27 ELF HILL ROAD

Commonwealth of Massachusetts

Title 5 Official Inspection Form

Subsurface Sewage Disposal System Form - Not for Voluntary Assessments

27 ELF HILL ROAD
Property Address

JILLITH BARCALOW
Owner's Name

Owner information is required for every page.

AMHERST — MASS — 01002 — 6/29/2012
City/Town — State — Zip Code — Date of Inspection

Inspection results must be submitted on this form. Inspection forms may not be altered in any way. Please see completeness checklist at the end of the form.

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.

A. General Information

1. Inspector:

PE 30148
SI 1055
SE 2241

WILLIAM J SIERUTA PE
Name of Inspector

SIERUTA ENGINEERING
Company Name

18 DEPOT ROAD
Company Address

LEVERETT — MASS — 01054
City/Town — State — Zip Code

413 549 1817 — SI 1055
Telephone Number — License Number

B. Certification

I certify that I have personally inspected the sewage disposal system at this address and that the information reported below is true, accurate and complete as of the time of the inspection. The inspection was performed based on my training and experience in the proper function and maintenance of on site sewage disposal systems. **I am a DEP approved system inspector pursuant to Section 15.340 of Title 5 (310 CMR 15.000).** The system:

☑ Passes ☐ Conditionally Passes ☐ Fails

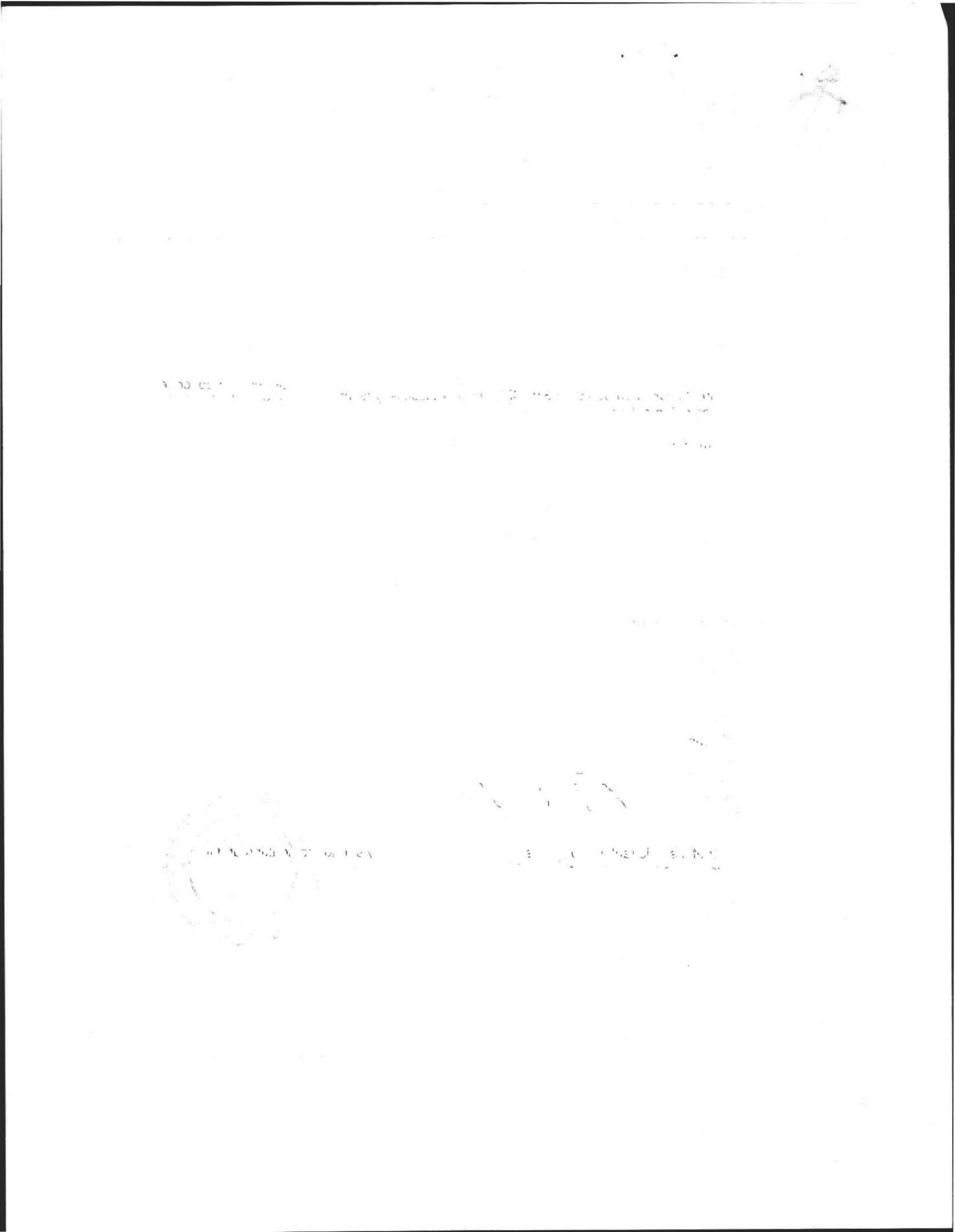
☐ Needs Further Evaluation by the Local Approving Authority

Inspector's Signature — Date 6/29/2012

Commonwealth of Massachusetts William John Sieruta Civil No. 30148 Registered Professional Engineer

The system inspector shall submit a copy of this inspection report to the approving Authority (Board of Health or DEP) within 30 days of completing this inspection. If the system is a shared system or has a design flow of 10,000 gpd or greater, the inspector and the system owner shall submit the report to the appropriate regional office of the DEP. The original should be sent to the system owner and copies sent to the buyer, if applicable, and the approving authority.

****This report only describes conditions at the time of inspection and under the conditions of use at that time. This inspection does not address how the system will perform in the future under the same or different conditions of use.**



Commonwealth of Massachusetts

Title 5 Official Inspection Form

Subsurface Sewage Disposal System Form - Not for Voluntary Assessments

27 ELF HILL ROAD
Property Address

J. BARCALOW
Owner's Name

Owner information is required for every page.

AMHERST | MA | 01002 | 6/29/2012
City/Town | State | Zip Code | Date of Inspection

B. Certification (cont.)

Inspection Summary: Check A,B,C,D or E / ***always*** complete all of Section D

A) System Passes:

☑ I have not found any information which indicates that any of the failure criteria described in 310 CMR 15.303 or in 310 CMR 15.304 exist. Any failure criteria not evaluated are indicated below.

Comments:

SYSTEM IS WORKING WELL
NO problems NOted.

B) System Conditionally Passes:

☐ One or more system components as described in the "Conditional Pass" section need to be replaced or repaired. The system, upon completion of the replacement or repair, as approved by the Board of Health, will pass.

Check the box for "yes", "no" or "not determined" (Y, N, ND) for the following statements. If "not determined," please explain.

The septic tank is metal and over 20 years old* **or** the septic tank (whether metal or not) is structurally unsound, exhibits substantial infiltration or exfiltration or tank failure is imminent. System will pass inspection if the existing tank is replaced with a complying septic tank as approved by the Board of Health.

* A metal septic tank will pass inspection if it is structurally sound, not leaking and if a Certificate of Compliance indicating that the tank is less than 20 years old is available.

☐ Y ☐ N ☐ ND (Explain below):

Commonwealth of Massachusetts

Title 5 Official Inspection Form

Subsurface Sewage Disposal System Form - Not for Voluntary Assessments

27 ELF HILL ROAD
Property Address

T. BARCHLOW
Owner's Name

Owner information is required for every page.

AMHERST | MA | 01002 | 6/29/2012
City/Town | State | Zip Code | Date of Inspection

B. Certification (cont.)

B) System Conditionally Passes (cont.):

☐ Observation of sewage backup or break out or high static water level in the distribution box due to broken or obstructed pipe(s) or due to a broken, settled or uneven distribution box. System will pass inspection if (with approval of Board of Health):

☐	broken pipe(s) are replaced	☐ Y	☐ N	☐ ND	(Explain below):
☐	obstruction is removed	☐ Y	☐ N	☐ ND	(Explain below):
☐	distribution box is leveled or replaced	☐ Y	☐ N	☐ ND	(Explain below):

☐ The system required pumping more than 4 times a year due to broken or obstructed pipe(s). The system will pass inspection if (with approval of the Board of Health):

☐	broken pipe(s) are replaced	☐ Y	☐ N	☐ ND	(Explain below):
☐	obstruction is removed	☐ Y	☐ N	☐ ND	(Explain below):

C) Further Evaluation is Required by the Board of Health:

☐ Conditions exist which require further evaluation by the Board of Health in order to determine if the system is failing to protect public health, safety or the environment.

1. System will pass unless Board of Health determines in accordance with 310 CMR 15.303(1)(b) that the system is not functioning in a manner which will protect public health, safety and the environment:

☐ Cesspool or privy is within 50 feet of a surface water

☐ Cesspool or privy is within 50 feet of a bordering vegetated wetland or a salt marsh

Commonwealth of Massachusetts

Title 5 Official Inspection Form

Subsurface Sewage Disposal System Form - Not for Voluntary Assessments

27 ELF HILL ROAD
Property Address

T. BARCALOW
Owner's Name

Owner information is required for every page.

AMHERST MA 01002 6/29/2012
City/Town State Zip Code Date of Inspection

B. Certification (cont.)

2. System will fail unless the Board of Health (and Public Water Supplier, if any) determines that the system is functioning in a manner that protects the public health, safety and environment:

☐ The system has a septic tank and soil absorption system (SAS) and the SAS is within 100 feet of a surface water supply or tributary to a surface water supply.

☐ The system has a septic tank and SAS and the SAS is within a Zone 1 of a public water supply.

☐ The system has a septic tank and SAS and the SAS is within 50 feet of a private water supply well.

☐ The system has a septic tank and SAS and the SAS is less than 100 feet but 50 feet or more from a private water supply well**.

Method used to determine distance: _____

** This system passes if the well water analysis, performed at a DEP certified laboratory, for fecal coliform bacteria indicates absent and the presence of ammonia nitrogen and nitrate nitrogen is equal to or less than 5 ppm, provided that no other failure criteria are triggered. A copy of the analysis must be attached to this form.

3. Other:

_____

_____

_____

_____

D) System Failure Criteria Applicable to All Systems:

You must indicate "Yes" or "No" to each of the following for all inspections:

Yes	No	
☐	☐	Backup of sewage into facility or system component due to overloaded or clogged SAS or cesspool
☐	☐	Discharge or ponding of effluent to the surface of the ground or surface waters due to an overloaded or clogged SAS or cesspool
☐	☐	Static liquid level in the distribution box above outlet invert due to an overloaded or clogged SAS or cesspool
☐	☐	Liquid depth in cesspool is less than 6" below invert or available volume is less than ½ day flow

Commonwealth of Massachusetts

Title 5 Official Inspection Form

Subsurface Sewage Disposal System Form - Not for Voluntary Assessments

J. BARCALOW
Property Address

27 ELF HILL ROAD
Owner's Name

Owner information is required for every page.

AMHERST | MA | 01002 | 6/29/2012
City/Town | State | Zip Code | Date of Inspection

B. Certification (cont.)

Yes	No	
☐	☑	Required pumping more than 4 times in the last year ***NOT*** due to clogged or obstructed pipe(s). Number of times pumped: _____.
☐	☑	Any portion of the SAS, cesspool or privy is below high ground water elevation.
☐	☑ DNA	Any portion of cesspool or privy is within 100 feet of a surface water supply or tributary to a surface water supply.
☐	☑ DNA	Any portion of a cesspool or privy is within a Zone 1 of a public well.
☐	☑ DNA	Any portion of a cesspool or privy is within 50 feet of a private water supply well.
☐	☑ DNA	Any portion of a cesspool or privy is less than 100 feet but greater than 50 feet from a private water supply well with no acceptable water quality analysis. **[This system passes if the well water analysis, performed at a DEP certified laboratory, for fecal coliform bacteria indicates absent and the presence of ammonia nitrogen and nitrate nitrogen is equal to or less than 5 ppm, provided that no other failure criteria are triggered. A copy of the analysis and chain of custody must be attached to this form.]**
☐	☑	The system is a cesspool serving a facility with a design flow of 2000gpd-10,000gpd.
☐	☑	**The system <u>fails</u>.** I have determined that one or more of the above failure criteria exist as described in 310 CMR 15.303, therefore the system fails. The system owner should contact the Board of Health to determine what will be necessary to correct the failure.

E) Large Systems: To be considered a large system the system must serve a facility with a design flow of 10,000 gpd to 15,000 gpd.

For large systems, you must indicate either "yes" or "no" to each of the following, in addition to the questions in Section D.

Yes	No DNA	
☐	☐	the system is within 400 feet of a surface drinking water supply
☐	☐	the system is within 200 feet of a tributary to a surface drinking water supply
☐	☐	the system is located in a nitrogen sensitive area (Interim Wellhead Protection Area – IWPA) or a mapped Zone II of a public water supply well

If you have answered "yes" to any question in Section E the system is considered a significant threat, or answered "yes" in Section D above the large system has failed. The owner or operator of any large system considered a significant threat under Section E or failed under Section D shall upgrade the system in accordance with 310 CMR 15.304. The system owner should contact the appropriate regional office of the Department.

