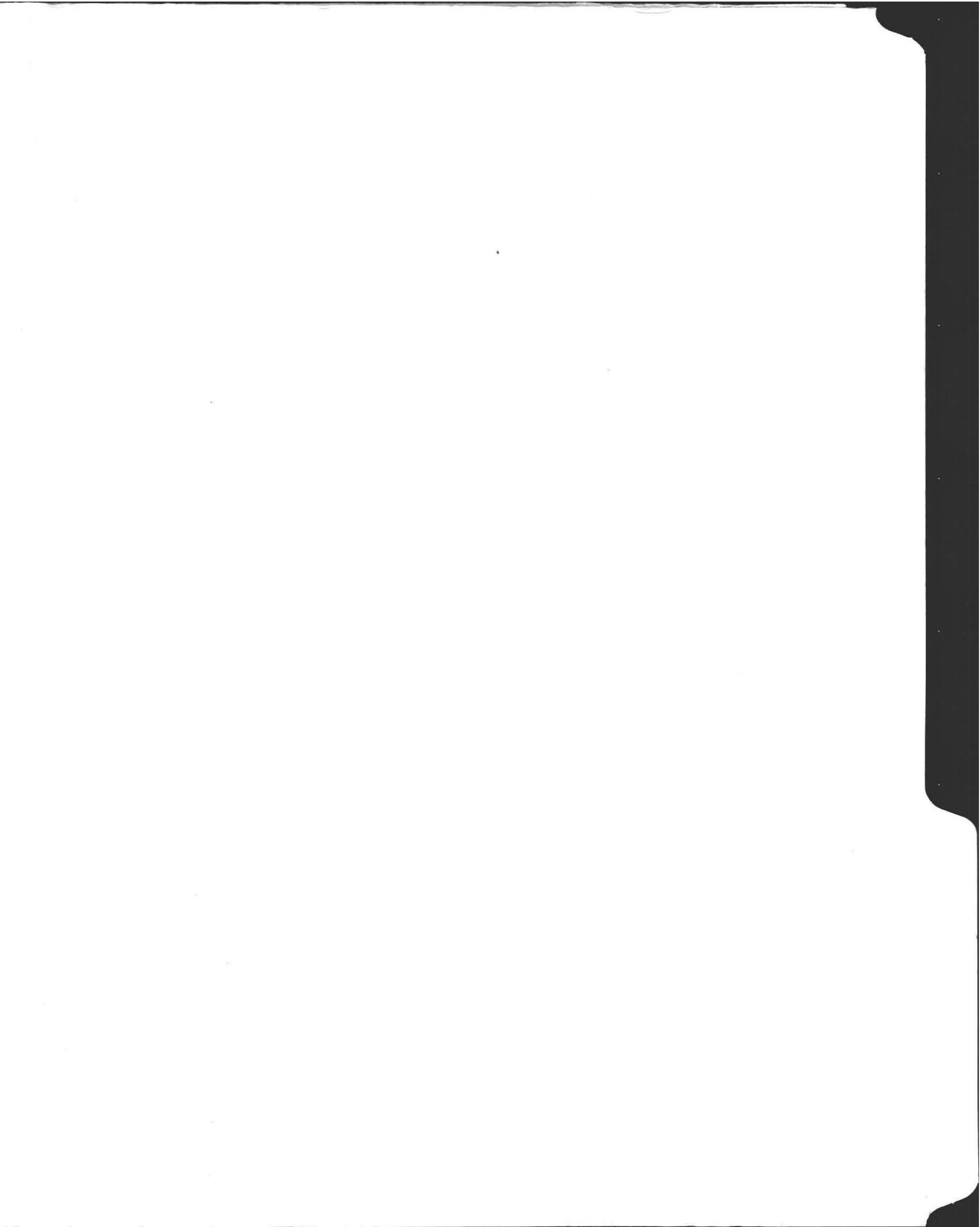
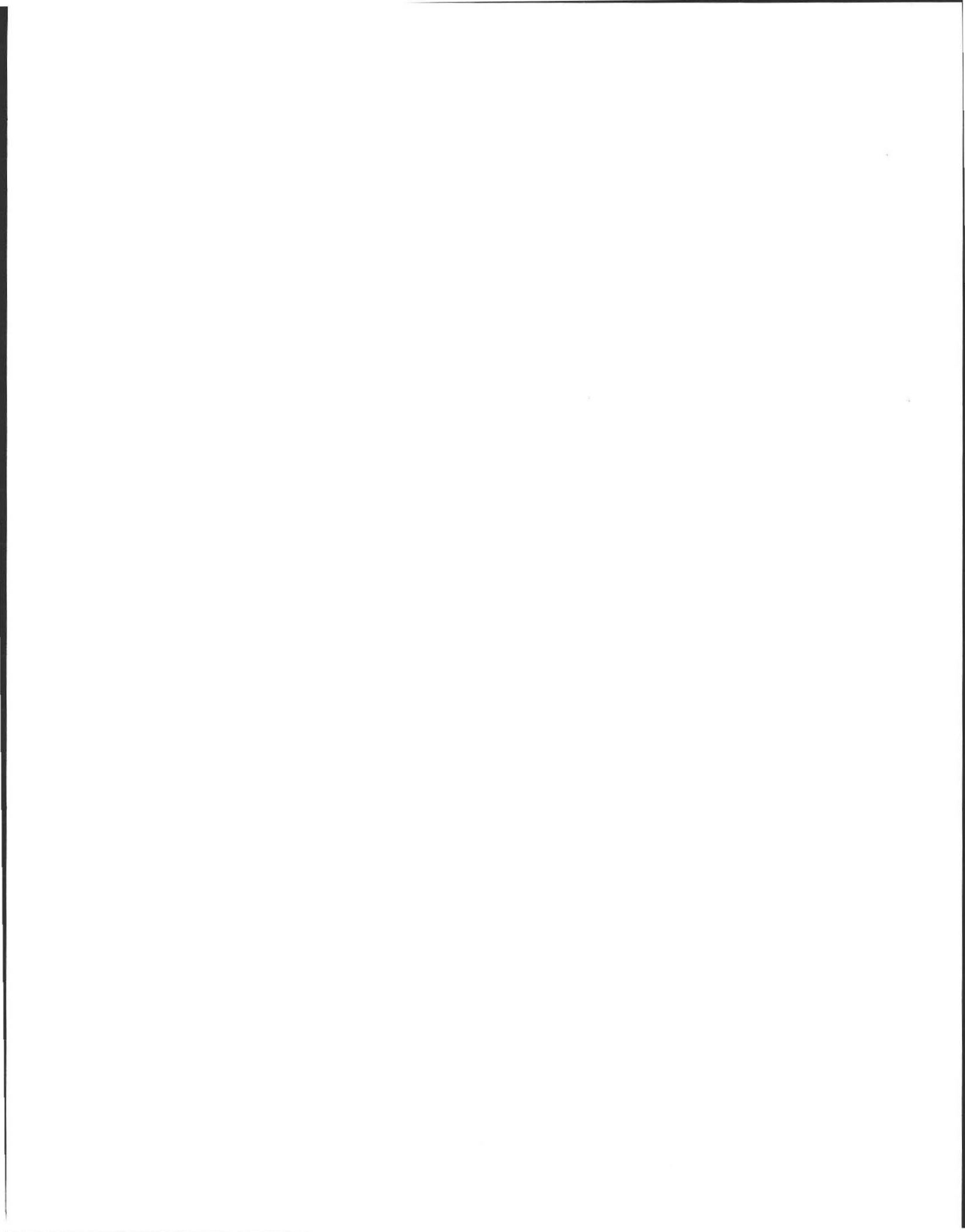


200  
Lot 4 Flat Hills Rd

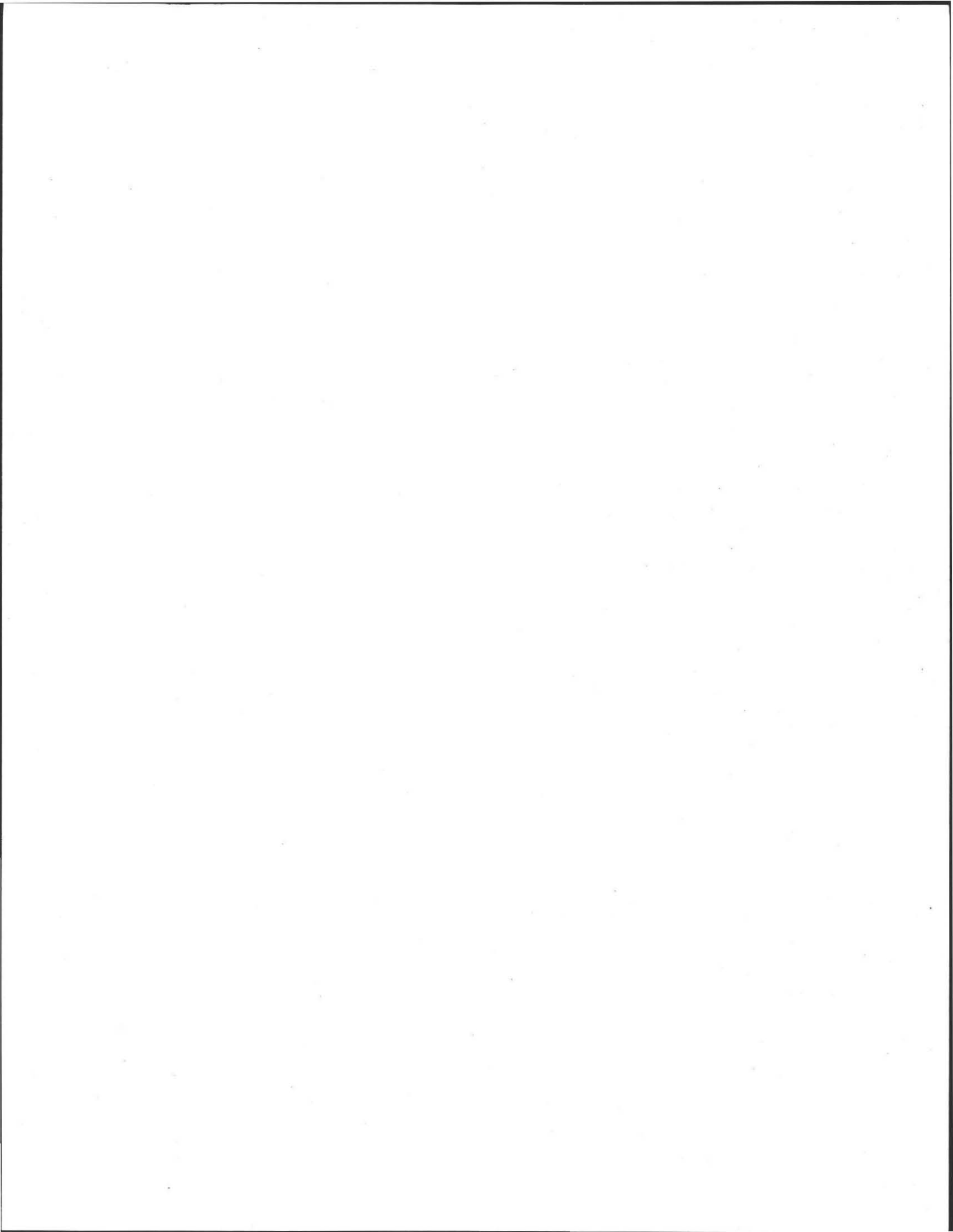
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Town of



# Amherst Massachusetts

## BOARD OF HEALTH

Phone: 413-259-3077  
Fax: 413-259-2404  
health@amherstma.gov

Bangs Community Center  
70 Boltwood Walk  
Amherst, MA 01002

### BOARD OF HEALTH

David Ahlfeld, Chair  
Diane Amsterdam, MD  
Nancy Gilbert  
Julie Marcus  
Maureen O'Leary

April 23, 2013

Janet and Sherry Poirrier  
290 Flat Hills Road  
Amherst, MA 01002

*originals  
mailed  
5-20-13*

Dear Janet and Sherry Poirrier:

The Amherst Board of Health received and reviewed your application for a Water Supply Certificate at their recent meeting on April 17, 2013. The Board of Health determined the application was complete and all documents required were submitted. Following the discussion, the Board of Health voted unanimously to approve the Water Supply Certificate as requested for the property at 290 Flat Hills Road.

In reviewing the water test report completed by Quabbin Analytical Laboratory, the Board of Health noted that the concentrations of iron and manganese were higher than the secondary maximum contaminant level established by the U.S. Environmental Protection Agency. These levels do not pose a health risk, however, they may affect the taste, appearance and odor of your tap water. These levels may also cause staining of porcelain appliances and laundry. Iron and manganese are natural occurring in water from deep wells and high levels are common. There are technologies for treating well water to reduce the iron and manganese concentrations. The Connecticut Department of Public Health has prepared an excellent fact sheet on iron and manganese in private wells. You can find it here:

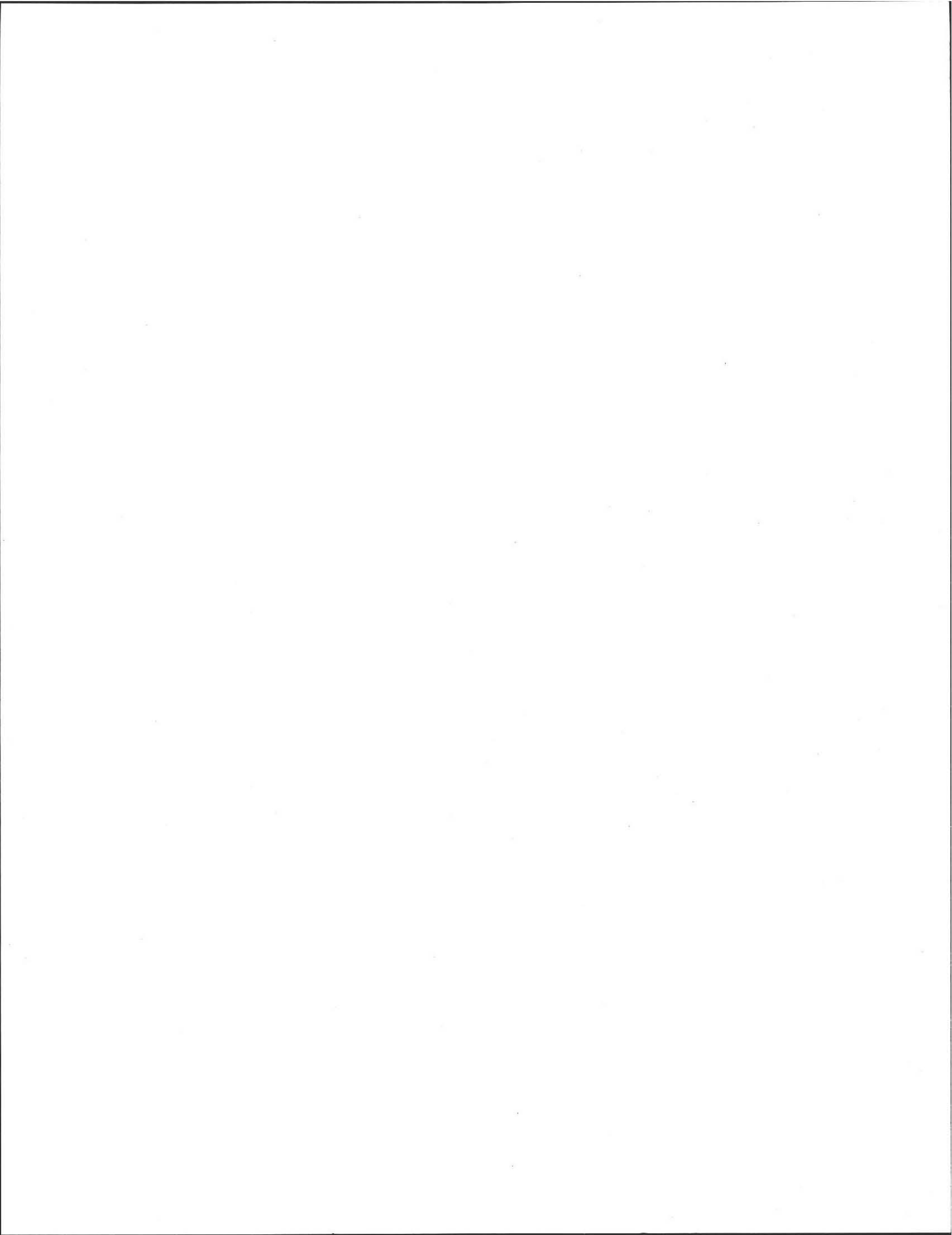
[http://www.ct.gov/dph/lib/dph/environmental\\_health/pdf/Iron.pdf](http://www.ct.gov/dph/lib/dph/environmental_health/pdf/Iron.pdf)

A copy is also enclosed for your convenience.

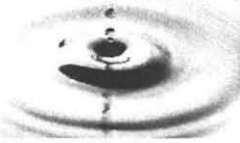
Should you have any questions, please feel free to contact Health Director Julie Federman at 413-259-3077.

Sincerely,

  
David Ahlfeld, Chairman  
Board of Health



# PRIVATE DRINKING WATER IN CONNECTICUT



Publication Date: April 2009

## *Publication No. 11: Iron and Manganese in Private Drinking Water Wells (Part 1)*

The U.S. Environmental Protection Agency (EPA) currently does not regulate private wells. Private well owners are responsible for the quality of their drinking water. Homeowners with private wells are generally not required to test their drinking water. However, they can use the public drinking water standards as guidelines to ensure drinking water quality. Refer to Publication #23 *Private Drinking Water Standards* for more information.

The Secondary Maximum Contaminant Level (SMCL) as established by the EPA for iron is 0.3 milligrams per liter (mg/l) or parts per million (ppm) and for manganese it is 0.05 mg/l.

### **Introduction**



Iron and manganese are naturally occurring elements commonly found in Connecticut groundwater and wells. While not considered a health hazard, their presence often results in staining of laundry and plumbing components, as well as offensive taste and appearance. Treatment methods for these elements depend on the form in which they occur in the untreated water. Therefore, accurate water testing is important before considering your options and selecting treatment equipment. A summary of treatment options is shown in Table 1.

### **Indications of Iron and Manganese**

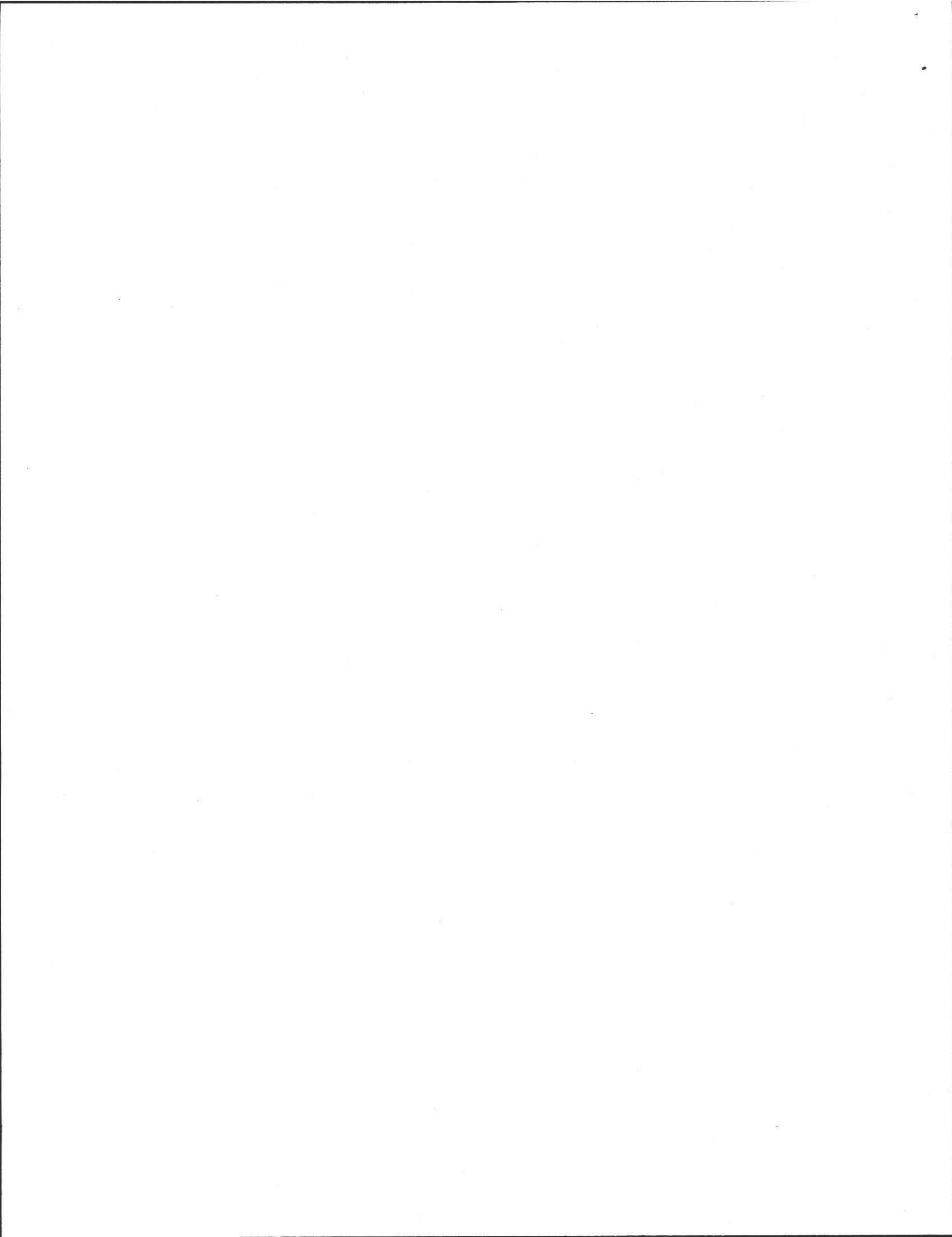
#### **Forms of Iron and Manganese in Drinking Water**

- Iron and manganese come in three different forms, which cause the appearance of the water to range from clear to discolored.
- In deep wells, where oxygen content is low, the iron/manganese-bearing water is clear and colorless because the iron and manganese are dissolved. Water from the tap may appear clear, but once it is exposed to air, iron and manganese are oxidized and change from colorless, dissolved forms to colored, solid forms.
- When oxygen in the air mixes with dissolved iron particles in water, the iron changes to white, then yellow and finally to red-brown solid particles that can settle out of the water. If the water coming from your tap appears "rust" colored, then this process has already begun to take place by the time the water reaches your faucet.
- Iron that does not form large enough particles to settle out remains suspended (colloidal iron) leaving the water with a red or yellow tint. Manganese is usually dissolved in water, although some shallow wells contain colloidal manganese (black tint). These colloidal sediments tend to form when iron and manganese combine with organic matter (tannins) in the water. It is these sediments that produce the staining properties of water and if in high enough concentrations, can lead to clogged water pipes.



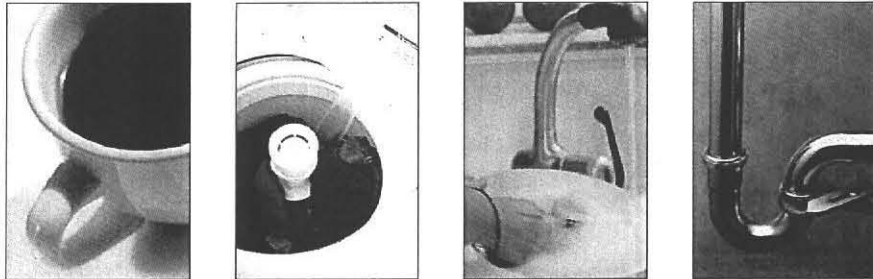
Produced by The State of Connecticut Department of Public Health  
Environmental Health Section, Private Well Program  
450 Capitol Avenue, MS#51REC, PO Box 340308, Hartford, CT 06134  
Phone: 860-509-7296 Fax: 860-509-7295





### Effects of Iron and Manganese in Drinking Water

- Iron and manganese can affect the flavor and color of food and water. They may react with tannins in coffee and tea to produce a black sludge, which affects both taste and appearance. Manganese is objectionable in water when present in smaller concentrations than iron.
- Iron will cause reddish-brown staining of laundry, porcelain, dishes, utensils and glassware. Manganese causes a brownish-black stain. Soaps and detergents do not remove these stains, and use of chlorine bleach and alkaline builders (such as sodium and carbonate) may intensify the stains.



- Iron and manganese deposits can build up in pipes, pressure tanks, water heaters, and ion exchange units. This reduces the available quantity and pressure of the water supply. Iron and manganese accumulations become an economic problem when water supply or treatment equipment needs replacing. There are increases in energy costs from pumping water through constricted pipes or heating water with heating rods coated with iron or manganese mineral deposits.
- A problem that frequently results from iron or manganese in water is iron or manganese bacteria. These bacteria feed on the iron and manganese, but are not considered health threatening. They can occur naturally in soil, shallow groundwater, and surface water. These bacteria form red-brown (iron) or black-brown (manganese) slime or an oily sheen in toilet tanks and can clog pipes. These bacteria can give the water a musty or swampy smell. See Part Two of this Publication re: Iron and Manganese Bacteria.

### Sources of Iron and Manganese in Drinking Water

Iron and manganese are naturally occurring elements in the earth. Iron and manganese are not hazardous, but can be a nuisance in a water supply. Iron and manganese are chemically similar, and can cause similar problems. Iron occurs most frequently, while manganese is typically found within iron-bearing water. As water percolates through soil and rock, it can dissolve minerals containing iron and manganese and hold them in solution. Corrosion and deterioration of old iron pipes may also be a source of iron in water.

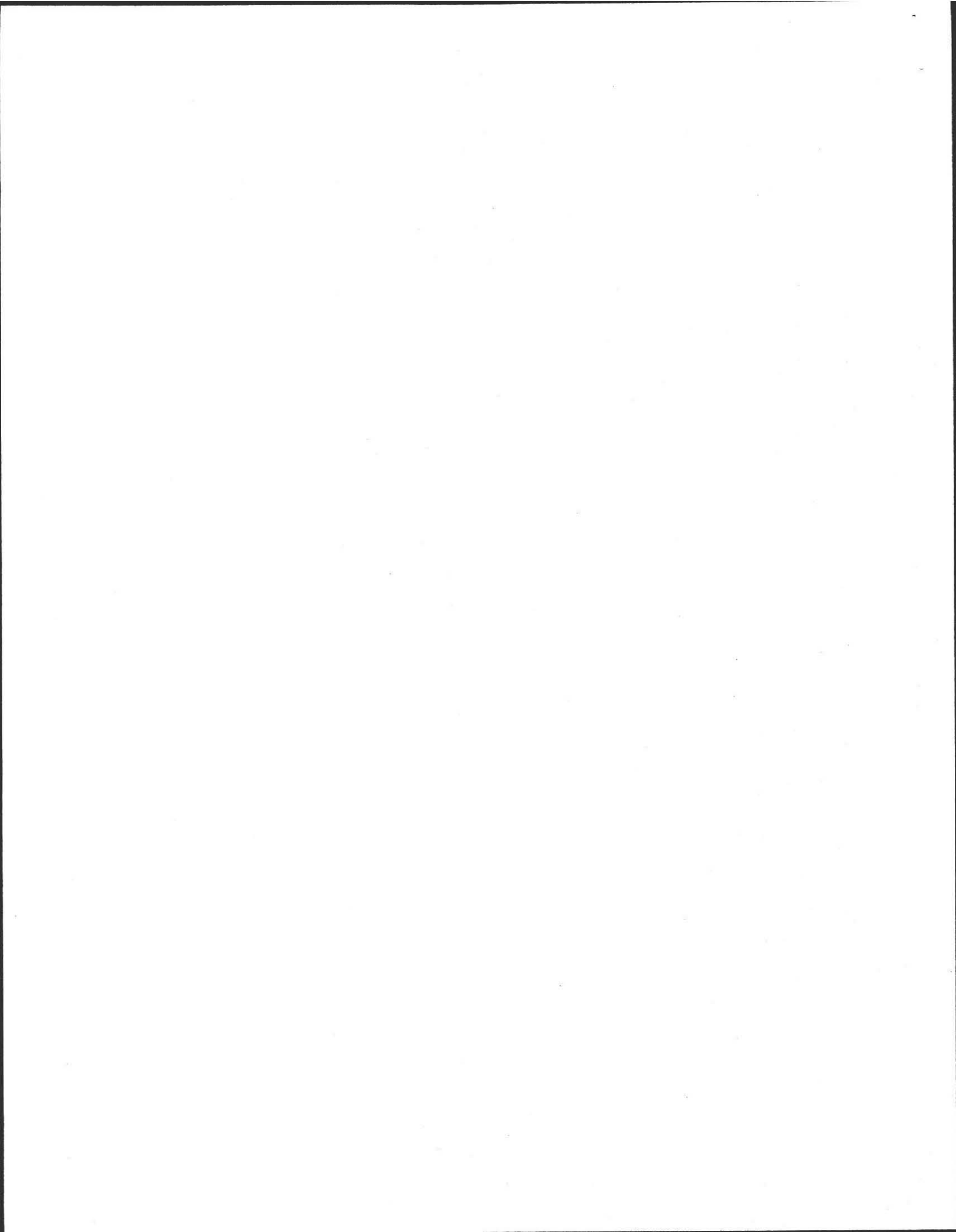
### Testing for Iron and Manganese in Private Drinking Water Wells

To determine if iron and manganese are present, have your drinking water tested at a state certified laboratory. Follow the laboratory's instructions carefully to avoid contamination and to obtain a good sample. Home test kits may not provide accurate results. The amount of iron and manganese in water is important to help you determine the type of treatment system you need to remedy the problem. It is also recommended that you have your well water tested for iron/manganese bacteria. This type of bacteria is not a coliform so it will not be detected by the standard coliform test. For more information, see Publication #24 *Residential Well Water Testing*.



### Corrective Action

Several methods are available for removing iron and manganese from water. The most appropriate method depends on many factors, including the concentration and form of the iron and/or manganese in the water, the presence of iron or manganese bacteria, and the volume of water you need to treat.



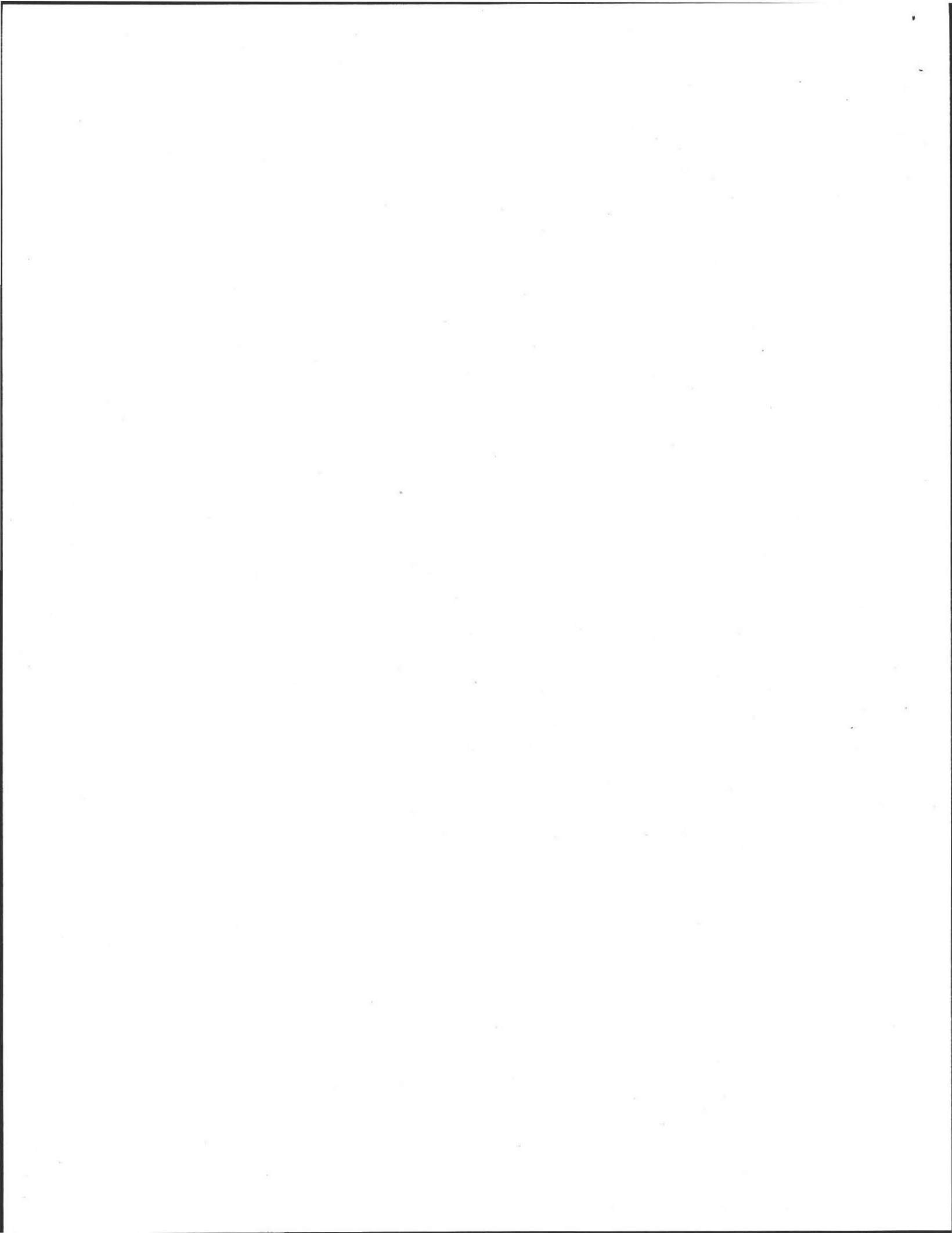
Generally speaking, there are five basic methods for treating water containing these contaminants. They are: (1) phosphate compounds; (2) ion exchange; (3) oxidizing filters; (4) aeration (pressure type) followed by filtration; and (5) chemical oxidation followed by filtration.

Most treatment techniques are effective in water within a narrow pH range near 7.0. The phosphate compound treatment is effective within a pH range of 5.0 to 8.0. Therefore, it may also be necessary to treat well water for pH in order to effectively treat for iron and manganese. Refer to Publication #18 *pH – Acidity of Private Drinking Water Wells* for more information.

Table 1 summarizes the treatment options of iron and manganese in drinking water.

**Table 1 Iron and Manganese in Drinking Water**

Indication	Cause	Treatment
Water clear when drawn but red-brown or black particles appear as water stands; red-brown or black stains on fixtures or laundry	Dissolved iron or manganese	1) Phosphate compounds, < 3mg/l iron 2) Ion Exchange, < 5mg combined concentration of iron and manganese 3) Oxidizing filter (manganese greensand or zeolite) (< 15mg/l combined concentrations of iron and manganese) 4) Aeration (pressure) (< 25mg/l combined concentrations of iron and manganese) 5) Chemical oxidation with potassium permanganate or chlorine; followed with filtration (> 10mg/l combined concentrations of iron and manganese)
Water contains red-brown particles when drawn; particles settle out as water stands	Iron particles from corrosion of iron pipes and equipment.	Raise pH with neutralizing filter, then filter for removal
Water contains red-brown or black particles when drawn; particles settle out as water stands	Oxidized iron/manganese due to exposure of water to air prior to tap	Particle filter (if quantity of oxidized material is high, use larger filter than inline e.g. sand filter)
Red-brown or black slime appears in toilet tanks or from clogs in faucets	Iron and manganese bacteria	Kill bacteria masses by shock treatment with chlorine or potassium permanganate, then filter. Bacteria may originate in well, so it may require continuous feed or chlorine or potassium permanganate, then filter.
Reddish or black color that remains longer than 24 hours	Colloidal iron/manganese; organically complexed iron/manganese	Chemical oxidation with chlorine or potassium permanganate followed with filtration





Note: mg/l = milligrams per liter, < = less than, > = greater than

Also refer to Publication #28 *Private Well Standards*

Adapted from "Iron and Manganese in Household Water," Water Treatment Notes. Fact Sheet 6, Cornell Cooperative Extension (1989).

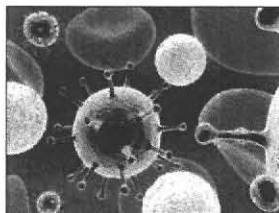
### **Treatment for Plumbing Corrosion**

Corroded iron pipes and equipment may cause reddish-brown particles in the water that, when drawn from the tap, will settle out as the water stands. This can indicate oxidized iron or it may only be iron corrosion particles. Raising the water's pH and using a sediment filter is the simplest solution to this problem. For more information, refer to the Publication #14 *Microfiltration Treatment of Drinking Water Systems* and Publication #18 *pH – Acidity of Private Drinking Water Wells*.



### **Treatment for Iron and Manganese Bacteria**

The most common approach to control iron and manganese bacteria is shock chlorination. Shock chlorination procedures are described in Publication #4 *Bacteria in Private Drinking Water Wells*. It is almost impossible to kill all the iron and manganese bacteria in your system. They will grow back eventually so be prepared to repeat the treatment from time to time. Chlorination rapidly changes dissolved iron into oxidized (colored) iron that will precipitate into a solid form.



If bacteria re-growth is rapid, repeated shock chlorination can be time consuming. Continuous application of low levels of chlorine may be less work and more effective. An automatic liquid chlorine injector pump or dispenser that drops chlorine pellets into the well is a common choice. The iron precipitate will dissipate over time. A filter may be needed to remove oxidized iron if continuous chlorination is used to control iron bacteria.

When choosing a treatment method, consider both the initial and the operating costs. Operating costs include the energy needed to operate the system, additional water that may be needed for flushing the system, consumable supplies and filters, repairs, and general maintenance.

Regardless of the quality of the equipment purchased, it will not operate well unless maintained in accordance the manufacturer's recommendations. Keep a logbook to record equipment maintenance and repairs. Equipment maintenance may include periodic cleaning and replacement of some components. Also consider any special installation requirements that may add to the equipment cost. For more information, refer to Publication #19 *Questions to Ask When Purchasing Water Treatment Equipment*.

### **Protection of Private Drinking Water Supplies**

You can protect your private well by paying careful attention to what you do in and around your home as well as our neighbor's activities near your well. Regular testing of your drinking and adopting practices that prevent contamination can help ensure that your well supplies you and your family with good quality drinking water. For more information on well protection see the Publication #26 *Drinking Water Wells*.

