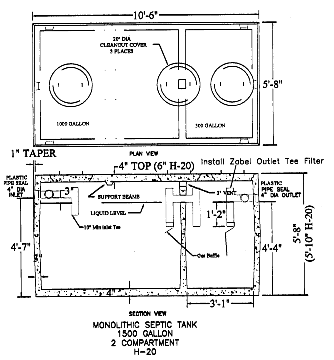
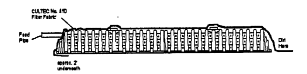
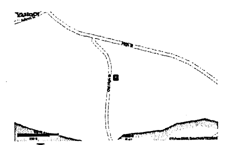
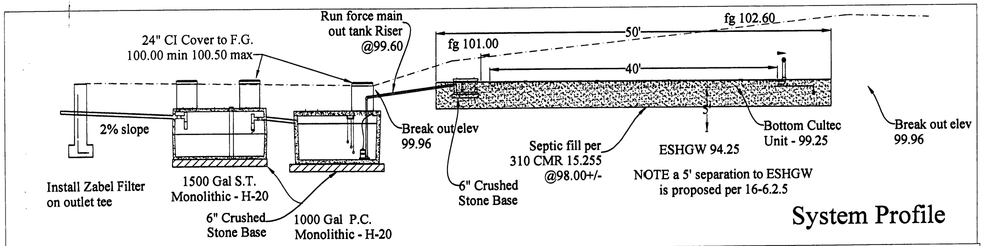
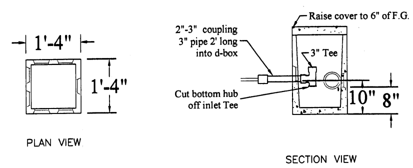




