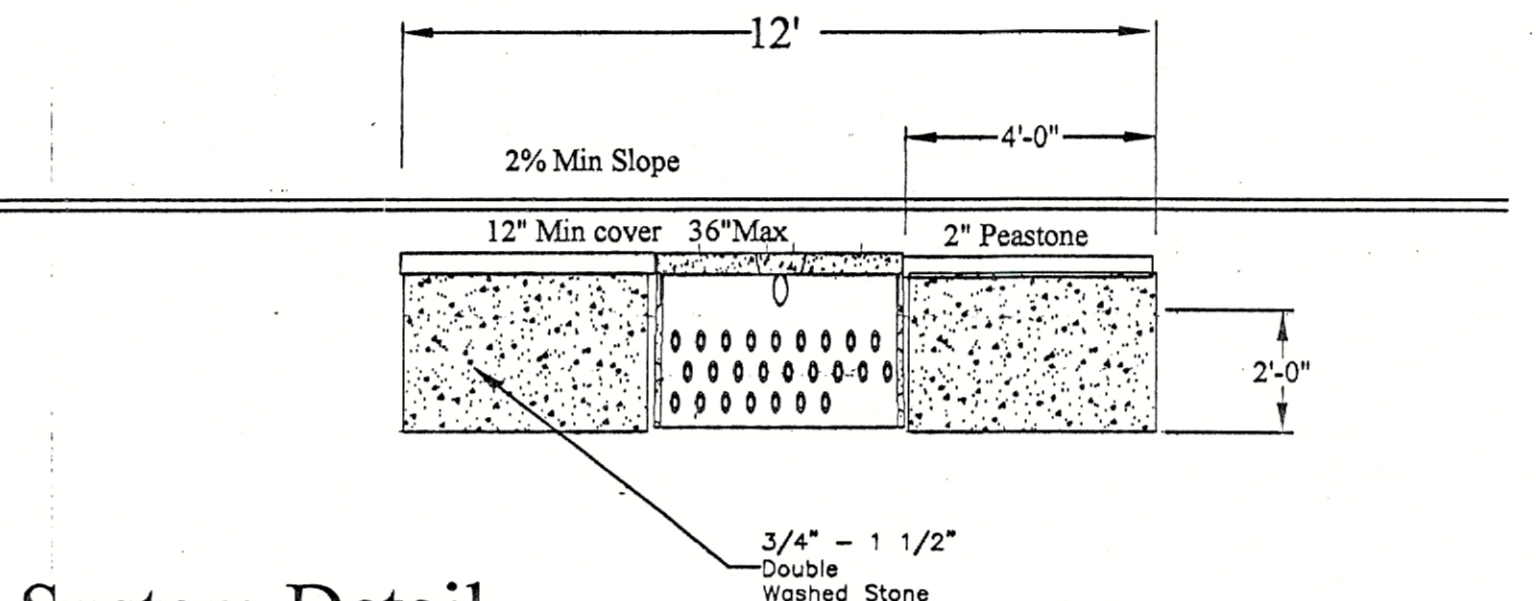
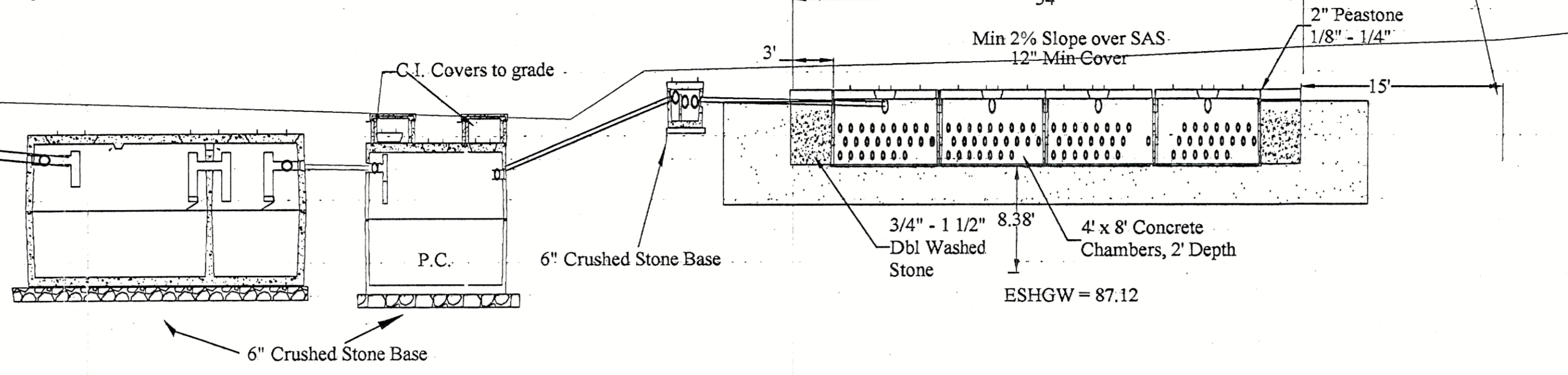