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For more information please click on the following links:

*EPA Office of Groundwater and Drinking Water*

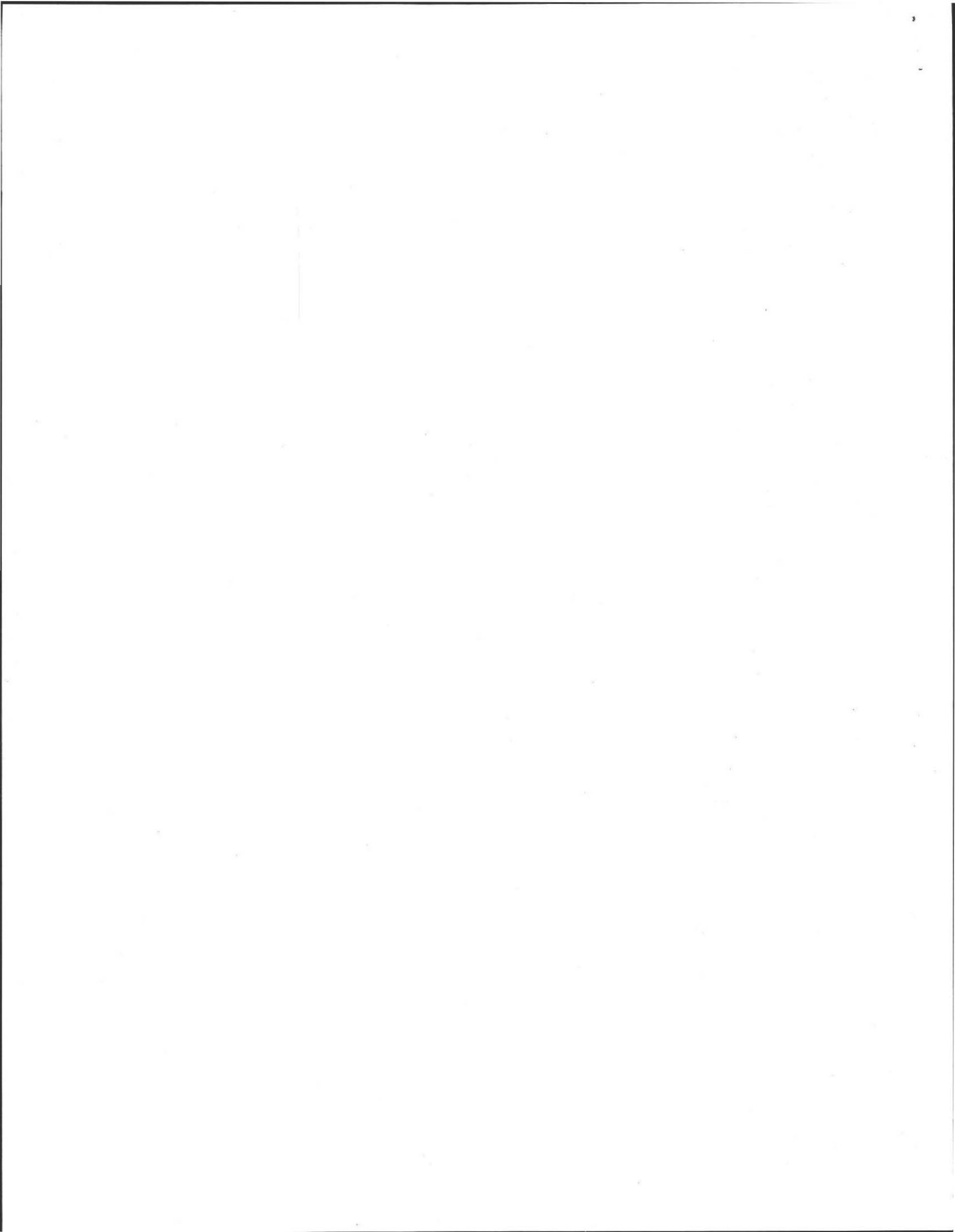
<http://www.epa.gov/ogwdw/>

*EPA New England*

<http://www.epa.gov/region01/>

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Adapted from *Healthy Drinking Waters for Rhode Islanders*, University of Rhode Island Cooperative Extension, April 2003.



Town of



# AMHERST *Massachusetts*

AMHERST HEALTH DEPARTMENT, 70 BOLTWOOD WALK, AMHERST, MA 01002  
(413) 259-3077 (413) 259-2404 - FAX Environmental Health Division (413) 259-3078

## APPLICATION FOR A WATER SUPPLY CERTIFICATE

I hereby petition the Board of Health of the Town of Amherst for a Water Supply Certificate for a potable well.

Located at: 290 Flat Hills Rd  
Assessor's Parcel No: GB-100

Constructed Under Well Construction Permit No: FY 12-3

By Well Driller: Larry G. Cushing & Sons, Inc.  
Registration No: # 558

Owner of Well: Janet & Sherry Poirrier  
Mail Address: 290 Flat Hills Rd Telephone: 413 629-8133

VOLUME OF WATER FOR HOUSEHOLD DAILY NEEDS: 600  
The volume of water necessary to support the household's daily needs shall be determined by the following equation: Number of bedrooms x 200 gallons per bedroom  
Number of gallons needed daily

Plumber performing connection: Riek's Plumbing  
Plumber Permit Number: \_\_\_\_\_

Electrical Connections by: Cushing & Sons, Inc  
(Electrical connections must be made by a pump installer or Registered Well Driller.)

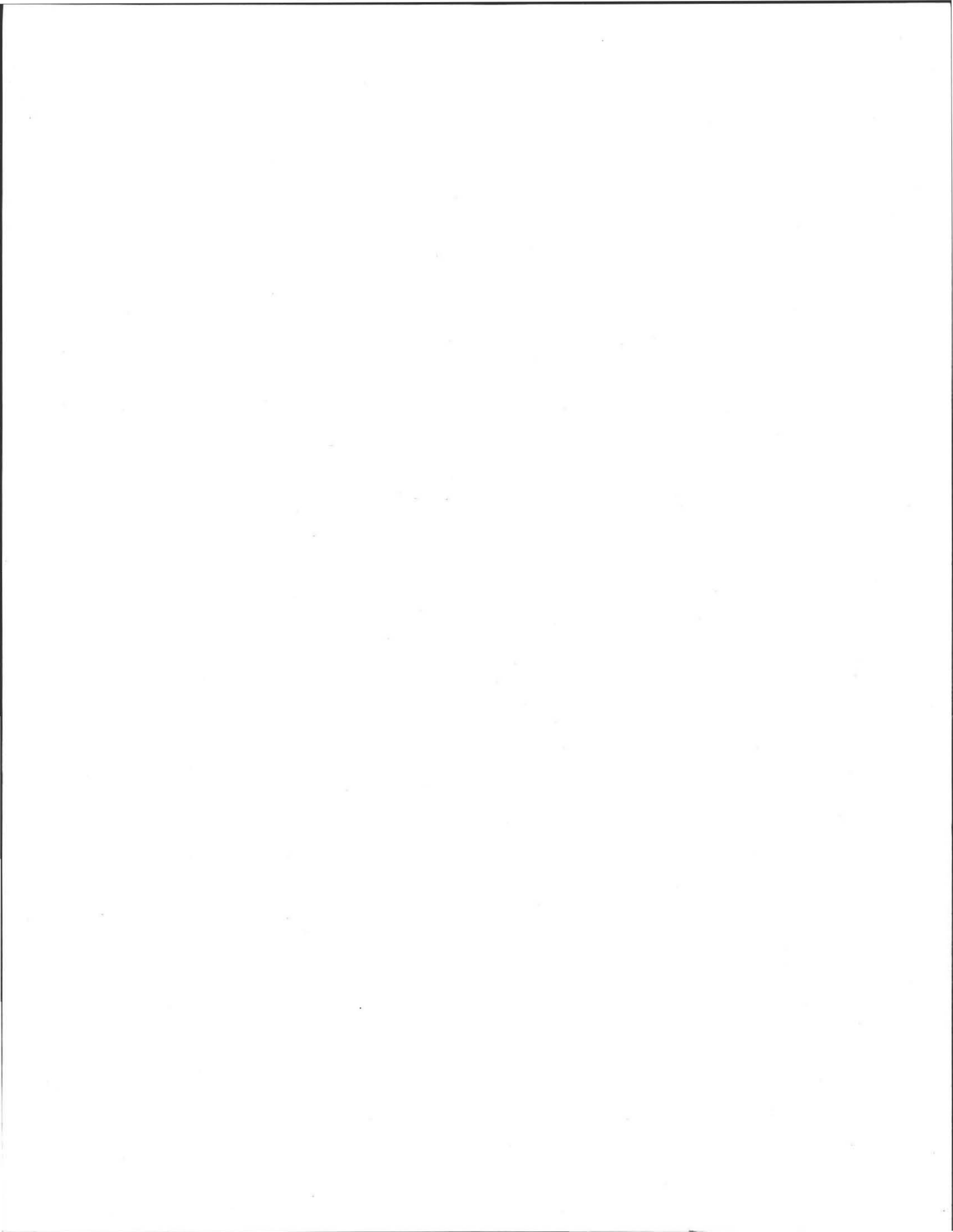
REPORT FILED BY: Kenneth C LeBlanc  
(Please Print Clearly)

SIGNATURE: Kenneth C LeBlanc DATE: 4/8/13

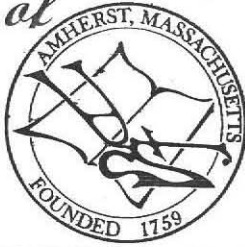
THE FOLLOWING MUST BE SUPPLIED TO THE BOARD OF HEALTH IN ORDER TO OBTAIN A WATER SUPPLY CERTIFICATE:

1.  Well Construction Permit
2.  Application for a Water Supply Certificate
3.  A copy of the Well Completion Report
4.  A copy of the Pumping Test Report *(no #3)*
5.  A copy of the Water Quality Report
6.  An As-Built of the well location referenced to at least two permanent landmarks.

MAKE SMOKING HISTORY



Town of



AMHERST

Massachusetts

AMHERST HEALTH DEPARTMENT, 70 BOLTWOOD WALK,  
AMHERST, MA 01002  
(413) 259-3077 (413) 259-2404 - FAX

**APPLICATION FOR A WELL CONSTRUCTION PERMIT**

I hereby petition the Board of Health of the Town of Amherst for a Well Construction Permit (WCP) to install a private well in the Town of Amherst. **ATTACHED IS A PLAN SHOWING THE PROPOSED LOCATION OF THE WELL (WITH ORIGINAL DATE, STAMP AND SIGNATURE OF AN ENGINEER, REGISTERED SANITARIAN, OR REGISTERED LAND SURVEYOR) AND ALL OTHER REQUIREMENTS OF THE AMHERST BOARD OF HEALTH REGULATIONS FOR PRIVATE WELLS.**

1. Address of Property: Lot 4, Flat Hills Rd.

2. Assessor of Parcel Number: Map 3D, Lot 21, (Purton)

3. Name of Owner: Ken Leblanc. Telephone Number: 413-

Address of Owner: P.O. Box 307, S. Hadley, MA.

✓ 4. Name of Well Driller: \_\_\_\_\_ Reg. # \_\_\_\_\_  
(Must be registered with Massachusetts Water Resources Commission)

5. Purpose of Well: \*Drinking (X) Agricultural Only ( ) Ground Source Heat Pump ( )  
\$100.00 \$50.00 \$50.00

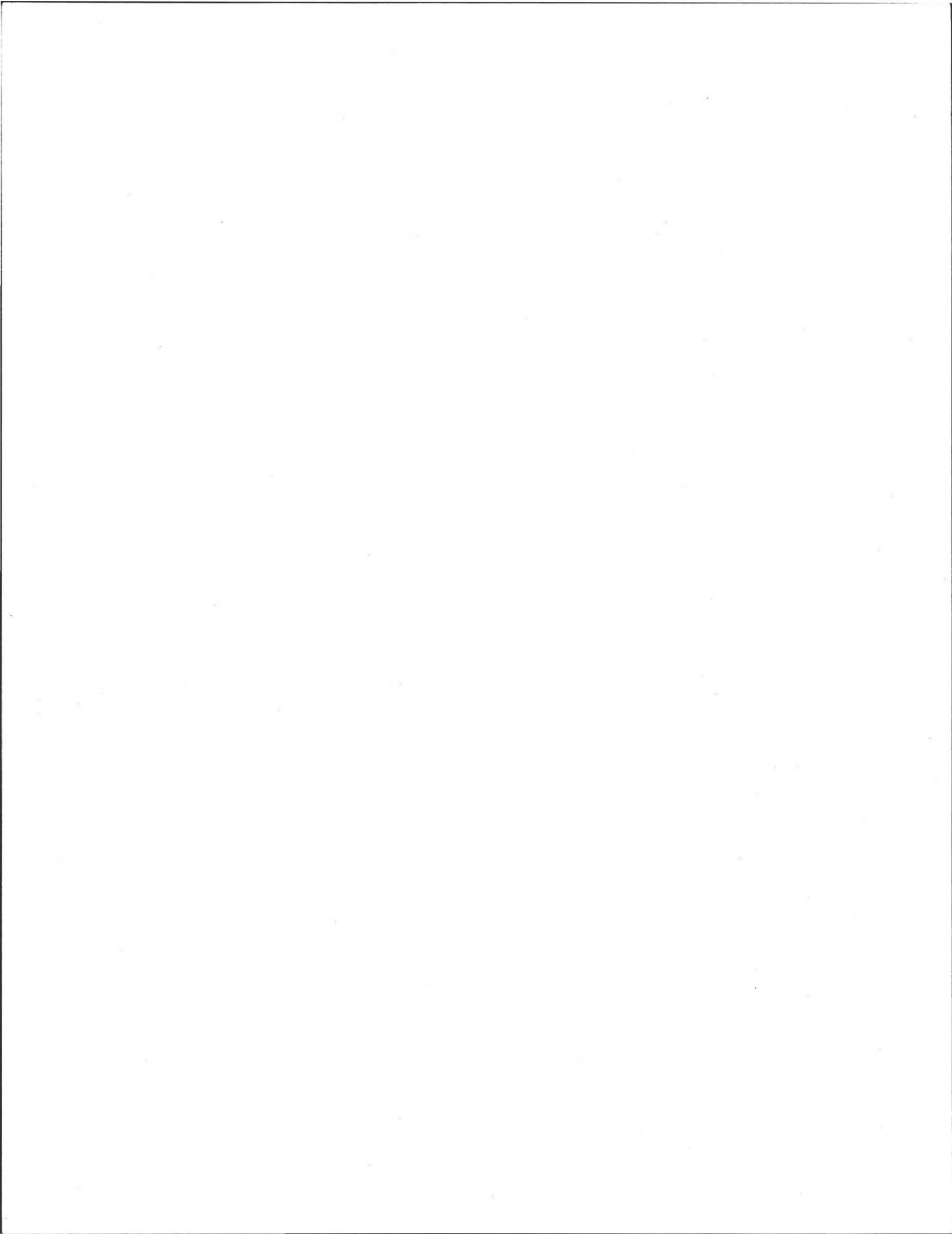
The undersigned acknowledges that he must, before commencing construction or use of the system which is the matter of this application, secure any and all other permits which may be required by the laws of the Town of Amherst and the Commonwealth of Massachusetts, and agree to abide by all regulations of the Town of Amherst and the Commonwealth of Massachusetts concerning private wells.

The undersigned also understands that if a private well is to be used for drinking purposes, a **BUILDING PERMIT** affecting the structure the well is to serve **WILL NOT BE ISSUED UNTIL A Water Supply Certificate** has been granted by the Amherst Board of Health.

✓ Name of Applicant: Kenneth C LeBlanc Kenneth C LeBlanc

Applicant Signature: Kenneth C LeBlanc Date: 10-26-12

For Office Use Only	
<input checked="" type="checkbox"/> Permit Issued By: <u>Edmund S. Smith</u> <u>Edmund S. Smith</u> <u>12/4/12</u>	<input type="checkbox"/> Permit Denied By: _____
PERMIT NUMBER: <u>13-1</u>	REASON: _____
DATE ISSUED: <u>12/4/2012</u>	DATE DENIED: _____
Inspected By: <u>Edmund S. Smith</u>	Fee Paid: Yes _____ No _____ Amount _____
Inspection Date: <u>4/2/2013</u>	Cash/Check # _____ Date of Payment _____



Massachusetts Department of Conservation and Recreation  
Office of Water Resources

**Well Completion Report**

TYPE OR PRINT ONLY

000003

**1. WELL LOCATION** GPS (Required) North 42° 25.193 West 072° 29.755  
 Address at Well Location: 209 Flat Hill Rd Property Owner/Client: Homes by LeBlanc  
 Subdivision Name: \_\_\_\_\_ Mailing Address: PO Box 307  
 City/Town: Amherst City/Town: S. Hadley MA 01075  
 Assessors Map 3D Assessors Lot #: 21 NOTE: Assessors Map and Lot # mandatory if no street address available  
 Board of Health permit obtained: Yes  Not Required  Permit Number 13-1 Date Issued 12-4-12

**2. WORK PERFORMED** **3. WELL TYPE** **4. DRILLING METHOD** **6. CASING**

N  W  D  M  S  T  A  H  A  H

From (ft)	To (ft)	Type	Thickness	Diameter
+2	48	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	19"	6"

**5. WELL LOG** **OVERBURDEN** **LITHOLOGY**

From (ft)	To (ft)	Code	Color	Comment	Water Bearing Zone	Loss or Addition of Fluid	Drop in Drill Stem	Extra Fast or Slow Drill Rate
0	33	T	BR			Y/N	Y/N	F/S
						Y/N	Y/N	F/S
						Y/N	Y/N	F/S
						Y/N	Y/N	F/S
						Y/N	Y/N	F/S
						Y/N	Y/N	F/S
						Y/N	Y/N	F/S

**7. SCREEN**

From (ft)	To (ft)	Type	Slot Size	Diameter
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		

**8. ANNULAR SEAL/FILTER PACK/ABANDONMENT MTL**

From (ft)	To (ft)	Material Description	Purpose
5	48	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
		<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
		<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
		<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>

**WELL LOG** **BEDROCK** **LITHOLOGY**

From (ft)	To (ft)	Code	Comment	Water Bearing Zone	Drop in Drill Stem	Extra Large Chips	Extra Fast or Slow Drill Rate	Visible Rust Staining	Loss or Addition of Fluid	# of Fractures per foot
33	100	GR			Y/N	Y/N	F/S	Y/N	Y/N	
100	200	GR			Y/N	Y/N	F/S	Y/N	Y/N	
200	300	GR			Y/N	Y/N	F/S	Y/N	Y/N	
300	400	GR			Y/N	Y/N	F/S	Y/N	Y/N	
400	502	GR			Y/N	Y/N	F/S	Y/N	Y/N	
					Y/N	Y/N	F/S	Y/N	Y/N	
					Y/N	Y/N	F/S	Y/N	Y/N	
					Y/N	Y/N	F/S	Y/N	Y/N	
					Y/N	Y/N	F/S	Y/N	Y/N	

**9. SITE SKETCH**

**10. WELL TEST DATA (ALL SECTIONS MANDATORY FOR PRODUCTION WELLS)** **11. STATIC WATER LEVEL (ALL WELLS)**

Date	Method	Yield (GPM)	Time Pumped (hrs & min)	Pumping Level (Ft. BGS)	Time to Recover (hrs & min)	Recovery (Ft. BGS)	Date Measured	Depth Below Ground Surface (ft)
12-18-12	AIR	5	2:00	500	24:00	25	12/19/12	25

**12. PERMANENT PUMP (IF AVAILABLE)** **13. ADDITIONAL WELL INFORMATION**

Pump Description  N  O  M  E Horsepower \_\_\_\_\_  
 Pump Intake Depth \_\_\_\_\_ (ft) Nominal Pump Capacity \_\_\_\_\_ (gpm)  
 Developed  N Fracture Enhancement  N  
 Disinfected  N Surface Seal Type  N  O

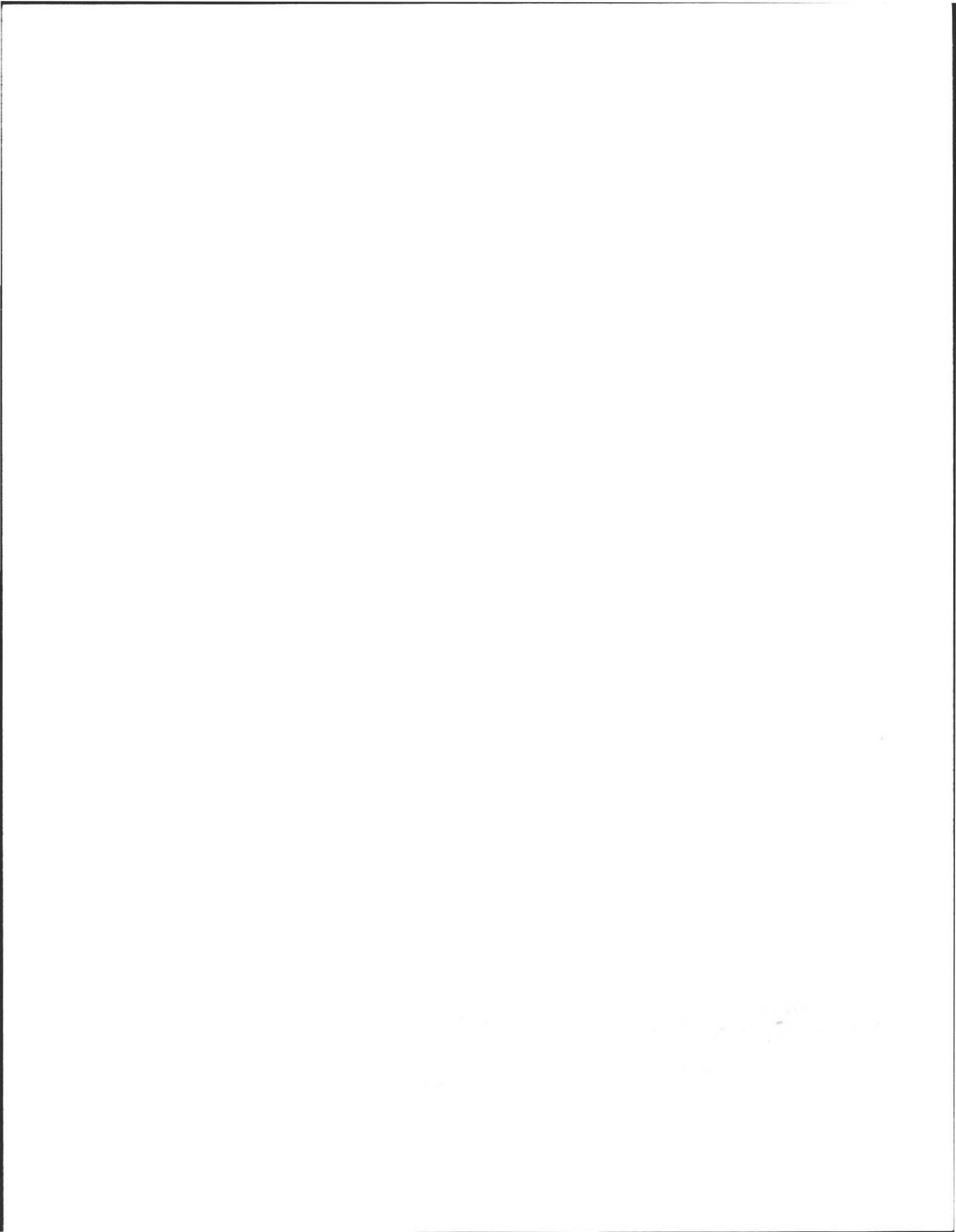
Total Well Depth 502 Depth to Bedrock 33

**14. COMMENTS**

**15. WELL DRILLER'S STATEMENT** This well was drilled, altered, and/or abandoned under my supervision, according to applicable rules and regulations, and this report is complete and correct to the best of my knowledge.

Driller: Mike Sanders Supervising Driller Signature: [Signature] Registration #: 15158  
 Firm: L. G. CUSHING & SONS, INC. Date Complete: 12/21/12 Rig Permit #: 101063

NOTE: Well Completion Reports must be filed by the registered well driller within 30 days of well completion.







# *Quabbin Analytical Laboratory*

**Box 1192 Stadler Street, Belchertown, MA 01007**

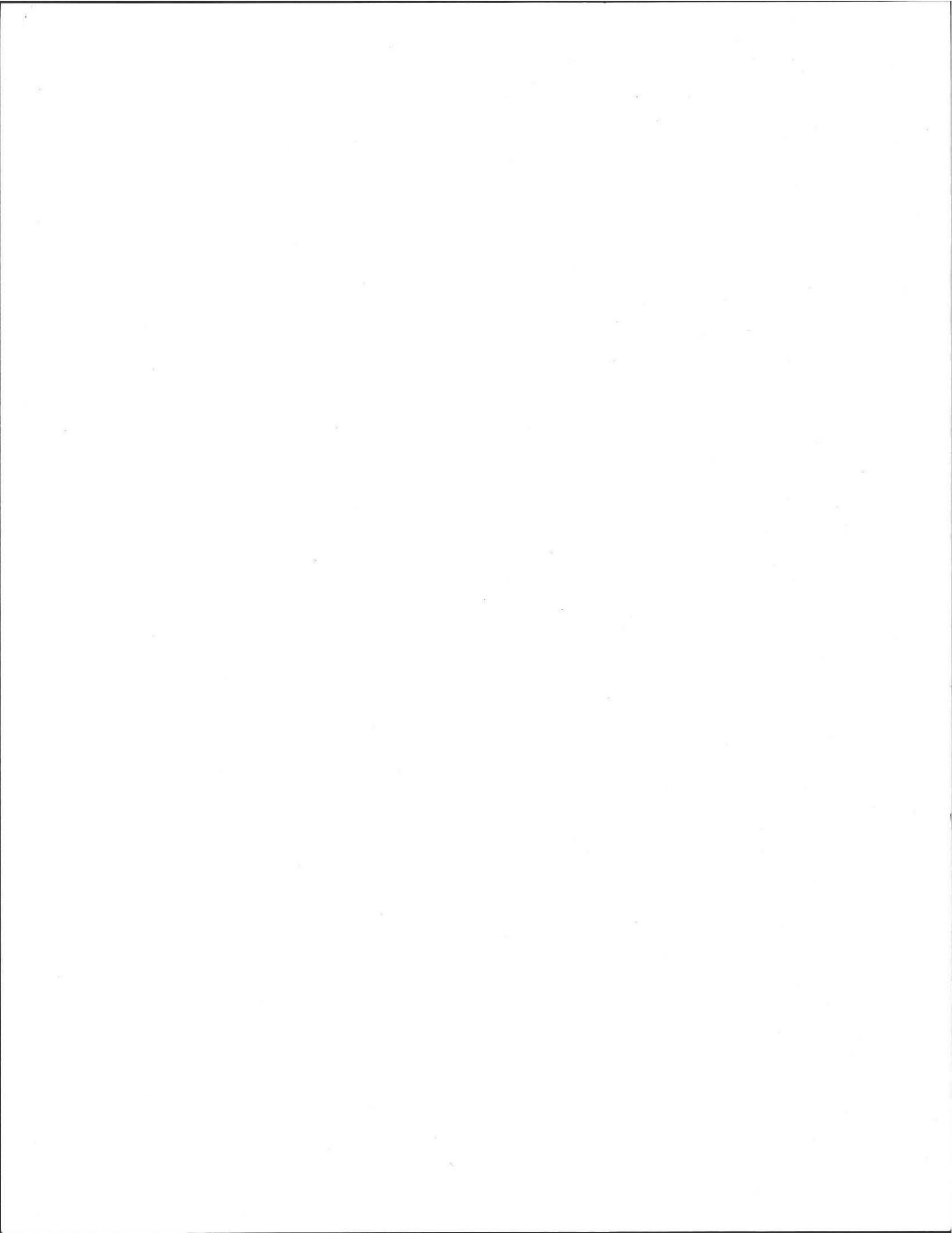
**(413)-323-7134**

Name:	Cushing & Sons	Sample Date:	12-20-12
Address:	P.O. Box 668	Report Date:	12-21-12
	Walpole, NH 03608-0668	Collected By:	Cushing & Sons
Sample Location:	LeBlanc	Type Supply:	Well
	Flat Hills Road	Sample No.:	QAL 6093
	Amherst, MA 01002		

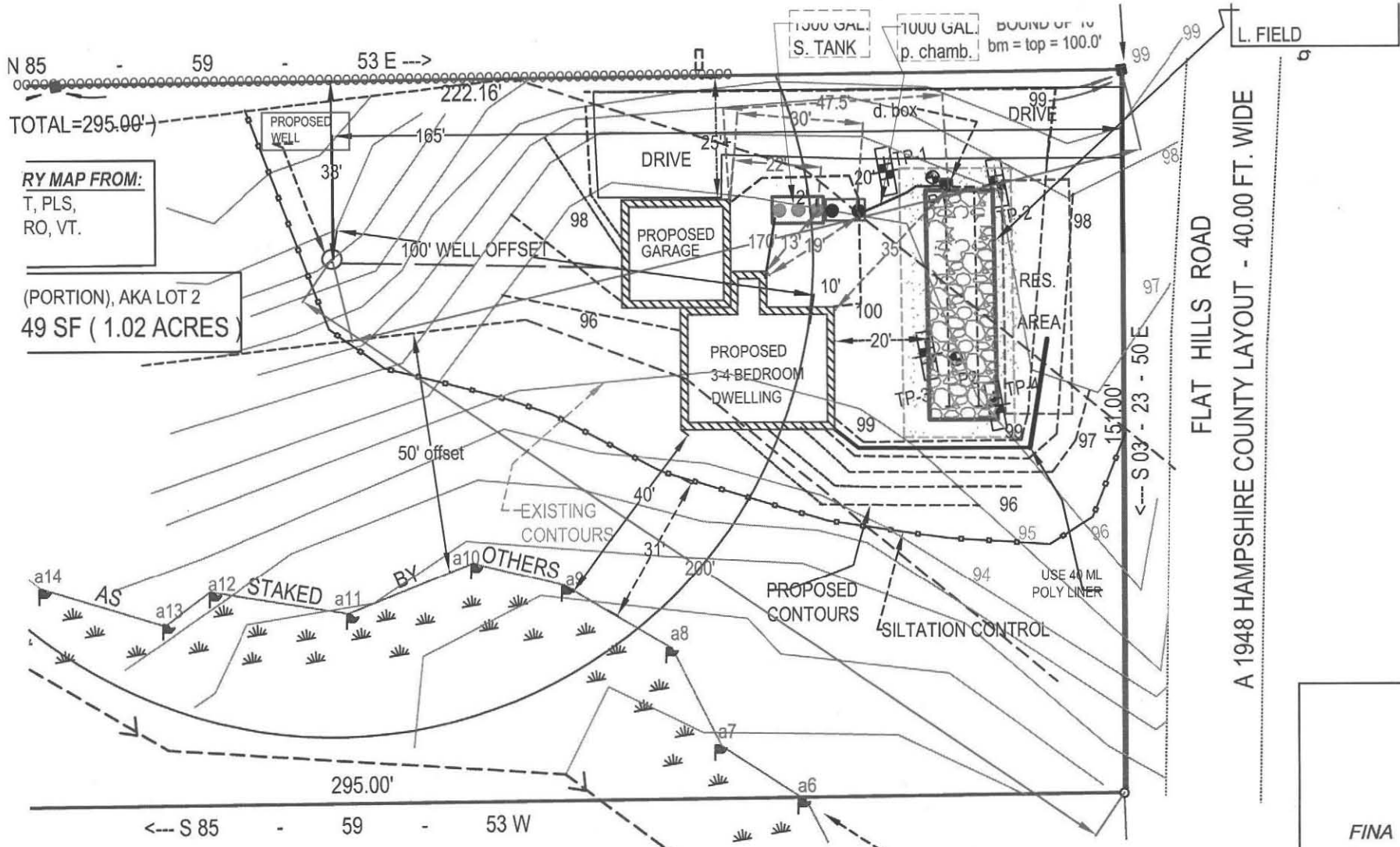
TESTED FOR	RESULTS	MAX. RECOMMENDED LEVELS
<b>Total Coliform Bacteria</b>	Absent	Absent
<b>Fecal Coliform Bacteria</b>	Absent	Absent
<b>Nitrite</b>	0	1.0 mg/l
<b>Nitrate</b>	0.1	10.0 mg/l
<b>pH</b>	7.88	6.5-8.5
<b>Alkalinity</b>	42.0	No Limit
<b>Iron</b>	*1.45	.30 mg/l
<b>Manganese</b>	*.58	.05 mg/l
<b>Copper</b>	0	1.3 mg/l
<b>Sulfate</b>	22.0	250 mg/l
<b>Chloride</b>	12.8	250 mg/l
<b>Hardness</b>	64.0	No Limit
<b>Conductivity</b>	207.0	No Limit
<b>Total Dissolved Solids</b>	136.6	500 mg/l
<b>Turbidity</b>	*52.0	5 NTU
<b>Chlorine</b>	0	0
<b>Sodium</b>	14.9	No Limit

Results are only for those items listed above and on the above collected date. Except for the following \*Iron, Manganese & Turbidity, the sample was found to be within acceptable levels for D.E.P. Drinking Water Standards. If there are any questions on this report, please do not hesitate to call this office.

David Fredenburgh, Director



As-Built



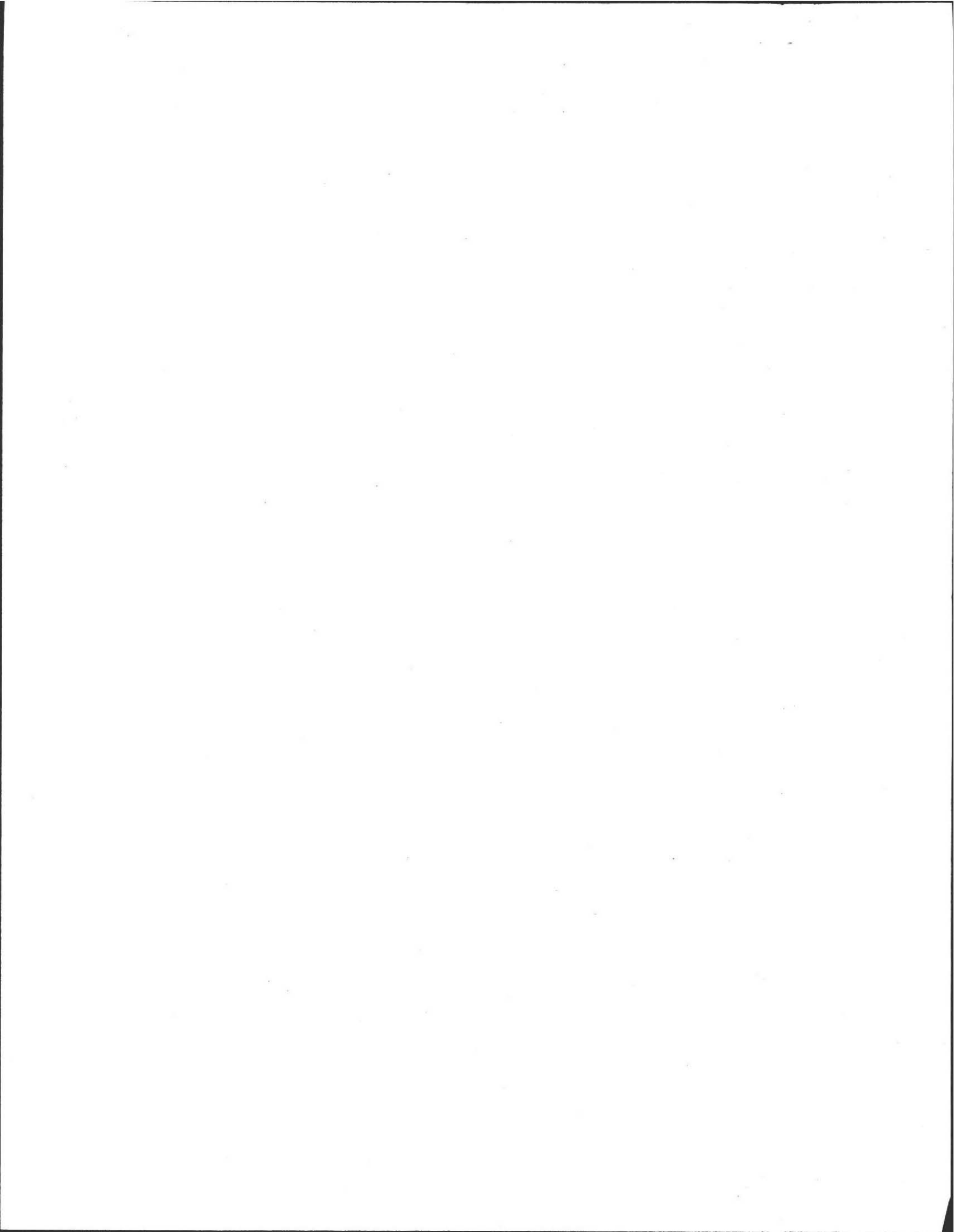
RY MAP FROM:  
T, PLS,  
RO, VT.

(PORTION), AKA LOT 2  
49 SF ( 1.02 ACRES )

FLAT HILLS ROAD  
A 1948 HAMPSHIRE COUNTY LAYOUT - 40.00 FT. WIDE

**CONTROL NOTES:**  
d Virgin Straw Bales OR SEDIMENT SOCK

FINA



*Town of*



AMHERST

*Massachusetts*

---

AMHERST HEALTH DEPARTMENT, 70 BOLTWOOD WALK, AMHERST, MA 01002  
(413) 259-3077 (413) 259-2404 - FAX Environmental Health Division (413) 259-3078

November 20, 2012

**RE: Lot 4, Flat Hills Road, Amherst, MA 01002**

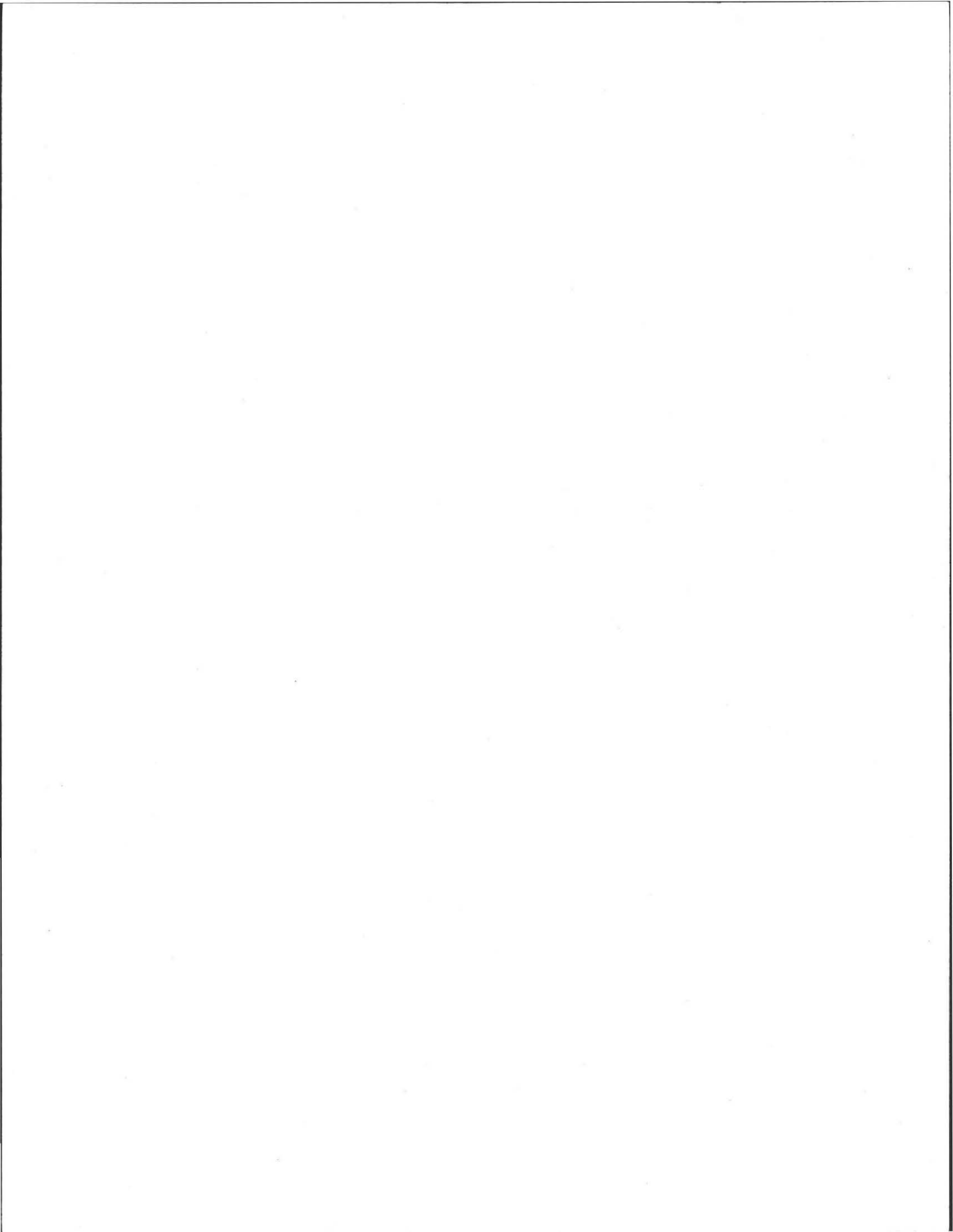
Dear Amherst Board of Health:

I have reviewed the plan for the installation of the drinking well at Lot 4 Flat Hills Road, Amherst, currently owned by Kenneth LeBlanc. In my opinion the proposed well plan design meets the requirements of the Amherst Board of Health Regulations for Private Wells as adopted on October 30, 2008, with amendments effective on March 15, 2011.