Commonwealth of Massachusetts

Title 5 Official Inspection Form

Subsurface Sewage Disposal System Form - Not for Voluntary Assessments

27 ELF HILL ROAD
Property Address

J. BARCALOW
Owner's Name

Owner information is required for every page.

AMHERST | MA | 01002 | 6/29/2012
City/Town | State | Zip Code | Date of Inspection

C. Checklist

Check if the following have been done. You **must** indicate "yes" or "no" as to each of the following:

Yes	No	
☑	☐	Pumping information was provided by the owner, occupant, or Board of Health
☐	☑	Were any of the system components pumped out in the previous two weeks?
☑	☐	Has the system received normal flows in the previous two week period?
☐	☑	Have large volumes of water been introduced to the system recently or as part of this inspection?
☑	☐	Were as built plans of the system obtained and examined? (If they were not available note as N/A)
☑	☐	Was the facility or dwelling inspected for signs of sewage back up?
☑	☐	Was the site inspected for signs of break out?
☑	☐	Were all system components, excluding the SAS, located on site?
☑	☐	Were the septic tank manholes uncovered, opened, and the interior of the tank inspected for the condition of the baffles or tees, material of construction, dimensions, depth of liquid, depth of sludge and depth of scum?
☑	☐	Was the facility owner (and occupants if different from owner) provided with information on the proper maintenance of subsurface sewage disposal systems?
		The **size and location of the Soil Absorption System (SAS)** on the site has been determined based on:
☑	☐	Existing information. For example, a plan at the Board of Health.
☑	☐	Determined in the field (if any of the failure criteria related to Part C is at issue approximation of distance is unacceptable) [310 CMR 15.302(5)]

D. System Information

Residential Flow Conditions:

Number of bedrooms (design): 4 Number of bedrooms (actual): 4

DESIGN flow based on 310 CMR 15.203 (for example: 110 gpd x # of bedrooms): 440

DESIGN 440 GALS/DAY

Commonwealth of Massachusetts

Title 5 Official Inspection Form

Subsurface Sewage Disposal System Form - Not for Voluntary Assessments

27 ELF HILL ROAD
Property Address

J. BARCALOW
Owner's Name

Owner information is required for every page.

AMHERST | MA | 01002 | 6/29/2012
City/Town | State | Zip Code | Date of Inspection

D. System Information

Description:

Number of current residents: 3

Does residence have a garbage grinder? ☐ Yes ☑ No

Is laundry on a separate sewage system? [if **yes** separate inspection required] ☐ Yes ☑ No

Laundry system inspected? ☑ Yes ☐ No

Seasonal use? ☐ Yes ☑ No

Water meter readings, if available (last 2 years usage (gpd)):

Detail:

Sump pump? ☐ Yes ☑ No

Last date of occupancy: Date

Commercial/Industrial Flow Conditions: DNA

Type of Establishment:

Design flow (based on 310 CMR 15.203): Gallons per day (gpd)

Basis of design flow (seats/persons/sq.ft., etc.):

Grease trap present? ☐ Yes ☐ No

Industrial waste holding tank present? ☐ Yes ☐ No

Non-sanitary waste discharged to the Title 5 system? ☐ Yes ☐ No

Water meter readings, if available:

Commonwealth of Massachusetts

Title 5 Official Inspection Form

Subsurface Sewage Disposal System Form - Not for Voluntary Assessments

27 ELF HILL ROAD
Property Address

J. BARCALOW
Owner's Name

Owner information is required for every page.

AMHERST | MA | 01002 | 6/29/2012
City/Town | State | Zip Code | Date of Inspection

D. System Information (cont.)

Last date of occupancy/use: DNA
Date

Other (describe below):

General Information

Pumping Records:

Source of information: OWNER INFORMATION

Was system pumped as part of the inspection? ☑ Yes ☐ No

If yes, volume pumped: 1500 gallons

How was quantity pumped determined? MEASURED

Reason for pumping: INSPECTION - SYSTEM IS DUE FOR PUMPING

Type of System:

- ☑ Septic tank, distribution box, soil absorption system
- ☐ Single cesspool
- ☐ Overflow cesspool
- ☐ Privy
- ☐ Shared system (yes or no) (if yes, attach previous inspection records, if any)
- ☐ Innovative/Alternative technology. Attach a copy of the current operation and maintenance contract (to be obtained from system owner) and a copy of latest inspection of the I/A system by system operator under contract
- ☐ Tight tank. Attach a copy of the DEP approval.
- ☐ Other (describe):

Commonwealth of Massachusetts

Title 5 Official Inspection Form

Subsurface Sewage Disposal System Form - Not for Voluntary Assessments

27 ELF HILL ROAD
Property Address

J. BARCALOW
Owner's Name

Owner information is required for every page.

AMHERST | MA | 01002 | 6/29/2012
City/Town | State | Zip Code | Date of Inspection

D. System Information (cont.)

Approximate age of all components, date installed (if known) and source of information:
INSTALLED 2003 NOVEMBER

Were sewage odors detected when arriving at the site? ☐ Yes ☒ No

Building Sewer (locate on site plan):

Depth below grade: 2' feet

Material of construction:

☑ cast iron ☐ 40 PVC ☑ other (explain): SDR 35 & SCH 40 PVC

Distance from private water supply well or suction line: feet

Comments (on condition of joints, venting, evidence of leakage, etc.):
NO

Septic Tank (locate on site plan):

Depth below grade: 8" feet

Material of construction:

☑ concrete ☐ metal ☐ fiberglass ☐ polyethylene ☐ other (explain)

1500 GAL 2 COMPARTMENT NOW 2003
10'6 x 5' x 6' 48" FLOW LINE

If tank is metal, list age: 2003 years

Is age confirmed by a Certificate of Compliance? (attach a copy of certificate) ☐ Yes ☐ No

Dimensions: 48" FLOW LINE 10'6 x 5' x 6'

Sludge depth: 18"

Commonwealth of Massachusetts

Title 5 Official Inspection Form

Subsurface Sewage Disposal System Form - Not for Voluntary Assessments

27 ELF HILL ROAD
Property Address

J. BARCALOW
Owner's Name

Owner information is required for every page.

AMHERST | MASS | 01002 | 6/29/2012
City/Town | State | Zip Code | Date of Inspection

D. System Information (cont.)

Septic Tank (cont.)

Distance from top of sludge to bottom of outlet tee or baffle: 16"

Scum thickness: 3"

Distance from top of scum to top of outlet tee or baffle: 3"

Distance from bottom of scum to bottom of outlet tee or baffle: 1

How were dimensions determined? 14"

Comments (on pumping recommendations, inlet and outlet tee or baffle condition, structural integrity, liquid levels as related to outlet invert, evidence of leakage, etc.):

4" SCH 40 PVC TEE AND GAS TEES
EXCELLENT CONDITION

Grease Trap (locate on site plan): DNA

Depth below grade: feet

Material of construction:

☐ concrete ☐ metal ☐ fiberglass ☐ polyethylene ☐ other (explain):

Dimensions:

Scum thickness

Distance from top of scum to top of outlet tee or baffle

Distance from bottom of scum to bottom of outlet tee or baffle

Date of last pumping: Date

Commonwealth of Massachusetts

Title 5 Official Inspection Form

Subsurface Sewage Disposal System Form - Not for Voluntary Assessments

27 ELF HILL ROAD
Property Address

J. BARCALOW
Owner's Name

Owner information is required for every page.

Amherst | MA | 01002 | 6/29/2012
City/Town | State | Zip Code | Date of Inspection

D. System Information (cont.)

Comments (on pumping recommendations, inlet and outlet tee or baffle condition, structural integrity, liquid levels as related to outlet invert, evidence of leakage, etc.):

TANK SHOULD BE pumped every 3yrs.

Tight or Holding Tank (tank must be pumped at time of inspection) (locate on site plan):

Depth below grade: DNA

Material of construction:

☐ concrete ☐ metal ☐ fiberglass ☐ polyethylene ☐ other (explain):

Dimensions:

Capacity: gallons

Design Flow: gallons per day

Alarm present: ☐ Yes ☐ No

Alarm level: Alarm in working order: ☐ Yes ☐ No

Date of last pumping: Date

Comments (condition of alarm and float switches, etc.):

* Attach copy of current pumping contract (required). Is copy attached? ☐ Yes ☐ No

Commonwealth of Massachusetts

Title 5 Official Inspection Form

Subsurface Sewage Disposal System Form - Not for Voluntary Assessments

27 ELF HILL ROAD
Property Address

J. BARCALOW
Owner's Name

Owner information is required for every page.

AMHERST | MA | 01002 | 6/29/2012
City/Town | State | Zip Code | Date of Inspection

D. System Information (cont.)

Distribution Box (if present must be opened) (locate on site plan):

Depth of liquid level above outlet invert 0

Comments (note if box is level and distribution to outlets equal, any evidence of solids carryover, any evidence of leakage into or out of box, etc.):

BOX IS IN GOOD CONDITION
SELF LEVELERS IN PLACE
NO PROBLEMS

Pump Chamber (locate on site plan): D N A

Pumps in working order: ☐ Yes ☐ No

Alarms in working order: ☐ Yes ☐ No

Comments (note condition of pump chamber, condition of pumps and appurtenances, etc.):

Soil Absorption System (SAS) (locate on site plan, excavation not required):

If SAS not located, explain why:

Commonwealth of Massachusetts

Title 5 Official Inspection Form

Subsurface Sewage Disposal System Form - Not for Voluntary Assessments

27 ELF HILL ROAD
Property Address

J. BARCHOW
Owner's Name

Owner information is required for every page.

Amherst | MASS | 01002 | 6/29/2012
City/Town | State | Zip Code | Date of Inspection

D. System Information (cont.)

Type:

☐	leaching pits	number:	
☐	leaching chambers	number:	
☐	leaching galleries	number:	
☐	leaching trenches	number, length:	
☑	leaching fields 600 FT²	number, dimensions:	15' x 40'
☐	overflow cesspool	number:	
☐	innovative/alternative system		

Type/name of technology:

Comments (note condition of soil, signs of hydraulic failure, level of ponding, damp soil, condition of vegetation, etc.):

RAISED SYSTEM IN TITLE 5 SAND
NO PROBLEMS NOTED
LIQUID LEVELS PROPER
NATURE SOIL PERCOLATION RATE
4.0 MIN/INCH DESIGN RATE 5.0
CLASS I SOIL

See ATTACHED PLAN

Cesspools (cesspool must be pumped as part of inspection) (locate on site plan):

Number and configuration N/A

Depth – top of liquid to inlet invert

Depth of solids layer

Depth of scum layer

Dimensions of cesspool

Materials of construction

Indication of groundwater inflow ☐ Yes ☐ No

Commonwealth of Massachusetts

Title 5 Official Inspection Form

Subsurface Sewage Disposal System Form - Not for Voluntary Assessments

27 ELF HILL ROAD
Property Address

J. BARCZOW
Owner's Name

Owner information is required for every page.

AMHERST MASS 01002 6/29/2012
City/Town State Zip Code Date of Inspection

D. System Information (cont.)

Comments (note condition of soil, signs of hydraulic failure, level of ponding, condition of vegetation, etc.):

Privy (locate on site plan): DNA

Materials of construction:

Dimensions

Depth of solids

Comments (note condition of soil, signs of hydraulic failure, level of ponding, condition of vegetation, etc.):