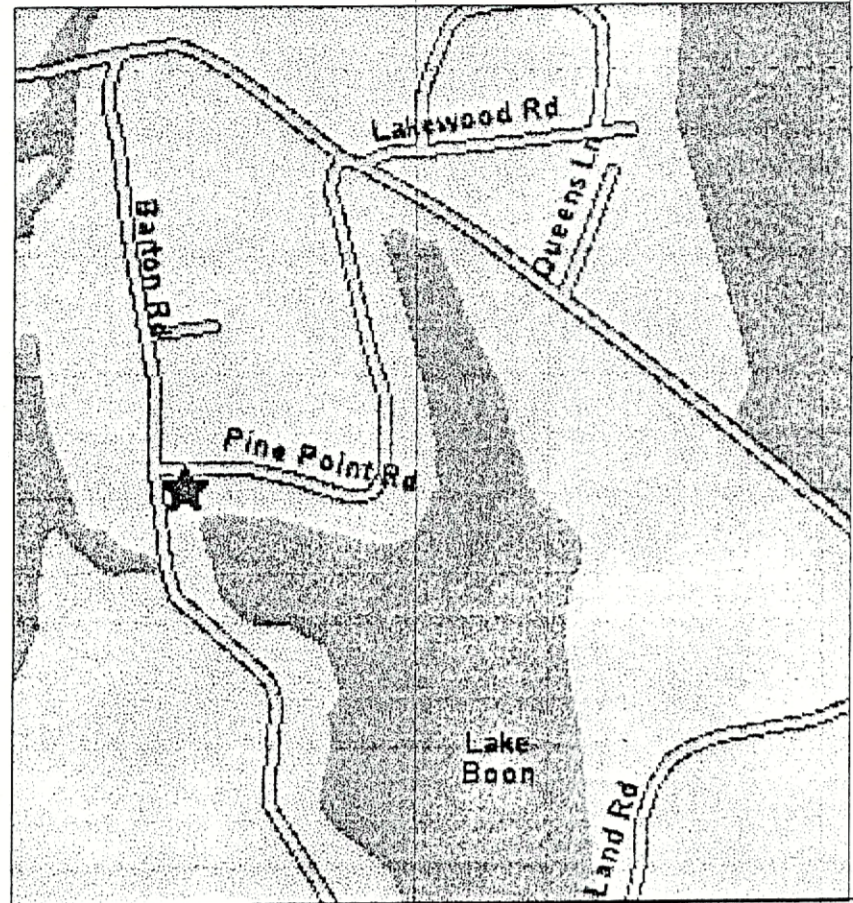