I visited the site today November 20, 2012 and observed no violations at this point. Mr. Alan Weiss will be notified to attend the BOH meeting to answer any questions or concerns you may have.

Respectfully submitted by,

Edmund Smith  
Assistant Sanitarian



Town of



AMHERST

Massachusetts

AMHERST HEALTH DEPARTMENT, 70 BOLTWOOD WALK,  
AMHERST, MA 01002  
(413) 259-3077 (413) 259-2404 - FAX

**APPLICATION FOR A WELL CONSTRUCTION PERMIT**

I hereby petition the Board of Health of the Town of Amherst for a Well Construction Permit (WCP) to install a private well in the Town of Amherst. **ATTACHED IS A PLAN SHOWING THE PROPOSED LOCATION OF THE WELL (WITH ORIGINAL DATE, STAMP AND SIGNATURE OF AN ENGINEER, REGISTERED SANITARIAN, OR REGISTERED LAND SURVEYOR) AND ALL OTHER REQUIREMENTS OF THE AMHERST BOARD OF HEALTH REGULATIONS FOR PRIVATE WELLS.**

1. Address of Property: Lot 4, Flat Hills Rd.

2. Assessor of Parcel Number: Map 3D, Lot 21, (Return)

3. Name of Owner: Ken Leblanc. Telephone Number: 413-534-1029

Address of Owner: P.O.B. 307, S. Hadley, MA.

✓ 4. Name of Well Driller: COSKINGS + SONS Reg. # \_\_\_\_\_  
(Must be registered with Massachusetts Water Resources Commission)

5. Purpose of Well: \*Drinking () Agricultural Only ( ) Ground Source Heat Pump ( )  
\$100.00 \$50.00 \$50.00

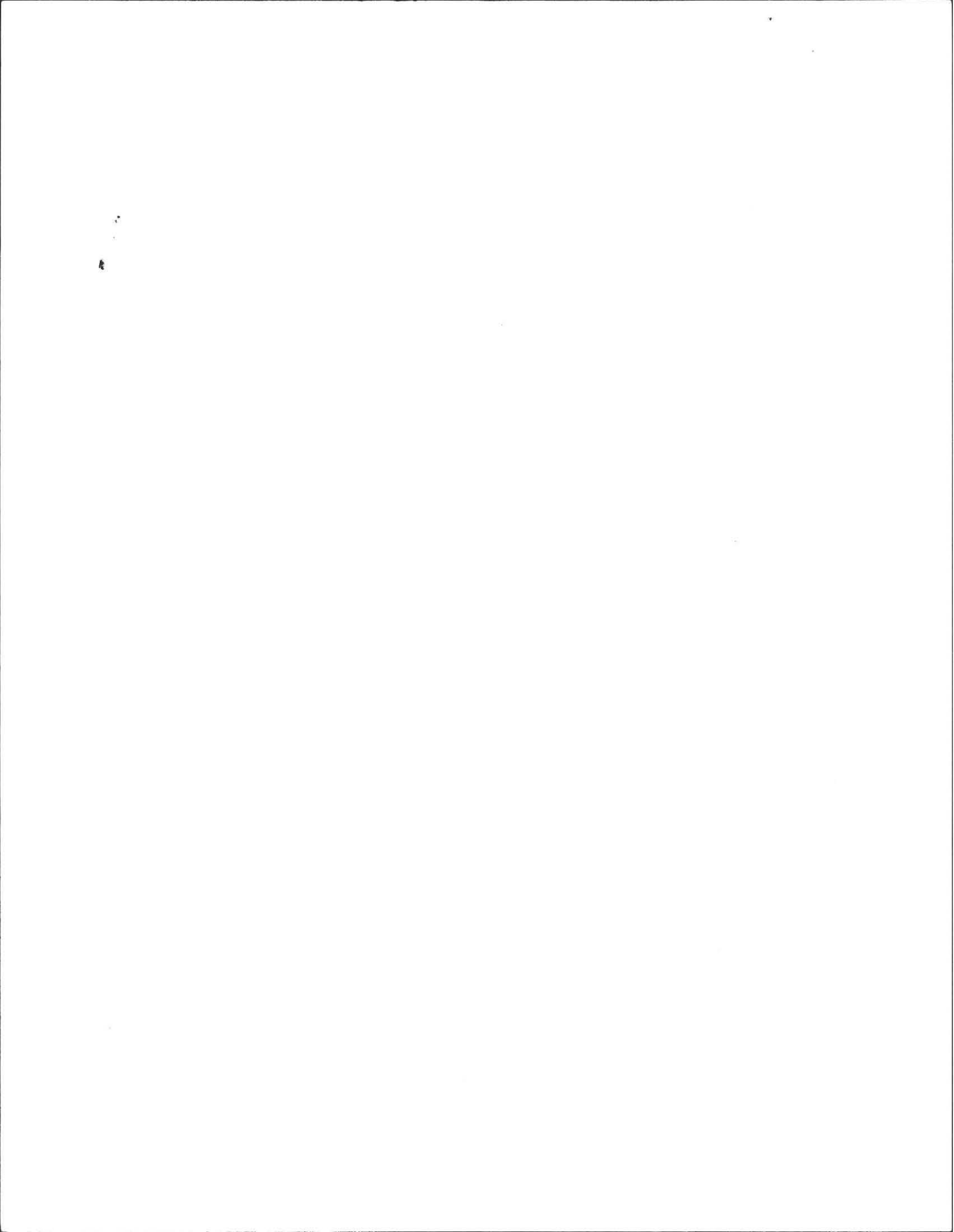
The undersigned acknowledges that he must, before commencing construction or use of the system which is the matter of this application, secure any and all other permits which may be required by the laws of the Town of Amherst and the Commonwealth of Massachusetts, and agree to abide by all regulations of the Town of Amherst and the Commonwealth of Massachusetts concerning private wells.

The undersigned also understands that if a private well is to be used for drinking purposes, a **BUILDING PERMIT** affecting the structure the well is to serve **WILL NOT BE ISSUED UNTIL A Water Supply Certificate** has been granted by the Amherst Board of Health.

✓ Name of Applicant: Kenneth C LeBlanc

Applicant Signature: Kenneth C LeBlanc Date: 10-26-12

For Office Use Only	
<input type="checkbox"/> Permit Issued By: _____	<input type="checkbox"/> Permit Denied By: _____
PERMIT NUMBER: _____	REASON: _____
DATE ISSUED: _____	DATE DENIED: _____
Inspected By: _____	Fee Paid: Yes ___ No ___ Amount _____
Inspection Date: _____	Cash/Check # _____
	Date of Payment _____







- Property Map**
- Property Line
  - Hydrographic Property
  - Right of Way Line
  - Town Boundary
- Lot Lines**
- Former Property Line
  - Subdivision Lot Line
- Easements**
- Trails
  - Rail Lines
- Structures**
- Building
  - Foundation or in const
  - Outbuilding or Miscell
  - Deck, Porch, Stairs or
  - Mobile home, Trailer
  - Swimming Pool
  - Building Ruins
  - Water storage tank
- Rivers and Streams**
- Streams
  - Major Culverts
  - Hydro Connector
  - Headwalls, Floodwalls
- Landcover**
- Brush and scrub vege
  - Tree and forest vege
  - Cultivated field
  - Gravel pile
  - Quarry
  - Misc Impervious Surfa
- Parking**
- Parking Paved
  - Parking Unpaved
- Driveways**
- Driveway Paved
  - Driveway Unpaved
- Sidewalks**
- Sidewalks
- Transportation**
- Paved street polygons
  - Unpaved street polyg
- Bridges**
- Bridge decking and str
  - Foot Bridge
  - Rail Bridge

Horizontal Datum: MA Stateplane Coordinate System, Zone 4151, Datum NAD83, Feet  
 Vertical Datum: NAVD88, Feet

Planimetric & topographic basemap features compiled at 1"=40' scale from April, 2009 Aerial Photography. Parcels compiled to match the basemap; revisions are ongoing.

The information depicted on this map is for planning purposes only. It may not be adequate for legal boundary definition, regulatory interpretation, or property conveyance purposes. Utility structures and underground utility locations are approximate and require field verification.

THE TOWN OF AMHERST MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, CONCERNING THE ACCURACY, COMPLETENESS, RELIABILITY, OR SUITABILITY OF THESE DATA. THE TOWN OF AMHERST DOES NOT ASSUME ANY LIABILITY ASSOCIATED WITH THE USE OR MISUSE OF THIS INFORMATION.

1" = 200 ft





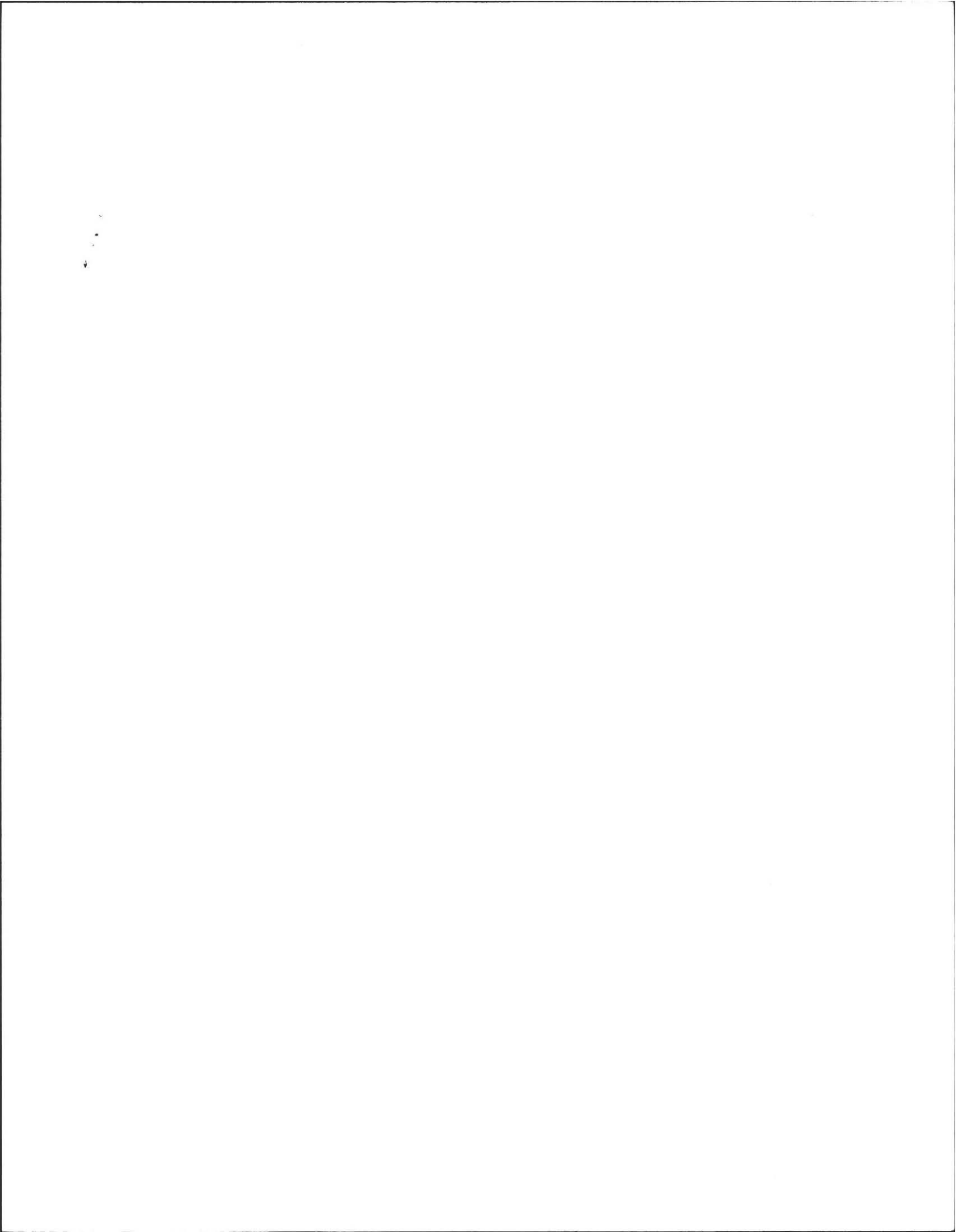
# Abuttas:

3D-21 WD Cowls: POB 9079; N. Amherst MA 01059

3D-22 Gaoyan Xie + You Yiang: 463 Flat Hills Rd. Amherst, MA. 01002.

3D-82 Eva Lehrer + Keith McCormick: 492 Flat Hills Rd. Amherst, MA 01002

6B-94 MALINA + ROGER STURGILL: 460 Flat Hills Rd. Amherst, MA. 01002.

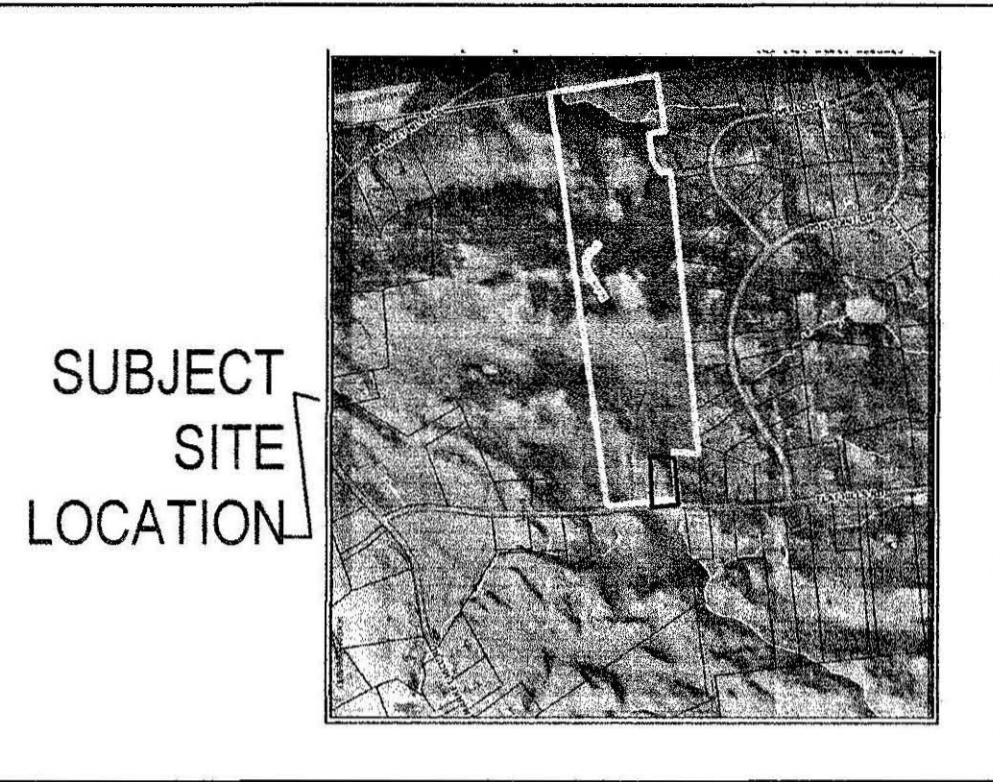
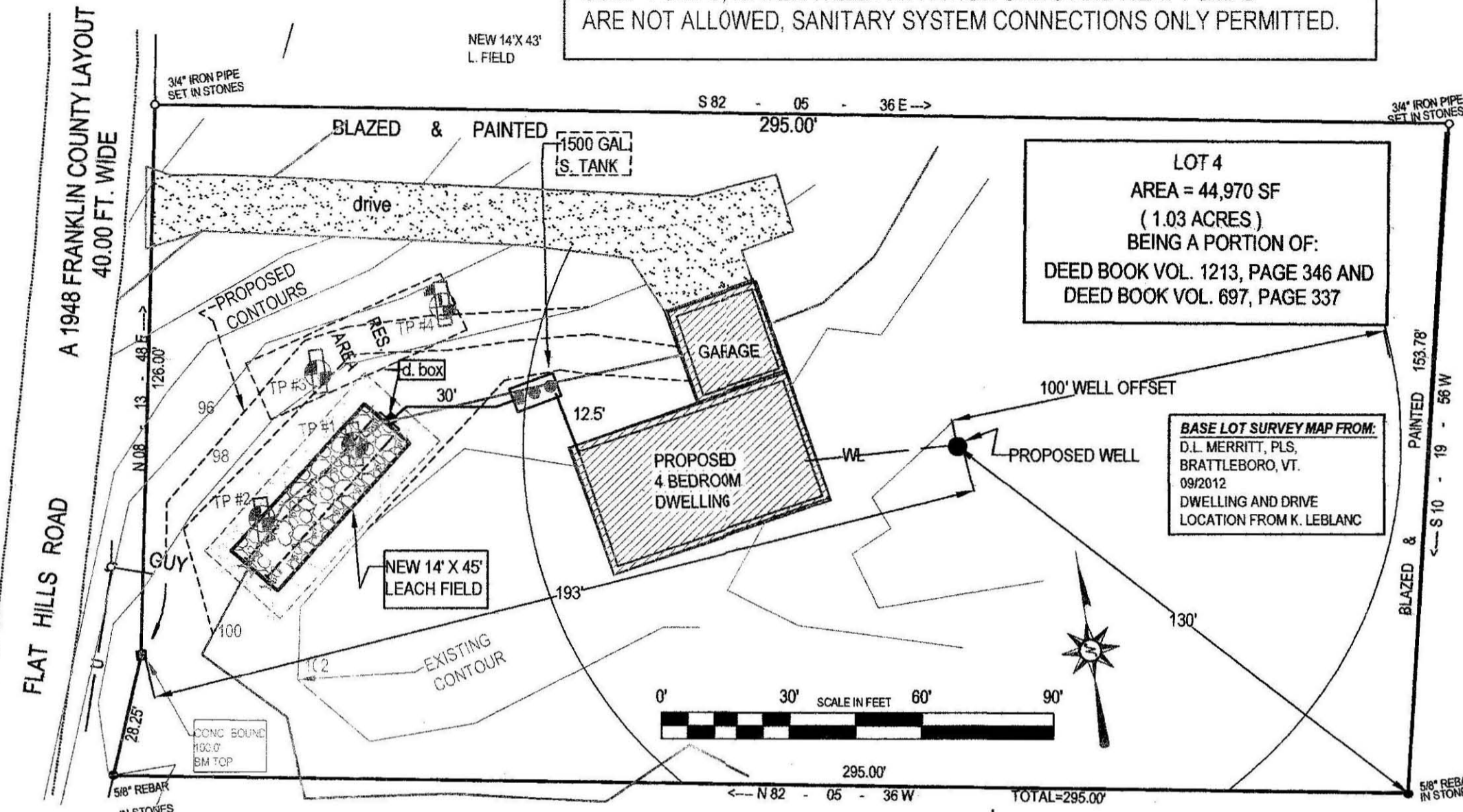


**GRAVITY SLOPE SEPTIC SYSTEM OPERATION AND MAINTENANCE NOTES FOR HOMEOWNER.**

- 1.) HAVE TANK PUMPED EVERY 2 YEARS.
- 2.) MAINTAIN AREA OVER SEPTIC SYSTEM AS GRASSY OR SIMILAR GROUND COVER.
- 3.) DO NOT PLANT ANY TREES OR DEEP ROOTING SHRUBS WITHIN 10 FEET OF SYSTEM.
- 4.) USE ONLY LIQUID DETERGENTS & LOW FLOW WASHERS.
- 5.) WIPE ALL OIL AND GREASE FROM COOKWARE AND DISPOSE IN TRASH NOT SEPTIC.
- 6.) All Toilets and Faucets must be confirmed to not be leaking, because one leaking fixture can fail a septic system in ONE DAY.

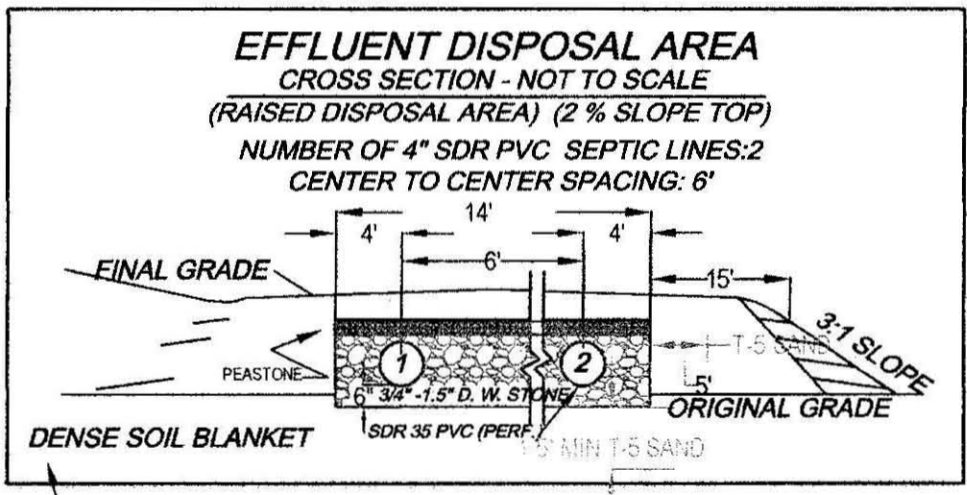
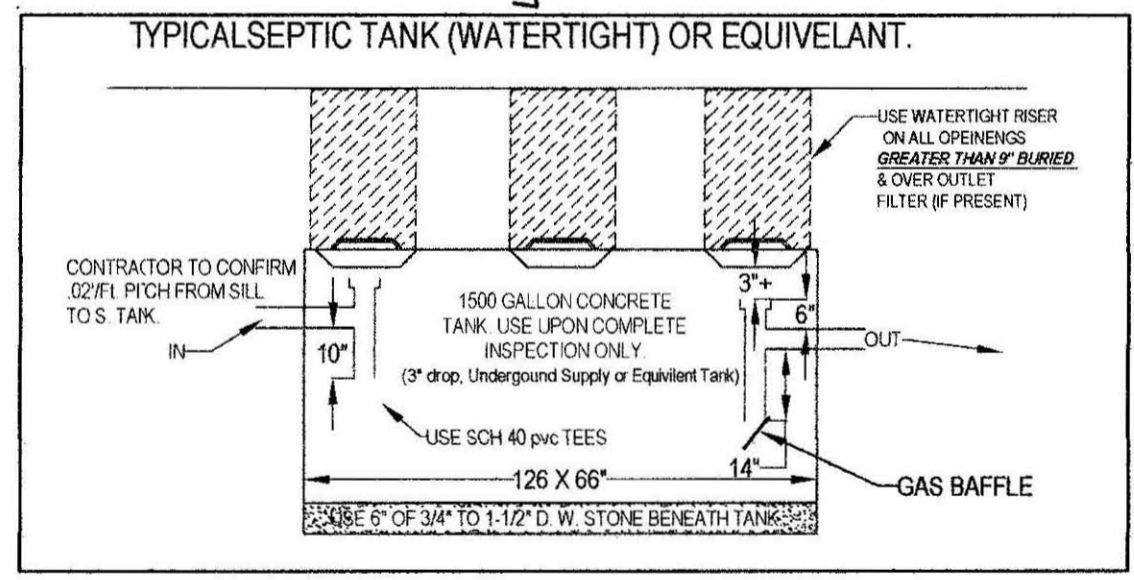
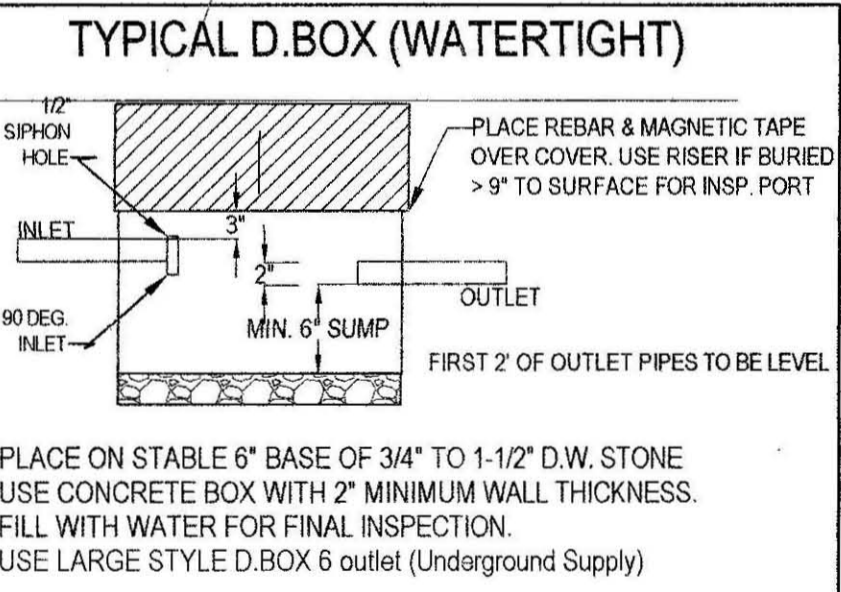
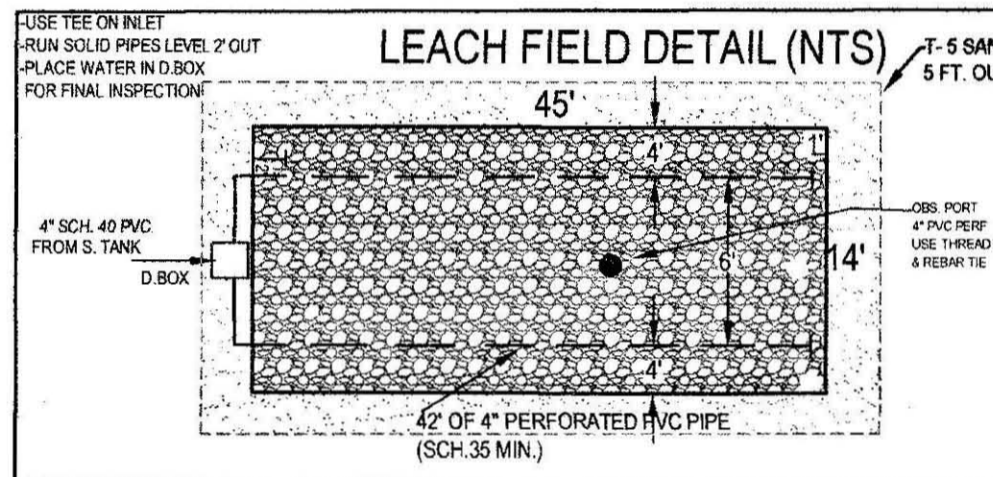
**NOTE TO HOMEOWNER: FILL, WHERE USED, ARE REQUIRED BY STATE CODE TO MAXIMIZE THE DISTANCE FROM THE BOTTOM OF THE LEACHING FIELD TO THE TOP OF THE ESTIMATED HIGH GROUNDWATER. THIS "SEPARATION" FROM HIGH GROUNDWATER (3, 4, OR 5 FEET), IS NOT THE SAME AS THE HEIGHT OF THE FINISHED MOUND SURFACE. THE ACTUAL FINISHED MOUND IS TYPICALLY HIGHER THAN THE "SEPARATION". BY SIGNING PERMIT YOU ACKNOWLEDGE THAT COLD SPRING ENVIRONMENTAL CONSULTANTS INC. IS NOT RESPONSIBLE FOR THE AESTHETICS OF FILLED OR MOUNDED SYSTEMS.**

**NOTE TO HOMEOWNER AND CONTRACTOR: CONNECTIONS FROM HEATING SYSTEM, AIRCONDITIONERS, SUMP PUMPS, WATER WELL FILTRATION UNITS AND HEAT PUMPS ARE NOT ALLOWED, SANITARY SYSTEM CONNECTIONS ONLY PERMITTED.**

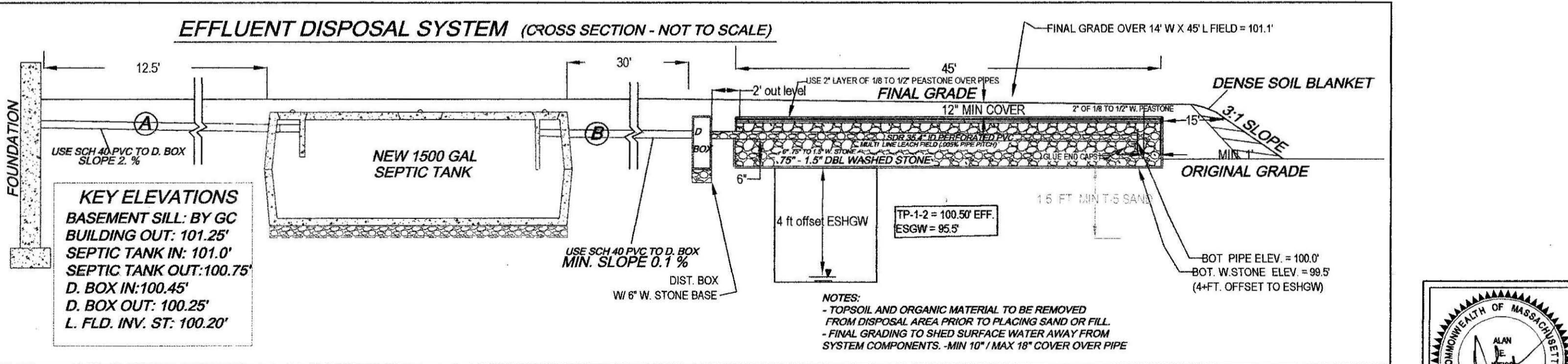


**DESIGN NOTES AND CALCULATIONS:**

- 1.) 4 BEDROOM HOME X 110 GPD /BR = 440 GPD. REQUIRED,
  - Use ONE FIELD: 14' WIDE X 45' LONG WITH 6" OF 3/4" TO 1 1/2" DBL WASHED STONE BELOW INVERT
  - BOTTOM AREA: 14' W X 45' L = 602 SF.
  - SIDE AREA: 0 SF.
  - TOTAL AREA: 630 SF X 0.74 GAL/SF = 466.5 GPD
3. GARBAGE: DISPOSAL NOT ALLOWED, ...
4. NO OTHER PRIVATE WELLS WITHIN 150 FEET OF SAS.
5. NO OTHER WETLANDS WITHIN 100 FEET OF SAS
6. USE NEW S. TANK AS NOTED & MAINTAIN 0.02 PITCH FROM SILL TO S. TANK
  - INSTALL & INSPECT SCH. 40 TEES / BAFFLES (10" INLET, 14" OUTLET),
- NOTE:
  - ALL COMPONENTS OF NEW SYSTEM MUST BE MARKED WITH MAGNETIC TAPE. BE SURE TO MAINTAIN 3" CLEARANCE FROM TOP OF TEES TO BOTTOM OF TANK COVERS & BOXES.
7. USE LARGE STYLE (6 OUTLET) D.BOX ONLY.
- 7A. ALL D. BOX OUTLET PIPES LEVEL FOR FIRST 2'. BOXES MUST HAVE 2"+ CONC. WALLS
  - NOTE:
    - D. BOXES WITH MORE THAN 9" OF COVER SOIL MUST HAVE RISERS TO 6" OF SURFACE.
8. USE (.75"-1 1/2") STONE UNDER TANK & D. BOX FOR 6" FOR STABLE BASE.
  - USE ONLY DBL. WASHED APPROVED (.75"-1.5") FOR PLACEMENT IN LEACH AREA.
9. USE PROPER SCH. 40 PVC TEES AS SHOWN.
10. PRE & POST CONTOURS NOTED AS NECESSARY, RESERVE AS NOTED
11. SLOPE CALLS (SEE CONTOURS), SUBGRADE INSP. REQ'D.
12. USE FIELD DUE TO TOPOGRAPHY AND SPACE OF LOT WITH RESPECT TO LOCATION AND ELEVATION OF RESIDENCE (310 CMR 15.240)
14. USE 2% MIN. SLOPE OVER SAS
  - CLEAR TOP AND SUB TO 25" MIN. AS NEEDED (INSPECTION REQUIRED).
  - CLEAR PAST BASE OF B (MIN. 25") & SCARIFY UNDER BED PRIOR TO TITLE V SAND/STONE PLACEMENT.
  - EXCAVATE EXISTING LOAM, SUB AND ANY EXISTING DEBRIS, DIRTY FILL OR PRIOR SYSTEM IF PRESENT.
15. SOIL EVALUATION BY A. WEISS, RS. ON 06.08.2012 (E. SMITH, BOH AGENT).
  - DEPTH OF PERC. 48 & 49"
  - PERC RATE = 3 & 5 MIN / IN,
  - CLASS 1(LS) SOIL RATING
16. NO TREES: WITHIN 10 FT. OF NEW LEACH FIELD.
17. ENGINEER & TOWN (IF REQUIRED) TO INSPECT SUBGRADE, TOWN AND ENGINEER INSPECT AT FINAL.
18. BM=100.001 @ (TOP OF CONC. BOUND as noted), CONFIRM PROPER PIPE SLOPES
  - USE INSPECT SCH. 40 PIPE FOR PIPE FROM HOUSE TO NEW OR EXISTING TANK
19. GRADE MULCH AND SEED OVER SAS AS NOTED.
20. INSTALLATION IN LOW GROUNDWATER SEASON RECOMMENDED.
21. USE OBSERVATION PORT NEAR CENTER OF STONE BED HAVE 4" PERFORATED, PVC INSPECTION PORTALS TO BOTTOM OF STONE BED, WITH RISER TO 3" OF SURFACE & THREADED CAP & MARK WITH RE-BAR.



TEST PIT LOG:				SOIL EVALUATOR: A. WEISS, RS		DATE OF EVALUATION: 06.08.2012			
TP-1 EFF. ELEV: 100.1' EFF.				TP-2 EFF. ELEV: 100'					
DEPTH	HORIZ	TEXTURE	COLOR (MUNSELL)	MATERIAL	DEPTH	HORIZ	TEXTURE	COLOR (MUNSELL)	MATERIAL
0-9"	A	FSL	10 YR 3.3	FRIABLE, LOOSE	0-8"	A	FSL	10 YR 3.3	FRIABLE, LOOSE
9-25"	Bw	LS	10 YR 4.6	FRIABLE, LOOSE	8-20"	Bw	LS	10 YR 4.6	FRIABLE, MED. SAND
25-112"	C1	LS	2.5 Y 4.3	F-MED. SMD ABL. TILL	20-86"	C1	LS	2.5 Y 4.3	F-MED. SMD ABL. TILL
OXIDES: 60"				2.5 Y 4.2	OXIDES: 60"				2.5 Y 4.2
EHWT: 60"					EHWT: 60"				
STANDING H2O: NOT OBSERVED					STANDING H2O: NOT OBSERVED				
WEEPING: NOT OBSERVED					WEEPING: NOT OBSERVED				
BEDROCK: 112"+					BEDROCK: 86"+				



TEST PIT LOG:				SOIL EVALUATOR: A. WEISS, RS		DATE OF EVALUATION: 06.08.12			
TP-3 EFF. ELEV: 97' EFF.				TP-4 EFF. ELEV: 97'					
DEPTH	HORIZ	TEXTURE	COLOR (MUNSELL)	MATERIAL	DEPTH	HORIZ	TEXTURE	COLOR (MUNSELL)	MATERIAL
0-8"	A	FSL	10 YR 3.3	FRIABLE, LOOSE	0-7"	A	FSL	10 YR 3.3	FRIABLE, LOOSE
8-22"	Bw	LS	10 YR 4.6	FRIABLE, MED. SAND	7-25"	Bw	LS	10 YR 4.6	FRIABLE, MED. SAND
22-96"	C1	LS	2.5 Y 4.3	F-MED. SMD ABL. TILL	25-87"	C1	LS	2.5 Y 4.3	F-MED. SMD ABL. TILL
OXIDES: 72"				2.5 Y 4.2	OXIDES: 72"				2.5 Y 4.2
EHWT: 72"					EHWT: 72"				
STANDING H2O: NOT OBSERVED					STANDING H2O: NOT OBSERVED				
WEEPING: NOT OBSERVED					WEEPING: NOT OBSERVED				
BEDROCK: 96"+					BEDROCK: 87"+				

**SEPTIC SYSTEM & WELL LOCATION PLAN FOR KEN LEBLANC**

MAP 3D LOT 21 (portion), "lot 4" FLAT HILLS ROAD

AMHERST, MA

**Cold Spring Environmental Consultants Inc.**

350 Old Enfield Road

Belchertown, MA. 01007

PHONE: (413) 323-5957

FAX: (413) 323-4916

e-Mail: AWEISS@charter.net

**ATTENTION INSTALLER!!**

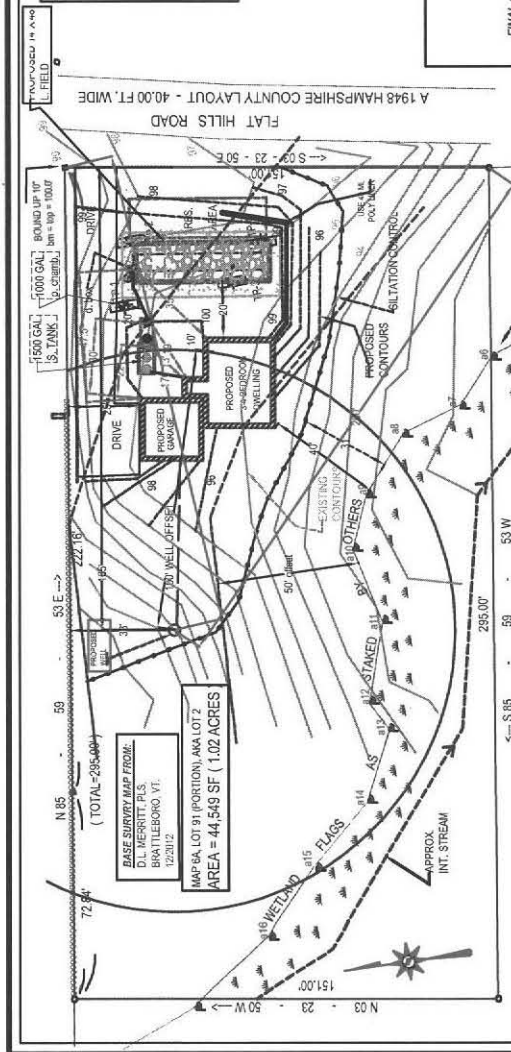
CALL DIG SAFE BEFORE YOU DIG! MASSACHUSETTS STATE LAW CHAPTER 82 SECTIONS 40 - 40E REQUIRE THAT PREMARKING OF GAS, ELECTRIC, WATER, TELEPHONE AND CABLE T.V. UTILITY LINES BE MADE A MINIMUM OF 72 HOURS PRIOR TO GROUND BREAK FOR ANY EXCAVATION.