Commonwealth of Massachusetts

Title 5 Official Inspection Form

Subsurface Sewage Disposal System Form - Not for Voluntary Assessments

27 ELF HILL ROAD
Property Address

J. BARCALOW
Owner's Name

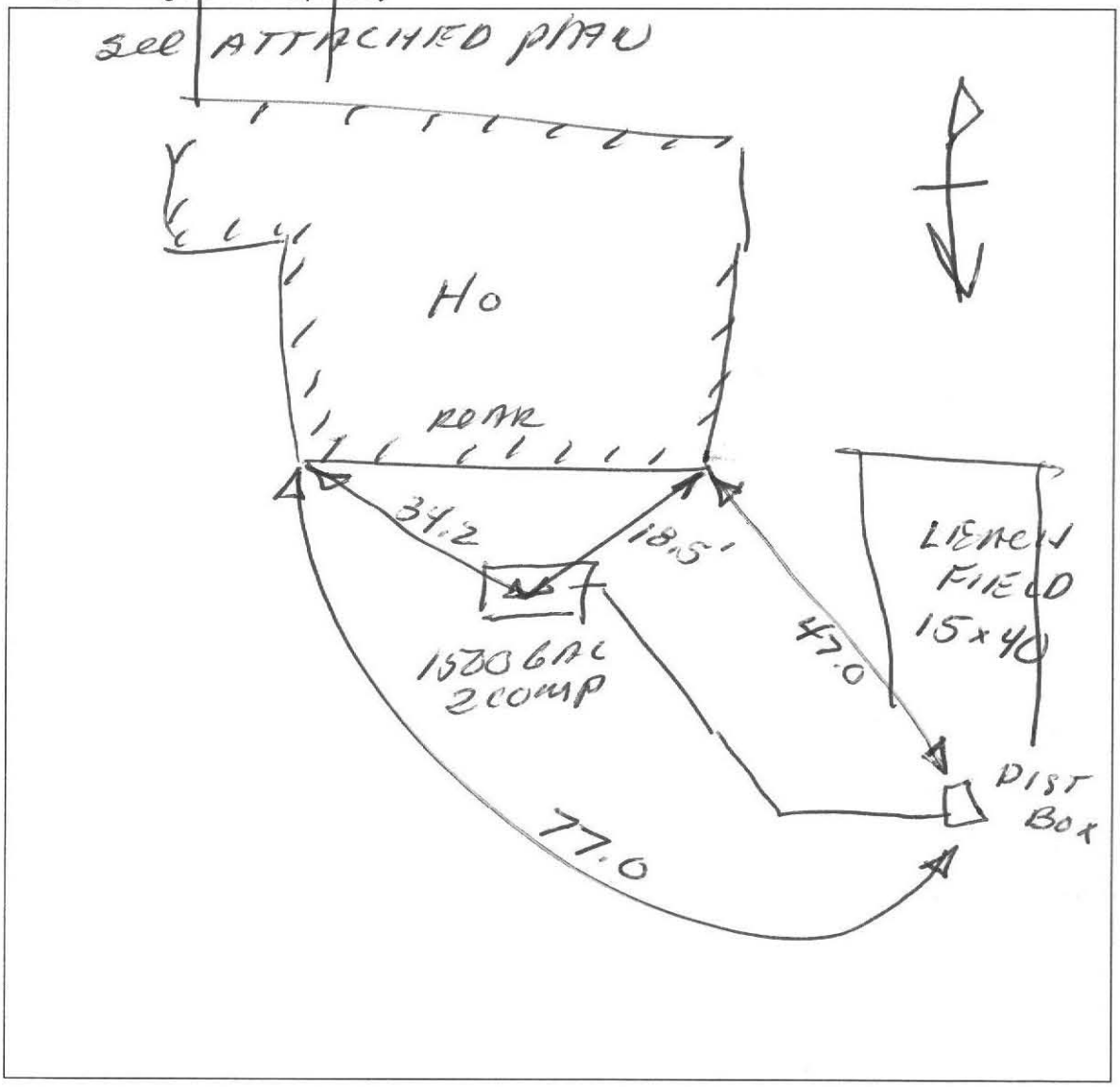
Owner information is required for every page.

City/Town | State | Zip Code | Date of Inspection

D. System Information (cont.)

Sketch Of Sewage Disposal System: Provide a view of the sewage disposal system, including ties to at least two permanent reference landmarks or benchmarks. Locate all wells within 100 feet. Locate where public water supply enters the building. Check one of the boxes below:

☐ hand-sketch in the area below
☐ drawing attached separately



Commonwealth of Massachusetts

Title 5 Official Inspection Form

Subsurface Sewage Disposal System Form - Not for Voluntary Assessments

27 ELF HILL ROAD
Property Address

J. BARCALOW
Owner's Name

Owner information is required for every page.

AMHERST | MA | 01002 | 6/29/2012
City/Town | State | Zip Code | Date of Inspection

D. System Information (cont.)

Site Exam:

- [x] Check Slope
- [ ] Surface water
- [x] Check cellar
- [ ] Shallow wells

Estimated depth to high ground water: 48" SEE ATTACHED PLAN
feet

Please indicate all methods used to determine the high ground water elevation:

- [x] Obtained from system design plans on record
  - If checked, date of design plan reviewed: _____ Date
- [x] Observed site (abutting property/observation hole within 150 feet of SAS)
- [ ] Checked with local Board of Health - explain:
- [x] Checked with local excavators, installers - (attach documentation)
- [ ] Accessed USGS database - explain:

You **must** describe how you established the high ground water elevation:

ORIGINAL PERC TEST 8/6/2003
SEE ATTACHED PLAN

Before filing this Inspection Report, please see Report Completeness Checklist on next page.

Commonwealth of Massachusetts

Title 5 Official Inspection Form

Subsurface Sewage Disposal System Form - Not for Voluntary Assessments

27 ELF HILL ROAD
Property Address

J. BARCALOW
Owner's Name

Owner information is required for every page.

Amherst	MA	01002	6/29/2012
City/Town	State	Zip Code	Date of Inspection

E. Report Completeness Checklist

- [x] Inspection Summary: A, B, C, D, or E checked
- [x] Inspection Summary D (System Failure Criteria Applicable to All Systems) completed
- [x] System Information – Estimated depth to high groundwater
- [x] Sketch of Sewage Disposal System either drawn on page 15 or attached in separate file

office copy

William J. Sieruta, P.E.
46 Upland Road
Holyoke, MA. 01040

Board of Health
Town Hall
Boltwood Walk
Amherst, MA. 01002
Attn: David Zarozinski

November 5, 2003

Subject: As Built Inspection
Emmett Barcalow
27 Elf Hill Road
Amherst, MA.

An "as built" inspection was completed for the subject septic system. The system is in compliance with 310 CMR 15.0 and local board of health regulations. If you need any additional information, please do not hesitate to contact me.

Very truly yours,

William J. Sieruta, P.E.

2CC: E. Barcalow

WJS:mbs

No. 03-18 Revised

FEE 275.00

COMMONWEALTH OF MASSACHUSETTS

Board of Health, Amherst, *MA.*

CERTIFICATE OF COMPLIANCE

Description of Work: ❑ **Individual Component(s)** ❑ **Complete System**

The undersigned hereby certify that the Sewage Disposal System; Constructed ( ), Repaired (✓), Upgraded ( ), Abandoned ( )

by: WILLIAM J SIENKIEWICZ PE

at 27 Old Hill Rd

has been installed in accordance with the provisions of 310 CMR 15.00 (Title 5) and the approved design plans/as-built plans relating to application No. 03-18, dated 9/18/03. Approved Design Flow ____ (gpd)

Installer William Sienkiewicz

Designer: _____ Inspector: Thomas Sienkiewicz Date: 11/6/03

The issuance of this permit shall not be construed as a guarantee that the system will function as designed.

Caring for Your Septic System

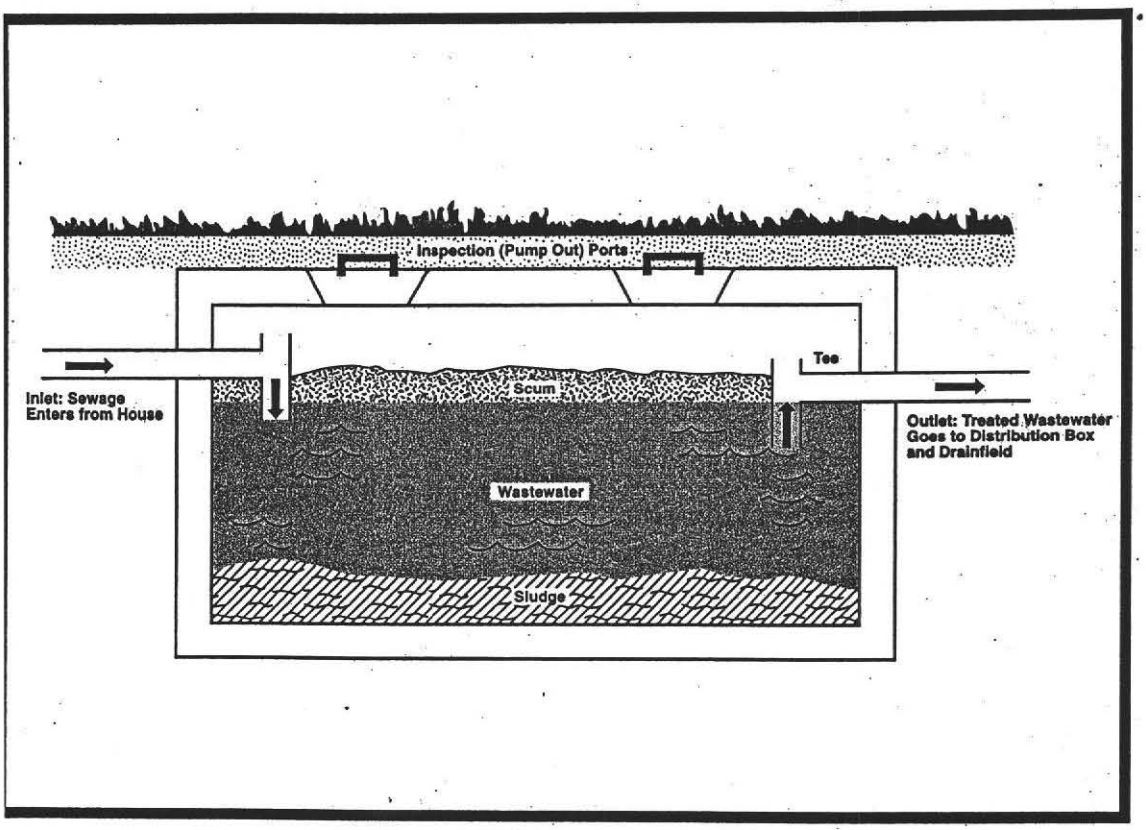
The accumulated solids in the bottom of the septic tank should be pumped out **every three to five years** to prolong the life of your system. Septic systems must be maintained regularly to continue working.

Neglect or abuse of your septic system can cause it to fail. Failing septic systems can

- cause a serious health threat to your family and neighbors,
- degrade the environment, especially lakes, streams and groundwater,
- reduce the value of your property,
- be very expensive to repair, and
- put thousands of water supply users at risk if you live in a public water supply watershed and fail to maintain your system.

Be alert to these warning signs of a failing system:

- sewage surfacing over the drainfield (especially after storms),
- sewage back-ups in the house,
- lush, green growth over the drainfield,
- slow draining toilets or drains,
- sewage odors.

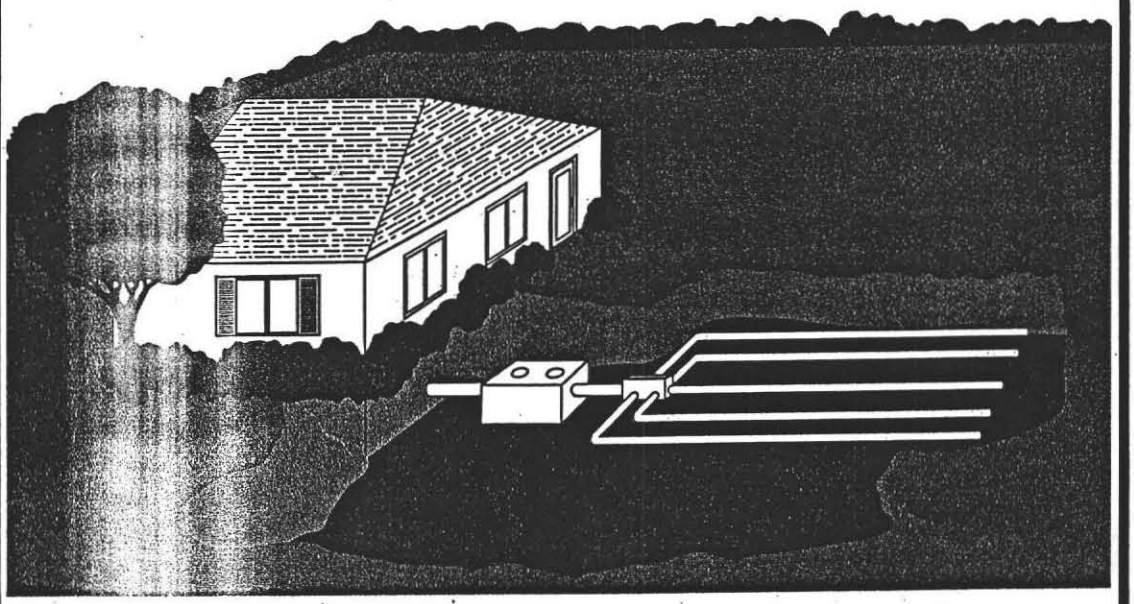


Septic Systems Explained

Septic systems are individual wastewater treatment systems that use the soil to treat small wastewater flows, usually from individual homes. They are typically used in rural or large lot settings where centralized wastewater treatment is impractical.

There are many types of septic systems in use today. While all septic systems are individually designed for each site, most septic systems are based on the same principles.

