Low pressure seats designed to accept 4" C.I. or PVC pipe.
  - Requires effluent pump a super single pump switch with a swing setting for a 105 gallon dose set 6" above the base of the pump with a high level alarm set 6" above the "pump on" setting. There shall be a minimum of one day storage above "alarm on" level.
  - Pump station shall be leak tested for 24 hours prior to backfilling.
  - It should be noted that any deviation in the location or elevation of the septic tank, pump station, or the disposal system from the designed location may require a different size pump.
  - The cover shall be child-proof.

**1000 Gallon Seamless Precast Concrete Pump Station**

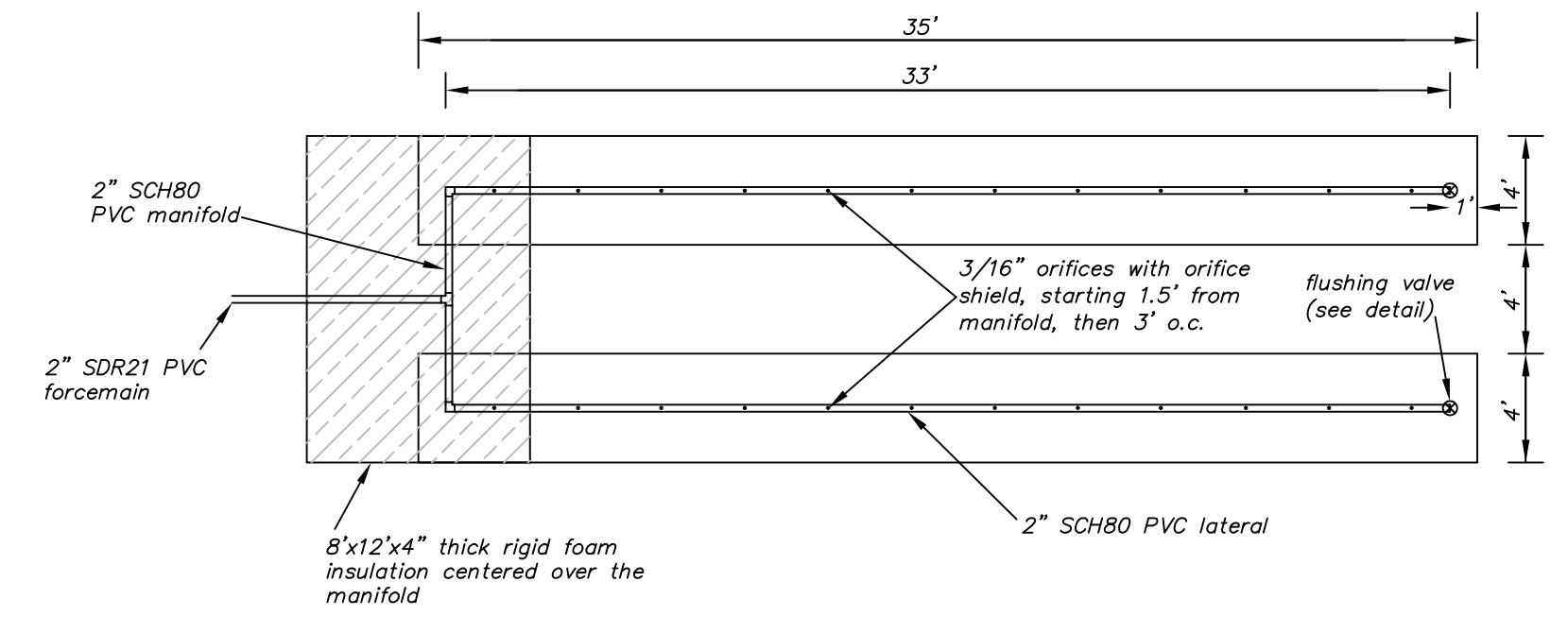
**Drilled Well Isolation Distances**

Item	Horizontal Distance (feet)		
	Disposal field	Septic tank	Sewer
Drilled well	50	50	50
Lake and pond impoundment - standing water	50	25	25
River, streams	50	25	10
Drainage swales, roadway ditches	25	25	10
Main or municipal water lines	50	50	b*
Service water lines	25	25	b*
Roadways, driveways, parking lots	10	5	-
Top of embankment, or slope greater than 30%	25	10	10
Property line	25	10	10
Trees	10	10	10
Other disposal field or replacement area	10	-	-
Foundation, footing drains, curtain drains	35	10	-
Suction water line	100	50	50