NOTE: INSTALLER MUST CONTACT ENGINEER/BD OF HEALTH 48 HOURS PRIOR TO SUBGRADE INSPECTION. INSTALLER MUST HAVE ALL BREAK OUT FILL ON SITE AND IN PLACE PRIOR TO SIGN OFF BY ENGINEER AT TIME OF FINAL INSPECTION OR APPROVAL WILL NOT BE GIVEN TO BACKFILL.

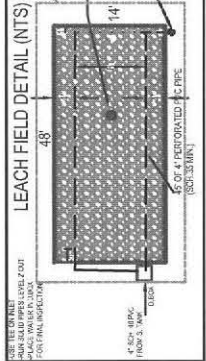


DATE: 10.19.2012	DRAWN BY: AEW	REVISED:
SCALE: 1"=30'	CHECKED BY: AEW	DRAWING NUMBER: 112-3984-1019

AS-BUILT



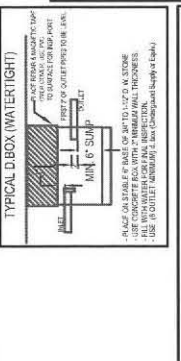
FLAT HILLS ROAD  
A 1948 HAMPSHIRE COUNTY LAYOUT - 40.00 FT. WIDE



LEACH FIELD DETAIL (NTS)

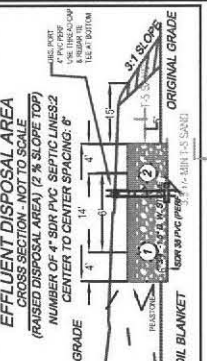


SUBJECT SITE LOCATION



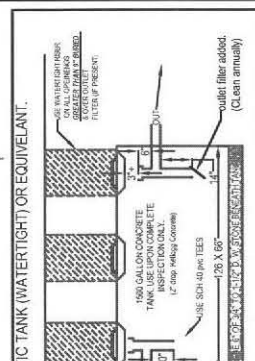
TYPICAL D-BOX (WATERTIGHT)

**DESIGN NOTES AND CALCULATIONS:**  
 1. 1/4 BEDROOM HOME DESIGN = 440 GPD MIN. REQUIRED.  
 - USE LEACHING FIELD 14' WIDE X 48' LONG WITH 6" OF 1/2" TO 1/4" DBL WASHED STONE BELOW INVERT.  
 - BOTTOM AREA, L. FIELD (14' W X 48' L) = 672 SF.  
 - TOTAL AREA: 672 SF X .86 GAL/SF = 578 GPD PROVIDED.  
 3. GARBAGE DISPOSAL NOT PERMITTED, A/C AND FURNACE CONDENSATE TUBES NOT ALLOWED  
 4. NO OTHER PRIVATE WELLS WITHIN 100 FEET OF SAS.  
 5. FILE NOTICE OF INTENT CONCURRENT WITH PLAN  
 6. USE NEW S. TANK AS NOTED & MAINTAIN 0.02 PITCH FROM SLL TO S. TANK  
 - INSTALL & INSPECT SCH. 40 TEES, BAFFLES (10" INLET, 14" OUTLET).  
 NOTE:  
 - ALL COMPONENTS OF NEW SYSTEM MUST BE MARKED WITH MAGNETIC TAPE. BE SURE TO MAINTAIN 3" CLEARANCE FROM TOP OF TEES TO BOTTOM OF TANK COVERS & BOXES.  
 7. USE LARGE STYRENE FOAM (LETO) BOX ONLY.  
 8. D-BOX, COUPLER PIPES LEVEL FOR FIRST 2. BOXES MUST HAVE 2" CONC. WALLS.  
 NOTE:  
 - D-BOXES WITH MORE THAN 9" OF COVER SOIL MUST HAVE RISERS TO TOP OF SURFACE.  
 7B ANY / ALL PLASTIC RISERS MUST BE SECURED WITH STAINLESS STEEL SCREENS.  
 7C USE 1/2" x 1/2" STONE UNDER TANK & D. BOX FOR 6" FOAM STABLE BASE.  
 - USE ONLY DBL WASHED APPROVED 75/1.57 FOR PLACEMENT IN LEACH AREA.  
 9. USE PROPER SCH. 40 PVC TEES AS SHOWN.  
 10. PRE & POST CONTOURS NOTED AS NECESSARY. RESERVE AS NOTED.  
 11. SLOPE CALC. (SEE CONTOURS). SUBGRADE INSP. REQ.  
 12. USE FIELD DUE TO TOPOGRAPHY AND SPACE OF LOT WITH RESPECT TO LOCATION AND ELEVATION OF RESIDENCE & ESHW (3' TO CURB 15.24)  
 13. USE 2% MIN. SLOPE OVER SAS  
 - CLEAR TOP AND SUB TO 24" MIN. AS NEEDED (INSPECTION REQUIRED).  
 - EXCAVATE EXISTING LOAM, SUB AND ANY EXISTING DEBRIS. DIRTY FILL OR PROX. SYSTEM IF PRESENT.  
 14. SOIL EVALUATION BY A. WEISS, RS. (GARY COURTEMARCHE, BOH AGENT), 12/03/2009  
 - PERC: 1.1 SAND SOIL RATING  
 - CLASS: U, L SAND SOIL RATING  
 15. NO TREES WITHIN 10 FT. OF NEW LEACH AREA.  
 16. ENGINEER TO INSPECT SUBGRADE, TOWN AND ENGINEER INSPECT AT FINAL  
 17. BM = 100.00 @ (TOP OF BOUND, AS NOTED). CONFIRM PROPER PIPE SLOPES  
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 19. INSTALLATION IN LOW GROUNDWATER SEASON RECOMMENDED.  
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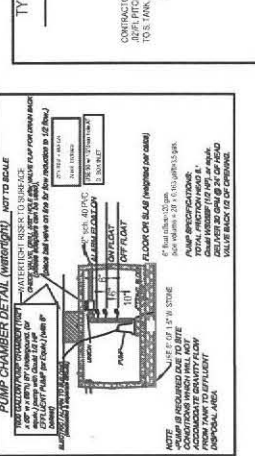
EFFLUENT DISPOSAL AREA (CROSS SECTION - NOT TO SCALE)

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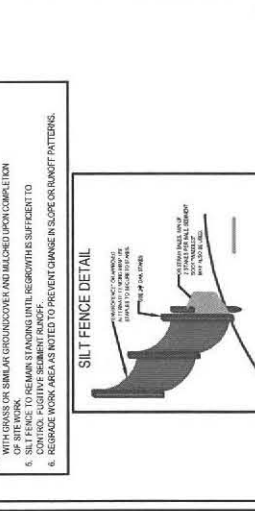


TYPICAL SEPTIC TANK (WATERTIGHT) OR EQUIVALENT.

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 12. USE FIELD DUE TO TOPOGRAPHY AND SPACE OF LOT WITH RESPECT TO LOCATION AND ELEVATION OF RESIDENCE & ESHW (3' TO CURB 15.24)  
 13. USE 2% MIN. SLOPE OVER SAS  
 - CLEAR TOP AND SUB TO 24" MIN. AS NEEDED (INSPECTION REQUIRED).  
 - EXCAVATE EXISTING LOAM, SUB AND ANY EXISTING DEBRIS. DIRTY FILL OR PROX. SYSTEM IF PRESENT.  
 14. SOIL EVALUATION BY A. WEISS, RS. (GARY COURTEMARCHE, BOH AGENT), 12/03/2009  
 - PERC: 1.1 SAND SOIL RATING  
 - CLASS: U, L SAND SOIL RATING  
 15. NO TREES WITHIN 10 FT. OF NEW LEACH AREA.  
 16. ENGINEER TO INSPECT SUBGRADE, TOWN AND ENGINEER INSPECT AT FINAL  
 17. BM = 100.00 @ (TOP OF BOUND, AS NOTED). CONFIRM PROPER PIPE SLOPES  
 - USE INSPECT SCH. 40 PIPE FOR PIPE FROM HOUSE TO NEW OR EXISTING TANK  
 18. GRADE MULCH AND SEED OVER SAS AS NOTED.  
 19. INSTALLATION IN LOW GROUNDWATER SEASON RECOMMENDED.  
 20. OBSERVATION PORT NEAR CENTER OF STONE BED HAVE 4" PERFORATED, PVC INSPECTION PORTALS TO BOTTOM OF STONE BED, WITH RISER TO 3" OF SURFACE & THREADED CAP & MARK WITH RE BAR.

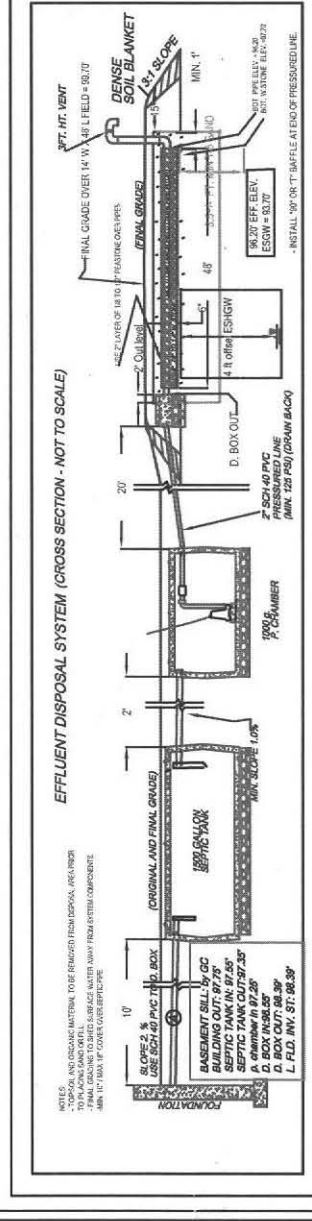


PUMP CHAMBER DETAIL (WATERTIGHT) - NOT TO SCALE



SILT FENCE DETAIL

**DESIGN NOTES AND CALCULATIONS:**  
 1. 1/4 BEDROOM HOME DESIGN = 440 GPD MIN. REQUIRED.  
 - USE LEACHING FIELD 14' WIDE X 48' LONG WITH 6" OF 1/2" TO 1/4" DBL WASHED STONE BELOW INVERT.  
 - BOTTOM AREA, L. FIELD (14' W X 48' L) = 672 SF.  
 - TOTAL AREA: 672 SF X .86 GAL/SF = 578 GPD PROVIDED.  
 3. GARBAGE DISPOSAL NOT PERMITTED, A/C AND FURNACE CONDENSATE TUBES NOT ALLOWED  
 4. NO OTHER PRIVATE WELLS WITHIN 100 FEET OF SAS.  
 5. FILE NOTICE OF INTENT CONCURRENT WITH PLAN  
 6. USE NEW S. TANK AS NOTED & MAINTAIN 0.02 PITCH FROM SLL TO S. TANK  
 - INSTALL & INSPECT SCH. 40 TEES, BAFFLES (10" INLET, 14" OUTLET).  
 NOTE:  
 - ALL COMPONENTS OF NEW SYSTEM MUST BE MARKED WITH MAGNETIC TAPE. BE SURE TO MAINTAIN 3" CLEARANCE FROM TOP OF TEES TO BOTTOM OF TANK COVERS & BOXES.  
 7. USE LARGE STYRENE FOAM (LETO) BOX ONLY.  
 8. D-BOX, COUPLER PIPES LEVEL FOR FIRST 2. BOXES MUST HAVE 2" CONC. WALLS.  
 NOTE:  
 - D-BOXES WITH MORE THAN 9" OF COVER SOIL MUST HAVE RISERS TO TOP OF SURFACE.  
 7B ANY / ALL PLASTIC RISERS MUST BE SECURED WITH STAINLESS STEEL SCREENS.  
 7C USE 1/2" x 1/2" STONE UNDER TANK & D. BOX FOR 6" FOAM STABLE BASE.  
 - USE ONLY DBL WASHED APPROVED 75/1.57 FOR PLACEMENT IN LEACH AREA.  
 9. USE PROPER SCH. 40 PVC TEES AS SHOWN.  
 10. PRE & POST CONTOURS NOTED AS NECESSARY. RESERVE AS NOTED.  
 11. SLOPE CALC. (SEE CONTOURS). SUBGRADE INSP. REQ.  
 12. USE FIELD DUE TO TOPOGRAPHY AND SPACE OF LOT WITH RESPECT TO LOCATION AND ELEVATION OF RESIDENCE & ESHW (3' TO CURB 15.24)  
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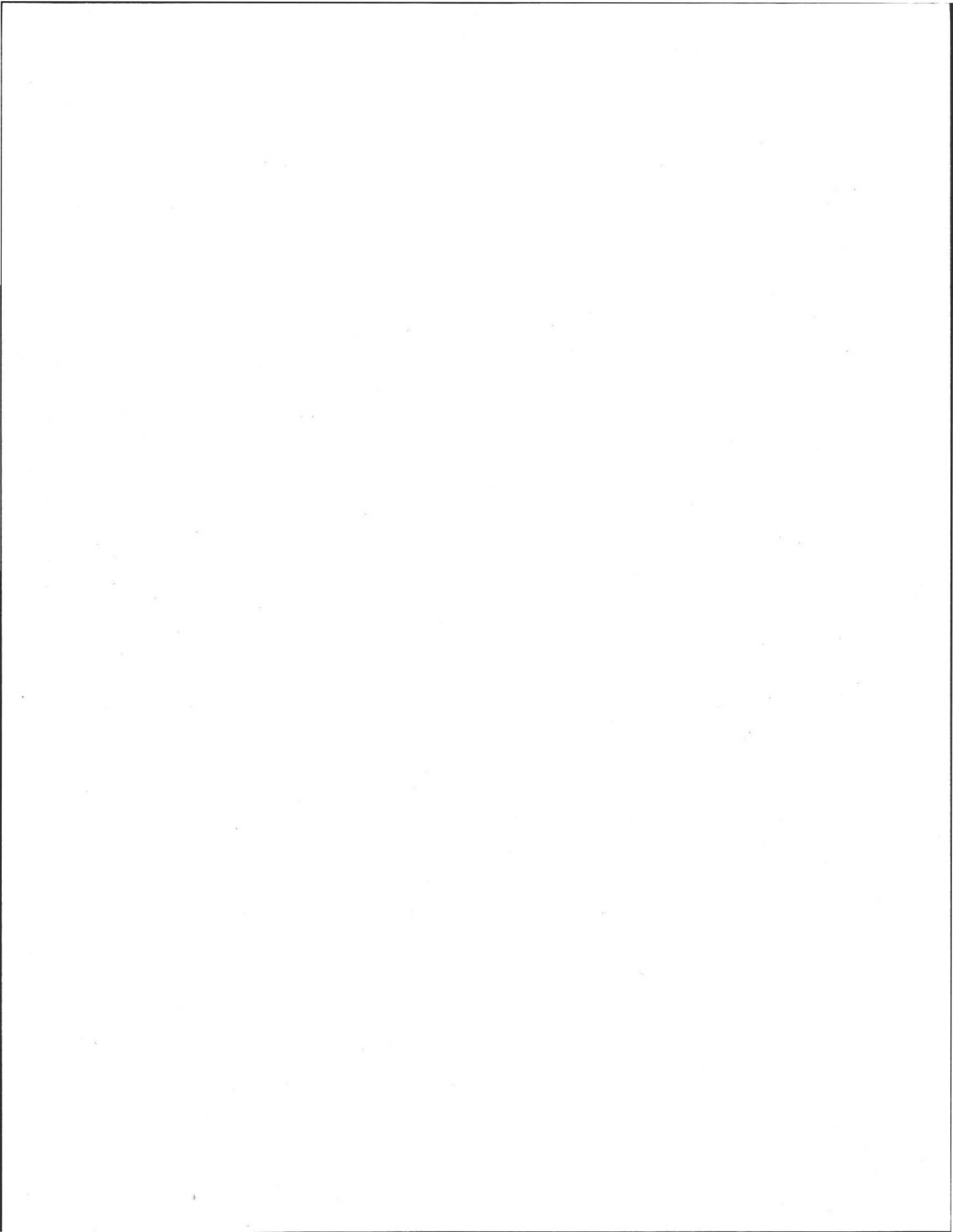


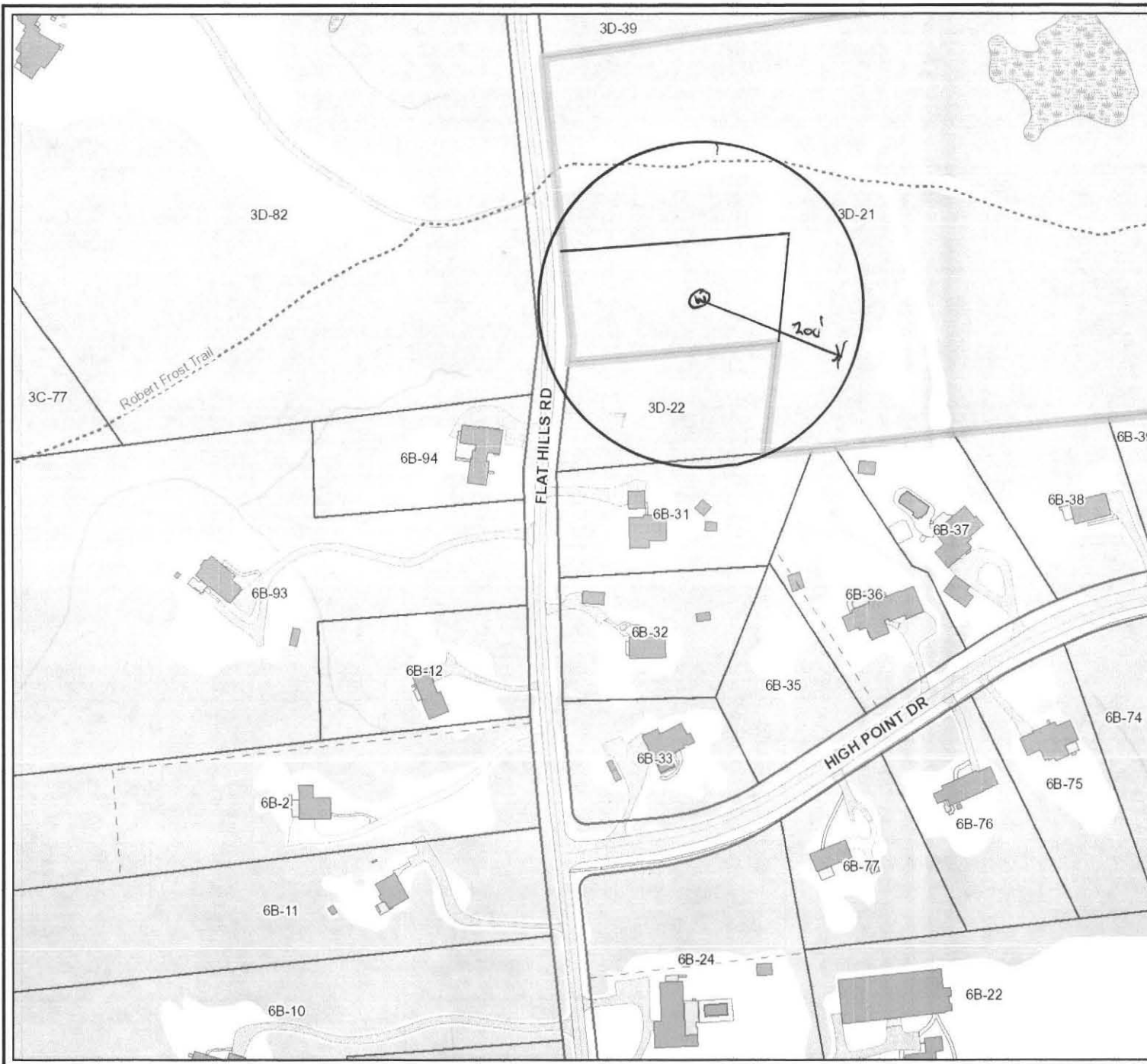
EFFLUENT DISPOSAL SYSTEM (CROSS SECTION - NOT TO SCALE)

TEST PIT LOG:	SOIL EVALUATOR:	DATE OF EVALUATION:
1. 1/4 BEDROOM HOME DESIGN = 440 GPD MIN. REQUIRED. - USE LEACHING FIELD 14' WIDE X 48' LONG WITH 6" OF 1/2" TO 1/4" DBL WASHED STONE BELOW INVERT. - BOTTOM AREA, L. FIELD (14' W X 48' L) = 672 SF. - TOTAL AREA: 672 SF X .86 GAL/SF = 578 GPD PROVIDED. 3. GARBAGE DISPOSAL NOT PERMITTED, A/C AND FURNACE CONDENSATE TUBES NOT ALLOWED 4. NO OTHER PRIVATE WELLS WITHIN 100 FEET OF SAS. 5. FILE NOTICE OF INTENT CONCURRENT WITH PLAN 6. USE NEW S. TANK AS NOTED & MAINTAIN 0.02 PITCH FROM SLL TO S. TANK - INSTALL & INSPECT SCH. 40 TEES, BAFFLES (10" INLET, 14" OUTLET). NOTE: - ALL COMPONENTS OF NEW SYSTEM MUST BE MARKED WITH MAGNETIC TAPE. BE SURE TO MAINTAIN 3" CLEARANCE FROM TOP OF TEES TO BOTTOM OF TANK COVERS & BOXES. 7. USE LARGE STYRENE FOAM (LETO) BOX ONLY. 8. D-BOX, COUPLER PIPES LEVEL FOR FIRST 2. BOXES MUST HAVE 2" CONC. WALLS. NOTE: - D-BOXES WITH MORE THAN 9" OF COVER SOIL MUST HAVE RISERS TO TOP OF SURFACE. 7B ANY / ALL PLASTIC RISERS MUST BE SECURED WITH STAINLESS STEEL SCREENS. 7C USE 1/2" x 1/2" STONE UNDER TANK & D. BOX FOR 6" FOAM STABLE BASE. - USE ONLY DBL WASHED APPROVED 75/1.57 FOR PLACEMENT IN LEACH AREA. 9. USE PROPER SCH. 40 PVC TEES AS SHOWN. 10. PRE & POST CONTOURS NOTED AS NECESSARY. RESERVE AS NOTED. 11. SLOPE CALC. (SEE CONTOURS). SUBGRADE INSP. REQ. 12. USE FIELD DUE TO TOPOGRAPHY AND SPACE OF LOT WITH RESPECT TO LOCATION AND ELEVATION OF RESIDENCE & ESHW (3' TO CURB 15.24) 13. USE 2% MIN. SLOPE OVER SAS - CLEAR TOP AND SUB TO 24" MIN. AS NEEDED (INSPECTION REQUIRED). - EXCAVATE EXISTING LOAM, SUB AND ANY EXISTING DEBRIS. DIRTY FILL OR PROX. SYSTEM IF PRESENT. 14. SOIL EVALUATION BY A. WEISS, RS. (GARY COURTEMARCHE, BOH AGENT), 12/03/2009 - PERC: 1.1 SAND SOIL RATING - CLASS: U, L SAND SOIL RATING 15. NO TREES WITHIN 10 FT. OF NEW LEACH AREA. 16. ENGINEER TO INSPECT SUBGRADE, TOWN AND ENGINEER INSPECT AT FINAL 17. BM = 100.00 @ (TOP OF BOUND, AS NOTED). CONFIRM PROPER PIPE SLOPES - USE INSPECT SCH. 40 PIPE FOR PIPE FROM HOUSE TO NEW OR EXISTING TANK 18. GRADE MULCH AND SEED OVER SAS AS NOTED. 19. INSTALLATION IN LOW GROUNDWATER SEASON RECOMMENDED. 20. OBSERVATION PORT NEAR CENTER OF STONE BED HAVE 4" PERFORATED, PVC INSPECTION PORTALS TO BOTTOM OF STONE BED, WITH RISER TO 3" OF SURFACE & THREADED CAP & MARK WITH RE BAR.	A. WEISS, RS.	12/03/2009

**ATTENTION INSTALLER!**  
 CALL DIG SAFE BEFORE YOU DIG! MASSACHUSETTS STATE LAW CHAPTER 82 SECTIONS 40 - 40E REQUIRE THAT PREMARKING OF GAS, ELECTRIC, WATER, TELEPHONE AND CABLE T.V. UTILITY LINES BE MADE A MINIMUM OF 72 HOURS PRIOR TO GROUND BREAK FOR ANY EXCAVATION.  
 NOTE: INSTALLER MUST CONTACT ENGINEER OF RECORD 48 HOURS PRIOR TO SITE AND SUBGRADE INSPECTION. INSTALLER MUST HAVE ALL BREAK OUT FALL ON SITE AND APPROVAL WILL NOT BE GIVEN TO BACKFILL.  
 NOTE TO OWNER AND CONTRACTORS:  
 CONNECTIONS FROM HEATING SYSTEM, AIR CONDITIONERS, SWAMP PUMPS, WATER WELLS, FILTRATION UNITS AND HEAT PUMPS ARE NOT ALLOWED. SANITARY WATER CONNECTIONS ONLY PERMITTED.  
 CON FLOW WASHERS.  
 GRAVITY SLOPE SEPTIC SYSTEM OPERATION AND MAINTENANCE NOTES FOR HOMEOWNER:  
 1) HAVE TANK PUMPED EVERY 2 YEARS. 2) MAINTAIN AREA OVER SEPTIC SYSTEM AS GRASSY OR SIMILAR GROUND COVER. 3) DO NOT PLANT ANY TREES OR DEEP ROOTING SHRUBS WITHIN 10 FEET OF SYSTEM. 4) USE ONLY LIQUID DETERGENTS & SOAP. 5) DO NOT PUT GREASE, OIL, COFFEE GROUND, EGGSHELLS, OR OTHER SOLID WASTE IN TOILET OR SINK. 6) DO NOT PUT PAINTS, SOLIDS, OR OTHER TOXIC WASTE IN TOILET OR SINK. 7) DO NOT PUT GREASE, OIL, COFFEE GROUND, EGGSHELLS, OR OTHER SOLID WASTE IN TOILET OR SINK. 8) DO NOT PUT PAINTS, SOLIDS, OR OTHER TOXIC WASTE IN TOILET OR SINK. 9) DO NOT PUT GREASE, OIL, COFFEE GROUND, EGGSHELLS, OR OTHER SOLID WASTE IN TOILET OR SINK.  
 WELL POINT ADDED 05.30.2012  
 permit number added 10.04.2012  
 A. Weiss, Inc. (Sealed) 10/11/12  
 Date of Revision: 05/30/2012

**WELL & SEPTIC SYSTEM PLAN FOR HOMES BY LEBLANC (aka Ken Leblanc)**  
 MAP 6a LOT 91 (PORTION) AKA LOT #2  
 298 FLAT HILLS ROAD, AMHERST, MA  
**Cold Spring Environmental Consultants Inc.**  
 360 Old Eastford Road  
 Shelburne, Mass. 01707  
 Phone No. (978) 225-5977  
 Fax No. (978) 225-6916  
 E-Mail: ACEW@ColdSpringEC.com  
 DRAWN BY: ALAN WEISS  
 DATE: 01.22.2012  
 SCALE: 1"=30'  
 REVISION: 03.22.2012 06.30.2012 10.04.2012  
 DRAWING NUMBER: 112-5815-10103





- |                           |                        |
|---------------------------|------------------------|
| <b>Property Map</b>       | <b>Driveways</b>       |
| — Property Lines          | Driveway Paved         |
| — Hydrographic Property   | Driveway Unpaved       |
| — Right of Way Line       | Sidewalks              |
| — Town Boundary           | <b>Transportation</b>  |
| <b>Lot Lines</b>          | Paved street polygons  |
| — Former Property Line    | Unpaved street polyg   |
| — Subdivision Lot Line    | <b>Bridges</b>         |
| — Easements               | Bridge decking and str |
| <b>Basemap 2009</b>       | Foot Bridge            |
| --- Trails                | Rail Bridge            |
| → Rail Lines              |                        |
| <b>Structures</b>         |                        |
| ■ Building                |                        |
| ■ Foundation or in const  |                        |
| ■ Outbuilding or Miscel   |                        |
| ■ Deck, Porch, Stairs or  |                        |
| ■ Mobile home, Trailer    |                        |
| ■ Swimming Pool           |                        |
| ■ Building Ruins          |                        |
| ■ Water storage tank      |                        |
| <b>Rivers and Streams</b> |                        |
| Streams                   |                        |
| Major Culverts            |                        |
| Hydro Connector           |                        |
| Headwalls, Floodwalls     |                        |
| <b>Landcover</b>          |                        |
| Brush and scrub vege      |                        |
| Tree and forest vege      |                        |
| Cultivated field          |                        |
| Gravel pile               |                        |
| Quarry                    |                        |
| Misc Impervious Surfa     |                        |
| <b>Parking</b>            |                        |
| ● Parking Paved           |                        |
| ● Parking Unpaved         |                        |

Horizontal Datum: MA Stateplane Coordinate System, Zone 4151, Datum NAD83, Feet  
 Vertical Datum: NAVD88, Feet

Planimetric & topographic basemap features compiled at 1"=40' scale from April, 2009 Aerial Photography. Parcels compiled to match the basemap; revisions are ongoing.

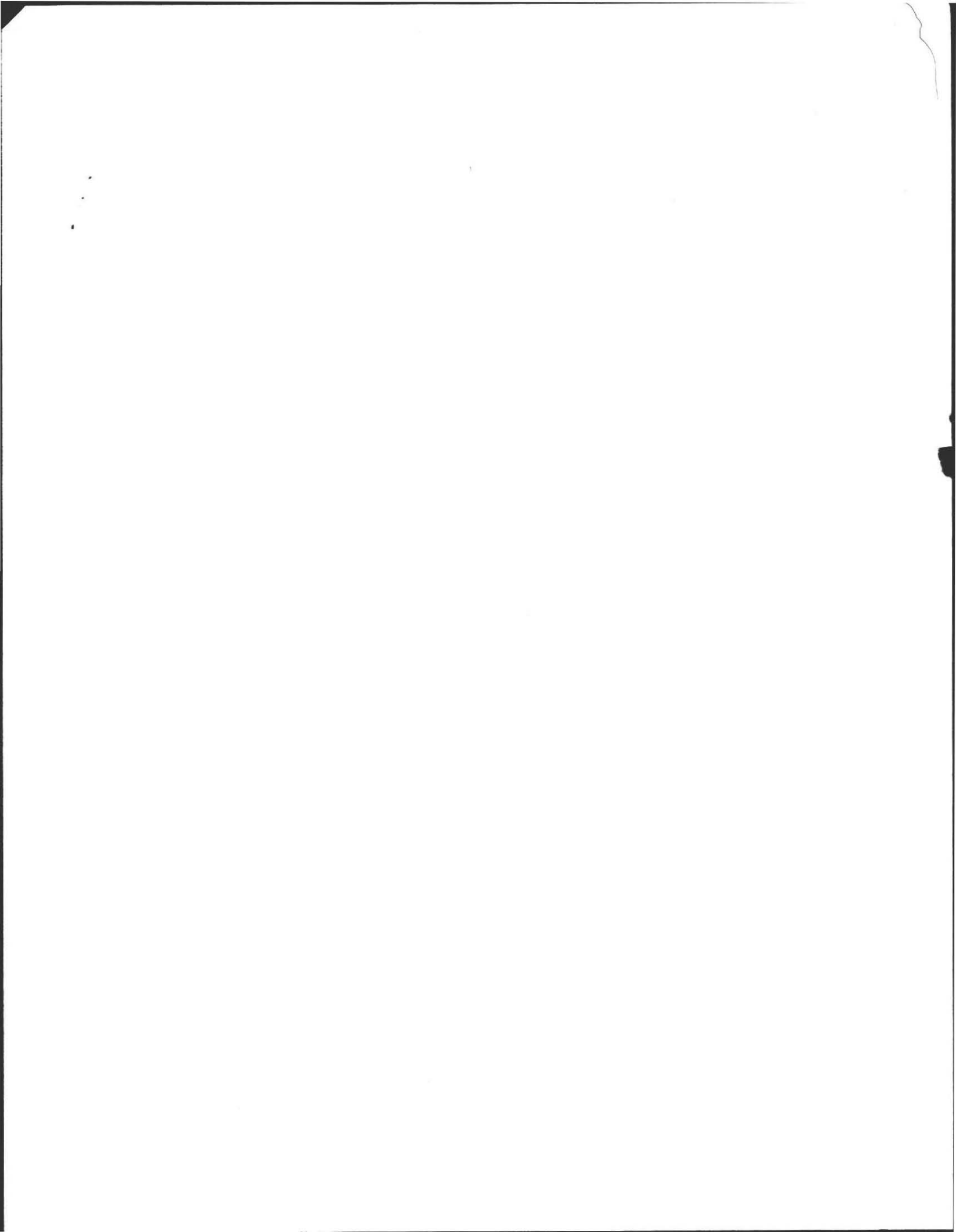
The information depicted on this map is for planning purposes only. It may not be adequate for legal boundary definition, regulatory interpretation, or property conveyance purposes. Utility structures and underground utility locations are approximate and require field verification.

**THE TOWN OF AMHERST MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, CONCERNING THE ACCURACY, COMPLETENESS, RELIABILITY, OR SUITABILITY OF THESE DATA. THE TOWN OF AMHERST DOES NOT ASSUME ANY LIABILITY ASSOCIATED WITH THE USE OR MISUSE OF THIS INFORMATION.**

1" = 200 ft







# November 2012 INVOICE

## AMHERST PUBLIC HEALTH DEPARTMENT

*Done*

Bangs Community Center  
70 Boltwood Walk  
Amherst, MA 01002

DATE: Nov. 16, 2012

*16176*

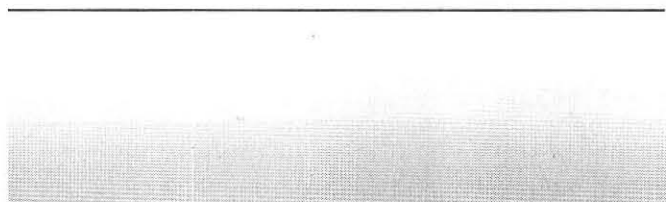
TO Homes by Leblanc, Inc.  
PO Box 307  
South Hadley, MA 01075

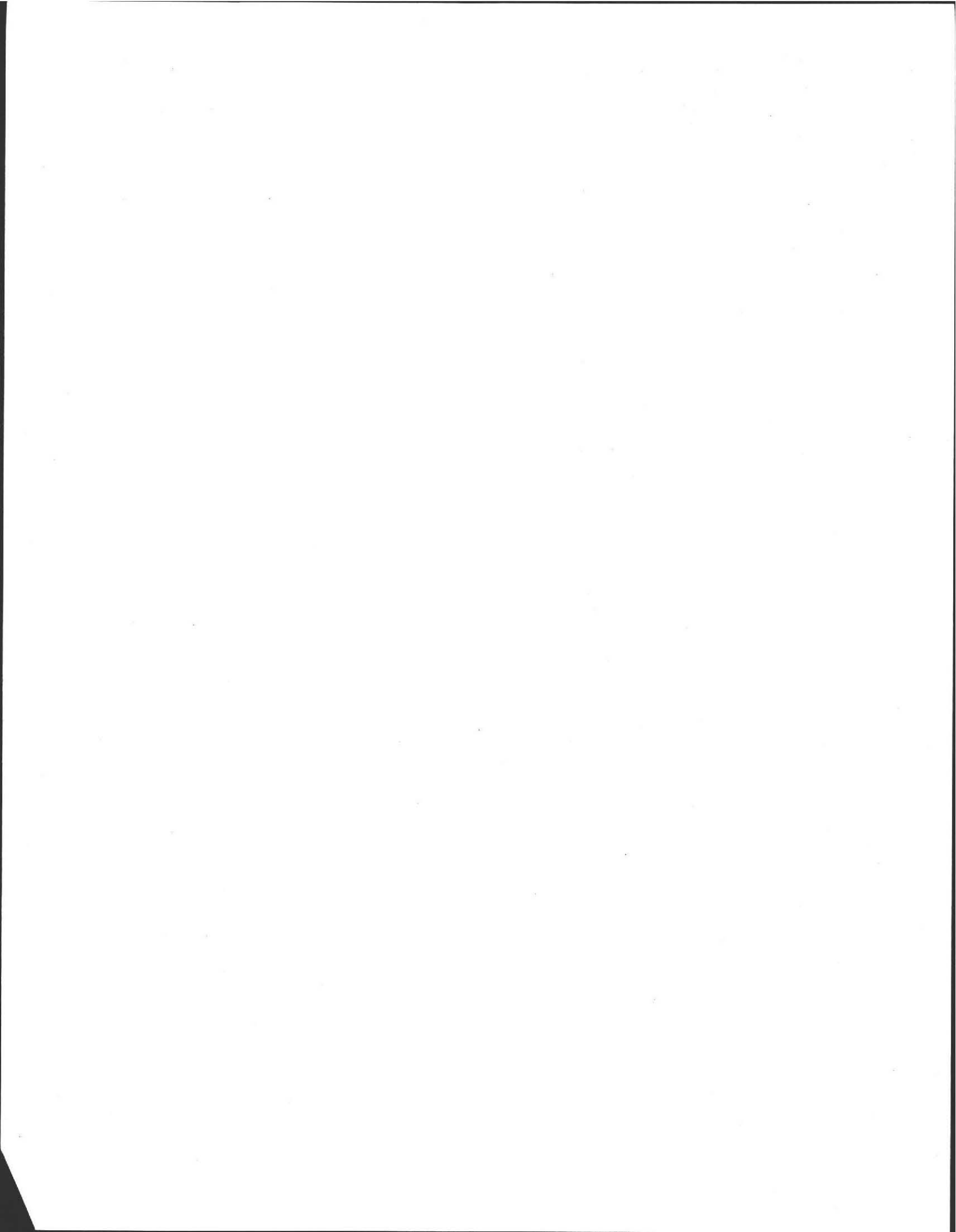
RE: Invoice for **Well Permit and Septic Review**

Services provided by **Edmund Smith**

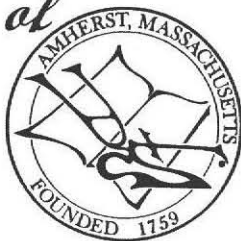
PAYMENT TERMS: I PAID

QUANTITY	DESCRIPTION	UNIT PRICE	LINE TOTAL
1.00	Well Construction Permit	\$ 100.00	\$ 100.00
1.00	Plan Review	\$ 150.00	\$ 150.00
	above for Map 3D, Lot 21 Portion (Lot 4 Flat Hills Road)		
	Rec'd today your check #1953 for \$250.00		
	this invoice is paid in full/thank you		
SUBTOTAL			\$ 250.00
SALES TAX			
TOTAL			\$ 250.00





Town of



# AMHERST *Massachusetts*

AMHERST HEALTH DEPARTMENT, 70 BOLTWOOD WALK, AMHERST, MA 01002  
(413) 259-3077 (413) 259-2404 - FAX Environmental Health Division (413) 259-3078

## APPLICATION FOR A WATER SUPPLY CERTIFICATE

I hereby petition the Board of Health of the Town of Amherst for a Water Supply Certificate for a potable well.