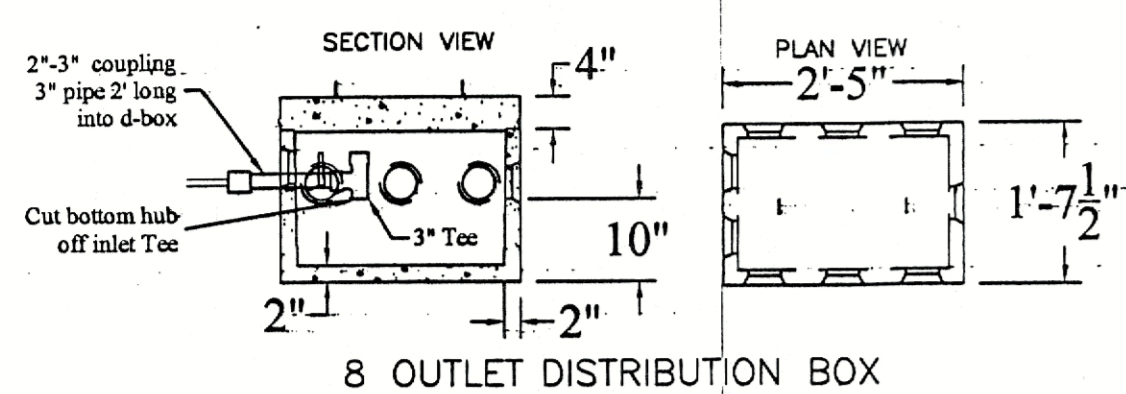
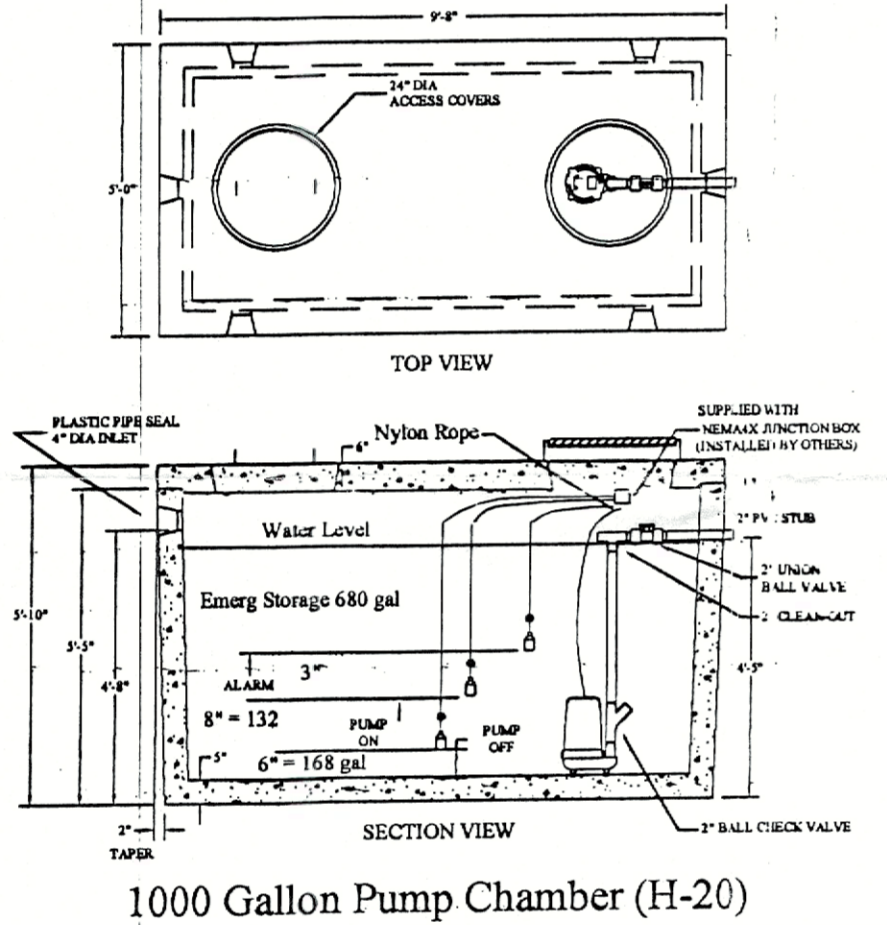