A Conventional Septic System



*A septic **system** consists of a **septic tank**, a distribution **box** and a **drainfield**, all connected by pipes, called **conveyance lines**.*

*Your septic system treats your household wastewater by temporarily holding it in the septic tank where heavy solids and lighter scum are allowed to separate from the wastewater. This separation process is known as **primary** treatment. The solids stored in the tank are decomposed by bacteria and later removed, along with the lighter scum, by a professional septic tank pumper.*

*After the partially treated wastewater leaves the tank, it flows into a **distribution box**, which separates this flow evenly into a network of **drainfield trenches**. Drainage holes at the bottom of each line allow the wastewater to drain into gravel trenches for temporary storage. This **effluent** then slowly seeps into the subsurface soil where it is further treated and purified **(secondary treatment)**.*

TEST PIT TP-1

0-6	OIS LOAM	AP SANDY LOAM 10YR 3-2	0-6
6-24	FILL MATERIAL	FILL 10YR 4-6	6-30
24-72	WELL GRADED SILTY COARSE GRAVEL	C1 LOAMY SAND 10YR 6-6	30-100
72-96	SAND & GRAVEL	C2 LOAMY SAND 10YR 6-4	100-120

WATER AT 108"

TEST PIT TP-2

0-6	OIS LOAM	AP SANDY LOAM 10YR 3-2	0-6
6-24	FILL MATERIAL	FILL 10YR 4-2	6-30
24-30	COARSE SAND & GRAVEL WITH FINES STRUCTURELESS	C COARSE SAND 20% GRAVEL 20% COBBLES FRIABLE	30-60

STOPPED USED AS PERC HOLE TP-2 WAIVED BY ASITN FOR CONSISTENT SOILS

WIPING 300'
H2O STANDING 120
MOTTLING 10YR5-6 @ 50" 100-103
BANDS @ 50" 100-103
ENHT 50

ENHT 30"
BANDS 10YR5-8 NOTED

DATE: SEPT 2003
ENGR: W.J. SIERUTA PE&LS
WITNESS: D. ZARDZINSKI BOH
PERMEABILITY TEST
PERC 1 @ TP-1
DEPTH 63"
ACTUAL RATE 4 MIN/INCH
DESIGN RATE 5.0 MIN/INCH
CLASS I SOIL
48" SEPARATION REQD PER 310 CMR 15.212
PERC 2 WAIVED BY BOH CONSISTENT SOILS, REPAIR PERC TEST

DESIGN INFORMATION

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH 310 CMR 15.0 TITLE 5 AND ALL LOCAL BOARD OF HEALTH REGULATIONS.

FINISH GRADING TO BE AS SHOWN ON PLAN VIEW. ALL DISTURBED TO BE LOAMED AND SEEDED.

DESIGN CRITERIA

USE: EXISTING 4 BEDROOM SINGLE FAMILY RESIDENTIAL HOME WALK OUT TO REAR, FULL BAT

DESIGN FLOW: 310 CMR 15.203
REQD 110 GALS/BEDROOM x 4 = 440 GALS/DAY

NO DISPOSAL UNIT

SEPTIC TANK REQD: 310 CMR 15.223
440 GALS/DAY x 300% = 880 GALS
MINIMUM TANK SIZE PERMITTED 1500 GAL

USE NEW 1500 GAL SEPTIC TANK 2 COMPARTMENT 10'6" x 5' x 5'

LEACHING SYSTEM: DUE TO SOIL CONDITIONS A LEACHFIELD DESIGN IS TO BE USED PER 310 CMR 15.252

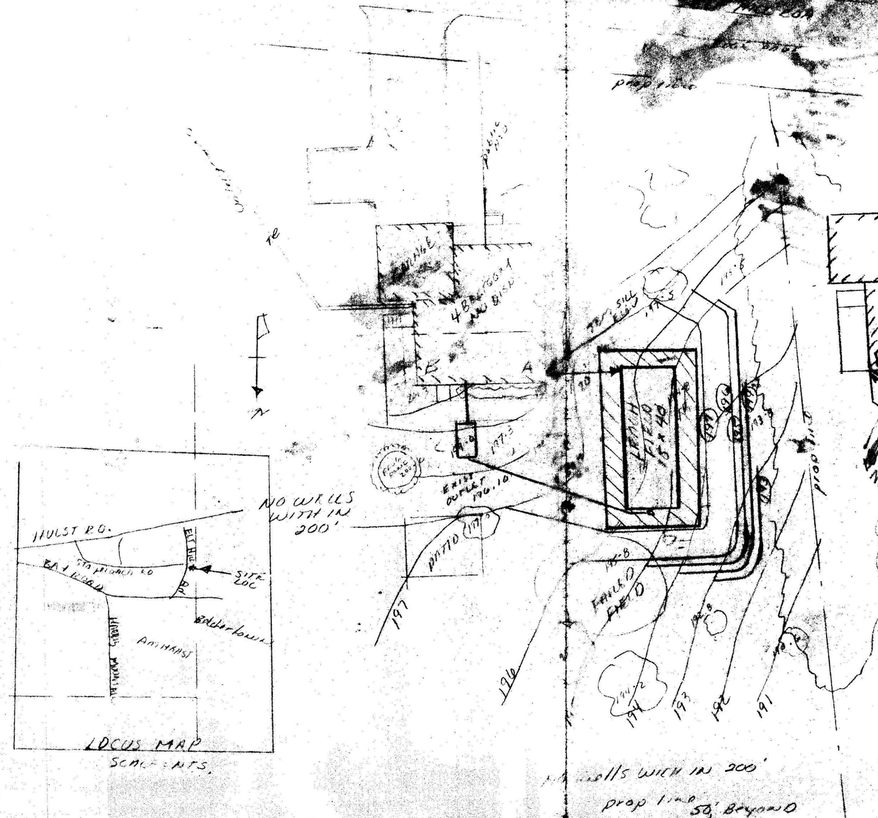
EFFECTIVE DEPTH	6 INCH MIN
EFFECTIVE WIDTH	15
EFFECTIVE LENGTH	40'

BOTTOM AREA
15 x 40 = 600 FT²

TOTAL PERMEABILITY
600 FT² x .74 = 444 GAL/DAY

PERMEABILITY
310 CMR 15.242
PERCOLATION RATES
ACTUAL RATES
4 MIN/INCH
DESIGN RATE
5.0 MIN/INCH
CLASS I SOIL
BOTTOM & SIDE WALL AREAS
.74 GALS/FT²

TBM SET SILL ELEV HOUSE
NE. CORN ELEV 200.00'



INSTALLATIONS NOTES:

1. SEPTIC TANK TO BE INSPECTED. INLET AND OUTLET TEES TO BE INACCORDANCE WITH 310 CMR 15.227 SECT 5
2. ALL STONE TO BE DOUBLE WASHED STONE FREE OF ALL SILT AND FINES PER 310 CMR 15.0
3. ALL PIPE JOINTS WITH TANK & DIST BOX TO BE ASPHALT ROPE SEALED
4. ALL TOP & SUB MATERIAL REMOVED TO EL EV(192.50) AND REPLACED WITH SELECT SAND FILL PER 310 CMR 15.255

5 [illegible] TO BE SET ON [illegible] WRAPPED STONE

PREPARED FOR
E. BARCALOW
27 ELF HILL ROAD
AMHERST MASS
ENGR: W.J. SIERUTA PE&LS
DATE: SEPT 18 2003

REVISED SEPT 29 2003
REPLACE TANK

App: 14341
Batch-58

June 2012 INVOICE

AMHERST PUBLIC HEALTH DEPARTMENT

Bangs Community Center
70 Boltwood Walk
Amherst, MA 01002

DATE: June 29, 2012

TO Jillit Barcalo (paid by William Sieruta)
27 Elf Hill Road
Amherst, MA 01002

RE: Invoice for **Septic Title V witness**

Services provided by **Edmund Smith**

PAYMENT TERMS: Due Upon Receipt

QUANTITY	DESCRIPTION	UNIT PRICE	LINE TOTAL
1.00	Septic Title V witness	$ 200.00	$ 200.00
	Rec'd today Bill Sieruta's check #8590 for $200.00		
	this invoice is paid in full/thank you		
		SUBTOTAL	$ 200.00
		SALES TAX	
		TOTAL	$ 200.00

Smith, Edmund

Subject: Title V
Location: 27 Elf Hill Road

Start: Fri 6/29/2012 9:00 AM
End: Fri 6/29/2012 10:00 AM

Recurrence: (none)

Organizer: Smith, Edmund

Meet Bill Sieruta; owner Jillit Barcalo; 2003 system (Bill put in).

CUST NAME
4 BOLTWOOD AVENUE
07/05/12
CITY, ST, ZIP

***TOWN OF A TOWN HAL
AMHERST M REFERENCE
DATE/TIME 14:49

CUST NAME

0
DEPT

DE HEA058 TITLE V WI 200.

RECPT TOTAL

200.00 AMOUNT
WILLIAM J QUA CHECK 8590

No. 03-18 Revised

FEE 275.00
dg 1663

COMMONWEALTH OF MASSACHUSETTS

Board of Health, Amherst, *MA.*

APPLICATION FOR DISPOSAL SYSTEM CONSTRUCTION PERMIT

Application for Permit to Construct(X) Repair(X) Upgrade(X) Abandon( ) - ❑ **Complete System** ❑ **Individual Components**

Location E BARCALOW	Owner's Name E. BARCALOW
Map/Parcel# 27 ELF HILL ROAD	Address 27 ELF HILL RD Amherst MA
Lot# Amherst MASS	Telephone# 2508319
Installer's Name	Designer's Name WILLIAM SIENUTA
Address	Address 46 upland Rd Holyoke MASS
Telephone#	413 532 8525

Type of Building RESIDENTIAL HOME (EXISTING) Lot Size EXISTING sq. ft.
Dwelling - No. of Bedrooms 4 BEDROOMS, NO DISPOSAL Garbage grinder (NO
Other - Type of Building SINGLE FAMILY No. of persons 8 Showers (2), Cafeteria (NO
Other Fixtures FULL BMT WALKOUT TO REAR
Design Flow (min. required) 110 x 4 gpd Calculated design flow 440 Design flow provided 444 gpd
Plan: Date SEPT 18 2003 Number of sheets 1 Revision Date —
Title SEPTIC SYSTEM DESIGN FOR E. BARCALOW 27 ELF HILL RD
Description of Soil(s) See ATTACHED
Soil Evaluator Form No. 11 Name of Soil Evaluator WJ SIENUTA Date of Evaluation 8/16/2003
DESCRIPTION OF REPAIRS OR ALTERATIONS complete septic sys to upgrade to 310 CMR 15.00

The undersigned agrees to install the above described Individual Sewage Disposal System in accordance with the provisions of TITLE 5 and further agrees to not to place the system in operation until a Certificate of Compliance has been issued by the Board of Health.

Signed X Emmett Barcalow Date 9/29/2003

Inspections

Sch 40 PVC Sch 40 Pipe

No. 03-18 Revised

FEE 275.00

COMMONWEALTH OF MASSACHUSETTS

Board of Health, Amherst, *MA.*

CERTIFICATE OF COMPLIANCE

Description of Work: ❑ **Individual Component(s)** ❑ **Complete System**

The undersigned hereby certify that the Sewage Disposal System; Constructed ( ), Repaired (✓), Upgraded ( ), Abandoned ( )
by: WILLIAM J SIENUTA PE
at 27 ELF HILL RD
has been installed in accordance with the provisions of 310 CMR 15.00 (Title 5) and the approved design plans/as-built plans relating to application No. 03-18, dated 9/18/03. Approved Design Flow (gpd)
Installer William Sienuta
Designer: Inspector: Thomas Sienuta Date: 11/6/03

The issuance of this permit shall not be construed as a guarantee that the system will function as designed.

No. 03-18

FEE 275.00
ck. pd
1663

COMMONWEALTH OF MASSACHUSETTS

Board of Health, Amherst, *MA.*

DISPOSAL SYSTEM CONSTRUCTION PERMIT

Permission is hereby granted to; Construct( ) Repair(✓) Upgrade( ) Abandon( ) an individual sewage disposal system at 27 Elf Hill Road as described in the application for Disposal System Construction Permit No. 03-18 (R) dated 9/18/03. Rec 9/29/03

Provided: Construction shall be completed within three years of the date of this permit. All local conditions must be met.

Form 1255 Rev. 5/96 A.M. Sulkin Co. Boston, MA

Date 9/30/03 Board of Health Paul Bergenbier for Conservation

No. _____ Date: 8/6/03

Commonwealth of Massachusetts
, Massachusetts

Soil Suitability Assessment for On-site Sewage Disposal

Performed By: WILLIAM SIEWTA PE EVAL Date: 8/6/03
Witnessed By: D. ZARAZINSKI BOH

Location Address or Lot #	Owner's Name, Address, and Telephone #
E. BARCALOW 27 ELF HILL RD 30 Amherst MA New Construction ☐ Repair ☐	E. BARCALOW 27 ELF HILL RD Amherst, MASS

Office Review

Published Soil Survey Available: No ☐ Yes ☑ Tel 256 8319
Year Published ..... Publication Scale ..... Soil Map Unit .....
Drainage Class ..... Soil Limitations .....
Surficial Geologic Report Available: No ☐ Yes ☐
Year Published ..... Publication Scale .....
Geologic Material (Map Unit) .....
Landform .....
Flood Insurance Rate Map:
Above 500 year flood boundary No ☐ Yes ☑
Within 500 year flood boundary No ☑ Yes ☐
Within 100 year flood boundary No ☑ Yes ☐
Wetland Area:
National Wetland Inventory Map (map unit) .....
Wetlands Conservancy Program Map (map unit) .....