Located at: \_\_\_\_\_  
Assessor's Parcel No: \_\_\_\_\_

Constructed Under Well Construction Permit No: \_\_\_\_\_

By Well Driller: \_\_\_\_\_  
Registration No: \_\_\_\_\_

Owner of Well: \_\_\_\_\_  
Mail Address: \_\_\_\_\_ Telephone: \_\_\_\_\_

**VOLUME OF WATER FOR HOUSEHOLD DAILY NEEDS:** \_\_\_\_\_  
The volume of water necessary to support the household's daily needs shall be determined by the following equation: Number of bedrooms x 200 gallons per bedroom  
Number of gallons needed daily

Plumber performing connection: \_\_\_\_\_  
Plumber Permit Number: \_\_\_\_\_

Electrical Connections by: \_\_\_\_\_  
(Electrical connections must be made by a pump installer or Registered Well Driller.)

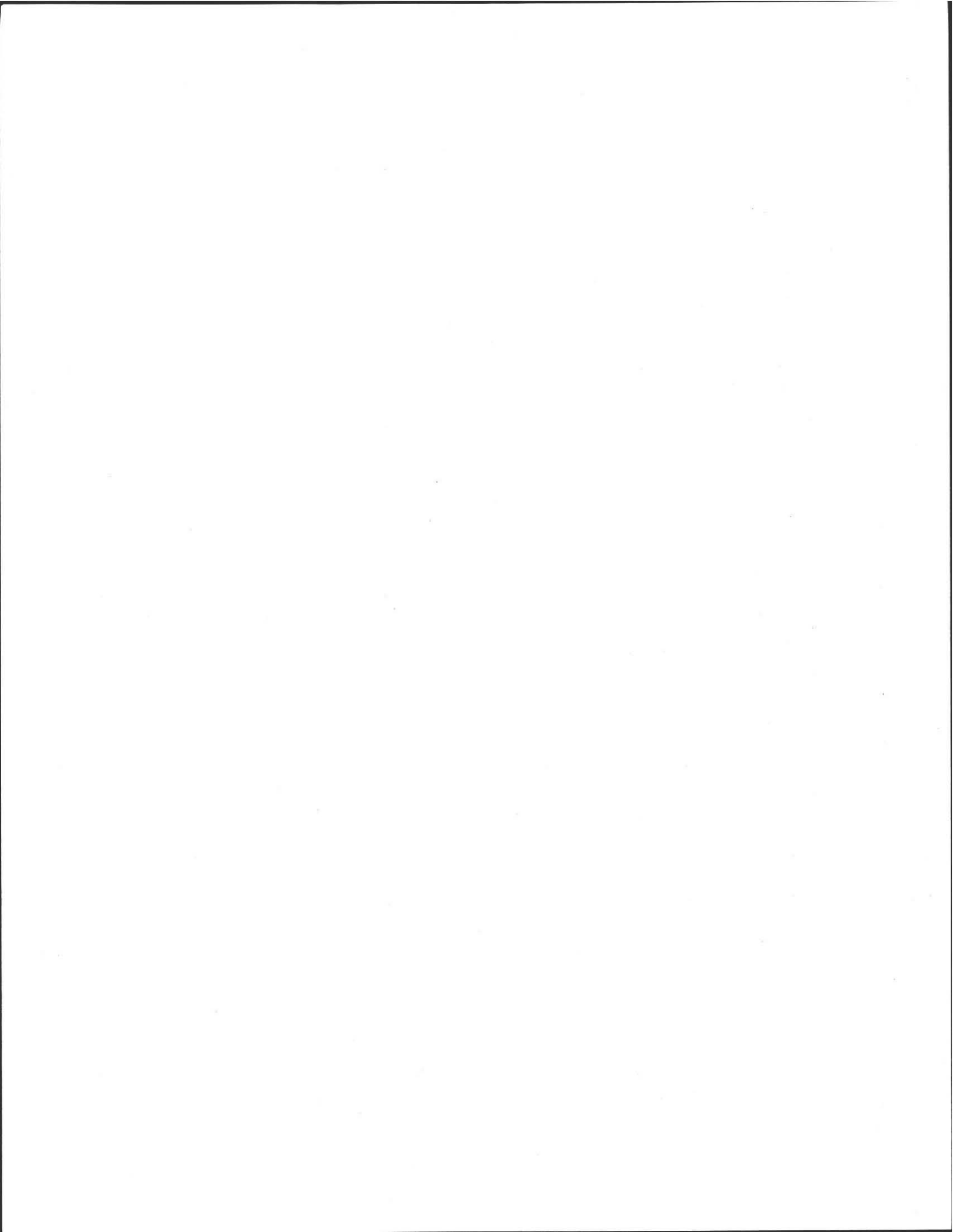
**REPORT FILED BY:** \_\_\_\_\_  
(Please Print Clearly)

**SIGNATURE:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

**THE FOLLOWING MUST BE SUPPLIED TO THE BOARD OF HEALTH IN ORDER TO OBTAIN A WATER SUPPLY CERTIFICATE:**

1. ✓ Well Construction Permit
2. Application for a Water Supply Certificate
3. ✓ A copy of the Well Completion Report
4. ✓ A copy of the Pumping Test Report
5. ✓ A copy of the Water Quality Report
6. An As-Built of the well location referenced to at least two permanent landmarks.

MAKE SMOKING HISTORY



## Smith, Edmund

---

**From:** HomesByLeBlanc@comcast.net  
**Sent:** Wednesday, February 06, 2013 6:42 PM  
**To:** Smith, Edmund  
**Subject:** Re: Well for 209 Flat Hill Road /well water test  
**Attachments:** 471flathillwatertest.pdf

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

Hi Ed,

Please find attached the well water test from Quabbin Analytical.

Best,

Ken LeBlanc

---

**From:** "Edmund Smith" <[smithe@amherstma.gov](mailto:smithe@amherstma.gov)>  
**To:** [HomesByLeBlanc@comcast.net](mailto:HomesByLeBlanc@comcast.net)  
**Sent:** Tuesday, February 5, 2013 1:46:49 PM  
**Subject:** Well for 209 Flat Hill Road

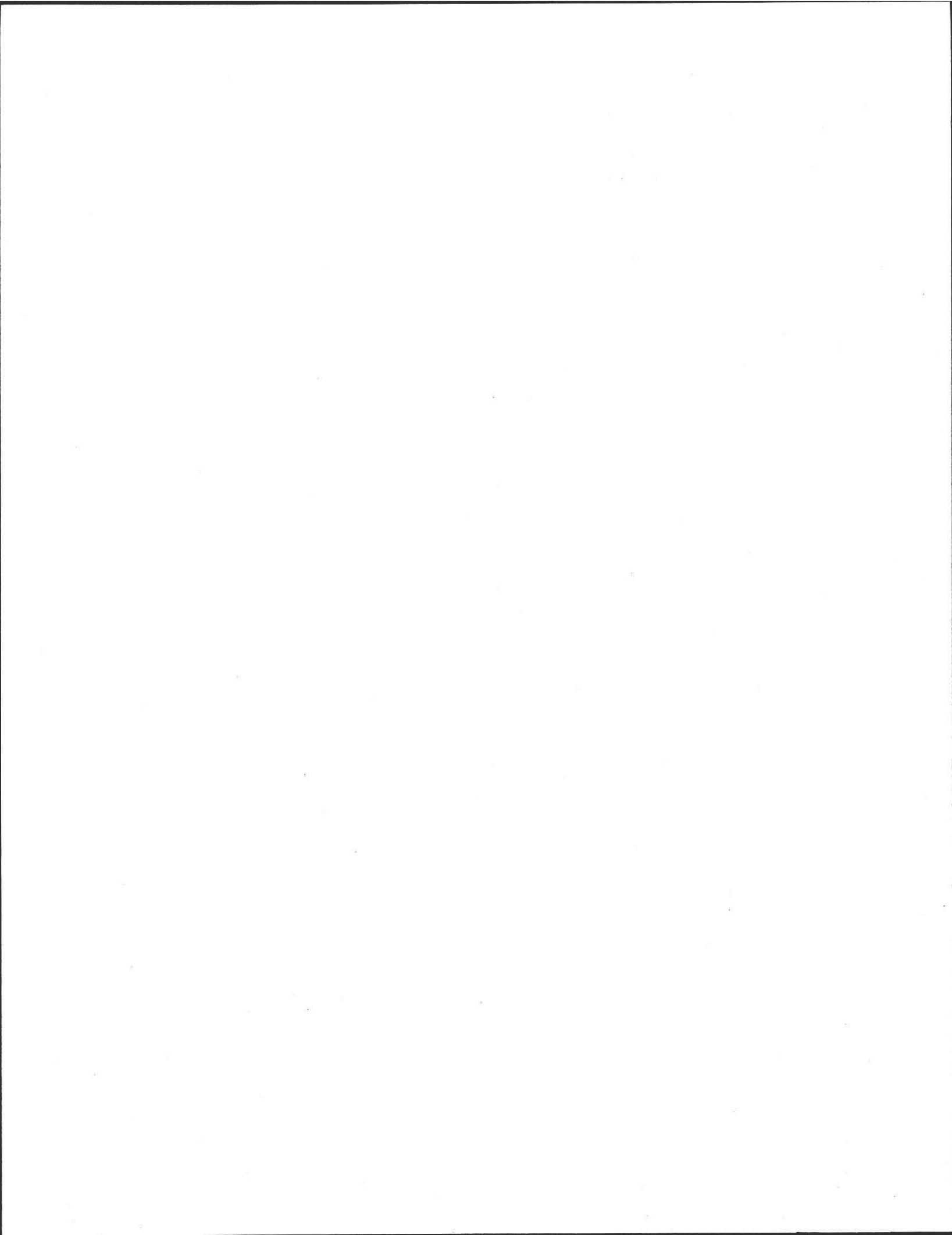
Dear Ken -

We've received a copy of the Well Completion Report, and look forward to getting the results of your water quality test so that the Board may issue a Water Supply Certificate.

Sincerely  
Ed Smith

Edmund R. Smith  
Health Inspector; (413)259-3153

my regular hours: Tuesdays 8-4:30; Thursdays 12:30-4:30; Fridays 8-4:30  
Amherst Health Department  
main phone #: (413)259-3077; fax (413)259-2404  
Bangs Community Center  
70 Boltwood Walk  
Amherst, MA 01002



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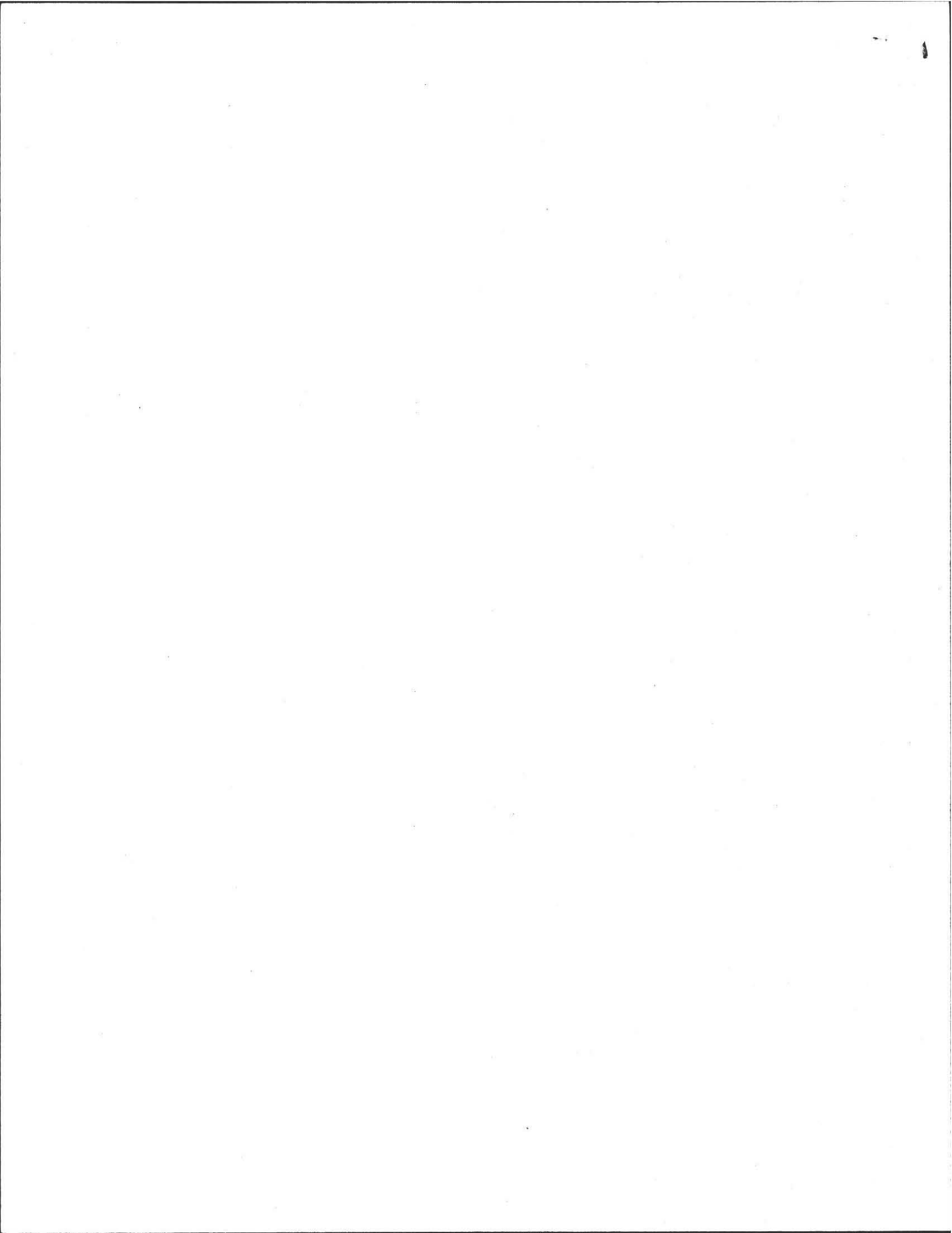
Sincerely

Ed Smith

Edmund R. Smith  
Health Inspector; (413)259-3153

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main phone #: (413)259-3077; fax (413)259-2404  
Bangs Community Center  
70 Boltwood Walk  
Amherst, MA 01002







# *Quabbin Analytical Laboratory*

Box 1192 Stadler Street, Belchertown, MA 01007

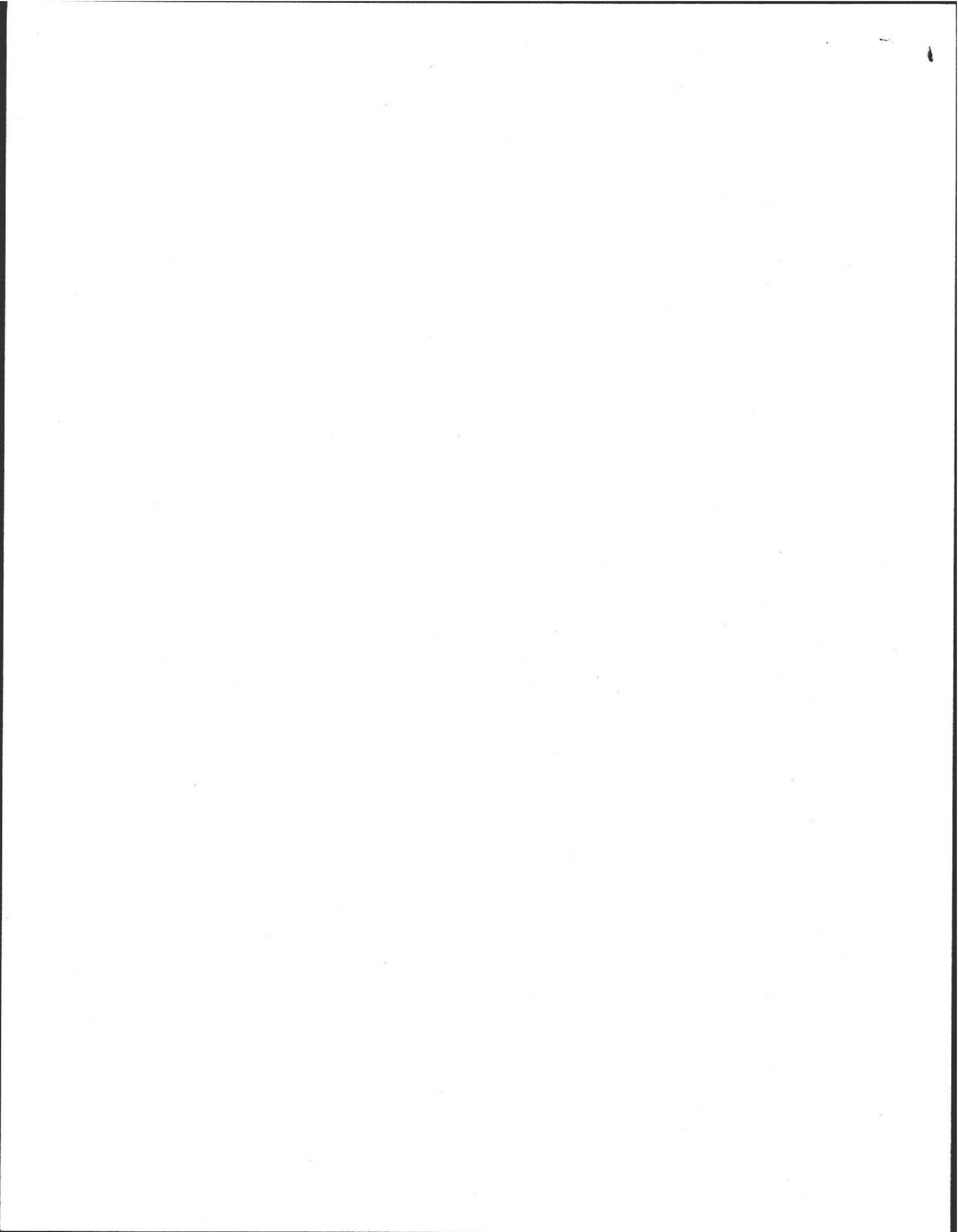
**(413)-323-7134**

Name:	Cushing & Sons	Sample Date:	12-20-12
Address:	P.O. Box 668	Report Date:	12-21-12
	Walpole, NH 03608-0668	Collected By:	Cushing & Sons
Sample Location:	LeBlanc	Type Supply:	Well
	Flat Hills Road	Sample No.:	QAL 6093
	Amherst, MA 01002		

TESTED FOR	RESULTS	MAX. RECOMMENDED LEVELS
<b>Total Coliform Bacteria</b>	Absent	Absent
<b>Fecal Coliform Bacteria</b>	Absent	Absent
<b>Nitrite</b>	0	1.0 mg/l
<b>Nitrate</b>	0.1	10.0 mg/l
<b>pH</b>	7.88	6.5-8.5
<b>Alkalinity</b>	42.0	No Limit
<b>Iron</b>	*1.45	.30 mg/l
<b>Manganese</b>	*.58	.05 mg/l
<b>Copper</b>	0	1.3 mg/l
<b>Sulfate</b>	22.0	250 mg/l
<b>Chloride</b>	12.8	250 mg/l
<b>Hardness</b>	64.0	No Limit
<b>Conductivity</b>	207.0	No Limit
<b>Total Dissolved Solids</b>	136.6	500 mg/l
<b>Turbidity</b>	*52.0	5 NTU
<b>Chlorine</b>	0	0
<b>Sodium</b>	14.9	No Limit

Results are only for those items listed above and on the above collected date. Except for the following \*Iron, Manganese & Turbidity, the sample was found to be within acceptable levels for D.E.P. Drinking Water Standards. If there are any questions on this report, please do not hesitate to call this office.

David Fredenburgh, Director



Massachusetts Department of Conservation and Recreation  
Office of Water Resources

TYPE OR PRINT ONLY

**Well Completion Report**

000003

**1. WELL LOCATION** GPS (Required) North 42° 25.193 West 072° 29.755  
 Address at Well Location: 209 Flat Hill Rd Property Owner/Client: Homes by LeBlanc  
 Subdivision Name: \_\_\_\_\_ Mailing Address: PO Box 307  
 City/Town: Amherst City/Town: S. Hadley MA 01075  
 Assessors Map 3D Assessors Lot #: 21 NOTE: Assessors Map and Lot # mandatory if no street address available  
 Board of Health permit obtained: Yes  Not Required  Permit Number 13-1 Date Issued 12-4-12

**2. WORK PERFORMED** **3. WELL TYPE** **4. DRILLING METHOD** **6. CASING**

<input type="checkbox"/> N	<input type="checkbox"/> W	<input type="checkbox"/> D	<input type="checkbox"/> M	<input type="checkbox"/> S	<input type="checkbox"/> T	<input type="checkbox"/> A	<input type="checkbox"/> H	<input type="checkbox"/> A	<input type="checkbox"/> L	From (ft)	To (ft)	Type	Thickness	Diameter
										+2	48	S7L	19"	6"

**5. WELL LOG** **OVERBURDEN** **LITHOLOGY** **Water Bearing Zone** **Loss or Addition of Fluid** **Drop in Drill Stem** **Extra Fast or Slow Drill Rate** **7. SCREEN**

From (ft)	To (ft)	Code	Color	Comment	Water Bearing Zone	Loss or Addition of Fluid	Drop in Drill Stem	Extra Fast or Slow Drill Rate	From (ft)	To (ft)	Type	Slot Size	Diameter
0	33	T	BR			Y/N	Y/N	F/S					
						Y/N	Y/N	F/S					
						Y/N	Y/N	F/S					
						Y/N	Y/N	F/S					
						Y/N	Y/N	F/S					
						Y/N	Y/N	F/S					
						Y/N	Y/N	F/S					
						Y/N	Y/N	F/S					

**8. ANNULAR SEAL/FILTER PACK/ABANDONMENT MTL**

From (ft)	To (ft)	Material Description	Purpose
5	48	AC	AS

**WELL LOG** **BEDROCK** **LITHOLOGY** **Water Bearing Zone** **Drop in Drill Stem** **Extra Large Chips** **Extra Fast or Slow Drill Rate** **Visible Rust Staining** **Loss or Addition of Fluid** **# of Fractures per foot** **9. SITE SKETCH**

From (ft)	To (ft)	Code	Comment	Water Bearing Zone	Drop in Drill Stem	Extra Large Chips	Extra Fast or Slow Drill Rate	Visible Rust Staining	Loss or Addition of Fluid	# of Fractures per foot
33	100	GR			Y/N	Y/N	F/S	Y/N	Y/N	
100	200	GR			Y/N	Y/N	F/S	Y/N	Y/N	
200	300	GR			Y/N	Y/N	F/S	Y/N	Y/N	
300	400	GR			Y/N	Y/N	F/S	Y/N	Y/N	
400	502	GR		✓	Y/N	Y/N	F/S	Y/N	Y/N	
					Y/N	Y/N	F/S	Y/N	Y/N	
					Y/N	Y/N	F/S	Y/N	Y/N	
					Y/N	Y/N	F/S	Y/N	Y/N	
					Y/N	Y/N	F/S	Y/N	Y/N	

**10. WELL TEST DATA (ALL SECTIONS MANDATORY FOR PRODUCTION WELLS)** **11. STATIC WATER LEVEL (ALL WELLS)**

Date	Method	Yield (GPM)	Time Pumped (hrs & min)	Pumping Level (Ft. BGS)	Time to Recover (hrs & min)	Recovery (Ft. BGS)	Date Measured	Depth Below Ground Surface (ft)
12-18-12	AIR	5	2:00	500	24:00	25	12/19/12	25

**12. PERMANENT PUMP (IF AVAILABLE)** **13. ADDITIONAL WELL INFORMATION**

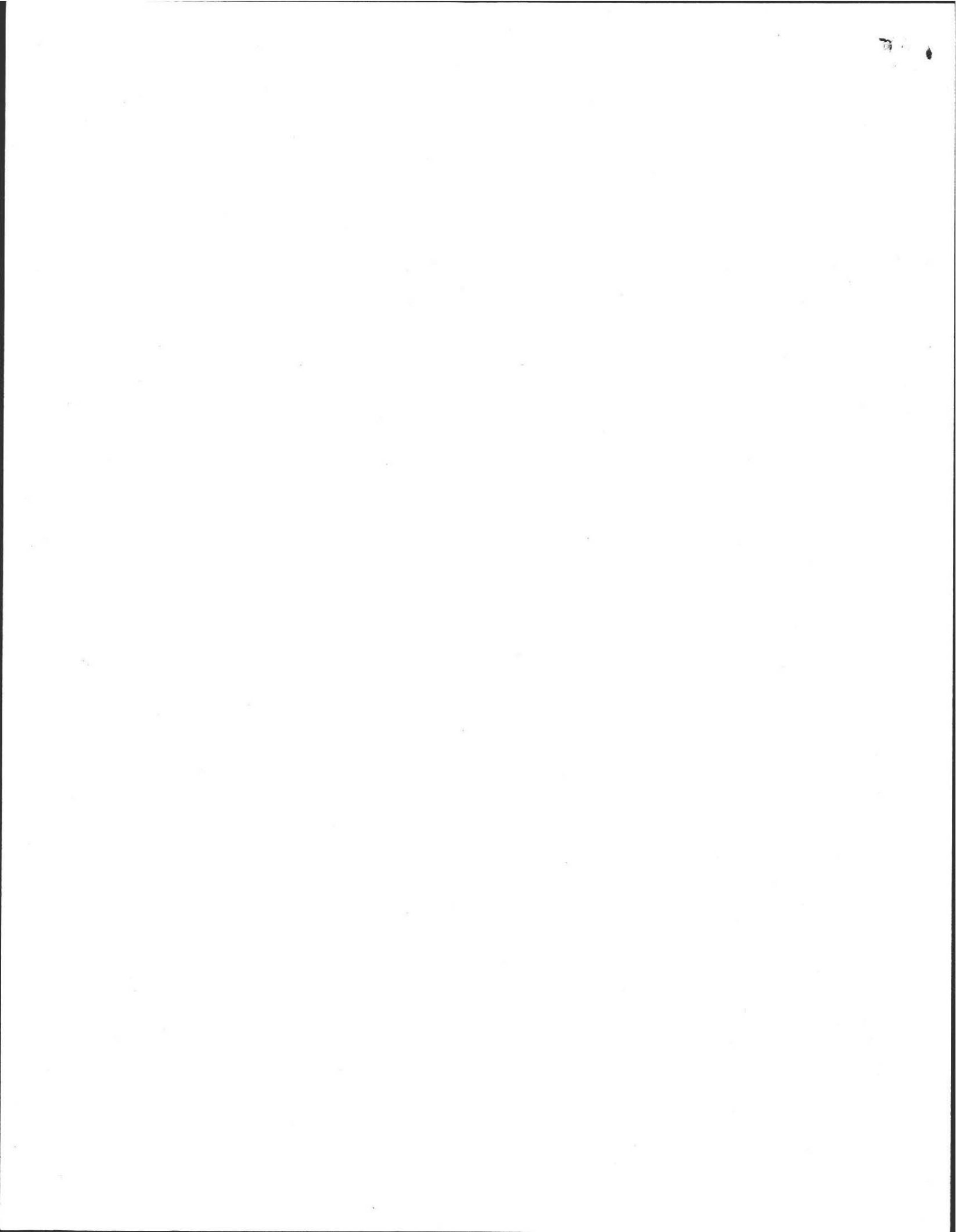
Pump Description:  N  D  M  E Horsepower: \_\_\_\_\_  
 Pump Intake Depth: \_\_\_\_\_ (ft) Nominal Pump Capacity: \_\_\_\_\_ (gpm)  
 Developed  Y  N Fracture Enhancement  Y  N  
 Disinfected  Y  N Surface Seal Type:  M  O  
 Total Well Depth: 502 Depth to Bedrock: 33

**14. COMMENTS** **15. WELL DRILLER'S STATEMENT**

This well was drilled, altered, and/or abandoned under my supervision, according to applicable rules and regulations, and this report is complete and correct to the best of my knowledge.

Driller: Mike Sanders Supervising Driller Signature: [Signature] Registration #: 15158  
 Firm: L. G. CUSHING & SONS, INC. Date Complete: 12/21/12 Rig Permit #: 101063

NOTE: Well Completion Reports must be filed by the registered well driller within 30 days of well completion.

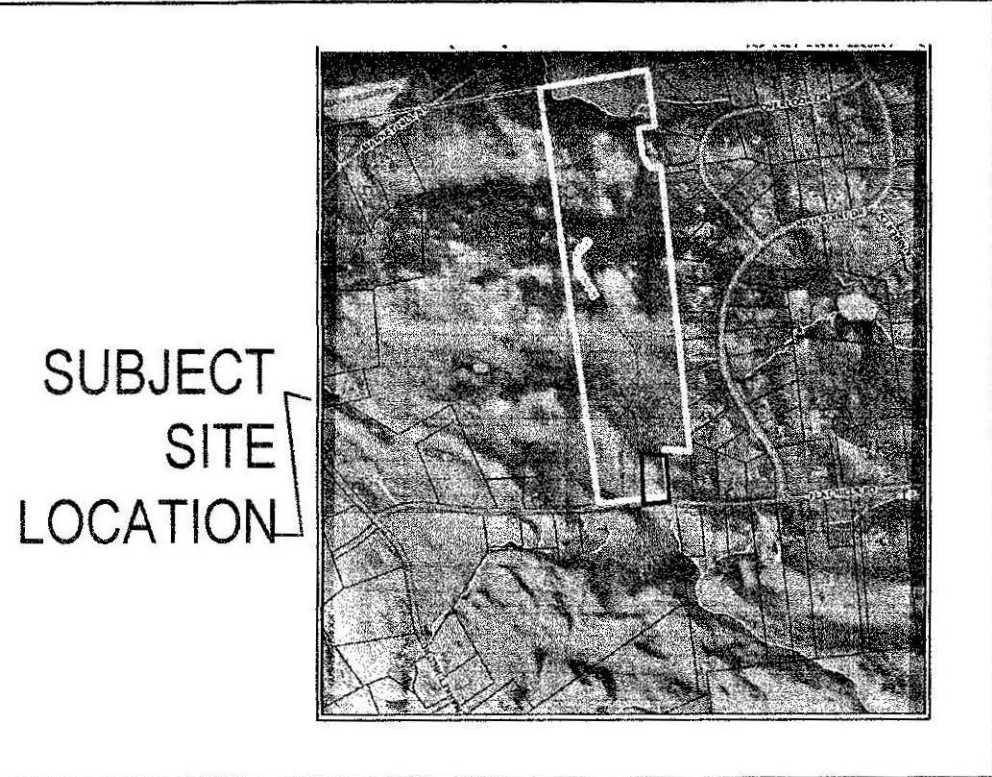
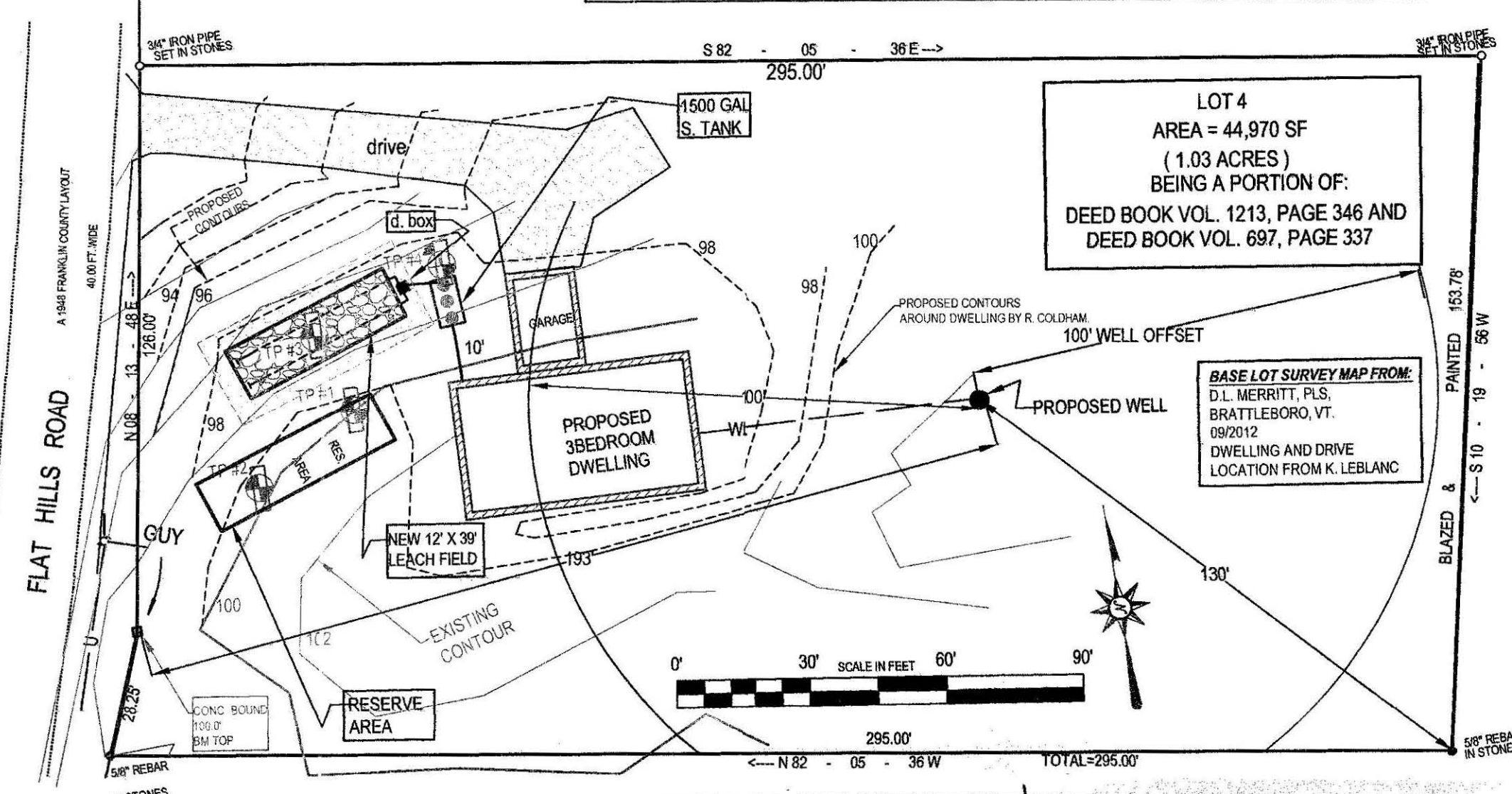


**GRAVITY SLOPE SEPTIC SYSTEM OPERATION AND MAINTENANCE NOTES FOR HOMEOWNER:**

- HAVE TANK PUMPED EVERY 2 YEARS.
- MAINTAIN AREA OVER SEPTIC SYSTEM AS GRASSY OR SIMILAR GROUND COVER.
- DO NOT PLANT ANY TREES OR DEEP ROOTING SHRUBS WITHIN 10 FEET OF SYSTEM.
- USE ONLY LIQUID DETERGENTS & LOW FLOW WASHERS.
- WIPE ALL OIL AND GREASE FROM COOKWARE AND DISPOSE IN TRASH NOT SEPTIC.
- All Toilets and Faucets must be confirmed to not be leaking, because one leaking fixture can fail a septic system in ONE DAY.