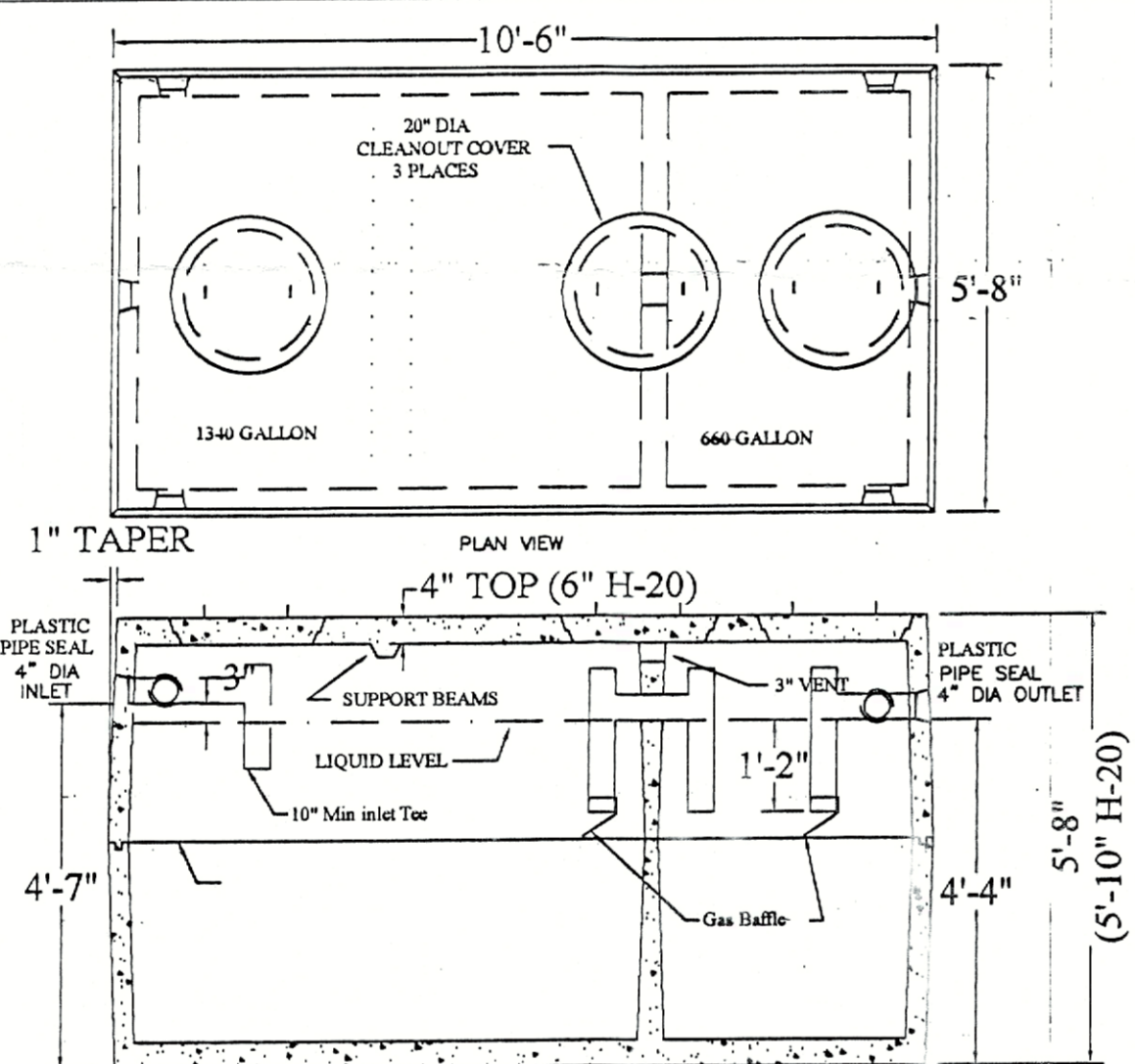
# System Profile



## System Detail



1000 Gallon Pump Chamber (H-20)



## Pump Chamber Specifications

- Type: Meyers SRM-4 - 0.4hp, Submersible Sewage Pump or approved equal - >1.5" Solids Handling Capacity - Min Capacity - 62 GPM at 9' head
- The pump shall be provided with liquid float control switches and high water alarm control as illustrated in detail.
- The control panel shall be equipped with an audible alarm placed in the basement in a readily accessible location. Alarm circuit shall be separated from pump circuit.
- All wiring shall conform to local and state wiring codes and shall be installed by a licensed electrician.
- Pump must be installed in accordance with manufacturers recommendations. All joints and fitting to be glued. Float switches to be set at levels shown in detail.