4 BEDROOM
NO DISPOSAL
UNIT

Current Water Resource Conditions (USGS): Month
Range: Above Normal ☐ Normal ☑ Below Normal ☐
Other References Reviewed: _____

Percolation Test

Test No. perc 1
Reading Time 50nk
Saturation (15 min) 24 gals

12	953
11	7/3 = 2.33 958
10	958
9	10 00
8	12/3 = 4.0 1002
7	1005
6	1012

Perc Rate design rate
Ground Elev. 5.0 Min/inch
Depth of Hole 5

Test No. perc 2
Reading Time perc 2
Saturation (15 min)

12	
11	
10	WAIVED BY
9	BOH
8	
7	
6	

Perc. Rate design rat
Ground Elev. Min/inch
Depth of Hole

Deep Test Pit/s

Test Pit TP1-1 63"

Depth	Soil Description
0-6	A
6-30	FILL WITH BLACKtopetc
30-100	WELL GRADED SICKY GRAVEL
100-120	SANDE gravel COARSE

Groundwater Depth 100" Elev.
Bedrock Depth DNA Elev.
Ground Elev. EHWT 50"

Test Pit TP1-2

Depth	Soil Description
0-6	OTS LOAM
6-30	FILL -
30-64	COARSE GRAVEL.
	STOPPED USED AS PERC HOL

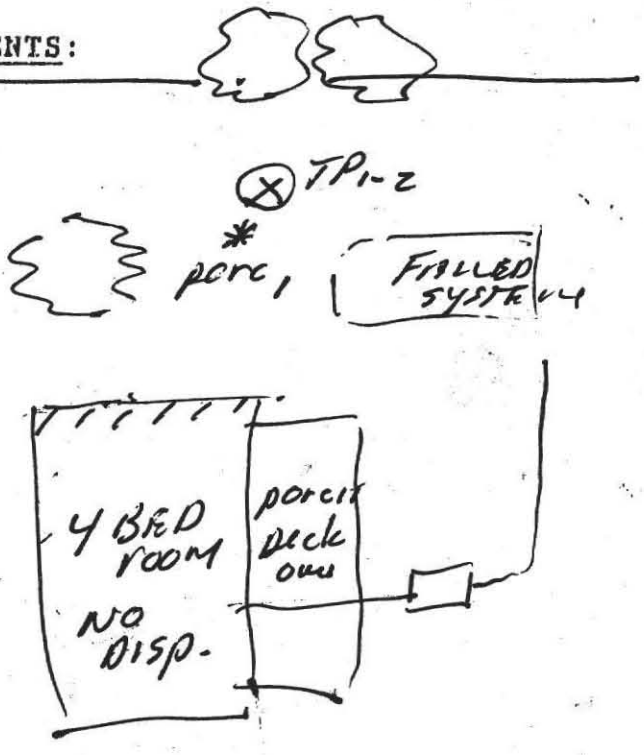
Groundwater Depth Elev.
Bedrock Depth Elev.
Ground Elev. EHWT 50"

S.C.S. Soil Description SANDE Gravel Seasonal High Water Table? AS NOTED

Bench Mark: Elev. - Description TOP OF SILL

COMMENTS:

Date: 8/6/03
Client: E BARCALOW
27 ELF HILL RD
AMHERST MASS
Engineer: WJ SIEKUTA
Witness: D ZARAZINSKI
Location of Perc:
27 ELF HILL RD
AMHERST



FORM 11 - SOIL EVALUATOR FORM
Page 2 of 3

Location Address or Lot No. 27 ELF HILL RD Amherst MASS

On-site Review

Deep Hole Number TP1-1 Date 8/6/03 Time 800 Weather RAIN

Location (identify on site plan)

Land Use RESIDENTIAL Slope (%) 0 Surface Stones SOME NOted

Vegetation LAWN

Landform

Position on landscape (sketch on the back)

Distances from:

Open Water Body DNA feet — Drainage way DNA feet

Possible Wet Area — feet — Property Line feet

Drinking Water Well feet — Other

public H2O

DEEP OBSERVATION HOLE LOG*

Depth from Surface (inches)	Soil Horizon	Soil Texture (USDA)	Soil Color (Munsell)	Soil Mottling	Other (Structure, Stones, Boulders, Consistency, % Gravel)
0-8	Ap	S/C	10YR 3-2		WITH SOME gravel & Blacktop
8-30	Fill	—	10YR 4-2		20% gravel
30-100	C1	LOAMY SAND	10YR 6-6	10YR 5-8 band	20% cobbles MASSIVE
100-120	C2	LOAMY SAND	10YR 6-4	@ 50"	FRIABLE 10% gravel

* MINIMUM OF 2 HOLES REQUIRED AT EVERY PROPOSED DISPOSAL AREA

Parent Material (geologic) OUTWASH Gravel Depth to Bedrock: DNA

Depth to Groundwater: Standing Water in the Hole: 100 Weeping from Pit Face: 100

Estimated Seasonal High Ground Water: 50" ESHWT Oxide

DEP APPROVED FORM - 12/17/95

FORM 11 - SOIL EVALUATOR FORM
Page 2 of 3

Location Address or Lot No. 27 ELF HILL ROAD Amherst MA

On-site Review

Deep Hole Number TP1-2 Date 8/6/03 Time 800 Weather RAIN

Location (identify on site plan)

Land Use RESIDENTIAL Slope (%) Surface Stones SOME NOted

Vegetation LAWN

Landform OUTWASH TERRACE

Position on landscape (sketch on the back)

Distances from:

Open Water Body DNA feet — Drainage way DNA feet

Possible Wet Area — feet — Property Line feet

Drinking Water Well feet — Other Soil sketch

public H2O

DEEP OBSERVATION HOLE LOG*

Depth from Surface (inches)	Soil Horizon	Soil Texture (USDA)	Soil Color (Munsell)	Soil Mottling	Other (Structure, Stones, Boulders, Consistency, % Gravel)
0-8	A	S/C	10YR 3-2		
8-30	Fill	—	10YR 4-2		20% gravel 20% cobbles
30-65	C1	LOAMY SAND	10YR 6-6	10YR 5-8 BANDS @ 50"	MASSIVE FRIABLE
		Stopped used as perc hole			

* MINIMUM OF 2 HOLES REQUIRED AT EVERY PROPOSED DISPOSAL AREA

Parent Material (geologic) OUTWASH Gravel Depth to Bedrock: DNA

Depth to Groundwater: Standing Water in the Hole: 100" Weeping from Pit Face: 100"

Estimated Seasonal High Ground Water: ESHWT 50"

DEP APPROVED FORM - 12/17/95

FORM 12 - PERCOLATION TEST

Location Address or Lot No. 27 ELF HILL RD

COMMONWEALTH OF MASSACHUSETTS

Amherst, Massachusetts

Percolation Test*		
Date: 8/6/03	Time: 800 AM	
Observation Hole #	TP1-1	TP1-2
Depth of Perc	63"	60"
Start Pre-soak	24 gals	
End Pre-soak	953	WAIVED BY BOH
Time at 12"	953	CONSISTENT SOILS
Time at 9"	10 00	LIMITED AREA
Time at 6"	1012	Repair perc test
Time (9"-6")	12/3 = 4.0	
Rate Min./Inch	5.0	

CLASS I SOIL 48" Separation Reqd 310 CMR 15.212

* Minimum of 1 percolation test must be performed in both the primary area AND reserve area.

Site Passed ☒ Site Failed ☐

Performed By: William Lee PE.

Witnessed By: D. ZARAZINSKI BOH.

Comments:

DEP APPROVED FORM - 12/07/95

Location Address or Lot No. 27 ELF HILL RD
AMHERST MA

Determination for Seasonal High Water Table

Method Used:

	TP#1	TP#2
☐ Depth observed standing in observation hole _____ inches	100	–
☑ Depth weeping from side of observation hole _____ inches	100	–
☑ Depth to soil mottles _____ inches 10YR 5-8	ENWT	ENWT
☐ Ground water adjustment _____ feet BNWD @ 50"	50"	50"

Index Well Number _____ Reading Date _____ Index well level _____

Adjustment factor _____ Adjusted ground water level _____

Depth of Naturally Occurring Pervious Material

Does at least four feet of naturally occurring pervious material exist in all areas observed throughout the area proposed for the soil absorption system? yes

If not, what is the depth of naturally occurring pervious material? _____

Certification

I certify that on 5/95 (date) I have passed the soil evaluator examination approved by the Department of Environmental Protection and that the above analysis was performed by me consistent with the required training, expertise and experience described in 310 CMR 15.017.

Signature [signature] Date 8/6/03

275 a
Lot #1667
PJ

FORM 11: Soil Evaluation Form NO: _____

Commonwealth of Massachusetts
Town of Amherst

Soil Suitability Assessment : On-Site Sewage Disposal

Performed By: B. Ll Smyth Date: 8/06/03
Witnessed By: Dave Zorrilla

Location Address of:
Lot #

Owner's Name: EMMET
Address of: BARCALOW
Telephone: 27 ELF HILL RD
256-8319

New Construction ☐ Repair ☑

Office Review

Published Soil Survey Available? No ☐ Yes ☐
Year Published _____ Publication Scale _____ Soil Map Unit _____
Drainage Class _____ Soil Limitations _____

Surficial Geologic Report Available? No ☐ Yes ☐
Year Published _____ Publication Scale _____
Geologic Material (map unit) _____
Landform _____

Flood Insurance Rate Map:
Above 500 year flood boundary? No ☐ Yes ☐
Within 500 year flood boundary? No ☐ Yes ☐
Within 100 year flood boundary? No ☐ Yes ☐

Wetland Area:
National Wetland Inventory Map (map unit) _____
Wetlands Conservancy Program Map (map unit) _____

Current Water Resource Conditions (USGS): month _____
Range: Above Normal ☐ Normal ☐ Below Normal ☐

Other Reference Reviewed:

Determination: Seasonal High Water Table

Methods Used:

☐ Depth observed standing in observation hole _____ inches
☐ Depth weeping from side of observation hole _____ inches
☐ Depth to soil mottles _____ inches
☐ Ground water adjustment _____ feet

Index Well No. _____ Reading Date _____ Index Well Level _____
Adjustment factor _____ Adjusted ground water level _____

Depth of Naturally Occurring Previous Material

Does at least four feed of naturally occurring previous materials exist in all areas observed throughout the area proposed for this soil absorption system? _____

If not, what is the depth of naturally occurring previous material?
_____

Certification

I certify that on _____ (date) I. have passed the soil evaluator examination approved by the Department of Environmental Protection and that the above analysis was performed by me consistent with the required training, expertise, and experience described in 310 CMR 15.017.

Signature _____
Date _____

27 ELF HILL Rd

On-Site Review

Deep Hole Number (1) Date: 8/6/03 Time 9 AM
Weather Rain PT. Cloudy Sun
Location (identify on site plan) _____
Land Use Residential Slope (%) 2-3
Surface Stone None
Vegetation: Lawn

Landform:

Position on Landscape (sketch on back) _____
Distances from:
Open Water Body 100 feet — Drainageway 100 feet
Possible Wet Ares 100 feet — Property Line 45 feet
Drinking Water Well 100 feet — Other _____

DEEP OBSERVATION HOLE LOG

depth from surface (inches)	soil horizon	soil texture (USDA)	soil color (Munsel)	soil mottling	other (structure, stones, boulders) Consistency, % gravel
8	AP	SLC	10YR 3-2		some gravel + Blacktop
30	Fill		10YR 4/2		
100	C1	Loamy Sandy Sand	10YR 5-8		20% gravel 2-3 cobble
120	C2	Loamy Sand	10YR 6/6 5-4	Band 50"	massive 10% gravel

Parent Material (geologic) OCTWASK
Depth to Bedrock 100
Depth to Groundwater :
Standing Water in the Hole 100
Weeping from Pit Face _____
Estimated Seasonal High Water 50

On-Site Review

Deep Hole Number _____ Date: _____ Time _____
Weather _____
Location (identify on site plan) _____
Land Use _____ Slope (%) _____
Surface Stone _____
Vegetation:

Landform:

Position on Landscape (sketch on back) _____
Distances from:
Open Water Body _____ feet — Drainageway _____ feet
Possible Wet Ares _____ feet — Property Line _____ feet
Drinking Water Well _____ feet — Other _____

DEEP OBSERVATION HOLE LOG

depth from surface (inches)	soil horizon	soil texture (USDA)	soil color (Munsel)	soil mottling	other (structure, stones, boulders) Consistency, % gravel
8	A	SLC			
30	Fill	—			
65	C1	Loamy Sand			
			use AS Perc hole		

Parent Material (geologic) _____
Depth to Bedrock _____
Depth to Groundwater :
Standing Water in the Hole _____
Weeping from Pit Face _____
Estimated Seasonal High Water _____

45-0

35'

4 Bedrooms
No G/R

27 Elk Hill Rd

FORM 12: Percolation Test
Location Address or Lot # 27 ELK HILL RD

Commonwealth of Massachusetts
Town of Amherst

PERCOLATION TEST * DATE: 7/31/03 TIME:		
Observation Hole #	(1)	
Depth of Perc	23"	
Start Pre-soak		9:53
End Pre-soak	~~8" 9th~~	9:56 11"
Time at 12"	~~15 11"~~	9:58 10
Time at 9"		10:00 9
Time at 6"		10:02 8
Time (9"-6")		10:05 7
Rate Min./Inch	(4)	10:12 6

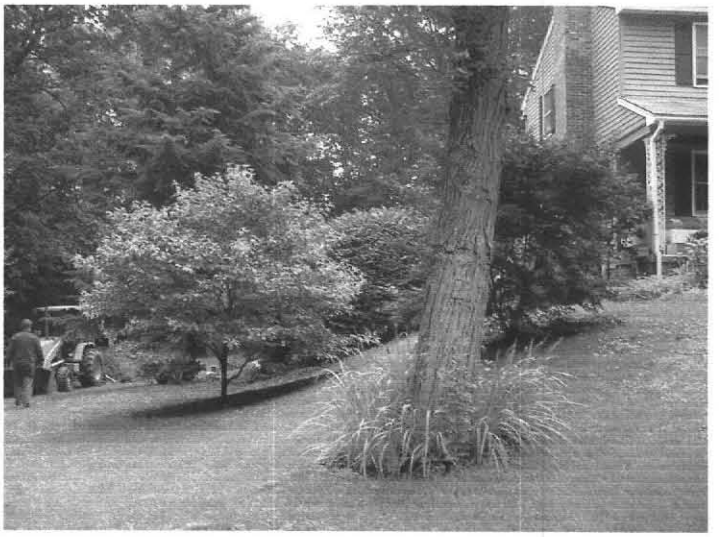
*Minimum of one percolation test must be performed in both the primary area and reserve area.