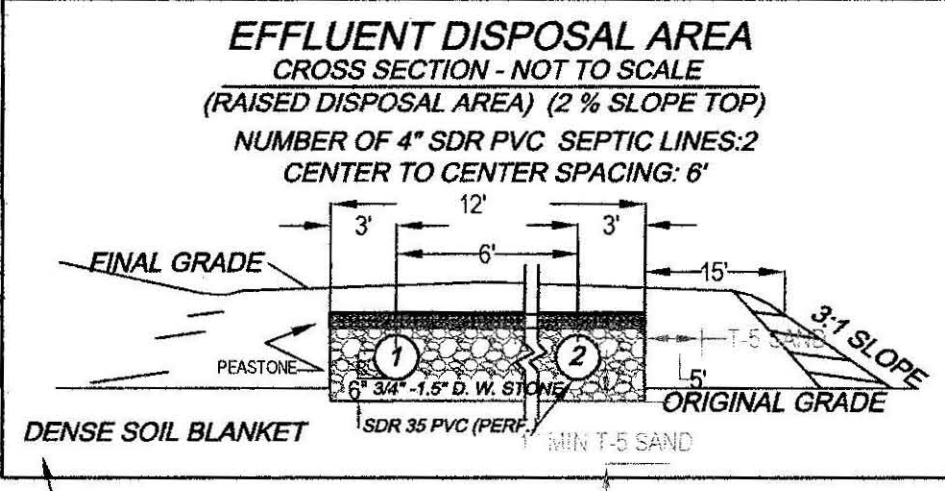
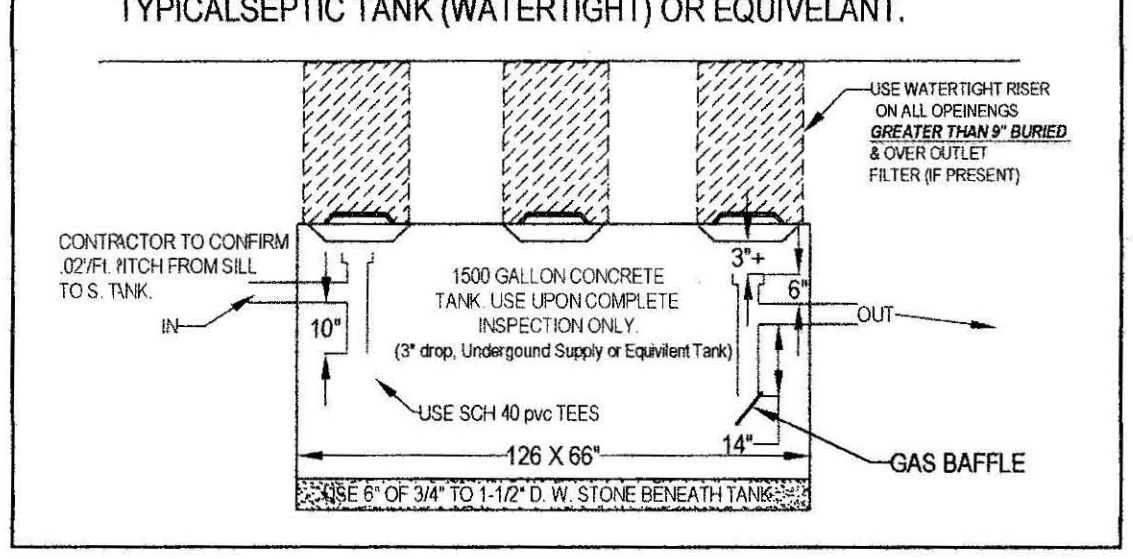
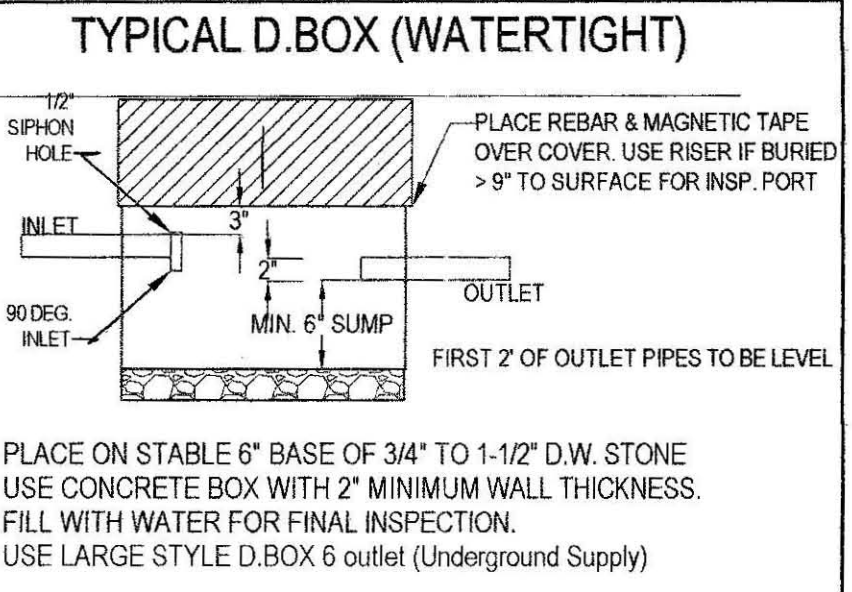
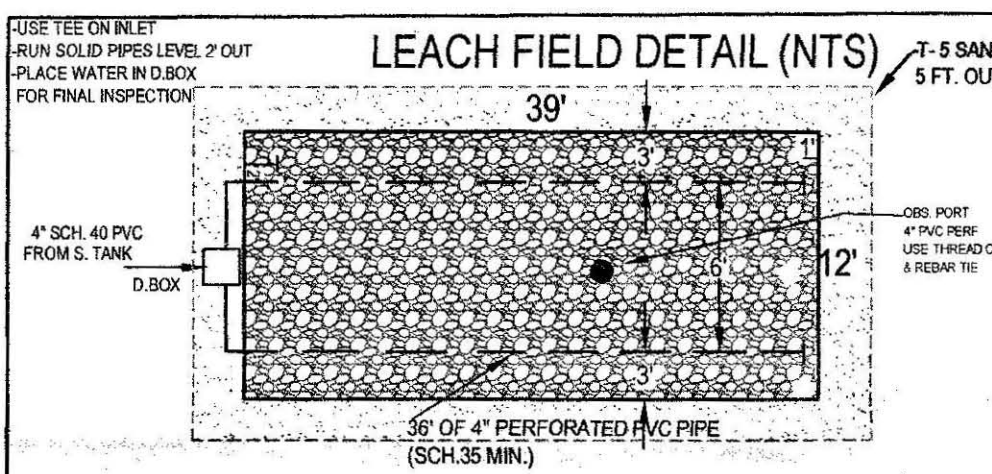
**NOTE TO HOMEOWNER: FILL, WHERE USED, ARE REQUIRED BY STATE CODE TO MAXIMIZE THE DISTANCE FROM THE BOTTOM OF THE LEACHING FIELD TO THE TOP OF THE ESTIMATED HIGH GROUNDWATER. THIS "SEPARATION" FROM HIGH GROUNDWATER (3, 4, OR 5 FEET), IS NOT THE SAME AS THE HEIGHT OF THE FINISHED MOUND SURFACE. THE ACTUAL FINISHED MOUND IS TYPICALLY HIGHER THAN THE "SEPARATION". BY SIGNING PERMIT YOU ACKNOWLEDGE THAT COLD SPRING ENVIRONMENTAL CONSULTANTS INC. IS NOT RESPONSIBLE FOR THE AESTHETICS OF FILLED OR MOUNDED SYSTEMS.**

**NOTE TO HOMEOWNER AND CONTRACTOR:** CONNECTIONS FROM HEATING SYSTEM, AIRCONDITIONERS, SUMP PUMPS WATER WELL FILTRATION UNITS AND HEAT PUMPS ARE NOT ALLOWED, SANITARY SYSTEM CONNECTIONS ONLY PERMITTED.



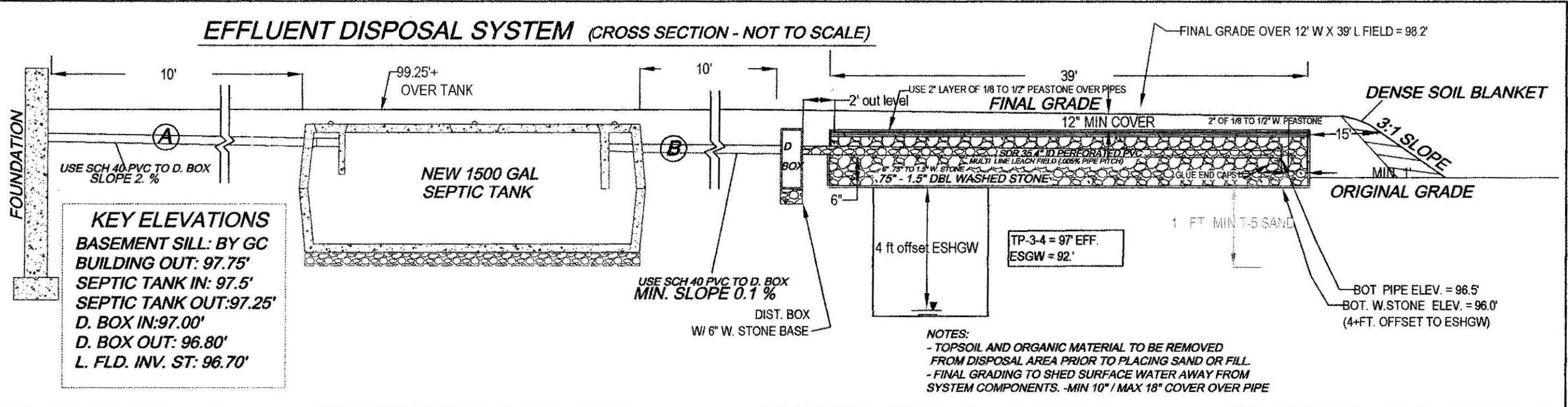
**SUBJECT SITE LOCATION**

- DESIGN NOTES AND CALCULATIONS:**
- 3 BEDROOM HOME X 110 GPD /BR = 330 GPD. REQUIRED.
    - Use ONE FIELD: 12' WIDE X 39' LONG WITH 6" OF 3/4" TO 1 1/2" DBL WASHED STONE BELOW INVERT
    - BOTTOM AREA: 12' W X 39' L = 468 SF.
    - SIDE AREA: 0 SF.
    - TOTAL AREA: 468 SF X 0.74 GAL/SF = 346 GPD
  - GARBAGE DISPOSAL NOT ALLOWED, ...
  - NO OTHER PRIVATE WELLS WITHIN 150 FEET OF SAS.
  - NO OTHER WETLANDS WITHIN 100 FEET OF SAS
  - USE NEW S. TANK AS NOTED & MAINTAIN 0.02 PITCH FROM SILL TO S. TANK
    - INSTALL & INSPECT SCH. 40 TEES / BAFFLES (10" INLET, 14" OUTLET),
  - NOTE:
    - ALL COMPONENTS OF NEW SYSTEM MUST BE MARKED WITH MAGNETIC TAPE. BE SURE TO MAINTAIN 3" CLEARANCE FROM TOP OF TEES TO BOTTOM OF TANK COVERS & BOXES.
  - USE LARGE STYLE (6 OUTLET) D.BOX ONLY.
  - ALL D. BOX OUTLET PIPES LEVEL FOR FIRST 2'. BOXES MUST HAVE 2" CONC. WALLS
    - NOTE:
      - D. BOXES WITH MORE THAN 9" OF COVER SOIL MUST HAVE RISERS TO 6" OF SURFACE.
  - USE (75"-1 1/2") STONE UNDER TANK & D. BOX FOR 6" FOR STABLE BASE.
    - USE ONLY DBL. WASHED APPROVED (75"-1.5") FOR PLACEMENT IN LEACH AREA.
  - USE PROPER SCH. 40 PVC TEES AS SHOWN.
  - PRE & POST CONTOURS NOTED AS NECESSARY, RESERVE AS NOTED
  - SLOPE CALCS (SEE CONTOURS), SUBGRADE INSP. REQ'D.
  - USE FIELD DUE TO TOPOGRAPHY AND SPACE OF LOT WITH RESPECT TO LOCATION AND ELEVATION OF RESIDENCE (310 CMR 15.240)
  - USE 2% MIN. SLOPE OVER SAS
    - CLEAR TOP AND SUB TO 25" MIN. AS NEEDED (INSPECTION REQUIRED).
    - CLEAR IPAST BASE OF B (MIN. 25") & SCARIFY UNDER BED PRIOR TO TITLE V SAND/STONE PLACEMENT.
    - EXCAVATE EXISTING LOAM, SUB AND ANY EXISTING DEBRIS, DIRTY FILL OR PRIOR SYSTEM IF PRESENT.
  - SOIL EVALUATION BY A. WEISS, RS. ON 06.08.2012 (E. SMITH, BOH AGENT).
    - DEPTH OF PERC. 48 & 49"
    - PERC RATE = 3 & 5 MIN / IN,
    - CLASS 1(LS) SOIL RATING
  - NO TREES WITHIN 10 FT. OF NEW LEACH FIELD.
  - ENGINEER & TOWN (IF REQUIRED) TO INSPECT SUBGRADE, TOWN AND ENGINEER INSPECT AT FINAL.
  - BM=100.00 @ (TOP OF CONC. BOUND as noted), CONFIRM PROPER PIPE SLOPES
    - USE/INSPECT SCH. 40 PIPE FOR PIPE FROM HOUSE TO NEW OR EXISTING TANK
  - GRADE MULCH AND SEED OVER SAS AS NOTED.
  - INSTALLATION IN LOW GROUNDWATER SEASON RECOMMENDED.
  - USE OBSERVATION PORT NEAR CENTER OF STONE BED HAVE 4" PERFORATED, PVC INSPECTION PORTALS TO BOTTOM OF STONE BED, WITH RISER TO 3" OF SURFACE & THREADED CAP & MARK WITH RE-BAR.



**TEST PIT LOG:**

TP-1 EFF. ELEV: 100' EFF.				SOIL EVALUATOR: A. WEISS, RS				DATE OF EVALUATION: 06.08.2012			
DEPTH	HORIZ.	TEXTURE	MOISTURE (MUNSELL)	MATERIAL	DEPTH	HORIZ.	TEXTURE	MOISTURE (MUNSELL)	MATERIAL		
0-9"	A	FSL	10 YR 3.3	FRIABLE, LOOSE	0-8"	A	FSL	10 YR 3.3	FRIABLE, LOOSE		
9-25"	Bw	LS	10 YR 4.6	FRIABLE, LOOSE	8-20"	Bw	LS	10 YR 4.6	FRIABLE, MED. SAND		
25-112"	C1	LS	2.5 Y 4.3	F-MED. SND ABL. TILL GRANULAR, LOOSE 15% GRAV. & BOULDERS	20-86"	C1	LS	2.5 Y 4.3	F-MED. SND ABL. TILL GRANULAR, LOOSE 15% GRAV. & BOULDERS		
OXIDES: 60"				OXIDES: 60"				OXIDES: 60"			
EHWT: 60"				EHWT: 60"				EHWT: 60"			
STANDING H2O: NOT OBSERVED				STANDING H2O: NOT OBSERVED				STANDING H2O: NOT OBSERVED			
WEEPING: NOT OBSERVED				WEEPING: NOT OBSERVED				WEEPING: NOT OBSERVED			
BEDROCK: 112"+				BEDROCK: 86"+				BEDROCK: 86"+			



**TEST PIT LOG:**

TP-3 EFF. ELEV: 97' EFF.				SOIL EVALUATOR: A. WEISS, RS				DATE OF EVALUATION: 06.08.12			
DEPTH	HORIZ.	TEXTURE	MOISTURE (MUNSELL)	MATERIAL	DEPTH	HORIZ.	TEXTURE	MOISTURE (MUNSELL)	MATERIAL		
0-8"	A	FSL	10 YR 3.3	FRIABLE, LOOSE	0-7"	A	FSL	10 YR 3.3	FRIABLE, LOOSE		
8-22"	Bw	LS	10 YR 4.6	FRIABLE, MED. SAND	7-25"	Bw	LS	10 YR 4.6	FRIABLE, MED. SAND		
22-96"	C1	LS	2.5 Y 4.3	F-MED. SND ABL. TILL GRANULAR, LOOSE 15% GRAV. & BOULDERS	25-87"	C1	LS	2.5 Y 4.3	F-MED. SND ABL. TILL GRANULAR, LOOSE 15% GRAV. & BOULDERS		
OXIDES: 72"				OXIDES: 72"				OXIDES: 72"			
EHWT: 72"				EHWT: 72"				EHWT: 72"			
STANDING H2O: NOT OBSERVED				STANDING H2O: NOT OBSERVED				STANDING H2O: NOT OBSERVED			
WEEPING: NOT OBSERVED				WEEPING: NOT OBSERVED				WEEPING: NOT OBSERVED			
BEDROCK: 96"+				BEDROCK: 87"+				BEDROCK: 87"+			

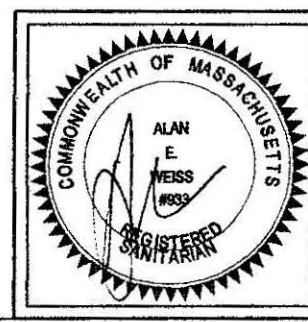
**REVISED SEPTIC SYSTEM & WELL LOCATION PLAN FOR KEN LEBLANC**  
 MAP 3D LOT 21 (portion), "lot 4" FLAT HILLS ROAD  
 AMHERST, MA

**Cold Spring Environmental Consultants Inc.**  
 350 Old Enfield Road  
 Belchertown, MA 01007

PHONE: (413) 323-5957  
 FAX: (413) 323-4916  
 E-Mail: ACEWCSES@charter.net

**ATTENTION INSTALLER!!**  
 CALL DIG SAFE BEFORE YOU DIG!! MASSACHUSETTS STATE LAW CHAPTER 82 SECTIONS 40 - 40E REQUIRE THAT PREMARKING OF GAS, ELECTRIC, WATER, TELEPHONE AND CABLE T.V. UTILITY LINES BE MADE A MINIMUM OF 72 HOURS PRIOR TO GROUND BREAK FOR ANY EXCAVATION.

**NOTE: INSTALLER MUST CONTACT ENGINEER/BD OF HEALTH 48 HOURS PRIOR TO SUBGRADE INSPECTION. INSTALLER MUST HAVE ALL BREAK OUT FILL ON SITE AND IN PLACE PRIOR TO SIGN OFF BY ENGINEER AT TIME OF FINAL INSPECTION OR APPROVAL WILL NOT BE GIVEN TO BACKFILL.**



DATE: 10.19.2012  
 SCALE: 1"=30'  
 DRAWN BY: AEW  
 CHECKED BY: AEW  
 REVISED: 11.21.2012  
 DRAWING NUMBER: 112-3984-1019

Town of



AMHERST

Massachusetts

AMHERST HEALTH DEPARTMENT, 70 BOLTWOOD WALK,  
AMHERST, MA 01002

(413) 259-3077 (413) 259-2404 - FAX

**APPLICATION FOR A WELL CONSTRUCTION PERMIT**

I hereby petition the Board of Health of the Town of Amherst for a Well Construction Permit (WCP) to install a private well in the Town of Amherst. **ATTACHED IS A PLAN SHOWING THE PROPOSED LOCATION OF THE WELL (WITH ORIGINAL DATE, STAMP AND SIGNATURE OF AN ENGINEER, REGISTERED SANITARIAN, OR REGISTERED LAND SURVEYOR) AND ALL OTHER REQUIREMENTS OF THE AMHERST BOARD OF HEALTH REGULATIONS FOR PRIVATE WELLS.**

1. Address of Property: Lot 4, Flat Hills Rd.

2. Assessor of Parcel Number: Map 3D, Lot 21, (Petroleum)

3. Name of Owner: Ken Leblanc. Telephone Number: 413-

Address of Owner: P.O. Box 307, S. Hadley, MA.

✓ 4. Name of Well Driller: \_\_\_\_\_ Reg. # \_\_\_\_\_  
(Must be registered with Massachusetts Water Resources Commission)

5. Purpose of Well: \*Drinking (X) Agricultural Only ( ) Ground Source Heat Pump ( )  
\$100.00 \$50.00 \$50.00

The undersigned acknowledges that he must, before commencing construction or use of the system which is the matter of this application, secure any and all other permits which may be required by the laws of the Town of Amherst and the Commonwealth of Massachusetts, and agree to abide by all regulations of the Town of Amherst and the Commonwealth of Massachusetts concerning private wells.

The undersigned also understands that if a private well is to be used for drinking purposes, a **BUILDING PERMIT** affecting the structure the well is to serve **WILL NOT BE ISSUED UNTIL A Water Supply Certificate** has been granted by the Amherst Board of Health.

✓ Name of Applicant: Kenneth C LeBlanc Kenneth C LeBlanc

Applicant Signature: Kenneth C LeBlanc Date: 10-26-12

For Office Use Only	
<input checked="" type="checkbox"/> Permit Issued By: <u>Edmund Sanitra</u> <u>Edmund Sanitra</u> 12/4/12 PERMIT NUMBER: <u>13-1</u> DATE ISSUED: <u>12/4/2012</u>	<input type="checkbox"/> Permit Denied By: _____ REASON: _____ DATE DENIED: _____
Inspected By: _____ Inspection Date: _____	Fee Paid: Yes ___ No ___ Amount _____ Cash/Check # _____ Date of Payment _____

# Abuttos:

3D-21

WD Cowles: POB 9079; N. Amherst MA 01059

3D-22

Gayou Xie + You Yang: 463 Flat Hills Rd. Amherst, MA. 01002

3D-82

Eva Lehrer + Keith McCormick: 492 Flat Hills Rd. Amherst, MA 01002

6B-94

MARILYN + ROGER STURGILL: 460 Flat Hills Rd. Amherst, MA. 01002.



Town of



AMHERST

Massachusetts

AMHERST HEALTH DEPARTMENT, 70 BOLTWOOD WALK, AMHERST, MA 01002  
(413) 259-3077 (413) 259-2404 - FAX Environmental Health Division (413) 259-3078

November 20, 2012

**RE: Lot 4, Flat Hills Road, Amherst, MA 01002**

Dear Amherst Board of Health:

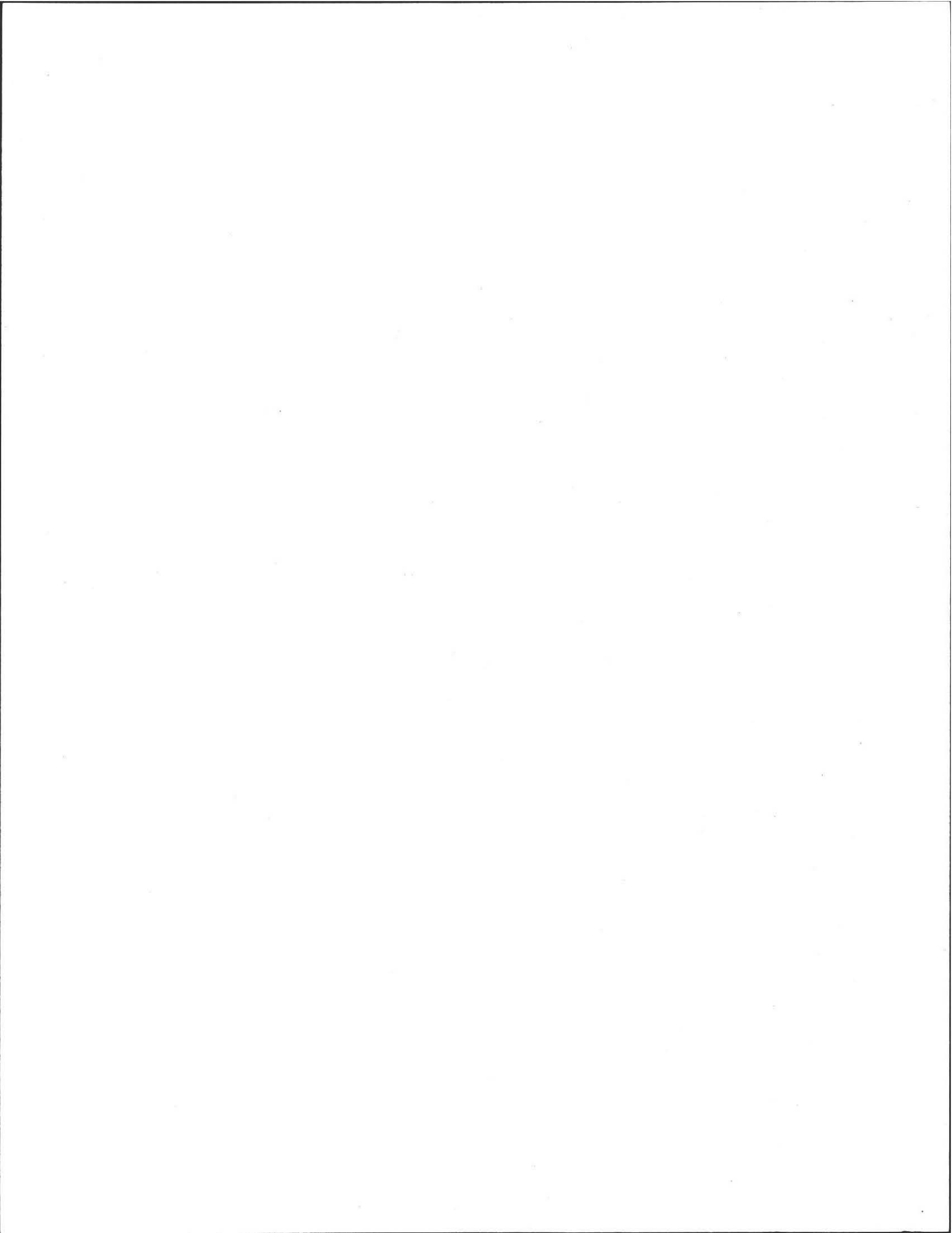
I have reviewed the plan for the installation of the drinking well at Lot 4 Flat Hills Road, Amherst, currently owned by Kenneth LeBlanc. In my opinion the proposed well plan design meets the requirements of the Amherst Board of Health Regulations for Private Wells as adopted on October 30, 2008, with amendments effective on March 15, 2011.

I visited the site today November 20, 2012 and observed no violations at this point. Mr. Alan Weiss will be notified to attend the BOH meeting to answer any questions or concerns you may have.

Respectfully submitted by,

  
Edmund Smith  
Assistant Sanitarian

*File Copy  
11/20/2012  
1 submitted to Pam  
for BOH packets*

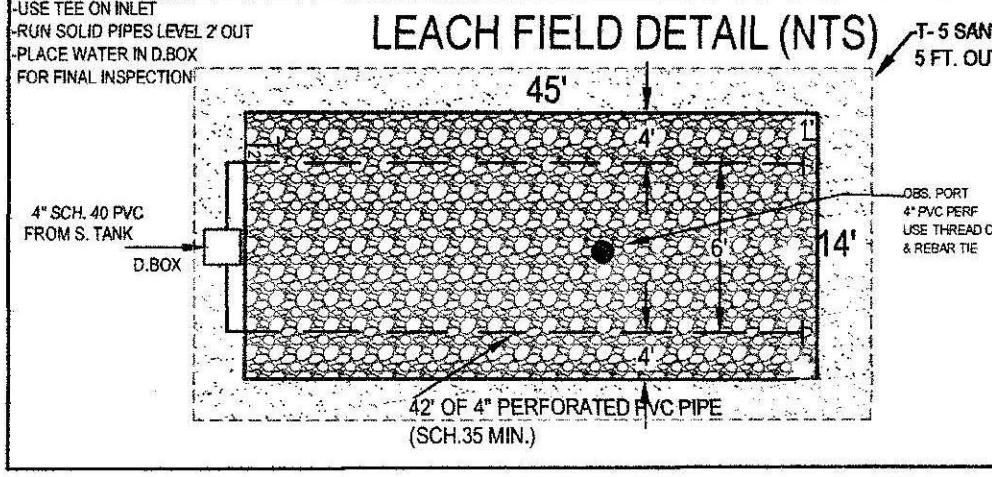
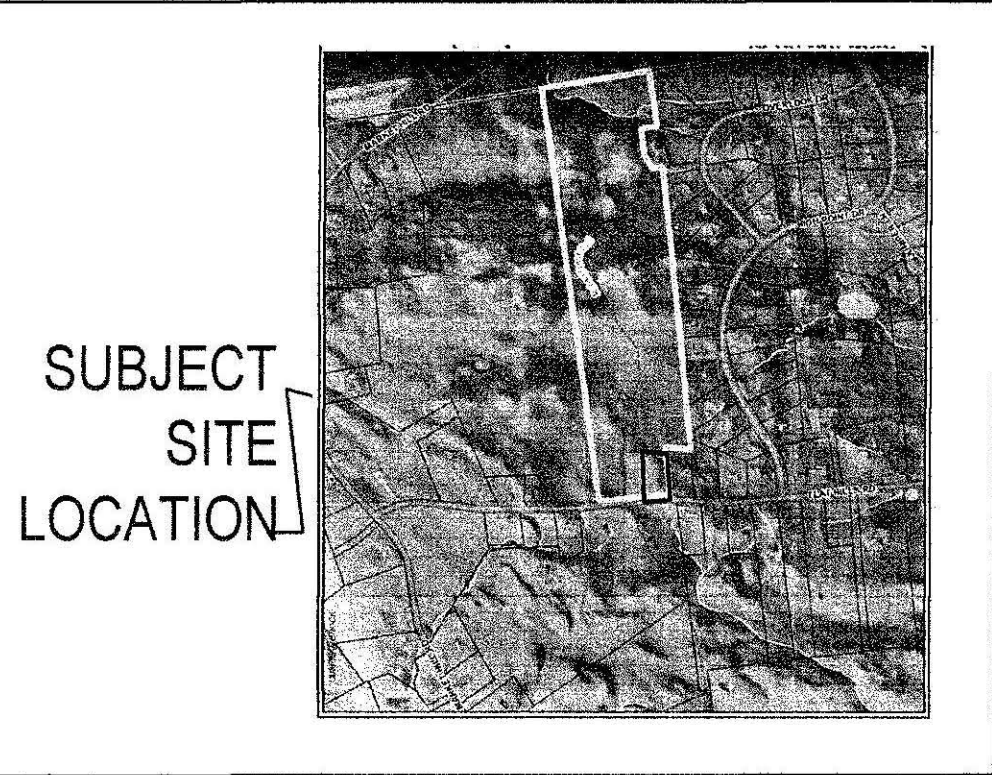
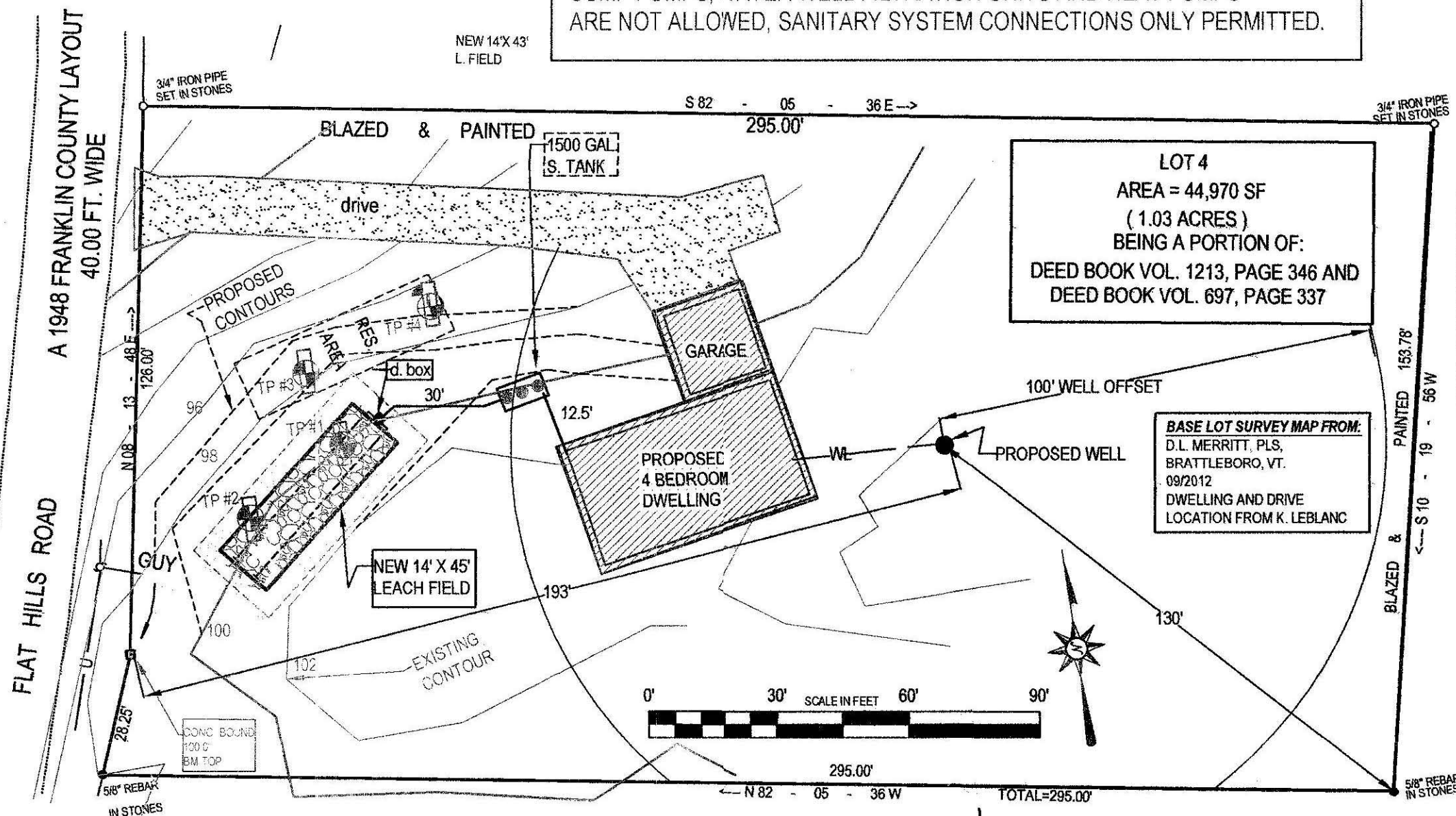


**GRAVITY SLOPE SEPTIC SYSTEM OPERATION AND MAINTENANCE NOTES FOR HOMEOWNER.**

- 1) HAVE TANK PUMPED EVERY 2 YEARS.
- 2) MAINTAIN AREA OVER SEPTIC SYSTEM AS GRASSY OR SIMILAR GROUND COVER.
- 3) DO NOT PLANT ANY TREES OR DEEP ROOTING SHRUBS WITHIN 10 FEET OF SYSTEM.
- 4) USE ONLY LIQUID DETERGENTS & LOW FLOW WASHERS.
- 5) WIPE ALL OIL AND GREASE FROM COOKWARE AND DISPOSE IN TRASH NOT SEPTIC.
- 6) All Toilets and Faucets must be confirmed to not be leaking, because one leaking fixture can fail a septic system in ONE DAY.

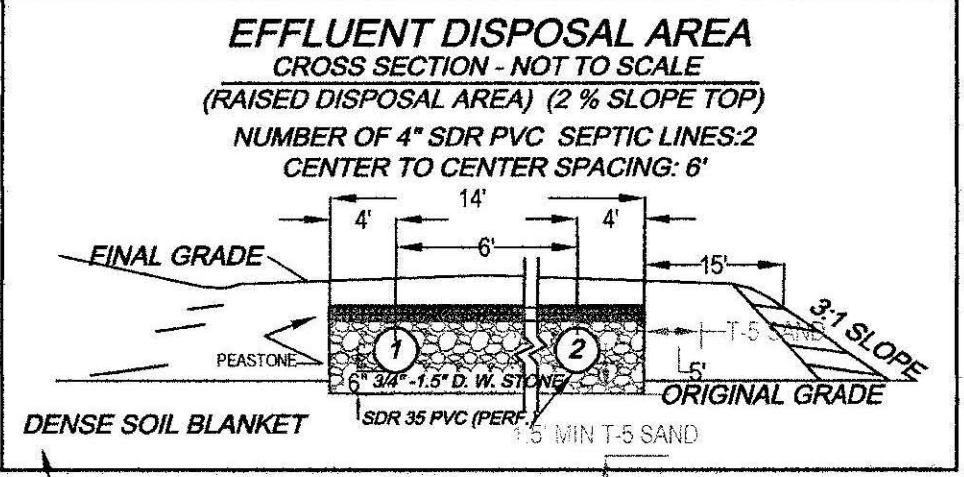
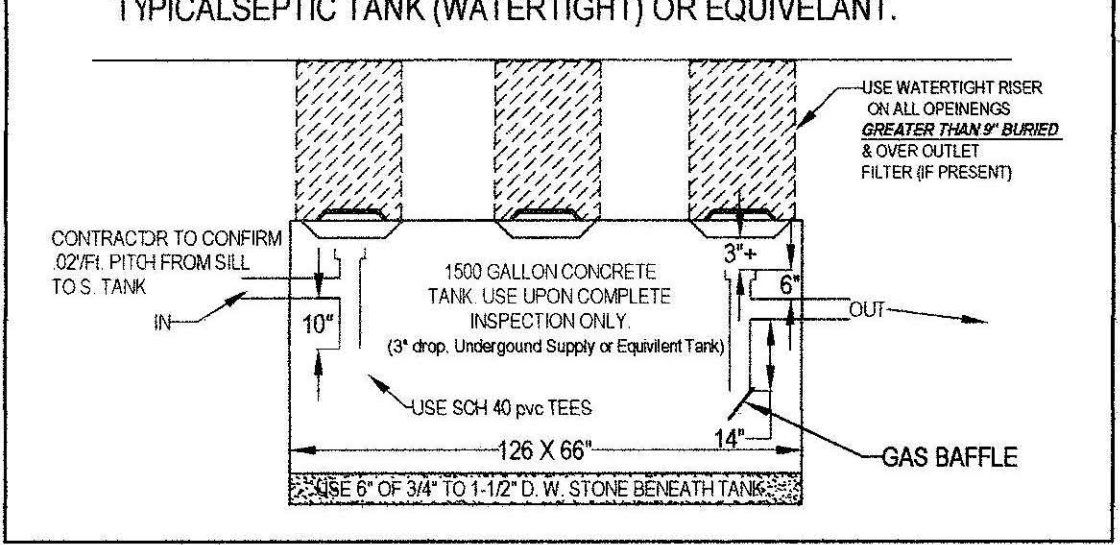
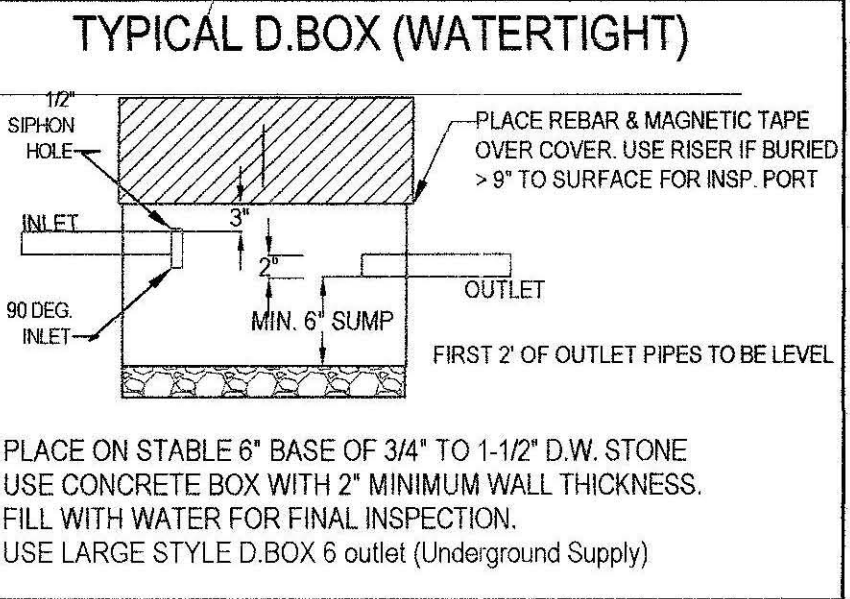
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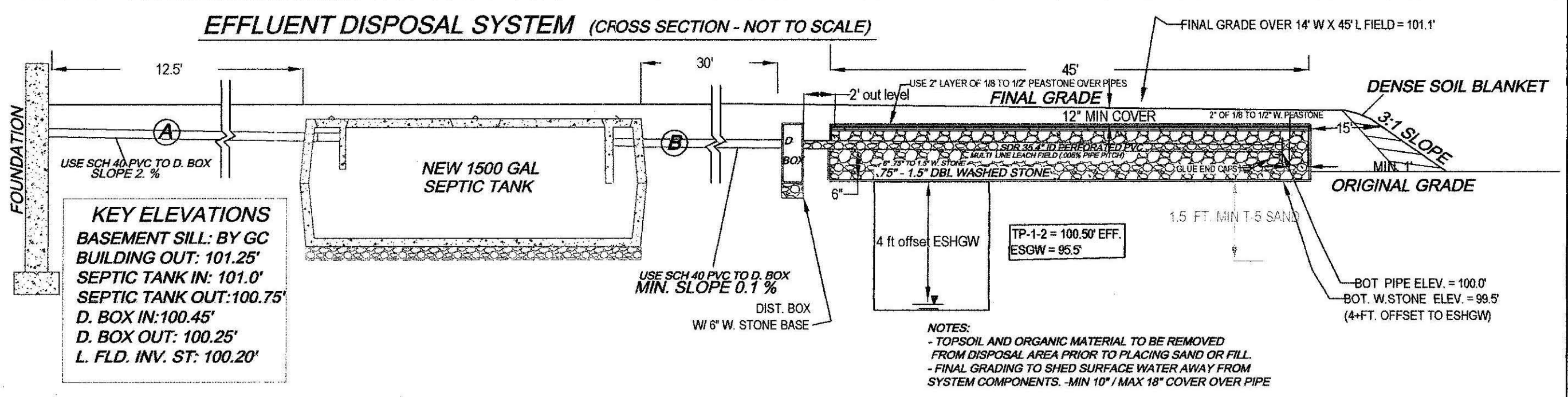
**DESIGN NOTES AND CALCULATIONS:**

- 1.) 4 BEDROOM HOME X 110 GPD / BR = 440 GPD. REQUIRED.
- Use ONE FIELD: 14' WIDE X 45' LONG WITH 6" OF 3/4" TO 1/2" DBL WASHED STONE BELOW INVERT
  - BOTTOM AREA: 14' W X 45' L = 602 SF.
  - SIDE AREA: 0 SF.
  - TOTAL AREA: 630 SF X 0.74 GAL/SF = 466.5 GPD
3. GARBAGE DISPOSAL NOT ALLOWED. ...
4. NO OTHER PRIVATE WELLS WITHIN 150 FEET OF SAS.
5. NO OTHER WETLANDS WITHIN 100 FEET OF SAS
6. USE NEW S. TANK AS NOTED & MAINTAIN 0.02 PITCH FROM SILL TO S. TANK
  - INSTALL & INSPECT SCH. 40 TEES / BAFFLES (10" INLET, 14" OUTLET),
- NOTE:**
  - ALL COMPONENTS OF NEW SYSTEM MUST BE MARKED WITH MAGNETIC TAPE. BE SURE TO MAINTAIN 3" CLEARANCE FROM TOP OF TEES TO BOTTOM OF TANK COVERS & BOXES.
7. USE LARGE STYLE (6 OUTLET) D. BOX ONLY.
- 7A ALL D. BOX: OUTLET PIPES LEVEL FOR FIRST 2'. BOXES MUST HAVE 2" + CONC. WALLS
- NOTE:**
  - D. BOXES WITH MORE THAN 9" OF COVER SOIL MUST HAVE RISERS TO 6" OF SURFACE.
8. USE (75"-1 1/2") STONE UNDER TANK & D. BOX FOR 6" FOR STABLE BASE.
  - USE ONLY DBL. WASHED APPROVED (75"-1.5") FOR PLACEMENT IN LEACH AREA.
9. USE PROPER SCH. 40 PVC TEES AS SHOWN.
10. PRE & POST CONTOURS NOTED AS NECESSARY. RESERVE AS NOTED.
11. SLOPE CALC (SEE CONTOURS). SUBGRADE INSP. REQ'D.
13. USE FIELD IDUE TO TOPOGRAPHY AND SPACE OF LOT WITH RESPECT TO LOCATION AND ELEVATION OF RESIDENCE (310 CMR 15.240)
14. USE 2% MIN. SLOPE OVER SAS
  - CLEAR TOP AND SUB TO 25" MIN. AS NEEDED (INSPECTION REQUIRED).
  - CLEAR PAIST BASE OF B (MIN. 25") & SCARIFY UNDER BED PRIOR TO TITL V SANDSTONE PLACEMENT.
  - EXCAVATE EXISTING LOAM, SUB AND ANY EXISTING DEBRIS, DIRTY FILL OR PRIOR SYSTEM IF PRESENT.
15. SOIL EVALUATION BY A. WEISS, RS. ON 06.08.2012 (E. SMITH, BOH AGENT).
  - DEPTH OF PERC. 48 & 49"
  - PERC RATE = 3 & 5 MIN / IN,
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16. NO TREES WITHIN 10 FT. OF NEW LEACH FIELD.
17. ENGINEER & TOWN (IF REQUIRED) TO INSPECT SUBGRADE, TOWN AND ENGINEER INSPECT AT FINAL.
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  - USE INSPECT SCH. 40 PIPE FOR PIPE FROM HOUSE TO NEW OR EXISTING TANK
19. GRADE MULCH AND SEED OVER SAS AS NOTED.
20. INSTALLATION IN LOW GROUNDWATER SEASON RECOMMENDED.
21. USE OBSERVATION PORT NEAR CENTER OF STONE BED HAVE 4" PERFORATED, PVC INSPECTION PORTALS TO BOTTOM OF STONE BED, WITH RISER TO 3" OF SURFACE & THREADED CAP & MARK WITH RE-BAR.