## Variances Required

- Local Upgrade Approvals 310 CMR 15.405
- 15.405 a. Reduction of SAS from setbacks established in 15.211 for property lines. A 10' separation is required. An 1' to 5' separation is proposed and the property line must be staked prior to construction by a Professional Land Surveyor.
- 15.405 b. Reduction in the SAS location from a cellar wall. A 20' separation is required. A 5' separation is proposed with a poly liner to mitigate breakout.
- 15.405 h. Reduction of SAS location setbacks from a private water supply. A 100' separation is required. A 50' is proposed. A 9' + separation to high groundwater will also provide added treatment of effluent. A new well is required to accommodate this design.

- Stow Board of Health
- To allow the SAS to be less than 150' from an existing private water supply. A 50' offset is proposed.
  - To allow the construction of a SAS without sizing the system 150% of the design flow. The system will be limited to 660 GPD to accommodate the existing dwelling.

## General Notes

- The septic tank and pump chamber shall be made of precast concrete. Tank construction materials shall comply with 310 CMR 15.226. Septic tank and pump chamber shall be retrofitted below the pipe inlet.
- The septic tank and pump chamber shall be placed on six inches of crushed stone that has been mechanically compacted. A minimum of nine inches of cover shall be placed over the tank. A 24 inch cover with an appropriate water tight riser shall be provided over the outlet within six inches of finished grade.
- Where not otherwise specified, piping shall be 4" schedule 40 PVC pipe with glued joints. Existing supply piping that is not 4" cast iron or schedule 40 PVC shall be replaced.
- Final grading over the leaching area shall provide that no water will accumulate on the surface. The grade above and next to the leaching facility shall have a minimum 2% slope.
- Cover material shall be free of large stones, stumps, frozen clumps of earth, masonry or construction waste material. Machinery that may crush or disturb the alignment of pipe in the disposal system area shall not be allowed on any part of the disposal area.
- All stone shall be free of iron, fines and dust, and must have less than 0.2% material finer than a #200 sieve as determined by AASHTO test methods T-11 and T-27.
- Fill material for systems constructed in fill shall consist of select on-site or imported soil material. The fill shall be comprised of clean granular sand, free from organic matter and deleterious substances. Mixtures and layers of different classes of soil shall not be used. The fill shall not contain any material larger than 2 inches. A sieve analysis report must be obtained by the installer to demonstrate that the fill material complies with 310 CMR 15.255(3). The Board of Health may require a minimum of one representative sample be taken from the in place fill and tested for compliance with the grain size distribution specifications.
- Should conditions be encountered onsite which require modification to the approved plan, the installer shall contact the Designer for instructions.
- The installer may make minor changes in orientation to avoid large obstacles that include but are not limited to boulders, trees, walls, fences, sheds, and pavement. It is the intent of this design to locate the leaching facility in the general area of the test holes. Minimum offsets from foundations, property lines, wells, and wetlands shall be maintained at all times.
- The owner shall be responsible for ascertaining the location of all property lines. The plan was made from survey information provided by the Town of Stow and a survey plan date 8/13/95, certified by John Snelling, P.L.S. A professional instrument survey was not performed. If proximity of the system to property lines are critical or if the location of a property line is in question, an instrument survey should be performed by a Professional Land Surveyor. This plan is designed for the purpose of installing a septic system only. The Designer is not responsible for damage to any subsurface structures not depicted on the plan.
- All existing elevations must be verified prior to installing any system components.
- The system IS NOT configured according to Title 5 to accommodate a GARBAGE DISPOSAL.
- All construction shall conform to 310 CMR 15.000 and Local Board of Health Regulations.