Site Passed ☐ Site failed ☐

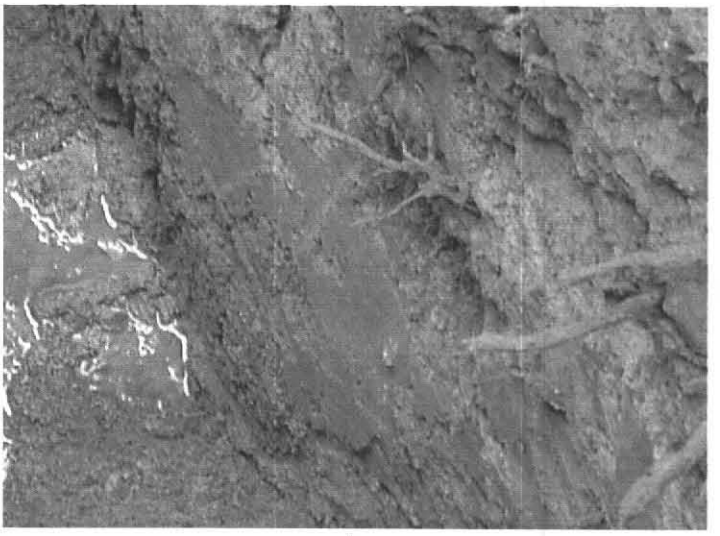
Performed by Bill Sienko

Witnessed by David Farrington

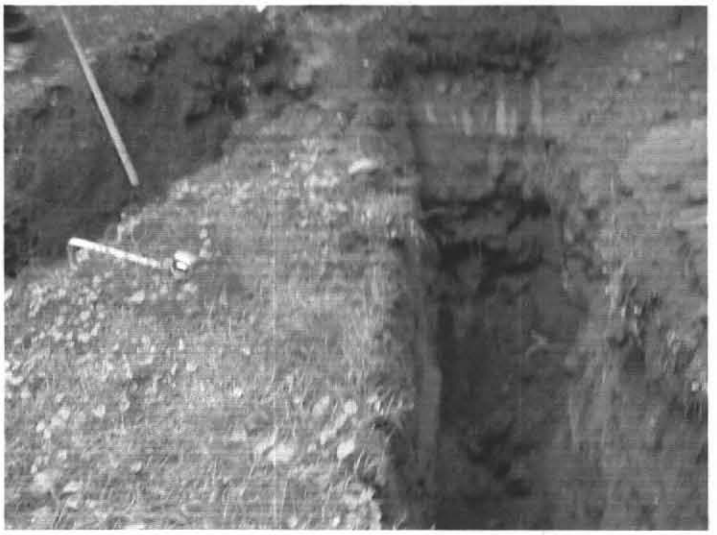
Comments:

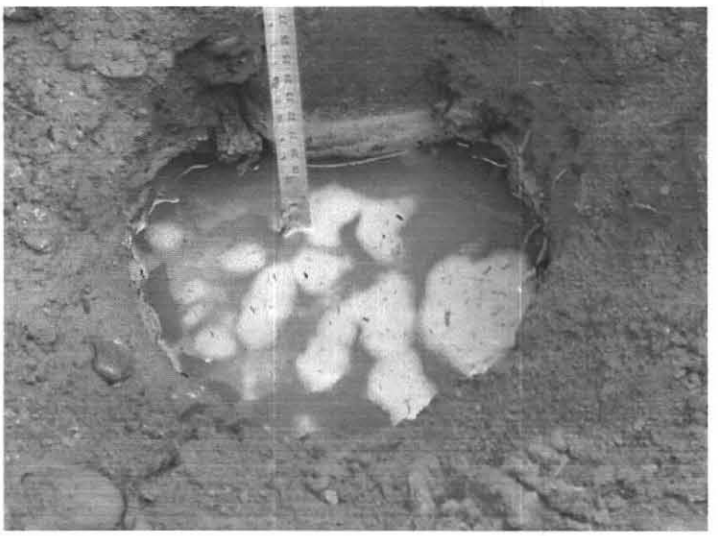







27 Elf Hill Rd Emmet C. Barcalow
Bill sieruta (2)





27 Elf Hill Rd Emmet C. Barcalow
Bill Sieruta

BOARD OF HEALTH, AMHERST, MASSACHUSETTS

APPLICATION FOR DISPOSAL WORKS CONSTRUCTION PERMIT

No. 69-24 Date 12/23/69 Fee $3.00 Date Rec'd. 12/23/69 By DGF

Application is hereby made for a permit to Construct (X) or Repair ( ) an Individual Sewage Disposal System at:
Location—Address 27 Elf Hill Road or Lot No. 256
Owner Joseph P. Norman, Jr. Address 79 School St., Agawam
Contractor Same Address same
Type of Building Dwelling-Garrison Dimensions 25.8x38;Garage 22x22 Size Lot 150'Frontage;160'Rear R.212.55; L.221.03
Dwelling—No. of Bedrooms 4 Expansion Attic (NO) Garbage Grinder (Yes)
Other _____ No. of persons _____ Showers ( )
Other fixtures _____
Town Water? yes Type of Well _____
Design Flow 75 gallons per person per day. Total daily flow 600 gallons
Septic Tank—Liquid capacity 1250 gallons Dimensions: L _____ W _____ D _____
Disposal Trench—No. 3 Width 3 Total Length 150 Total leaching area 450 sq. ft.
Disposal Bed—No. _____ Diameter _____ Depth below inlet _____ Total leaching area _____ sq. ft.
Dry Well—No. _____ Diameter _____ Depth below inlet _____ Dimensions: _____ x _____ x _____
Other: Distribution box ( ) No. _____ Dosing tank ( )
(Depth of Soil Line Below finished grade at foundation _____)
Percolation Test Results Performed by _____ Date _____
Test Pit No. 1 _____ minutes per inch Depth of Test Pit _____
Test Pit No. 2 _____ minutes per inch Depth of Test Pit _____
Description of Soil _____ Depth to Ground Water _____
Will *disposal area* be filled? _____ Cut down? _____
(On reverse side or separate sheet, show plot plan with building. Include dimensions, distances from all boundaries. Show location of wells, streams, ledge, large trees, etc.)

AGREEMENT: The undersigned agrees to construct the aforedescribed individual sewage disposal system in accordance with the provisions of Article XI of the Sanitary Code and regulations of the Amherst Board of Health. The undersigned further agrees not to place the system in operation until a Certificate of Compliance has been issued by this board of health.

J. P. Norman — Owner or builder — 12-23-69 date

Application Approved by C E Drake — 1-19-70 date

Application Disapproved *for the following reasons:*

BOARD OF HEALTH, AMHERST, MASSACHUSETTS

CERTIFICATE OF COMPLIANCE

THIS IS TO CERTIFY, That the individual Sewage Disposal System installed ( ) or repaired ( ) by _____ (INSTALLER) at _____ has been constructed in accordance with the provisions of Article XI of the State Sanitary Code as described in the application for Disposal Works Construction Permit No. _____ dated _____

The issuance of this certificate shall not be construed as a guarantee that the system will function satisfactorily.

DATE _____ Inspector _____

BOARD OF HEALTH, AMHERST, MASSACHUSETTS

DISPOSAL WORKS CONSTRUCTION PERMIT

No. 69-24

Permission is hereby granted J. P. Norman Jr to construct (X) or repair ( ) an Individual Sewage Disposal System at Lot 256 Elf Hill Rd as shown on the application for Disposal Works Construction Permit No. 69-24

This permit is issued with the understanding that future alterations or additions will be made if necessary. This permit shall not be construed as permission to create or maintain any sewage nuisance and in the issuance of this permit the Board of Health assumes no responsibility for the future operation or maintenance of the system.

DATE ~~12-23-69~~ 1-19-70

C E Drake — Board of Health

27 Elf Hill

ENVIRONMENTAL FIELD SERVICES, INC.
PO BOX 518
LEEDS, MA 01053
(413) 586-7200

February 10, 1997

Mr. John Banner
27 Elf Hill Road
Amherst, MA 01002

Re: Follow-up inspection of repairs to Septic System at 27 Elf Hill Road, Amherst, MA.

Dear Mr. Banner,

This letter shall serve as confirmation of repairs made to the Septic Tank, the D-Box and some of the Piping at the above referenced location. As indicated on the *Subsurface Sewage Disposal System Inspection Form*, the broken baffle in the Septic Tank, and the structurally unsound D-box resulted in a **Conditional Pass** finding. It was also recommended that the first two feet (2') of Orangeburg pipe from the D-Box to the S.A.S. be replaced with 4" dia. SDR 35 pipe.

Following the initial inspection on January 13, 1997, Karl's Excavation Inc., was contracted to perform the recommended repairs to bring the Septic System into passing compliance.

Due to the repairs performed by Karl's Excavating Inc., the Septic System at 27 Elf Hill Road is in good working condition and therefore, **Passes** the Title 5 Inspection. This letter should be attached to the original inspection dated, January 14, 1997 and shall serve as confirmation of repair work performed.

If you have any questions please do not hesitate to call.

Sincerely yours,

Dan Nitzsche

Dan Nitzsche
Certified Title 5 System Inspector

cc: Amherst Board of Health

RECEIVED FEB 12 1997

ENVIRONMENTAL FIELD SERVICES, INC.
PO BOX 518
LEEDS, MA 01053
1-413-586-7200

January 14, 1997

Mr. John Banner
27 Elf Hill Road
Amherst, MA 01002

Re: Septic System Inspection at 27 Elf Hill Road, Amherst, MA.

Dear Mr. Banner,

Enclosed please find a copy of my report for the referenced inspection. I have forwarded copies of the report to the Amherst Board of Health per the requirements of 310 CMR 15.300.

Based on the results of my inspection in accordance with 310 CMR 15.300, I have concluded that the system **conditional passes** at this time.

Specifically, at the time of the inspection I found that the septic tank outlet baffle has separated from the cover and should be replaced with a 4" dia. PVC Tee (also, add a section of SDR 35 pipe to extend 14" below the outlet invert). In addition, the Distribution Box (D-Box) was structurally unsound and should be replaced. When the D-Box is replaced I would recommend that the first 2' of the existing perforated Orangeburg leaching lines be replaced with solid pipe (SDR 35 min.). This will help to move effluent farther down the leaching lines, utilizing more of the leaching area.

The Septic Tank, Distribution Box and Leaching Field locations have been clearly identified in the "As-Built" drawing on page 9 of the Septic System Inspection Report.

Please call if you have any questions, and thank you for this opportunity to be of service.

Sincerely yours,

Dan Nitzsche

Dan Nitzsche
Certified Title 5 System Inspector

cc: Amherst Board of Health

Commonwealth of Massachusetts
Executive Office of Environmental Affairs

Department of Environmental Protection

William F. Weld
Governor
Argeo Paul Cellucci
Lt. Governor

Trudy Coxe
Secretary
David B. Struhs
Commissioner

SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART A
CERTIFICATION

Property Address: 27 ELF HILL ROAD, AMHERST
Date of Inspection: 1.13.97
Name of Inspector: DAN NITZSCHE
Company Name, Address and Telephone Number:
ENVIRONMENTAL FIELD SERVICES, INC., PO Box 518, LEEDS, MA 01053
(413) 586-7200

Address of Owner (If different)

CERTIFICATION STATEMENT

I certify that I have personally inspected the sewage disposal system at this address and that the information reported below is true, accurate and complete as of the time of inspection. The inspection was performed based on my training and experience in the proper function and maintenance of on-site sewage disposal systems. The system:

___ Passes
X Conditionally Passes
___ Needs Further Evaluation By the Local Approving Authority
___ Fails

Inspector's Signature: Dan Nitzsche Date: 1.14.97

The System Inspector shall submit a copy of this inspection report to the Approving Authority within thirty (30) days of completing this inspection. If the system is a shared system or has a design flow of 10,000 gpd or greater, the inspector and the system owner shall submit the report to the appropriate regional office of the Department of Environmental Protection.
The original should be sent to the system owner and copies sent to the buyer, if applicable and the approving authority.