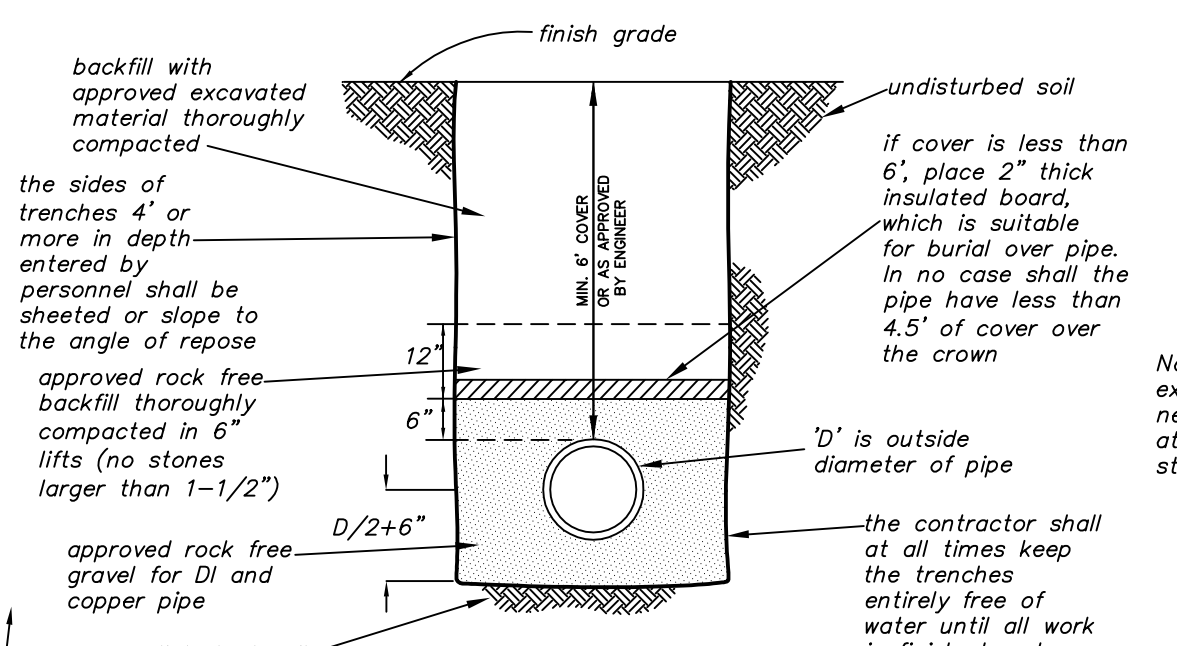
\* a) see presumptive isolation zone on plan  
\* b) see Vermont Water Supply Rule

**Invert Elevations:**

FFE: 1007.0'  
 Septic tank inlet: 1003.5'  
 Septic tank outlet: 1003.3'  
 Pump station inlet: 1003.2'  
 Pump station outlet: 1000.9'  
 Lower trench: 1011.0'  
 Upper trench: 1011.5'