**TEST PIT LOG:**

TP-1 EFF. ELEV: 100' EFF.				TP-2 EFF. ELEV: 100'					
DEPTH	HORIZ.	TEXTURE	COLOR (MUNSELL)	MATERIAL	DEPTH	HORIZ.	TEXTURE	COLOR (MUNSELL)	MATERIAL
0-8"	A	FSL	10 YR 3.3	FRIABLE, LOOSE	0-8"	A	FSL	10 YR 3.3	FRIABLE, LOOSE
9-25"	Bw	LS	10 YR 4.6	FRIABLE, LOOSE	8-20"	Bw	LS	10 YR 4.6	FRIABLE, MED. SAND
25-112"	C1	LS	2.5 Y 4.3	F-MED. SND ABL. TILL GRANULAR, LOOSE 15% GRAV. & BOULDERS	20-86"	C1	LS	2.5 Y 4.3	F-MED. SND ABL. TILL GRANULAR, LOOSE 15% GRAV. & BOULDERS
OXIDES: 60"				2.5 Y 4.2	OXIDES: 60"				2.5 Y 4.2
EHWT: 160"					EHWT: 60"				
STANDING H2O: NOT OBSERVED					STANDING H2O: NOT OBSERVED				
WEEPING: NOT OBSERVED					WEEPING: NOT OBSERVED				
BEDROCK: 112"+					BEDROCK: 86"+				



**TEST PIT LOG:**

TP-3 EFF. ELEV: 97' EFF.				TP-4 EFF. ELEV: 97'					
DEPTH	HORIZ.	TEXTURE	COLOR (MUNSELL)	MATERIAL	DEPTH	HORIZ.	TEXTURE	COLOR (MUNSELL)	MATERIAL
0-8"	A	FSL	10 YR 3.3	FRIABLE, LOOSE	0-7"	A	FSL	10 YR 3.3	FRIABLE, LOOSE
8-22"	Bw	LS	10 YR 4.6	FRIABLE, MED. SAND	7-25"	Bw	LS	10 YR 4.6	FRIABLE, MED. SAND
22-96"	C1	LS	2.5 Y 4.3	F-MED. SND ABL. TILL GRANULAR, LOOSE 15% GRAV. & BOULDERS	25-87"	C1	LS	2.5 Y 4.3	F-MED. SND ABL. TILL GRANULAR, LOOSE 15% GRAV. & BOULDERS
OXIDES: 72"				2.5 Y 4.2	OXIDES: 72"				2.5 Y 4.2
EHWT: 77"					EHWT: 72"				
STANDING H2O: NOT OBSERVED					STANDING H2O: NOT OBSERVED				
WEEPING: NOT OBSERVED					WEEPING: NOT OBSERVED				
BEDROCK: 96"+					BEDROCK: 87"+				

**SEPTIC SYSTEM & WELL LOCATION PLAN FOR KEN LEBLANC**  
MAP 3D LOT 21 (portion), "lot 4" FLAT HILLS ROAD  
AMHERST, MA

**Cold Spring Environmental Consultants Inc.**  
350 Old Enfield Road  
Belchertown, MA. 01007

PHONE: (413) 323-5957  
FAX: (413) 323-4916  
e-Mail: ACWES@charter.net

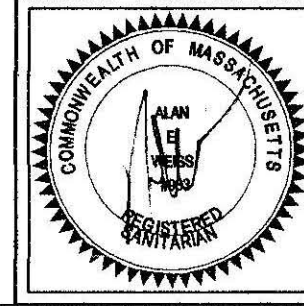
DATE: 10.19.2012  
SCALE: 1"=30'

DRAWN BY: AEW  
CHECKED BY: AEW

REVISED:  
DRAWING NUMBER: 112-3984-1019

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No. 13-5

COMMONWEALTH OF MASSACHUSETTS

Board of Health, Amherst, MA.

APPLICATION FOR DISPOSAL SYSTEM CONSTRUCTION PERMIT



Application for a Permit to Construct  Repair ( ) Upgrade ( ) Abandon ( ) -  Complete System  Individual Components

Location <u>LOT 4</u>	Owner's Name <u>Ken Leblanc</u>
Map/Parcel# <u>Map 3D, LOT 21, Porton</u>	Address <u>POB 307, S. Hadley, MA</u>
Lot# <u># 4</u>	Telephone#
Installer's Name <u>Rue Drive Excavating</u>	Designer's Name <u>Alan Weiss, RS</u>
Address <u>Hadley, MA</u>	Address <u>Beldertown, MA</u>
Telephone# <u>584-1814</u>	Telephone# <u>413-323-5757</u>

Type of Building Proposed 4 BR. Home Lot Size 44,970 sq. ft.  
 Dwelling - No. of Bedrooms \_\_\_\_\_ Garbage grinder   
 Other - Type of Building \_\_\_\_\_ No. of persons \_\_\_\_\_ Showers ( ), Cafeteria ( )  
 Other Fixtures \_\_\_\_\_  
 Design Flow (min. required) 440 gpd Calculated design flow 466 Design flow provided 466 gpd  
 Plan: Date 10/19/12 Number of sheets 1 Revision Date \_\_\_\_\_  
 Title Septic system + Well Location Plan  
 Description of Soil(s) LS (Class 1)  
 Soil Evaluator Form No. \_\_\_\_\_ Name of Soil Evaluator A. Weiss Date of Evaluation 6/8/12

DESCRIPTION OF REPAIRS OR ALTERATIONS Proposed New Const.

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 place the system in operation until a Certificate of Compliance has been issued by the Board of Health.

Signed Kenneth (Y) Blue Date 10-26-12

Inspections \_\_\_\_\_

No. 13-5

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: \_\_\_\_\_  
at \_\_\_\_\_

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. \_\_\_\_\_, dated \_\_\_\_\_, Approved Design Flow \_\_\_\_\_ (gpd)

Installer: \_\_\_\_\_ Designer: \_\_\_\_\_ Inspector: \_\_\_\_\_ Date: \_\_\_\_\_

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

No. 13-5

COMMONWEALTH OF MASSACHUSETTS

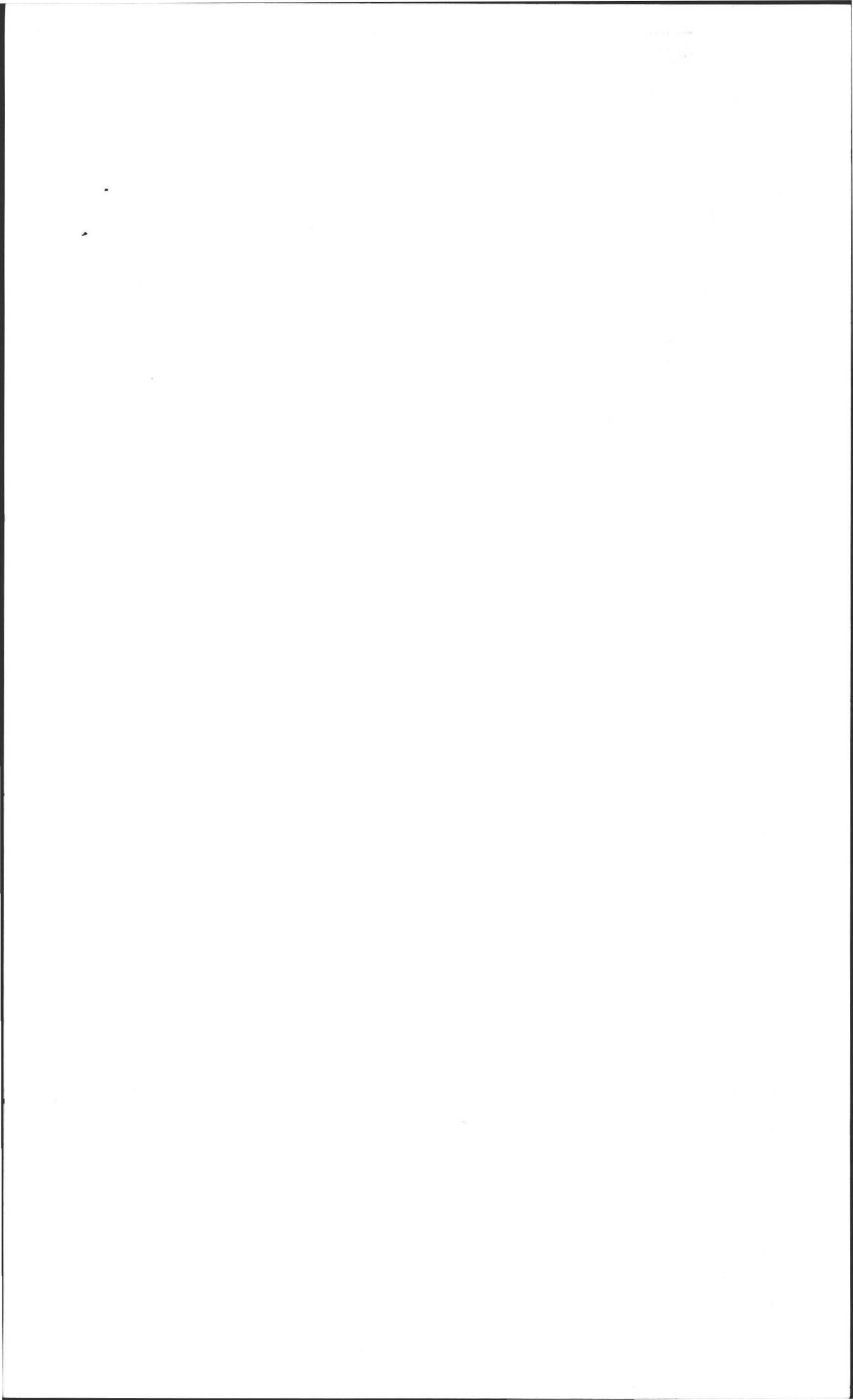
Board of Health, AMHERST, MA.

DISPOSAL SYSTEM CONSTRUCTION PERMIT

Permission is hereby granted to; Construct  Repair ( ) Upgrade ( ) Abandon ( ) an individual sewage disposal system at LOT 4 (MAP 3D, LOT 21 - PORTON) FLAT HILLS ROAD as described in the application for Disposal System Construction Permit No. 13-5, dated 10/26/12.

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. Charlestown, MA Date 11/20 Board of Health Edmund R. Sullivan





# COLD SPRING ENVIRONMENTAL CONSULTANTS INC.

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- 2IE Site Investigations
- Subsurface Investigations
- Pollution Remediation
- LSP on Staff
- Forensic Septic Investigations

- Percolation Tests
- Septic Designs
- Regulatory Compliance
- Recycling and Solid Waste
- Second Opinions

## Percolation Testing Reports

Prepared by:

Cold Spring Environmental Consultants, Inc.  
350 Old Enfield Road  
Belchertown, MA. 01007

Prepared for:

WD Cows

Cinda Jones, President  
POB 9677  
N. Amherst, MA 01059

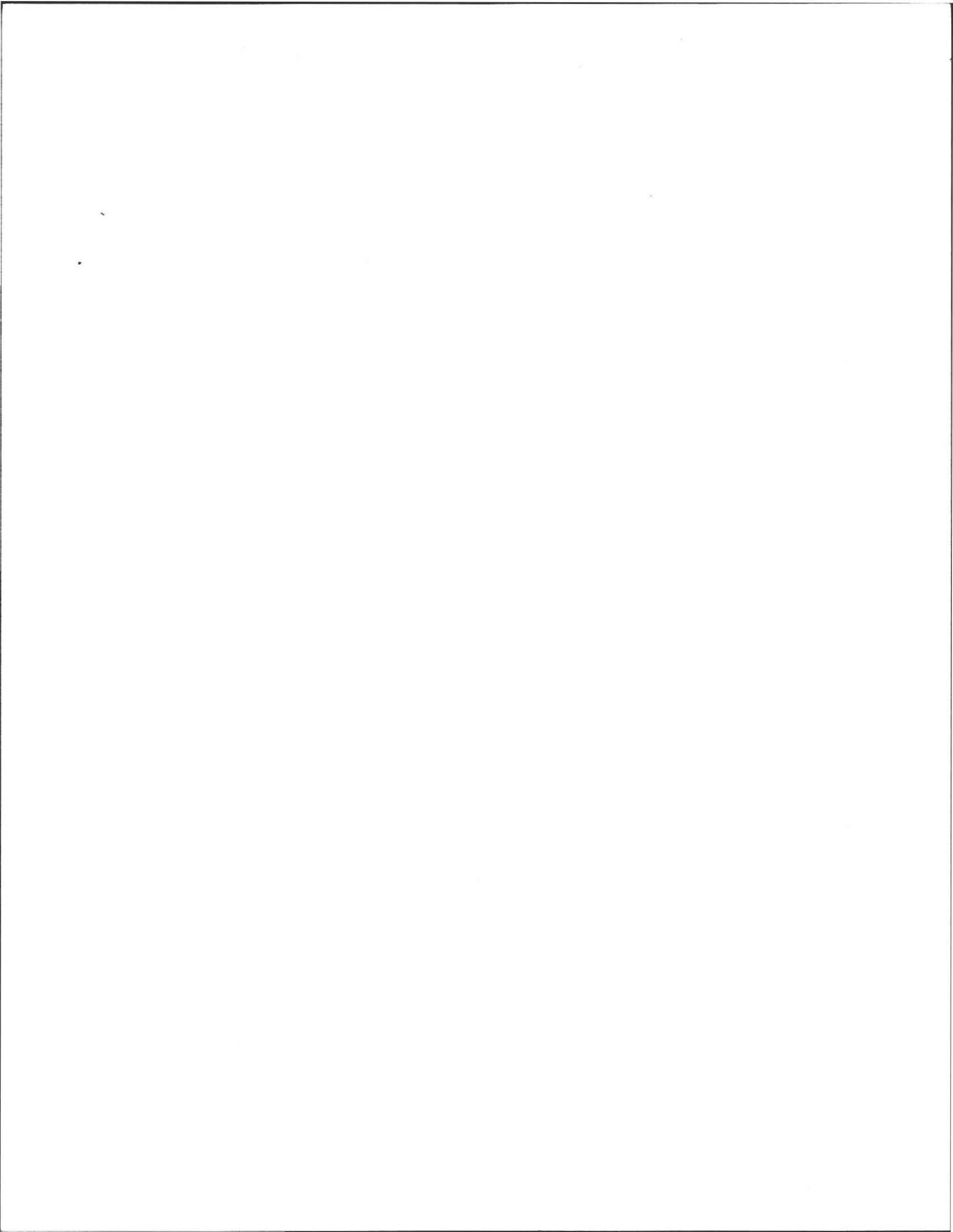
Location:

Lot # 4 (Map 3D, Lot 21 (portion))  
Flat Hills Road  
Amherst, MA

**Project Number: 109-3285-1203**

**System Evaluator: Alan Weiss, RS**

**Date: June 9, 2012**





ALAN E. WEISS, M.S., R.S., L.S.P.

Licensed Site Professional  
Registered Sanitarian  
Hydrogeologist  
President

- Wetland Consults
- Soil and Water Testing
- 21E Site Investigations
- Percolation Tests and
- Septic Designs
- Title 5 Inspections

350 Old Enfield Rd.  
Belchertown, MA 01007  
(413) 323-5957 & 323-4916 (FAX)  
aweiss@charter.net

Date: 6/8/12

Commonwealth of Massachusetts  
*Amherst*, Massachusetts

Soil Suitability Assessment for On-site Sewage Disposal

Performed By: *A. Weiss*

Date: *6/8/12*

Witnessed By: *E. Smith*

Location Address or Lot # <i>(LOT #4) Map 3D to 21 (Porter) Flat Hills RD -</i>	Owner's Name, Address, and Telephone # <i>c/o Sarah La Cour W.D. Cawls POB. 9677, 134 Montague RD N. Amherst, MA 01057</i>
New Construction <input checked="" type="checkbox"/> Repair <input type="checkbox"/>	

Office Review

*(549 - 1403 x - 337)*

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)

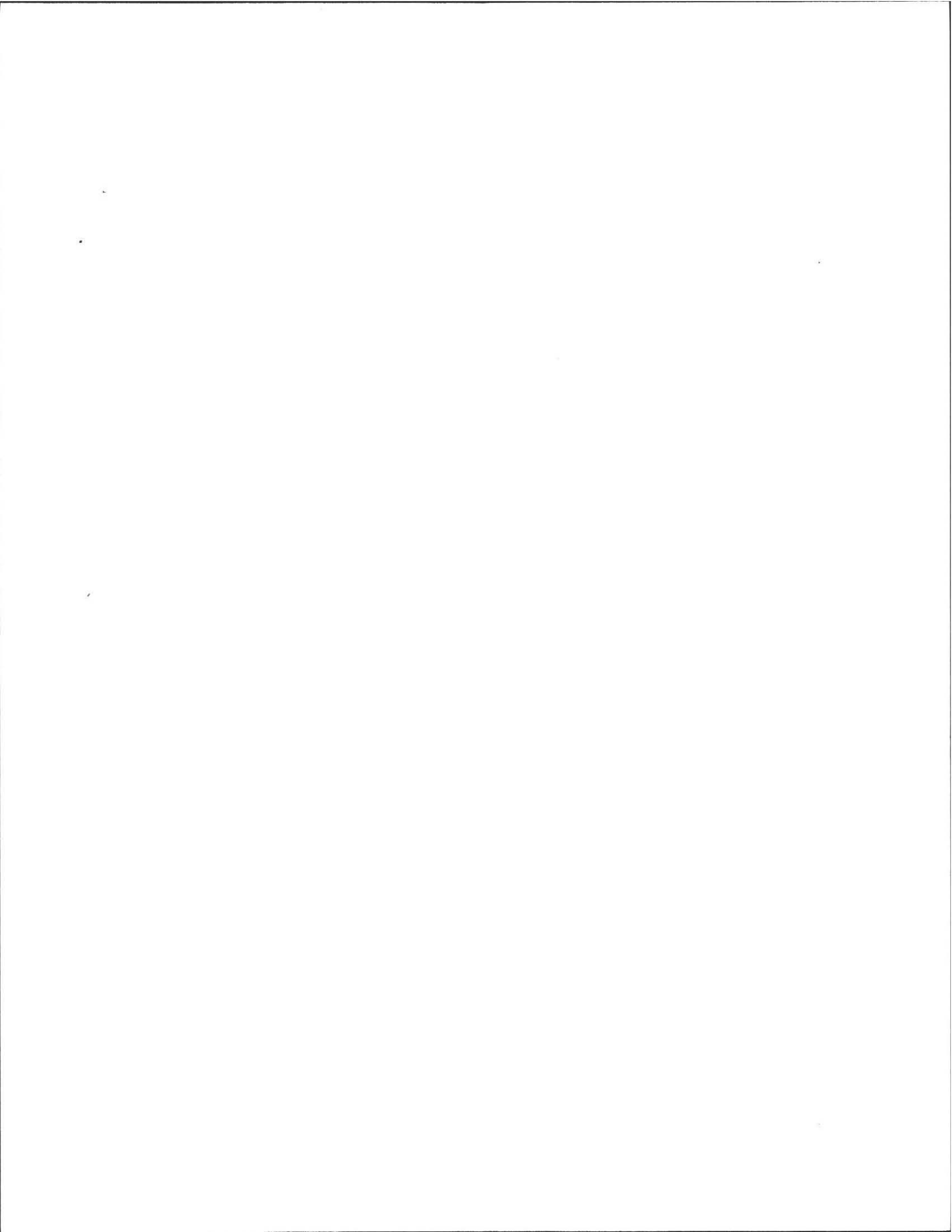
Current Water Resource Conditions (USGS): Month

Range : Above Normal  Normal  Below Normal

Other References Reviewed: \_\_\_\_\_







Location Address or Lot No. Lot #4; Flat Hills rd

## COMMONWEALTH OF MASSACHUSETTS

Amherst, Massachusetts

Percolation Test*		
Date: ..	<u>6/8/12</u>	Time: <u>6/8/12 9:00 AM</u>
Observation Hole #	Perc # (1)	Perc # (2)
Depth of Perc	<u>48"</u>	<u>49"</u>
Start Pre-soak	<u>9:35</u>	<u>10:00</u>
End Pre-soak	<u>9:52</u>	<u>10:16</u>
Time at 12"	<u>9:52</u>	<u>10:22</u>
Time at 9"	<u>9:59</u>	<u>10:30</u>
Time at 6"	<u>10:14</u>	<u>10:38</u>
Time (9"-6")	<u>15 min</u>	<u>8</u>
Rate Min./Inch	<u>5 <math>\frac{min}{IN}</math></u>	<u>3 <math>\frac{min}{IN}</math></u>

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

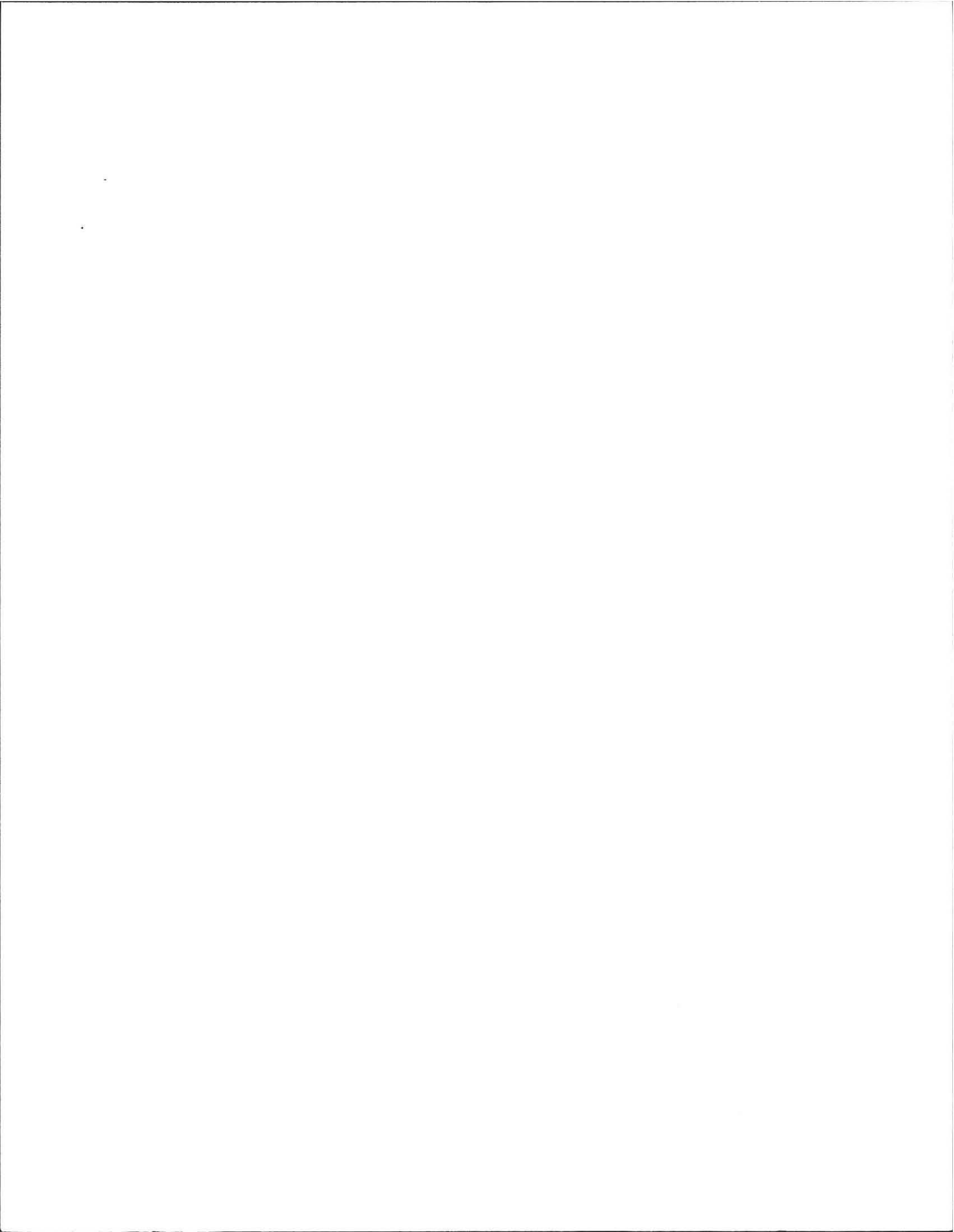
Site Passed  Site Failed

Performed By: Alan Weiss RS

Witnessed By: Ed. Smith

Comments: \_\_\_\_\_





Location Address or Lot No. "LOT" 4. Flat Hills RD

Determination for Seasonal High Water Table

Method Used:

- Depth observed standing in observation hole ..... inches
- Depth weeping from side of observation hole ..... inches
- Depth to soil mottles 60-62" inches
- Ground water adjustment ..... feet

Index Well Number ..... Reading Date ..... Index well level

Adjustment factor ..... Adjusted ground water level .....

Depth of Naturally Occurring Pervious Material

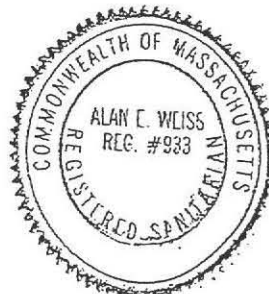
Does at least four feet of naturally occurring pervious material exist in all areas observed throughout the area proposed for the soil absorption system? YES

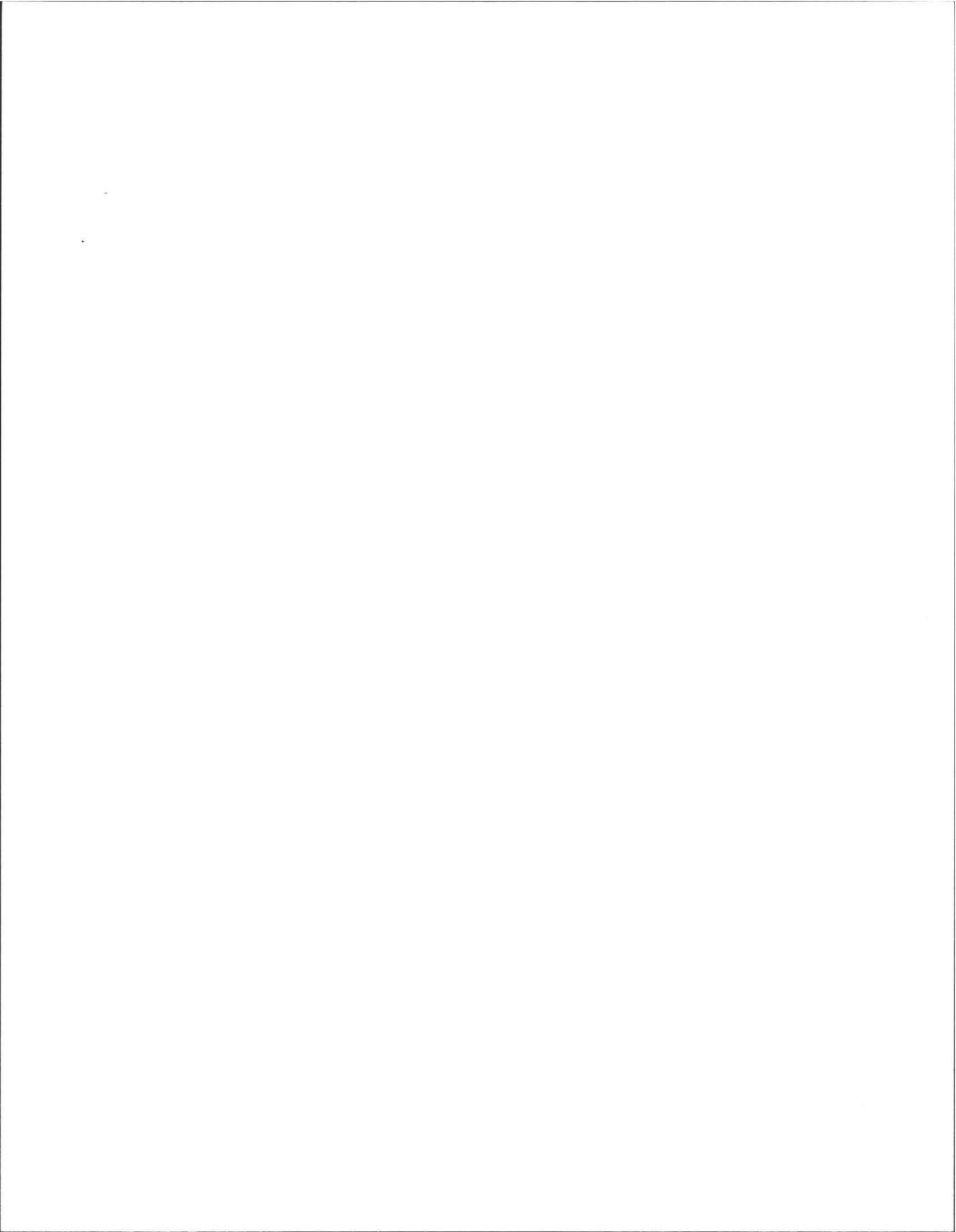
If not, what is the depth of naturally occurring pervious material?       