INSPECTION SUMMARY:

Check A, B, C, or D:

A] SYSTEM PASSES:

_____ I have not found any information which indicates that the system violates any of the failure criteria as defined in 310 CMR 15.303. Any failure criteria not evaluated are indicated below.

B] SYSTEM CONDITIONALLY PASSES:

X One or more system components need to be replaced or repaired. The system, upon completion of the replacement or repair, passes inspection.

Indicate yes, no, or not determined (Y, N, or ND). Describe basis of determination in all instances. If "not determined", explain why not)

Y The septic tank is metal, cracked, structurally unsound, shows substantial infiltration or exfiltration, or tank failure is imminent. The system will pass inspection if the existing septic tank is replaced with a conforming septic tank as approved by the Board of Health.
D-Box is structurally unsound and should be replaced

One Winter Street • Boston, Massachusetts 02108 • FAX (617) 556-1049 • Telephone (617) 292-5500

SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART A
CERTIFICATION (continued)

Property Address: 27 ELF HILL ROAD, AMHERST
Owner: JOHN BANNER
Date of Inspection: 1.13.97

B] SYSTEM CONDITIONALLY PASSES (continued)

N Sewage backup or breakout or high static water level observed in the distribution box is due to broken or obstructed pipe(s) or due to a broken, settled or uneven distribution box. The system will pass inspection if (with approval of the Board of Health):

_____ broken pipe(s) are replaced
_____ obstruction is removed
_____ distribution box is levelled or replaced

N The system required pumping more than four times a year due to broken or obstructed pipe(s). The system will pass inspection if (with approval of the Board of Health):

_____ broken pipe(s) are replaced
_____ obstruction is removed

C] FURTHER EVALUATION IS REQUIRED BY THE BOARD OF HEALTH:

_____ Conditions exist which require further evaluation by the Board of Health in order to determine if the system is failing to protect the public health, safety and the environment.

1) SYSTEM WILL PASS UNLESS BOARD OF HEALTH DETERMINES THAT THE SYSTEM IS NOT FUNCTIONING IN A MANNER WHICH WILL PROTECT THE PUBLIC HEALTH AND SAFETY AND THE ENVIRONMENT:

__ Cesspool or privy is within 50 feet of a surface water
__ Cesspool or privy is within 50 feet of a bordering vegetated wetland or a salt marsh.

2) SYSTEM WILL FAIL UNLESS THE BOARD OF HEALTH (AND PUBLIC WATER SUPPLIER, IF APPROPRIATE) DETERMINES THAT THE SYSTEM IS FUNCTIONING IN A MANNER THAT PROTECT THE PUBLIC HEALTH AND SAFETY AND THE ENVIRONMENT:

__ The system has a septic tank and soil absorption system and is within 100 feet to a surface water supply or tributary to a surface water supply.
__ The system has a septic tank and soil absorption system and is within a Zone I of a public water supply well.
__ The system has a septic tank and soil absorption system and is within 50 feet of a private water supply well.
__ The system has a septic tank and soil absorption system and is less than 100 feet but 50 feet or more from a private water supply well, unless a well water analysis for coliform bacteria and volatile organic compounds indicates that the well is free from pollution from that facility and the presence of ammonia nitrogen and nitrate nitrogen is equal to or less than 5 ppm.

3) OTHER

__ _____
_____

SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART A
CERTIFICATION (continued)

Property Address: 27 ELF HILL ROAD, AMHERST
Owner: JOHN B. ANNER
Date of Inspection: 1.13.97

D] SYSTEM FAILS:

_____ I have determined that the system violates one or more of the following failure criteria as defined in 310 CMR 15.303. The basis for this determination is identified below. The Board of Health should be contacted to determine what will be necessary to correct the failure.

___ Backup of sewage into facility or system component due to an overloaded or clogged SAS or cesspool.

___ Discharge or ponding of effluent to the surface of the ground or surface waters due to an overloaded or clogged SAS or cesspool.

___ Static liquid level in the distribution box above outlet invert due to an overloaded or clogged SAS or cesspool.

___ Liquid depth in cesspool is less than 6" below invert or available volume is less than 1/2 day flow.

___ Required pumping more than 4 times in the last year NOT due to clogged or obstructed pipe(s).
Number of times pumped ____

___ Any portion of the Soil Absorption System, cesspool or privy is below the high groundwater elevation.

___ Any portion of a cesspool or privy is within 100 feet of a surface water supply or tributary to a surface water supply.

___ Any portion of a cesspool or privy is within a Zone I of a public well.

___ Any portion of a cesspool or privy is within 50 feet of a private water supply well.

___ Any portion of a cesspool or privy is less than 100 feet but greater than 50 feet from a private water supply well with no acceptable water quality analysis. If the well has been analyzed to be acceptable, attach copy of well water analysis for coliform bacteria, volatile organic compounds, ammonia nitrogen and nitrate nitrogen.

E] LARGE SYSTEM FAILS:

The following criteria apply to large systems in addition to the criteria above:

____ The system serves a facility with a design flow of 10,000 gpd or greater (Large System) and the system is a significant threat to public health and safety and the environment because one or more of the following conditions exist:

___ the system is within 400 feet of a surface drinking water supply

___ the system is within 200 feet of a tributary to a surface drinking water supply

___ the system is located in a nitrogen sensitive area (Interim Wellhead Protection Area (IWPA) or a mapped Zone II of a public water supply well)

The owner or operator of any such system shall bring the system and facility into full compliance with the groundwater treatment program requirements of 314 CMR 5.00 and 6.00. Please consult the local regional office of the Department for further information.

SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART B
CHECKLIST

Property Address: 27 ELF HILL ROAD, AMHERST
Owner: JOHN BANNER
Date of Inspection: 1.13.97

Check if the following have been done:

X Pumping information was requested of the owner, occupant, and Board of Health.

X None of the system components have been pumped for at least two weeks and the system has been receiving normal flow rates during that period. Large volumes of water have not been introduced into the system recently or as part of this inspection.

N/A As built plans have been obtained and examined. Note if they are not available with N/A.

X The facility or dwelling was inspected for signs of sewage back-up.

X The system does not receive non-sanitary or industrial waste flow

X The site was inspected for signs of breakout.

X All system components, excluding the Soil Absorption System, have been located on the site.

X The septic tank manholes were uncovered, opened, and the interior of the septic tank was inspected for condition of baffles or tees, material of construction, dimensions, depth of liquid, depth of sludge, depth of scum.

X The size and location of the Soil Absorption System on the site has been determined based on existing information or approximated by non-intrusive methods.

X The facility owner (and occupants, if different from owner) were provided with information on the proper maintenance of Sub-Surface Disposal System.

SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART C
SYSTEM INFORMATION

Property Address: 27 ELF HILL ROAD, AMHERST
Owner: JOHN BANNER
Date of Inspection: 1·13·97

FLOW CONDITIONS

RESIDENTIAL:
Design flow: UNK gallons
Number of bedrooms: 4
Number of current residents: 2
Garbage grinder (yes or no): Y
Laundry connected to system (yes or no): Y
Seasonal use (yes or no): N
Water meter readings, if available: current reading (1·13·97) 274 872 ft³

Last date of occupancy: present

COMMERCIAL/INDUSTRIAL:
Type of establishment: _____
Design flow: _____ gallons/day
Grease trap present: (yes or no) ___
Industrial Waste Holding Tank present: (yes or no) ___
Non-sanitary waste discharged to the Title 5 system: (yes or no) ___
Water meter readings, if available: _____

Last date of occupancy: _____

OTHER: (Describe) _____
Last date of occupancy: _____

GENERAL INFORMATION

PUMPING RECORDS and source of information: 1994 and 1997 by owner
System pumped as part of inspection: (yes or no) Y
If yes, volume pumped: 1200 gallons
Reason for pumping: TO INSPECT TANK

TYPE OF SYSTEM
X Septic tank/distribution box/soil absorption system
___ Single cesspool
___ Overflow cesspool
___ Privy
___ Shared system (yes or no) (if yes, attach previous inspection records, if any)
___ Other (explain) _____

APPROXIMATE AGE of all components, date installed (if known) and source of information: 1970 by owner

Sewage odors detected when arriving at the site: (yes or no) NO

SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART C
SYSTEM INFORMATION (continued)

Property Address: 27 ELF HILL ROAD, AMHERST
Owner: JOHN BANNER
Date of Inspection: 1.13.97

SEPTIC TANK: X 1250 gAL.
(locate on site plan)

Depth below grade: 19" ±
Material of construction: X concrete __metal __FRP __other(explain)

Dimensions: 108" X 60" X 60"
Sludge depth: 7"
Distance from top of sludge to bottom of outlet tee or baffle: BAFFLE MISSING
Scum thickness: 6"
Distance from top of scum to top of outlet tee or baffle: BAFFLE MISSING
Distance from bottom of scum to bottom of outlet tee or baffle: BAFFLE MISSING

Comments:
(recommendation for pumping, condition of inlet and outlet tees or baffles, depth of liquid level in relation to outlet invert, structural integrity, evidence of leakage, etc.) OUTLET BAFFLE MISSING, STRUCTURAL INTEGRITY OF TANK - GOOD, NO EVIDENCE OF LEAKAGE

GREASE TRAP: N/A
(locate on site plan)

Depth below grade:____
Material of construction: __concrete __metal __FRP __other(explain)

Dimensions:____
Scum thickness:____
Distance from top of scum to top of outlet tee or baffle:____
Distance from bottom of scum to bottom of outlet tee or baffle:____

Comments:
(recommendation for pumping, condition of inlet and outlet tees or baffles, depth of liquid level in relation to outlet invert, structural integrity, evidence of leakage, etc.) ____

SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART C
SYSTEM INFORMATION (continued)

Property Address: 27 ELF HILL ROAD, AMHERST
Owner: JOHN BANNER
Date of Inspection: 1.13.97

TIGHT OR HOLDING TANK: NA
(locate on site plan)

Depth below grade:____
Material of construction: __concrete __metal __FRP __other(explain)

Dimensions:_____
Capacity:_____gallons
Design flow:_____gallons/day
Alarm level:_____

Comments:
(condition of inlet tee, condition of alarm and float switches, etc.)

DISTRIBUTION BOX: X
(locate on site plan)

Depth of liquid level above outlet invert: D-Box Fell Apart while Excavating component.

Comments:
(note if level and distribution is equal, evidence of solids carryover, evidence of leakage into or out of box, etc.)
NO BACKFLOW WAS OBSERVED, SOIL (NOT WAS FOUND IN D-Box SUMP - MOST LIKELY FROM SURROUNDING SOIL INFILTRATING VIA cracked D-Box TOP & WALLS.

PUMP CHAMBER: NA
(locate on site plan)

Pumps in working order:(yes or no)____

Comments:
(note condition of pump chamber, condition of pumps and appurtenances, etc.)

SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART C
SYSTEM INFORMATION (continued)

Property Address: 27 ELF HILL ROAD, AMHERST
Owner: JOHN BANNER
Date of Inspection: 1.13.97

SOIL ABSORPTION SYSTEM (SAS): X
(locate on site plan, if possible; excavation not required, but may be approximated by non-intrusive methods)

If not determined to be present, explain:

Type:

leaching pits, number:____
leaching chambers, number:____
leaching galleries, number:____
leaching trenches, number,length:____
leaching fields number, dimensions: one Field w/2 "Legs" (SEE pg. 9)
overflow cesspool, number:____

Comments: (note condition of soil, signs of hydraulic failure, level of ponding, condition of vegetation,etc.) NO SIGN OF HYDRAULIC FAILURE, VEGETATION APPEARS NORMAL W/only grass species. EFFLUENT WAS OBSERVED 8" below top OF Stone in FIELD.

CESSPOOLS: NA
(locate on site plan)

Number and configuration:____
Depth-top of liquid to inlet invert:____
Depth of solids layer:____
Depth of scum layer:____
Dimensions of cesspool:____
Materials of construction:____
Indication of groundwater:____
inflow (cesspool must be pumped as part of inspection)____

Comments: (note condition of soil, signs of hydraulic failure, level of ponding, condition of vegetation, etc.)