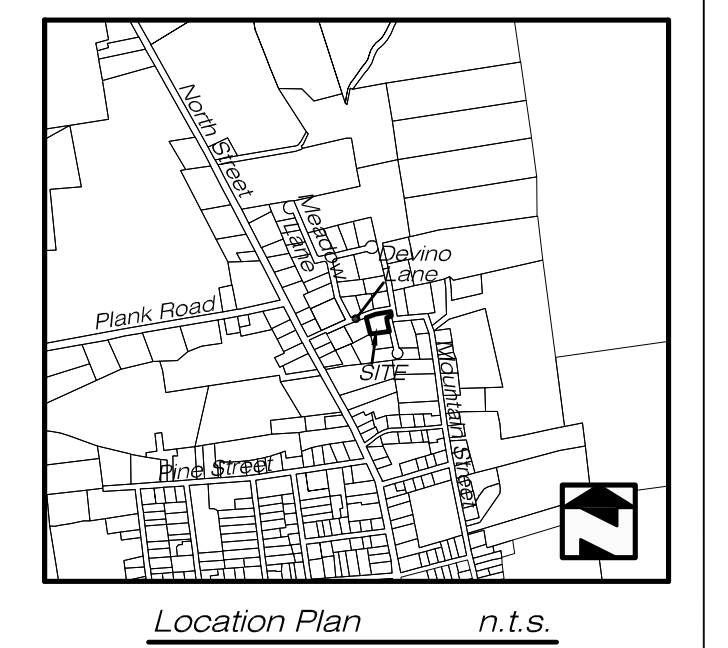
**Typical System Layout**



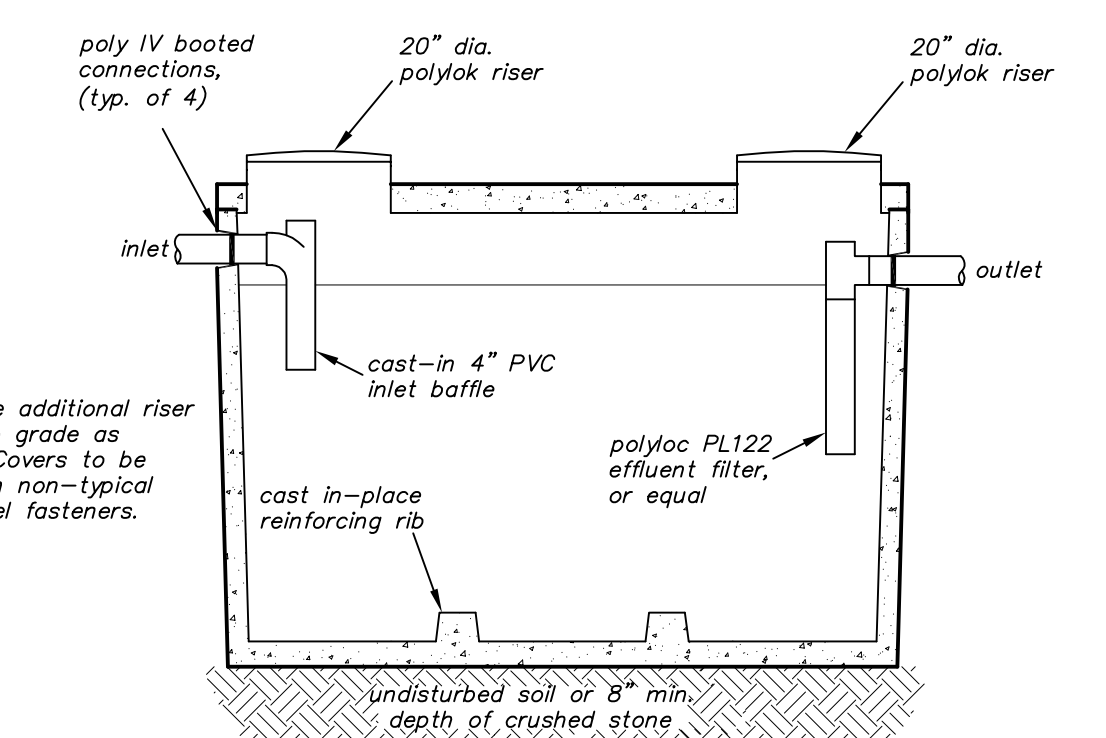
**Typical Water Trench**

**Legend**

- Project Boundary Line
- Adj. Property Boundary Line
- Iron Pipe Found
- Rebar Set
- Test Pit
- More or Less
- Utility Pole
- Treeline



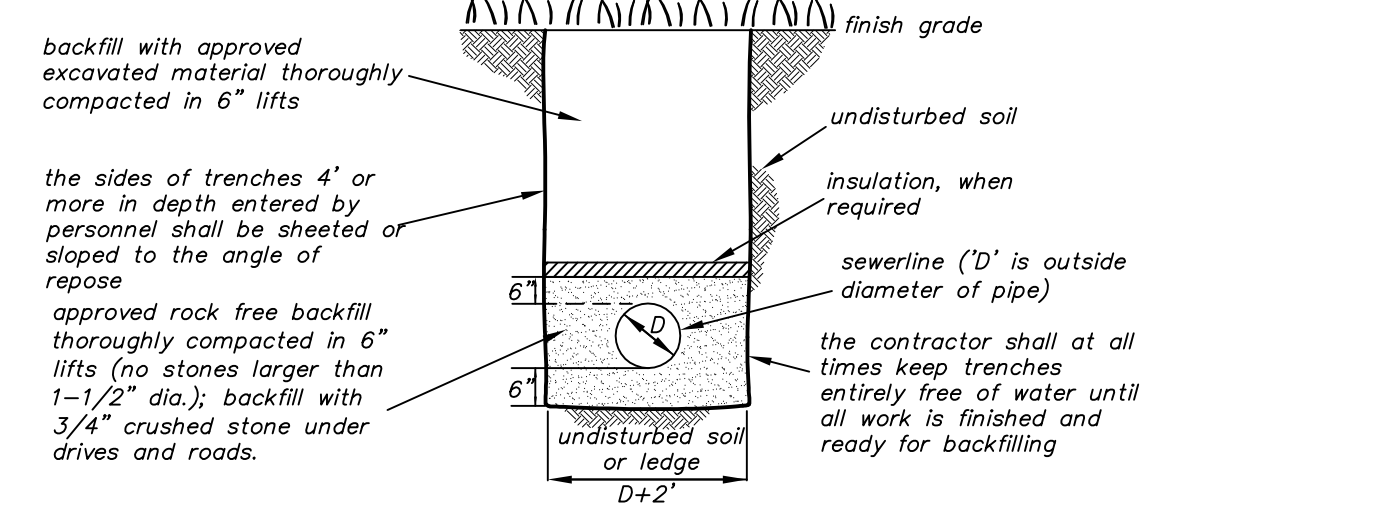
**Location Plan** n.t.s.