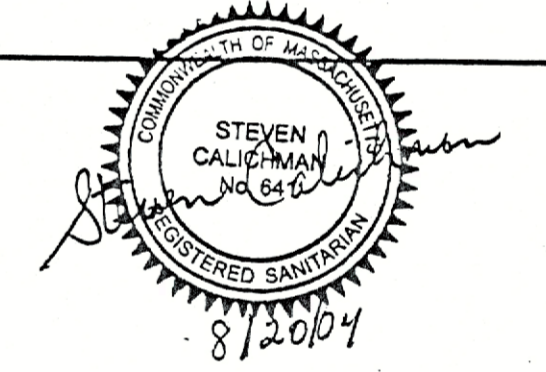
## Design Calculations

|                       |   |
|-----------------------|---|
| Type of Establishment | 2 Dwellings                             |
| System Required       |   |
| Number of Bedrooms:   | 6                                       |
| Design Flow:          | 660 GPD                                 |
| Septic Tank:          | 1500 gal                                |
| System Area:          | 892 sqft Title 5<br>1338 sqft Stow, BoH |
| System Provided       |   |
| Number of Bedrooms:   | 6                                       |
| Septic Tank Capacity: | 2000 Gal                                |
| System Area:          | 912 sqft                                |
| System Capacity:      | 675 GPD Title 5                         |
| Soil Classification:  | I                                       |
| LTAR:                 | 0.74 GPD/sqft                           |

## Proposed Elevations

|                     |               |
|---------------------|---------------|
| Bench Mark:         | 100.00        |
| Building Sewer:     | 97.00-95.60   |
| Septic Tank Inlet:  | 95.40         |
| Outlet:             | 95.15         |
| Pump Chamber Inlet: | 95.05         |
| Outlet:             | 94.80         |
| D-Box In:           | 97.74         |
| D-Box Out:          | 97.60         |
| Chamber In:         | 97.50         |
| Bottom Stone:       | 95.50         |
| ESHGW:              | 87.12         |
| F.G. over SAS:      | 99.60 -101.60 |

- There are no wetlands within 100' of the proposed leaching facility.
- All known private or public wells within 200' of the proposed leaching facility are depicted on the plan.
- The site is located within the Lake Boon Watershed. The location of the lake has been identified on the plan.