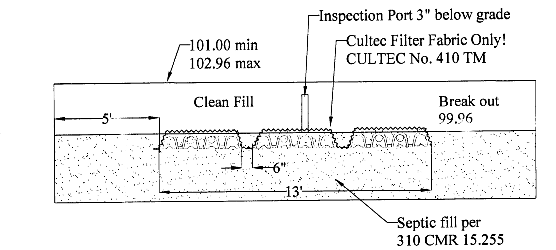




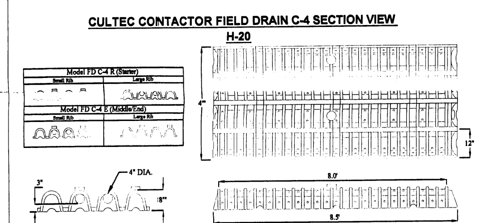
System Profile

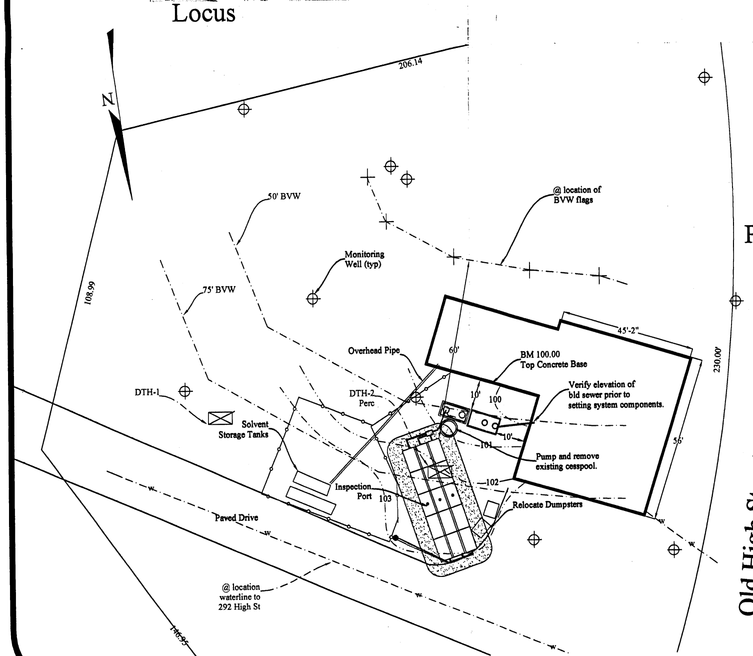


6- Outlet D-Box



System Detail

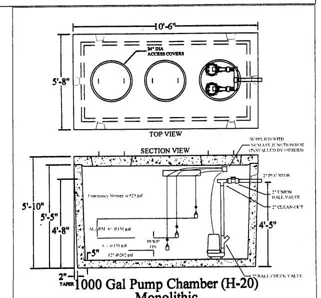




Old High Street

Pump Chamber Specifications

1. Type: Meyers Sewage Series SRM-4; Submersible Sewage Pump or approved equal - >1.5" Solids Handling Capacity - Min Capacity - 70 GPM at 8' head.
2. The pump chamber shall be a 1000 gallon tank as provided by SHEA Concrete or approved equal.
3. The pump shall be provided with liquid float control switches and high water alarm control as illustrated in detail.
4. 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.
5. All wiring shall conform to local and state wiring codes and shall be installed by a licensed electrician.
6. Pump must be installed in accordance with manufacturers recom -mendations. All joints and fitting to be glued. Float switches to be set at levels shown in detail.
7. TWO pumps are required for this design per 310 CMR 15.231(6). See plan view on pump chamber detail.



Variance Required

Local Variance
A variance from Acton BoH regulation 11-6.1.1 is requested to allow the SAS to be less than 75' from the BVW. A 60' offset is proposed.

A variance from Acton BoH regulation 16.6.2.7 is requested to allow the SAS to be less than 100' from the BVW in an aquifer zone 1. A 60' offset is proposed.

General Notes

1. 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 waterproofed below the pipe inlet.
2. 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.
3. 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.
4. 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.
5. 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.
6. All stone shall be free or 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.
7. 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.
8. Should conditions be encounter onsite which require modification to the approved plan, the installer shall contact the Designer for instructions.
9. 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.
10. 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 Acton on a plan of land by Clyde Wheeler RLS, 18843, dated 6/28//65. 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 sytem only. The Designer is not responsible for any subsurface structures not accuratel; depicted on the plan.
11. All existing elevations must be verified prior to installing any system components.
12 The system IS NOT SIZED according to Title 5 to accommodate a GARBAGE DISPOSAL.
13. All construction shall conform to 310 CMR 15.000 and Local Board of Health Regulations.

DTH-1		
0"	Ap	103.00
	Fill	
62"	Sand C-1	97.83
111"		93.75
ESHGW = 93.75		

DTH-2		
0"	Ap	102.00
	Fill	
43"	Sand C-1	98.42
93"	Standing Water 94.25	
96"		94.00
ESHGW = 94.25		

Date:5/7/08 Witnessed by Heather Hasz,CEHT, Acton BoH

Percolation Test			
Test #	Depth	Elevation	Rate
1			2 mpi

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

Design Calculations

Type of Establishment Industrial / Office - Bld total 3313 sqft

System Required
Industrial 15 gal/pers x 10 = 150 gpd
Office @3313sqft = 249 gpd
Design Flow: 398 GPD
Septic Tank: 1500 Gallons
System Area: 800sqft [Table 1]

System Provided
Septic Tank Capacity: 1500 gal
System Area: 804 sqft
System Capacity: 440 GPD [Tble 1]
Soil Classification: I
LTAR: 0.74 GPD/sqft

Cultec Area 15 Units x 8' Long x 6.7 sqft/lf = 804 sqft

Proposed Elevations

Bench Mark: 100.00
Building Sewer: 97.00+/-
Septic Tank Inlet: 96.80
Outlet: 96.55
Pump ChmberInlet: 96.45
Outlet: 96.20
D-Box In: 99.77
D-Box Out: 99.60
Chamber Inlet:: 99.50
Bottom Chamber: 99.25
ESHGW: 94.25
F.G. over SAS: 101-102.60+/-

1. Wetlands within 100' of the proposed leaching facility have been identified
2. There are no private/public wells within 200' of the proposed leaching facility.
3. The proposed system will be located in Acton's Aquifer Protection Zone 1. A 5' separation to ESHGW has been provided.
4. This site is not in the 100 year flood plain.

STEVEN CALICHMAN, R.S., C.H.O.
I have reviewed this plan for compliance with 310 CMR 15.000 and applicable local regulations.
6/19/08

No.	Revision/Issue	Date
2		
1		

ABC CessPool Inc.
292 High Street
Acton, MA 01720

Proposed Septic System
308 Old High St
Acton, MA 01720

Project	Sheet
308oldhigh_act	1
Date: 5/30/08	
Scale: 1" = 20'	

RECEIVED
JUL - 2 2008
ACTON CONSERVATION COMMISSION