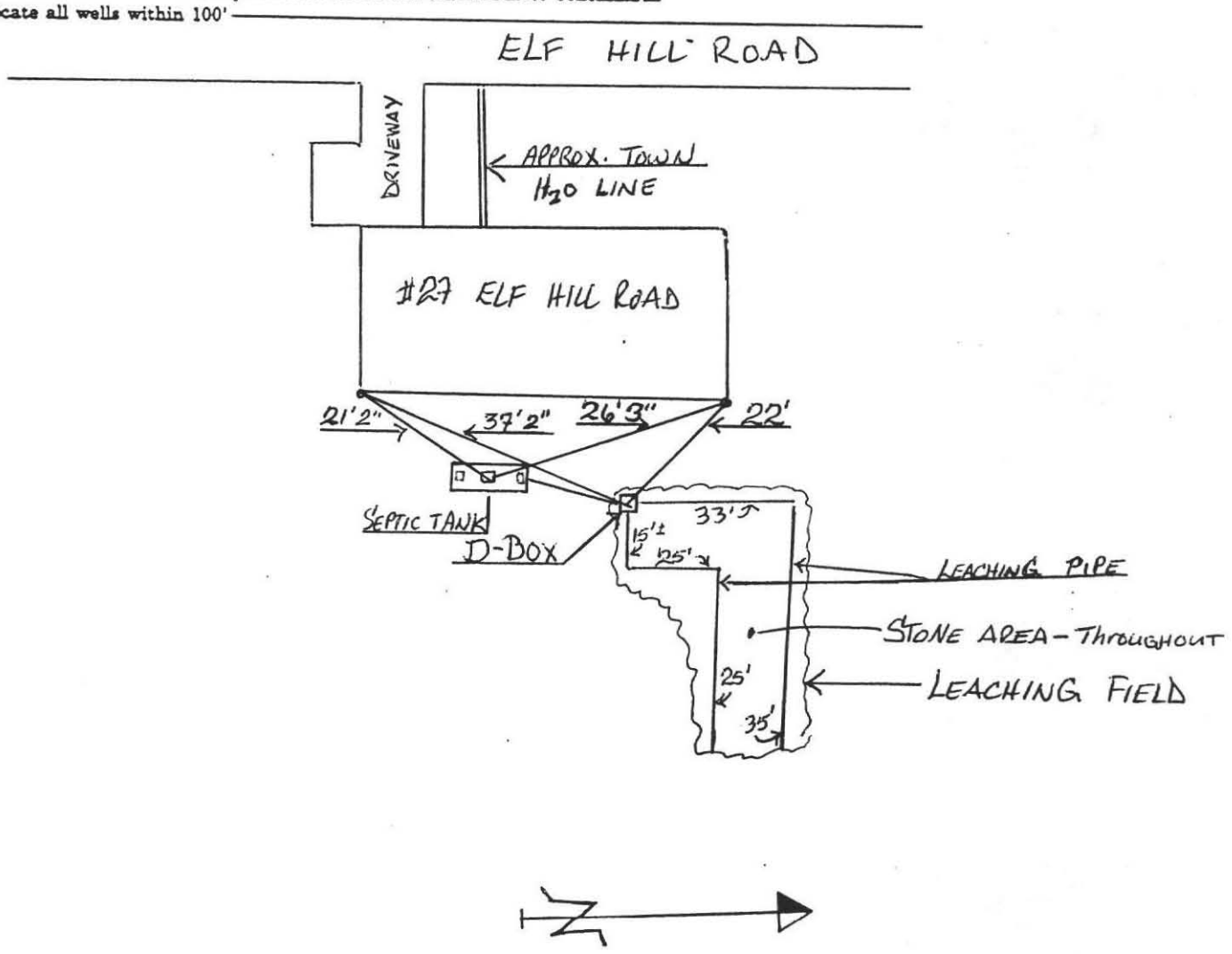
PRIVY: NA
(locate on site plan)

Materials of construction:____ Dimensions:____
Depth of solids:____
Comments: (note condition of soil, signs of hydraulic failure, level of ponding, condition of vegetation, etc.)____

SUBSURFACE SEWAGE DISPOSAL SYSTEM INSPECTION FORM
PART C
SYSTEM INFORMATION (continued)

Property Address: 27 ELF HILL ROAD, AMHERST
Owner: JOHN BANNER
Date of Inspection: 1.13.97

SKETCH OF SEWAGE DISPOSAL SYSTEM:
include ties to at least two permanent references landmarks or benchmarks
locate all wells within 100'



DEPTH TO GROUNDWATER

Depth to groundwater: 3 feet
method of determination or approximation: BORE HOLE WAS DUG 40"± TO OBSERVE GROUNDWATER - WATER WAS OBSERVED AT 36"±
THIS IS BELOW BOTTOM OF LEACHING FIELD (Approx. 22" to Bottom of S.A.S)

William J. Sieruta, P.E.
46 Upland Road
Holyoke, MA. 01040

Board of Health
Town Hall
Boltwood Walk
Amherst, MA. 01002
Attn: David Zarozinski

November 5, 2003

Subject: As Built Inspection
Emmett Barcalow
27 Elf Hill Road
Amherst, MA.

An "as built" inspection was completed for the subject septic system. The system is in compliance with 310 CMR 15.0 and local board of health regulations. If you need any additional information, please do not hesitate to contact me.

Very truly yours,

William J. Sieruta PE.

William J. Sieruta, P.E.

(MBS)

2CC: E. Barcalow

WJS:mbs

No. 03-18 Revised

FEE 275.00

COMMONWEALTH OF MASSACHUSETTS

Board of Health, Amherst, *MA.*

CERTIFICATE OF COMPLIANCE

Description of Work: ☐ **Individual Component(s)** ☐ **Complete System**

The undersigned hereby certify that the Sewage Disposal System; Constructed ( ), Repaired (✓), Upgraded ( ), Abandoned ( )

by: WILLIAM J SIENIEWICZ PE

at 27 ELF HILL Rd

has been installed in accordance with the provisions of 310 CMR 15.00 (Title 5) and the approved design plans/as-built plans relating to application No. 03-18, dated 9/18/03. Approved Design Flow [illegible] (gpd)

Installer William Sienicz [signature]

Designer: [signature] Inspector: Thomas Sim Date: 11/6/03

The issuance of this permit shall not be construed as a guarantee that the system will function as designed.

PERCOLATION TEST INFORMATION

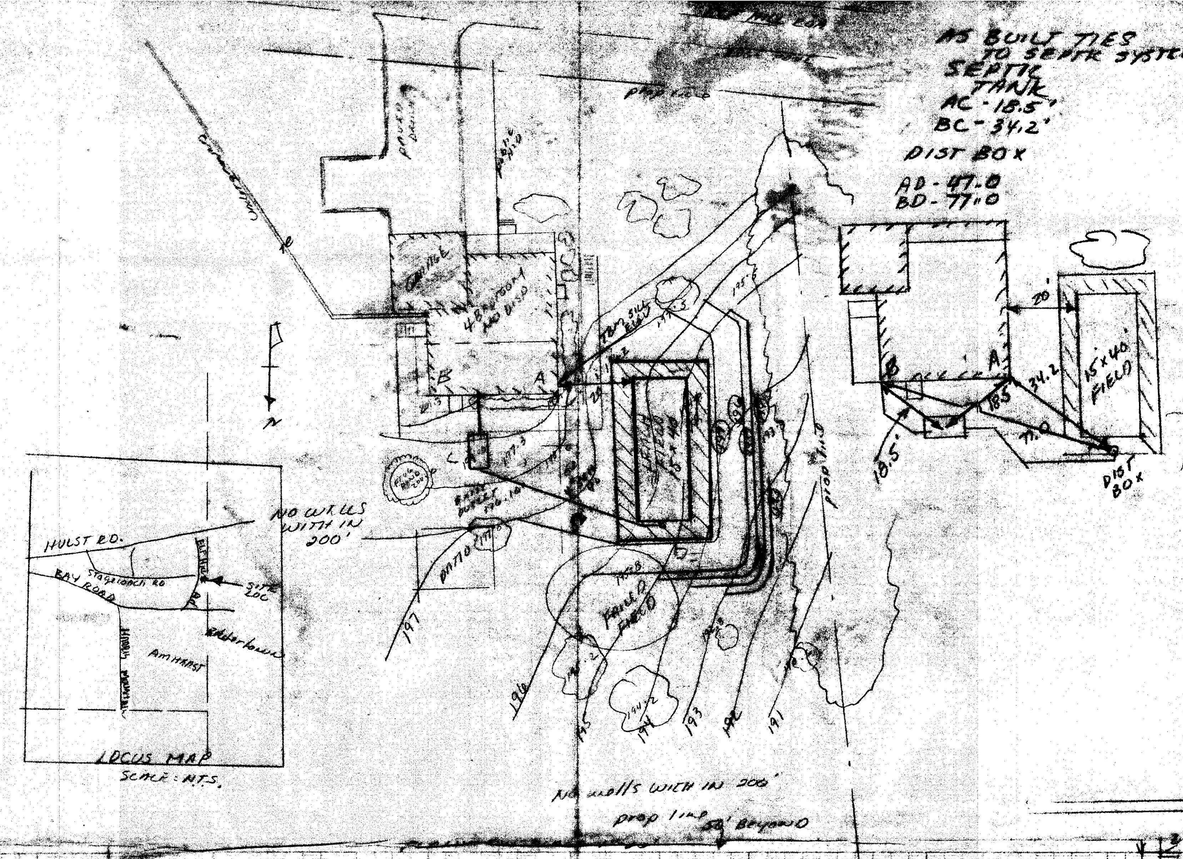
TEST PIT TPI-1			TEST PIT TPI-2		
OFS LOAM	AP SANDY LOAM 10YR 3-2	0-6	OFS LOAM	AP SANDY LOAM 10YR 3-2	0-6
FILL MATERIAL	FILL 10YR 4-2	6-30	FILL MATERIAL	FILL MATERIAL 10YR 4-2	6-30
WELL GRADED SILTY COARSE GRAVEL	C1 LOAMY SAND 10YR 6-6	30-100	COARSE SAND & GRAVEL MASSIVE FRIABLE STRUCTURELESS	C1 COARSE SAND 20% gravel 20% COBBLES FEW STONES	30-64
SAND & GRAVEL	C2 LOAMY SAND 10YR 6-4	100-120	STOPPED USED AS PERC HOLE TPI-2 WAIVED BY BOH CONSISTENT SOIL		

WIPING 100"
H2O STANDING 100
MOTTLING 10YR 5-8 BANDS @ 50" 100-103
EH WT 50

EH WT" 50
BANDS 10YR 5-8 NOTED

DATE: 8/6/2003
ENGR: W.J. SIENNTA PEEEVAL
WITNESS: D ZAROZINSKI BOH

PERMEABILITY TEST
PERC 1 @ TPI-1
DEPTH 63"
ACTUAL RATE 4.0 MIN/INCH
DESIGN RATE 5.0 MIN/INCH
CLASS I SOIL
48" SEPARATION REQD PER 310 CMR 15.212
PERC 2 WAIVED BY BOH CONSISTENT SOILS, REPAIR PERC TEST



DESIGN INFORMATION

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH 310 CMR 15.0 TITLE 5 AND ALL LOCAL BOARD OF HEALTH REGULATIONS

FINISH GRADING TO BE AS SHOWN ON PLAN VIEW. ALL DISTURBED TO BE LOAMED AND SEEDED.

DESIGN CRITERIA

USE: EXISTING 4 BEDROOM SINGLE FAMILY RESIDENTIAL HOME WALK OUT TO REAR, FULL BMT

DESIGN FLOW: 310 CMR 15.203
REQD 110 GALS/BEDROOM x 4 = 440 GALS/DAY

NO DISPOSAL UNIT

SEPTIC TANK REQD: 310 CMR 15.223
440 GALS/DAY x 200% = 880 GALS
MINIMUM TANK SIZE PERMITTED 1500 GAL

USE NEW 1500 GAL SEPTIC TANK 2 COMPARTMENT 10'6" x 5' x 5'

LEACHING SYSTEM: DUE TO SOIL CONDITIONS A LEACH FIELD DESIGN IS TO BE USED PER 310 CMR 15.252

EFFECTIVE DEPTH 6 MIN MAX	PERMEABILITY 310 CMR 15.242
EFFECTIVE WIDTH 15	PERCOLATION/RATES
EFFECTIVE LENGTH 40'	MIN/INCH
BOTTOM AREA A	DESIGN RATE 5.0 MIN/INCH
15 x 40 = 600 FT²	CLASS I SOIL
TOTAL PERMEABILITY 600 FT² x .74 = 444 GAL/DAY	BOTTOM & SIDEWALL AREAS .74 GALS/FT²

TBM SET SHT ELEV HOUSE NE. CORN ELEV 200.00

INSTALLATIONS NOTES:

1. SEPTIC TANK TO BE INSPECTED, INLET AND OUTLET TEES TO BE IN ACCORDANCE WITH 310 CMR 15.227 SECT 5
2. ALL STONE TO BE DOUBLE WASHED STONE FREE OF ALL SILT AND FINES PER 310 CMR 15.0
3. ALL PIPE JOINTS WITH TANK & DIST BOX TO BE ASPHALT ROPE SEALED
4. ALL TOP & FILL MATERIAL REMOVED TO ELEV (192.50) AND REPLACED WITH SELECT SAND FILL PER 310 CMR 15.255
5. SEPTIC TANK AND DIST. BOX TO BE SET ON 6" DEEP WASHED STONE FOUNDATION PAD

SEPTIC SYSTEM DESIGN FOR E. BARCALOW 27 ELF HILL ROAD AMHERST MASS
ENGR: W.J. SIENNTA PEEEVAL
DATE: SEPT 19 2003
REVISED SEPT 29 2003 REPLACE TANK