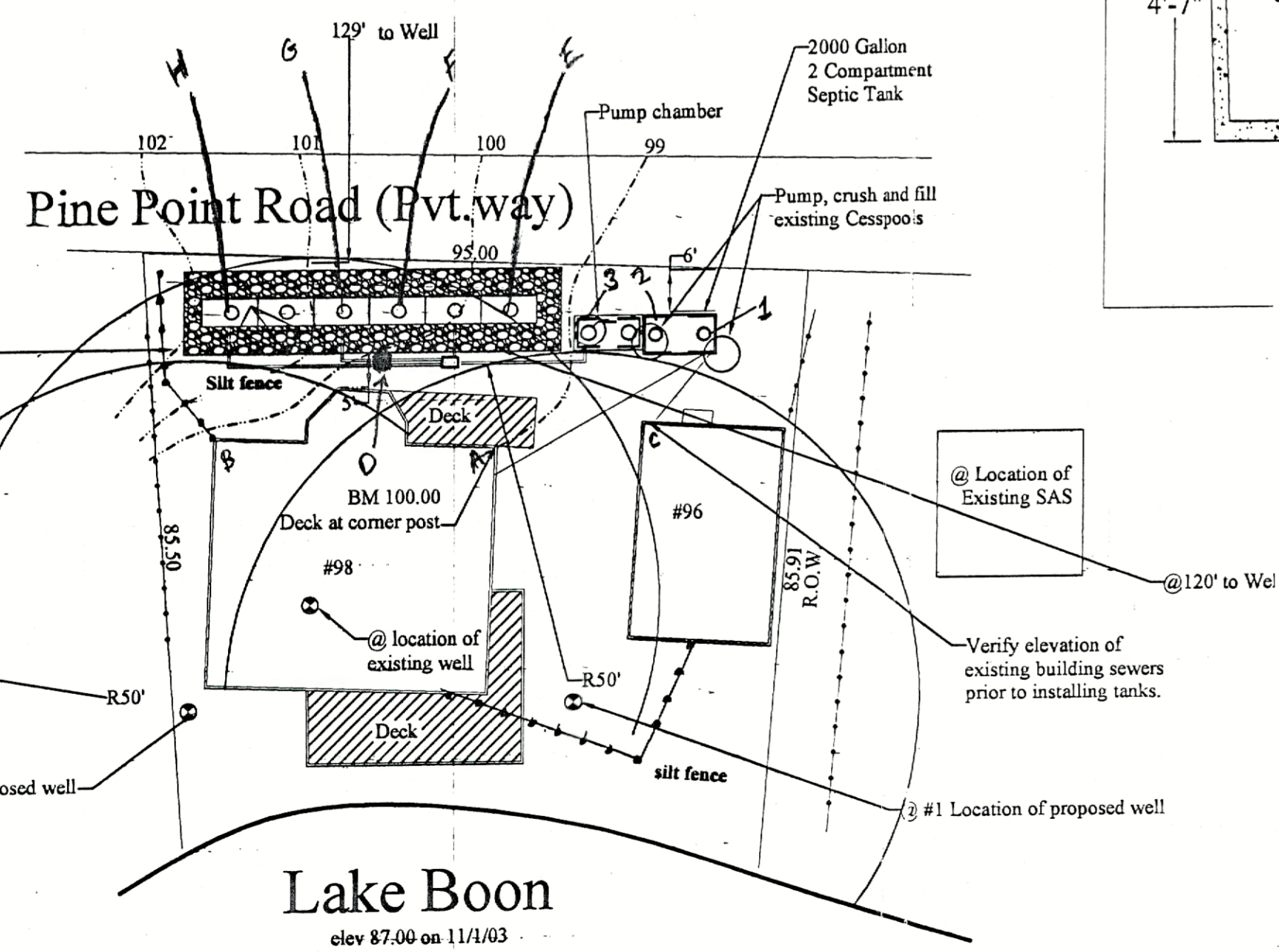


| No. | Revision/Issue              | Date    |
|-----|-----------------------------|---------|
| 3   | BoH Comments/lot dimensions | 8/18/04 |
| 2   | BoH Comments/2comp tank     | 8/3/04  |
| 1   | BoH Comments/IA Technology  | 5/10/04 |

**ABC CessPool Inc.**  
292 High Street  
Acton, MA 01720

**As - Built**  
96 - 98 Pine Point Rd.  
Stow

|         |                  |       |   |
|---------|------------------|-------|---|
| Project | 96pinepoint_stow | Sheet |   |
| Date    | 11/12/03         |       | 1 |
| Scale   | 1" = 10'         |       |   |



| System Dimensions: |        | Schedule of Elevations |                |
|--------------------|--------|------------------------|----------------|
| Septic Tank        |        | Benchmark              | 100.00         |
| A-1                | 36"    | Invert at Bldg         | 97. - 95.6 +/- |
| 2                  | 28'3"  | Tank inlet             | 95.35          |
| Pump Chamber       |        | outlet                 | 95.10          |
| A-3                | 22'8"  | Pump Chamber inlet     | 95.0           |
| D-Box              |        | D-box inlet            | 97.77          |
| A-D                | 20'10" | D-box outlet           | 97.60          |
| Chambers:          |        | Chamber inlet          | 97.50          |
| A-E                | 20"    | bottom                 | 95.50          |
| F                  | 19'2"  | ESHGW                  | 87.12          |
| G                  | 26"    | FG                     | 100-102        |
| H                  | 40"    |                        |                |

Location and Certification of the well by others

I certify this system has been installed according to this plan  
*Steven Callichman* Date 4/22/09



| Class I Soil | DTH-1 | Elevation         |
|--------------|-------|-------------------|
|              | 0"    | Ap 101.12         |
|              | 14"   | C1 99.95          |
|              | 24"   | Sand 99.12        |
|              |       | C2 Sand 10 yr 5/8 |
|              |       | 10 yr 5/6         |
|              | 144"  | 88.00             |

ESHGW - Water level at pond 87.00

| Percolation Test |       |           |       |
|------------------|-------|-----------|-------|
| Test #           | Depth | Elevation | Rate  |
| 1                | 48"   | 93.26     | 2 mpi |

Date: 10/19/01  
 Witnessed by: Jack Wallace Stow, Bdf  
 I certify that I have passed the examination approved by DEP and that the soil analysis has been performed by me consistent with the required training, expertise, and experience described in 310 CMR 15.018(2).  
 Richard Dolan  
 Soil Evaluator