- Design Notes:**
- Concrete: 4,000 psi after 28 days. Reinforcing 6x6/10x10 and fibers.
  - Heavy-duty septic tank reinforced with 5/8" rebar @ 12" o.c. each way.
  - Keyst joint sealed with butyl rubber.
  - Excavation must be at least 12" wider and longer than tank size.
  - Provide watertight pipe connections using pre-fab 4" plastic boots or non-shrink grout.
  - The tank shall be leak-tested for 24 hours prior to backfilling.
  - The cover shall be child-proof.

**1000 Gallon Seamless Precast Concrete Septic Tank**

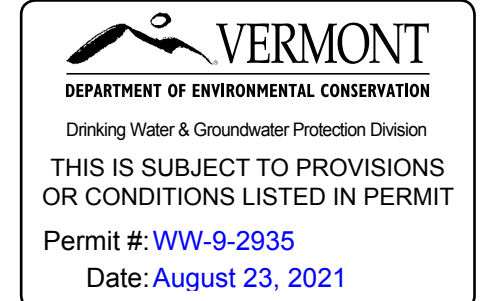
**Deed Reference:** 147:220  
**Total Area = 0.78 acres ± 33,978 sqft ±**  
**Zoning District:** High Density Residential  
**Parcel ID# 205025**



**Sewerline Trench**

**Sewage Design Information**

- The proposed sewage disposal system shall be constructed in accordance with all applicable Town Regulations and the State of Vermont Environmental Protection Rules.
- Basis of design:
  - Lot 1
    - Number of bedrooms = 3
    - Number of occupants = 6
    - Number of gallons per day = 420
    - Application Rate = 1.5 gpd/sf (per Table 9-3 Coarse Sand)
    - Use 24" of stone for 33% reduction
    - Required Disposal Area = 420 gpd/1.5 x 66% = 185 sf
    - 150% requirement (no replacement) = 185 x 1.5 = 278 sf
    - Disposal Area Provided = (2) 4' x 35' trenches = 280 sf
  - Lot 2 (replacement)
    - Number of bedrooms = 3
    - Number of occupants = 6
    - Number of gallons per day = 420
    - Application Rate = 1.5 gpd/sf (per Table 9-3 Coarse Sand)
    - Use 24" of stone for 33% reduction
    - Required Disposal Area = 420 gpd/1.5 x 66% = 185 sf
    - Disposal Area Provided = (2) 4' x 24' trenches = 192 sf
- The use of garbage disposals is not recommended.
- If a water treatment system (water softener) is going to be used, the backwash water may not be discharged into the disposal system.



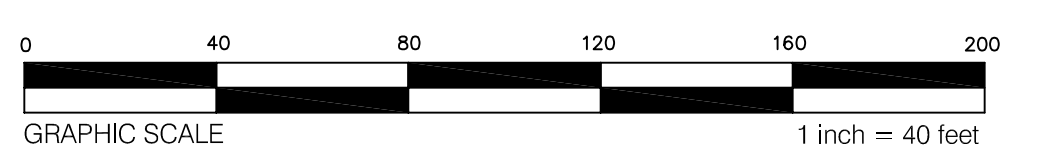
a site plan showing a subdivision of lands of

**GREGG A. & LAURA J. BUTLER**

10 Devino Lane  
 Bristol, Addison County, Vermont

September 17, 2020

PROJECT #14087



THE CONTRACTOR SHALL NOTIFY "DIGSAFE" AT 1-888-DIG-SAFE PRIOR TO ANY EXCAVATION.

**IMPORTANT NOTE:**  
 This is not a boundary survey. The property lines and easements shown hereon are based on the Vermont Agency of Natural Resources only. No certifications, expressed or otherwise, are made to the boundary lines shown hereon. This plan does not meet the requirements for a land survey as described in 26 VSA §2502 and shall not be used in lieu of a survey as the basis of any land transfer or establishment of any property right. LaRose Surveys, P.C. waives any and all responsibility from problems and/or issues relating to the boundary lines shown hereon including but not limited to setback lines and encroachments.

compiled & prepared by  
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