Certification

I certify that on 6/95 (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  Date 6/8/12





Location Address or Lot No. Lot #4 Flat Hills RD

On-site Review

Deep Hole Number 1D4 Date: 6/8/12 Time: 9:00 Weather SW 70°

Location (identify on site plan) \_\_\_\_\_

Land Use Wooded Slope (%) 2 Surface Stones 4-5

Vegetation Mixed deciduous

Landform Terraced

Position on landscape (sketch on the back) \_\_\_\_\_

Distances from:

Open Water Body 100' feet      Drainage way 50' feet  
 Possible Wet Area 100' feet      Property Line 40' feet  
 Drinking Water Well 100' feet      Other \_\_\_\_\_

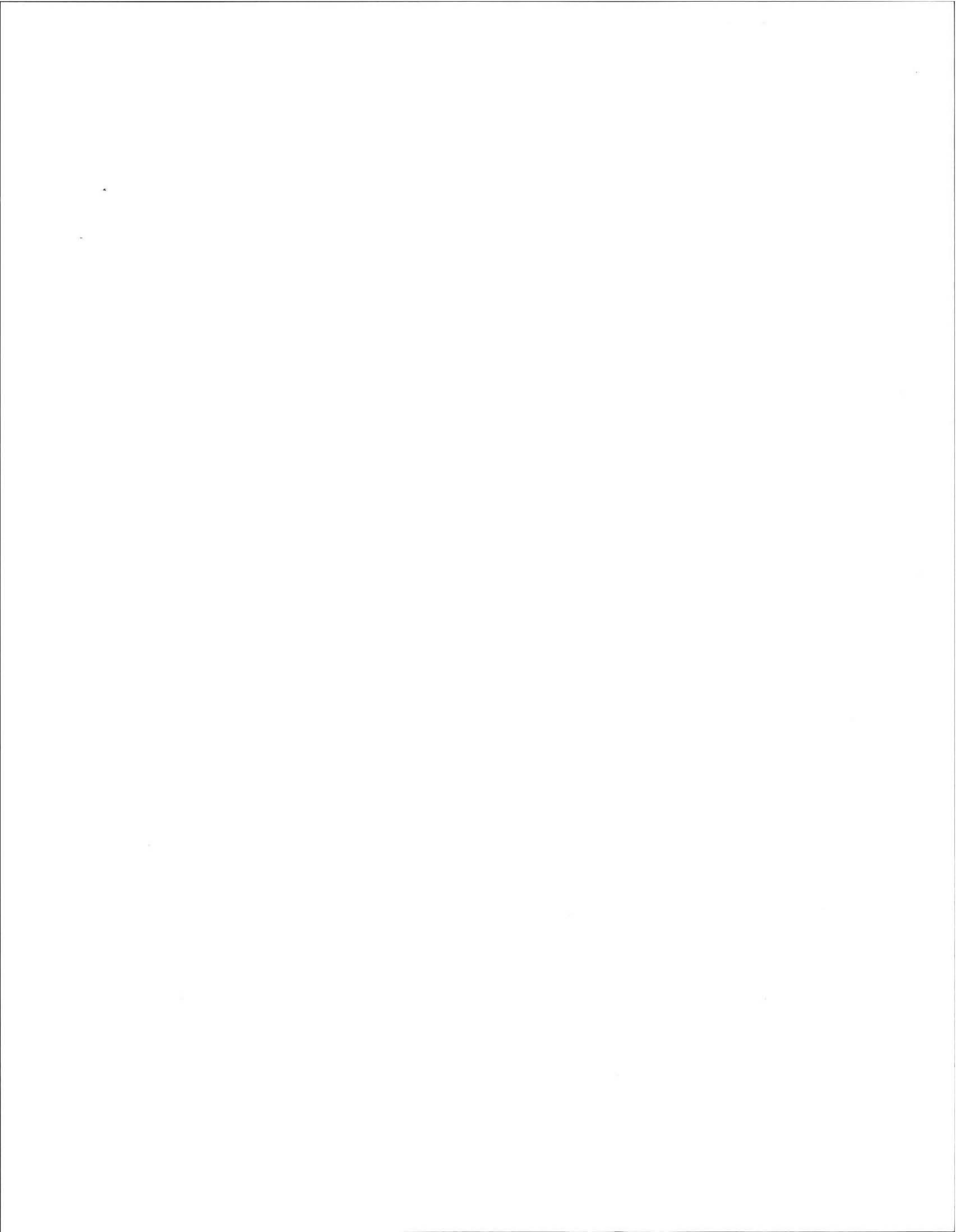
DEEP OBSERVATION HOLE LOG\*

Depth from Surface (Inches)	Soil Horizon	Soil Texture (USDA)	Soil Color (Munsell)	Soil Mottling	Other (Structure, Stones, Boulders, Consistency, % Gravel)
<u>0-9"</u> <u>9"-25"</u> <u>25"-112"</u>	<u>A</u> <u>Bw</u> <u>C1</u>	<u>F&amp;L</u> <u>LS</u> <u>LS</u>	<u>10YR 3/3</u> <u>10YR 4/2</u> <u>2.5Y 1/3</u>	<u>60"</u> <u>2.5Y 1/2</u>	<u>Friable</u> <u>Fragile Loose</u> <u>F. Sandy Ablation till, 15% Stones</u> <u>Loose</u>
<u>0-8"</u> <u>8-20"</u> <u>20-86"</u>	<u>A</u> <u>Bw</u> <u>C1</u>	<u>F&amp;L</u> <u>LS</u> <u>LS</u>	<u>↓</u>	<u>60"</u> <u>2.5Y 1/2</u>	<u>Friable</u> <u>Friable Loose</u> <u>F. Sandy Ablation till</u> <u>Loose, 15% Stones</u>
<u>0-8"</u> <u>8-22"</u> <u>22"-96"</u>	<u>A</u> <u>Bw</u> <u>C1</u>	<u>F&amp;C</u> <u>LS</u> <u>LS</u>	<u>↓</u>	<u>72"</u> <u>2.5Y 1/2</u>	<u>Same as #1</u> ↓
<u>0-7"</u> <u>7'-25"</u> <u>25-87"</u>	<u>A</u> <u>Bw</u> <u>C1</u>	<u>F&amp;L</u> <u>LS</u> <u>LS</u>	<u>↓</u>	<u>72"</u>	<u>Same as #1</u> ↓

\* MINIMUM OF 2 HOLES REQUIRED AT EVERY PROPOSED DISPOSAL AREA

Parent Material (geologic) Ablation till      Depth to Bedrock: 86" - 112"  
 Depth to Groundwater: Standing Water in the Hole: Not      Weeping from Pit Face: Not  
 Estimated Seasonal High Ground Water: 60-72"





# WDC Flat Hills Rd- Lot 4



- Property Map**
- Property Lines
    - Property Line
    - Hydrographic Property Line
    - Right of Way Line
    - Town Boundary
  - Other Property Lines
    - Former Property Line
    - Subdivision Lot Line
  - Easements
- Driveways**
- Driveway Paved
  - Driveway Unpaved
  - Sidewalks
- Transportation**
- Paved street polygons
  - Unpaved street polyg
- Bridges**
- Bridge decking and str
  - Foot Bridge
  - Rail Bridge
- Basemap**
- Trails
  - Rail Lines
- Structures**
- Building
  - Foundation or in const
  - Outbuilding or Miscell
  - Deck, Porch, Stairs or
  - Mobile home, Trailer
  - Swimming Pool
  - Building Ruins
  - Water storage tank
- Rivers and Streams**
- Streams
  - Major Culverts
  - Hydro Connector
  - Roadwalls, Floodwalls
- Landcover**
- Brush and scrub vege
  - Tree and forest vege
  - Cultivated field
  - Gravel pile
  - Quarry
  - Misc Impervious Surfa
- Parking**
- Parking Paved
  - Parking Unpaved

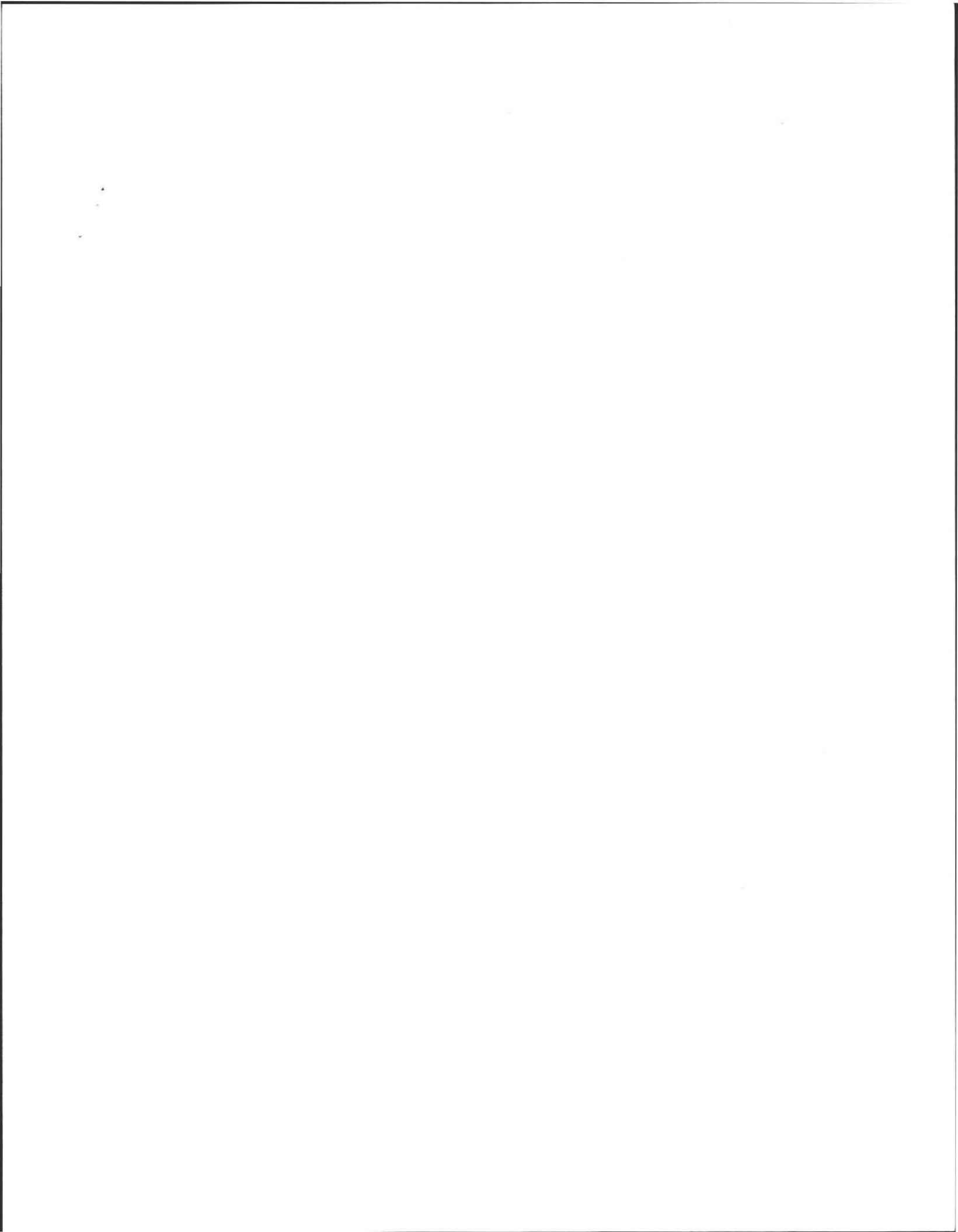
Horizontal Datum: MA Stateplane Coordinate System, Zone 4151, Datum NAD83, Feet  
 Vertical Datum: NAVD88, Feet

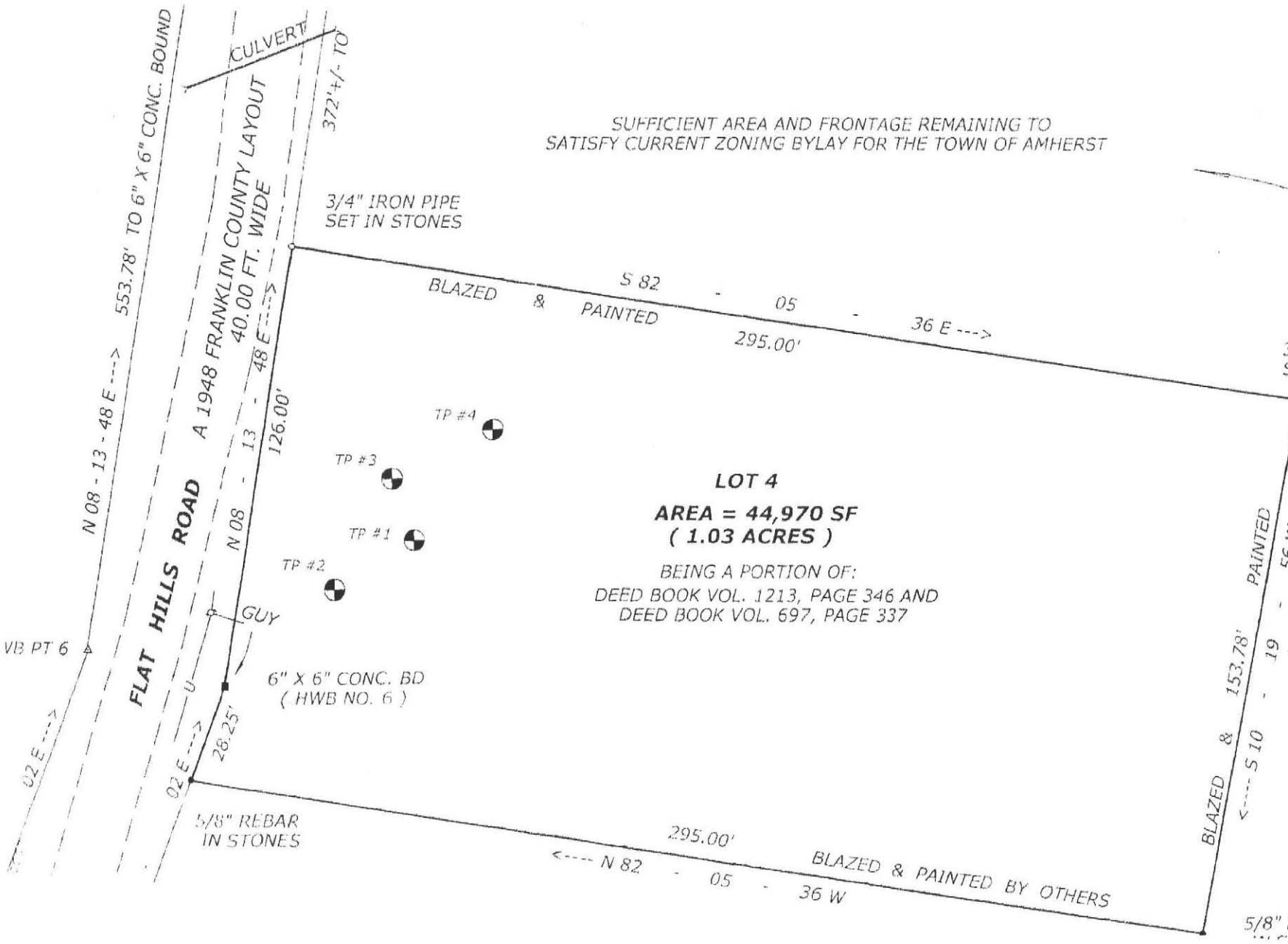
Planimetric & topographic basemap features compiled at 1"=40' scale from April, 2009 Aerial Photography  
 Parcels compiled to match the basemap; revisions are ongoing.

The information depicted on this map is for planning purposes only. It may not be adequate for legal boundary definition, regulatory interpretation, or property conveyance purposes. Utility structures and underground utility locations are approximate and require field verification.

THE TOWN OF AMHERST MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, CONCERNING THE ACCURACY, COMPLETENESS, RELIABILITY, OR SUITABILITY OF THESE DATA. THE TOWN OF AMHERST DOES NOT ASSUME ANY LIABILITY ASSOCIATED WITH THE USE OR MISUSE OF THIS INFORMATION.





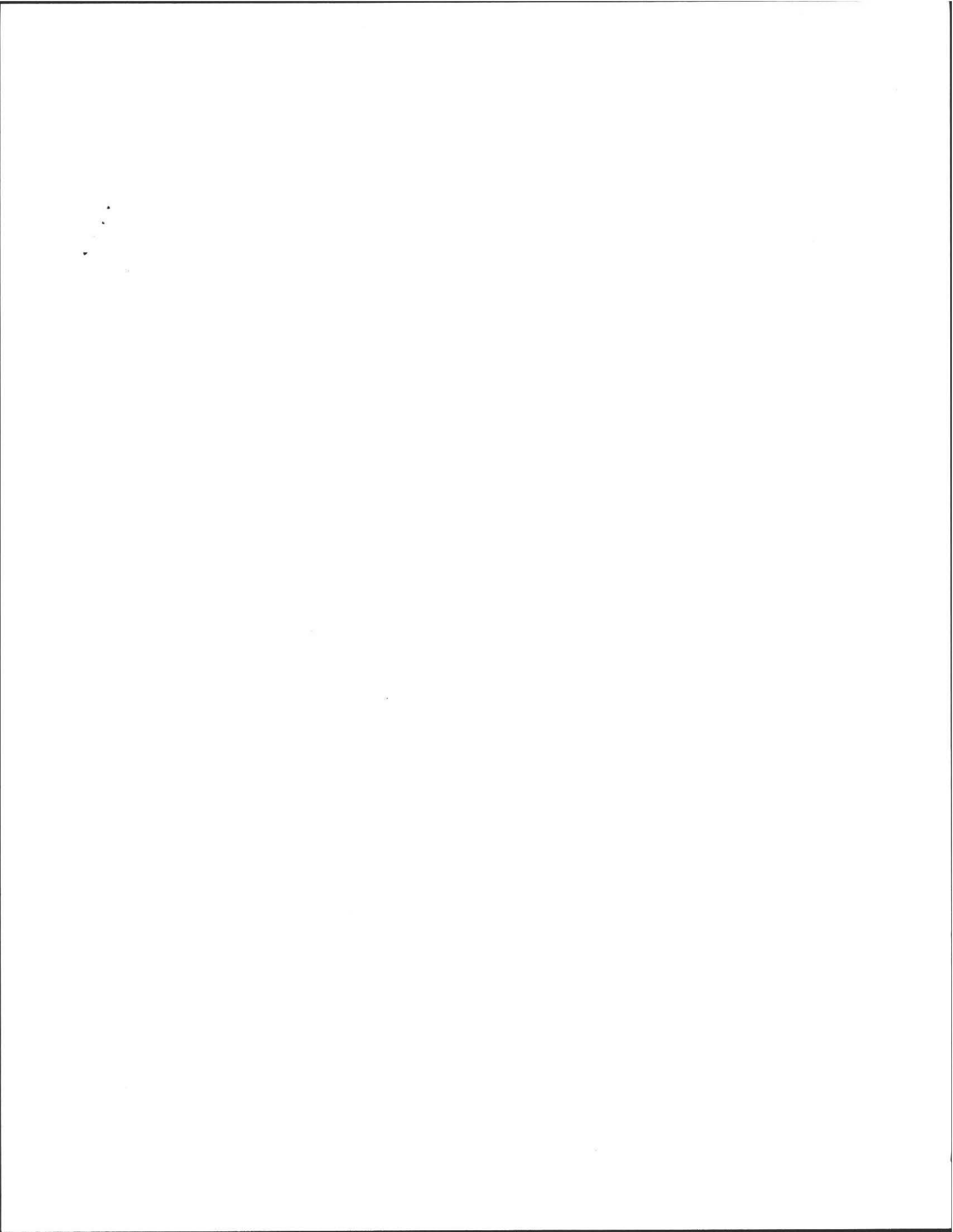


SUFFICIENT AREA AND FRONTAGE REMAINING TO SATISFY CURRENT ZONING BYLAW FOR THE TOWN OF AMHERST

**LOT 4**  
**AREA = 44,970 SF**  
**( 1.03 ACRES )**

BEING A PORTION OF:  
 DEED BOOK VOL. 1213, PAGE 346 AND  
 DEED BOOK VOL. 697, PAGE 337

5/11/11

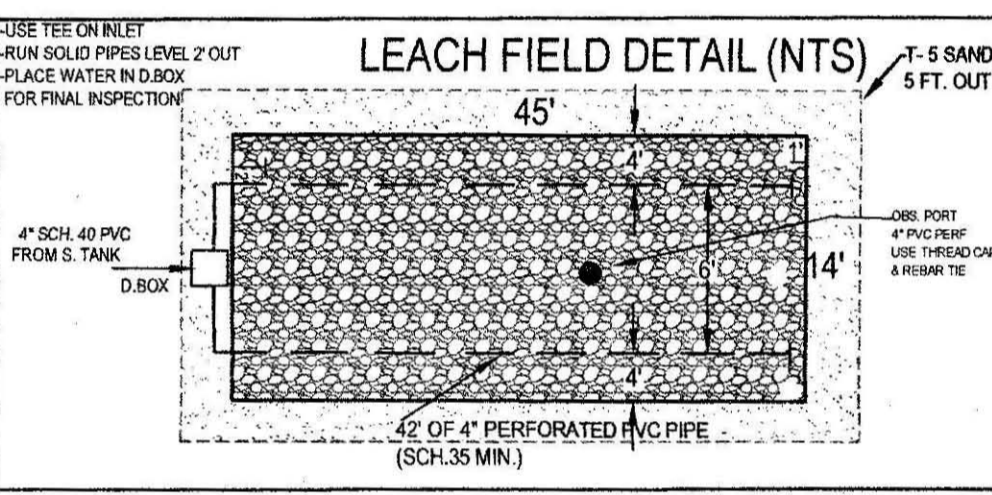
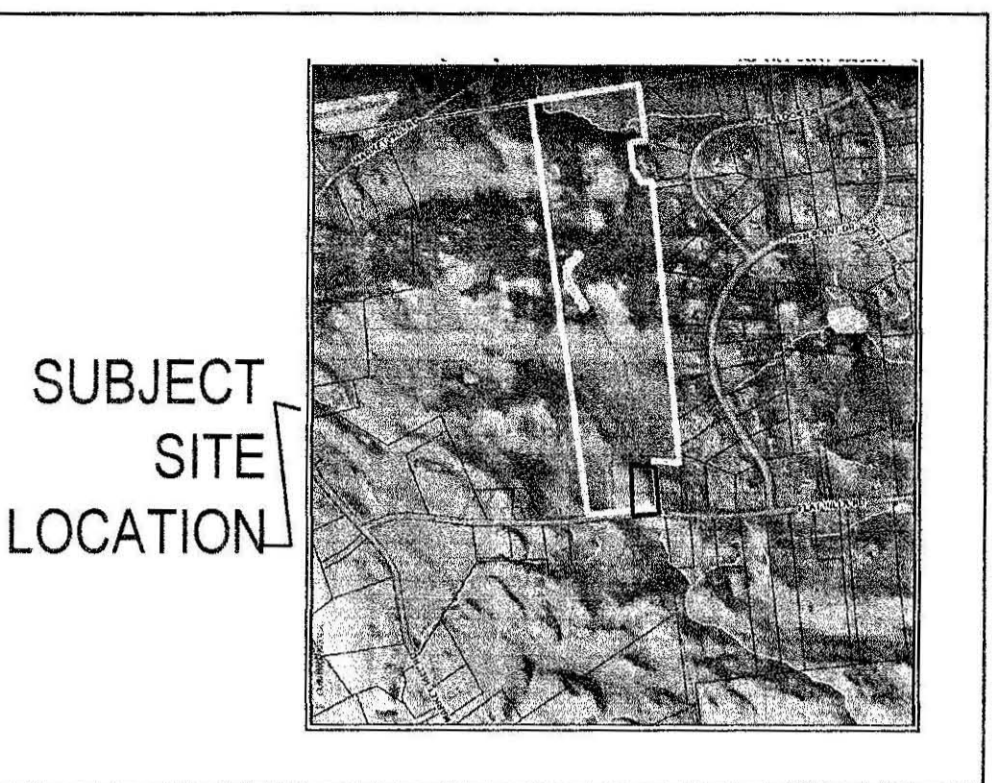
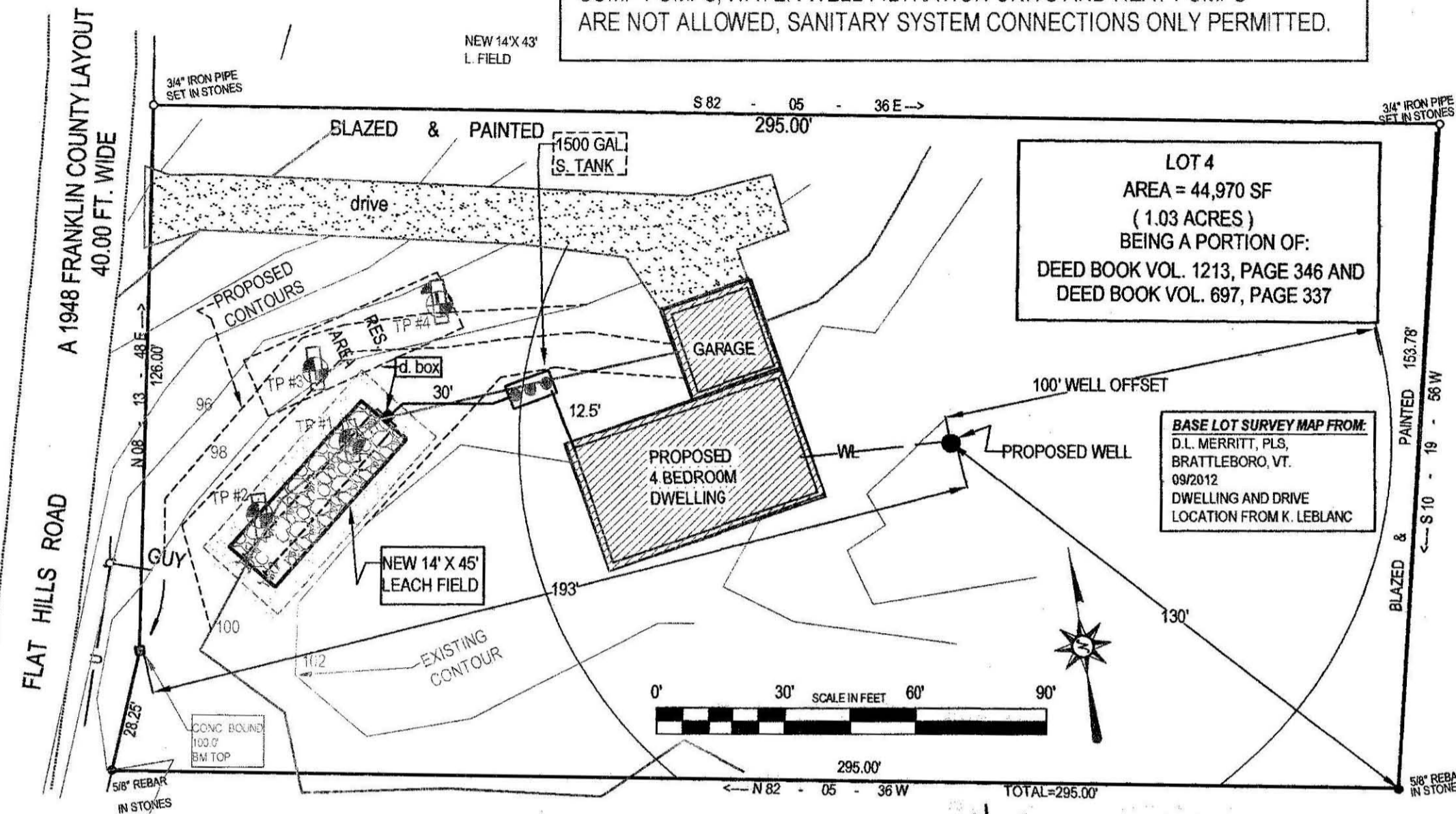


**GRAVITY SLOPE SEPTIC SYSTEM OPERATION AND MAINTENANCE NOTES FOR HOMEOWNER.**

- HAVE TANK PUMPED EVERY 2 YEARS.
- MAINTAIN AREA OVER SEPTIC SYSTEM AS GRASSY OR SIMILAR GROUND COVER.
- DO NOT PLANT ANY TREES OR DEEP ROOTING SHRUBS WITHIN 10 FEET OF SYSTEM.
- USE ONLY LIQUID DETERGENTS & LOW FLOW WASHERS.
- WIPE ALL OIL AND GREASE FROM COOKWARE AND DISPOSE IN TRASH NOT SEPTIC.
- All Toilets and Faucets must be confirmed to not be leaking, because one leaking fixture can fail a septic system in ONE DAY.

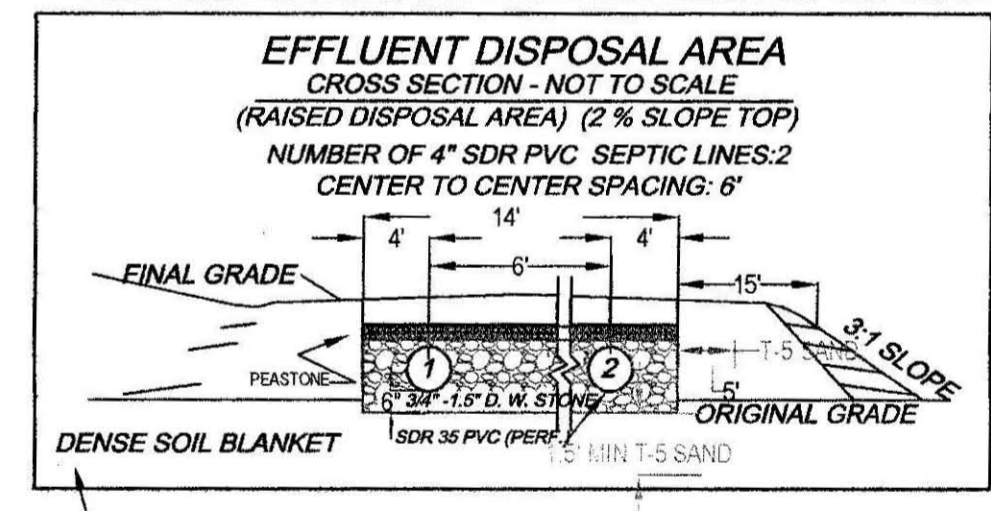
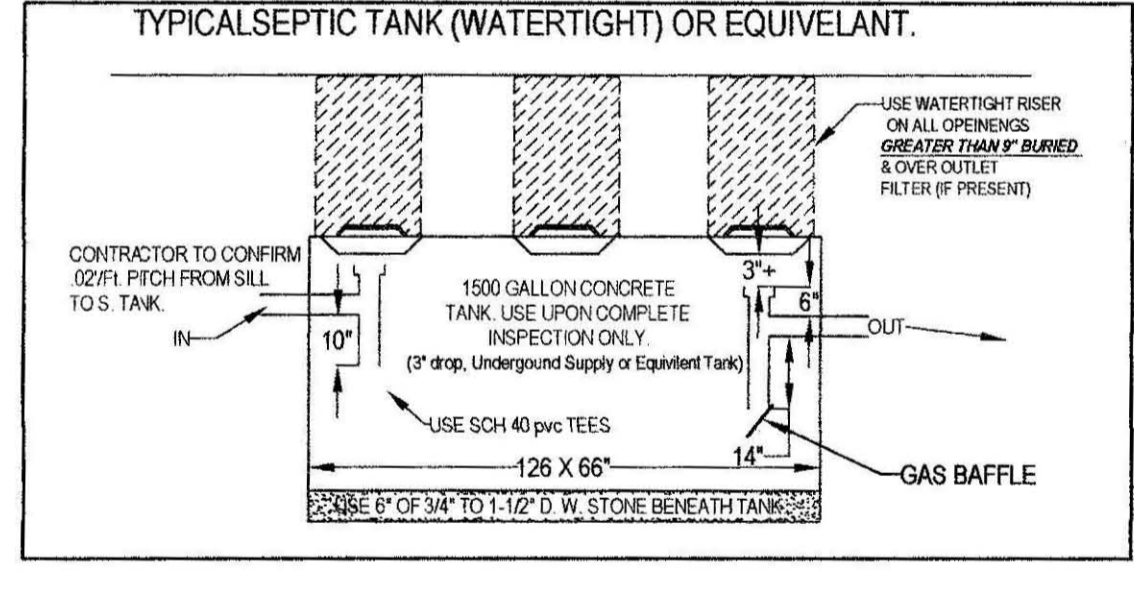
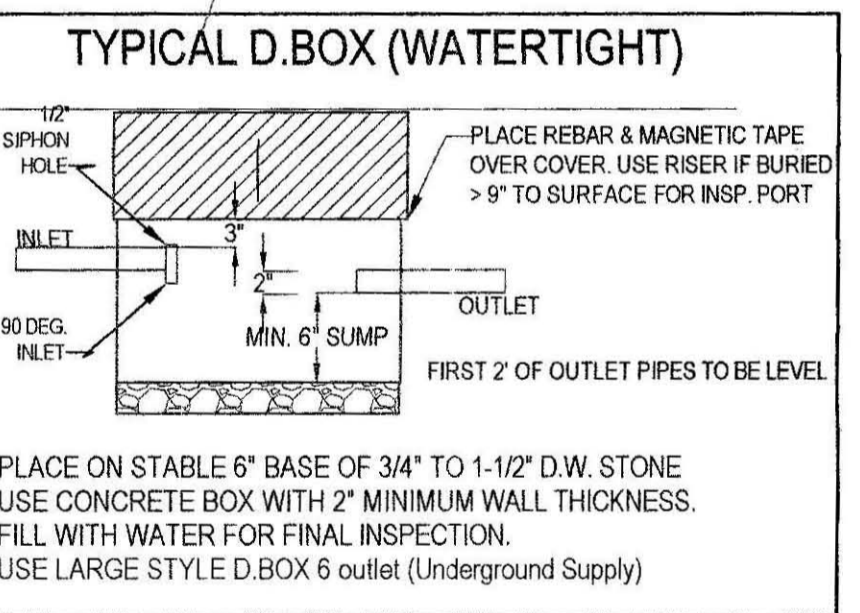
**NOTE TO HOMEOWNER: FILL, WHERE USED, ARE REQUIRED BY STATE CODE TO MAXIMIZE THE DISTANCE FROM THE BOTTOM OF THE LEACHING FIELD TO THE TOP OF THE ESTIMATED HIGH GROUNDWATER. THIS "SEPARATION" FROM HIGH GROUNDWATER (3.4, OR 5 FEET), IS NOT THE SAME AS THE HEIGHT OF THE FINISHED MOUND SURFACE. THE ACTUAL FINISHED MOUND IS TYPICALLY HIGHER THAN THE "SEPARATION". BY SIGNING PERMIT YOU ACKNOWLEDGE THAT COLD SPRING ENVIRONMENTAL CONSULTANTS INC. IS NOT RESPONSIBLE FOR THE AESTHETICS OF FILLED OR MOUNDED SYSTEMS.**

**NOTE TO HOMEOWNER AND CONTRACTOR: CONNECTIONS FROM HEATING SYSTEM, AIRCONDITIONERS, SUMP PUMPS, WATER WELL FILTRATION UNITS AND HEAT PUMPS ARE NOT ALLOWED, SANITARY SYSTEM CONNECTIONS ONLY PERMITTED.**



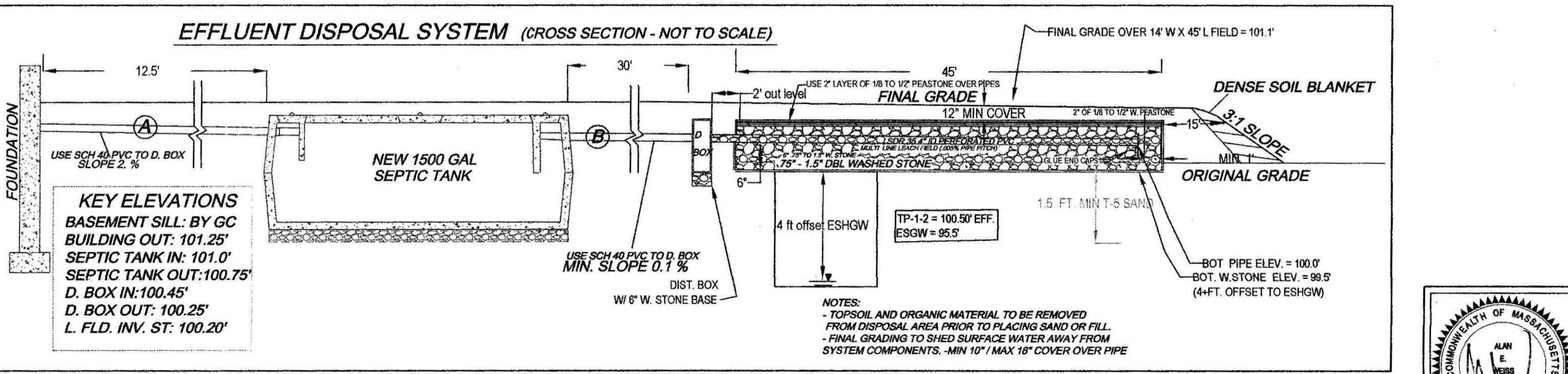
**DESIGN NOTES AND CALCULATIONS:**

- 4 BEDROOM HOME X 110 GPD /BR = 440 GPD. REQUIRED.
  - Use ONE FIELD: 14' WIDE X 45' LONG WITH 6" OF 3/4" TO 1/2" DBL WASHED STONE BELOW INVERT
  - BOTTOM AREA: 14' W X 45' L = 602 SF.
  - SIDE AREA: 0 SF.
  - TOTAL AREA: 630 SF X 0.74 GAL/SF = 466.5 GPD
- GARBAGE DISPOSAL NOT ALLOWED, ...
- NO OTHER PRIVATE WELLS WITHIN 150 FEET OF SAS.
- NO OTHER WETLANDS WITHIN 100 FEET OF SAS.
- USE NEW S. TANK AS NOTED & MAINTAIN 0.02 PITCH FROM SILL TO S. TANK
- INSTALL & INSPECT SCH. 40 TEES / BAFFLES (10" INLET, 14" OUTLET),
  - NOTE:
    - ALL COMPONENTS OF NEW SYSTEM MUST BE MARKED WITH MAGNETIC TAPE. BE SURE TO MAINTAIN 3" CLEARANCE FROM TOP OF TEES TO BOTTOM OF TANK COVERS & BOXES.
- USE LARGE STYLE (6 OUTLET) D.BOX ONLY.
- ALL D. BOX OUTLET PIPES LEVEL FOR FIRST 2'. BOXES MUST HAVE 2"+ CONC. WALLS
  - NOTE:
    - D. BOXES WITH MORE THAN 9" OF COVER SOIL MUST HAVE RISERS TO 6" OF SURFACE.
- USE (75'-1 1/2") STONE UNDER TANK & D. BOX FOR 6" FOR STABLE BASE.
  - USE ONLY DBL. WASHED APPROVED (75"-1.5") FOR PLACEMENT IN LEACH AREA.
- USE PROPER SCH. 40 PVC TEES AS SHOWN.
- PRE & POST CONTOURS NOTED AS NECESSARY, RESERVE AS NOTED.
- SLOPE CALCS (SEE CONTOURS), SUBGRADE INSP. REQD.
- USE FIELD DUE TO TOPOGRAPHY AND SPACE OF LOT WITH RESPECT TO LOCATION AND ELEVATION OF RESIDENCE (310 CMR 15.240)
- USE 2% MIN. SLOPE OVER SAS
  - CLEAR TOP AND SUB TO 25" MIN. AS NEEDED (INSPECTION REQUIRED).
  - CLEAR PIAST BASE OF B (MIN. 25") & SCARIFY UNDER BED PRIOR TO TITLE V SAND/STONE PLACEMENT.
  - EXCAVATE EXISTING LOAM, SUB AND ANY EXISTING DEBRIS, DIRTY FILL OR PRIOR SYSTEM IF PRESENT.
- SOIL EVALUATION BY A. WEISS, RS. ON 06.08.2012 (E. SMITH, BOH AGENT)
  - DEPTH OF PERC. 48 & 49"
  - PERC RATE = 3 & 5 MIN / IN.
  - CLASS 1(LS) SOIL RATING
- NO TREES WITHIN 10 FT. OF NEW LEACH FIELD.
- ENGINEER & TOWN (IF REQUIRED) TO INSPECT SUBGRADE, TOWN AND ENGINEER INSPECT AT FINAL.
- BM=100.00 @ (TOP OF CONC. BOUND as noted), CONFIRM PROPER PIPE SLOPES
  - USE/INSPECT SCH. 40 PIPE FOR PIPE FROM HOUSE TO NEW OR EXISTING TANK
- GRADE MULCH AND SEED OVER SAS AS NOTED.
- INSTALLATION IN LOW GROUNDWATER SEASON RECOMMENDED.
- USE OBSERVATION PORT NEAR CENTER OF STONE BED HAVE 4" PERFORATED, PVC INSPECTION PORTALS TO BOTTOM OF STONE BED, WITH RISER TO 3" OF SURFACE & THREADED CAP & MARK WITH RE-BAR.



**TEST PIT LOG:**

TP-1 EFF. ELEV: 100.1' EFF.				TP-2 EFF. ELEV: 100'					
DEPTH	HORIZ.	TEXTURE	COLOR (MUNSELL)	MATERIAL	DEPTH	HORIZ.	TEXTURE	COLOR (MUNSELL)	MATERIAL
0-9"	A	FSL	10 YR 3.3	FRIABLE, LOOSE	0-8"	A	FSL	10 YR 3.3	FRIABLE, LOOSE
9-25"	Bw	LS	10 YR 4.6	FRIABLE, LOOSE	8-20"	Bw	LS	10 YR 4.6	FRIABLE, MED. SAND
25-112"	C1	LS	2.5 Y 4.3	F-MED. SND ABL. TILL 15% GRAV. & BOULDERS	20-86"	C1	LS	2.5 Y 4.3	F-MED. SND ABL. TILL 15% GRAV. & BOULDERS
OXIDES: 60"				2.5 Y 4.2	OXIDES: 60"				2.5 Y 4.2
EHWT: 60"					EHWT: 60"				
STANDING H2O: NOT OBSERVED					STANDING H2O: NOT OBSERVED				
WEEPING: NOT OBSERVED					WEEPING: NOT OBSERVED				
BEDROCK: 112'+					BEDROCK: 86'+				



**TEST PIT LOG:**

TP-3 EFF. ELEV: 97' EFF.				TP-4 EFF. ELEV: 97'					
DEPTH	HORIZ.	TEXTURE	COLOR (MUNSELL)	MATERIAL	DEPTH	HORIZ.	TEXTURE	COLOR (MUNSELL)	MATERIAL
0-8"	A	FSL	10 YR 3.3	FRIABLE, LOOSE	0-7"	A	FSL	10 YR 3.3	FRIABLE, LOOSE
8-22"	Bw	LS	10 YR 4.6	FRIABLE, MED. SAND	7-25"	Bw	LS	10 YR 4.6	FRIABLE, MED. SAND
22-96"	C1	LS	2.5 Y 4.3	F-MED. SND ABL. TILL 15% GRAV. & BOULDERS	25-87"	C1	LS	2.5 Y 4.3	F-MED. SND ABL. TILL 15% GRAV. & BOULDERS
OXIDES: 72"				2.5 Y 4.2	OXIDES: 72"				2.5 Y 4.2
EHWT: 72"					EHWT: 72"				
STANDING H2O: NOT OBSERVED					STANDING H2O: NOT OBSERVED				
WEEPING: NOT OBSERVED					WEEPING: NOT OBSERVED				
BEDROCK: 96'+					BEDROCK: 87'+				

**SEPTIC SYSTEM & WELL LOCATION PLAN FOR KEN LEBLANC**  
 MAP 3D LOT 21 (portion), "lot 4" FLAT HILLS ROAD  
 AMHERST, MA

**Cold Spring Environmental Consultants Inc.**  
 350 Old Enfield Road  
 Belchertown, MA 01007

PROJ. NO: (413) 323-5957  
 FAX: (413) 323-4916  
 e-Mail: [AEW@CS@charter.net](mailto:AEW@CS@charter.net)

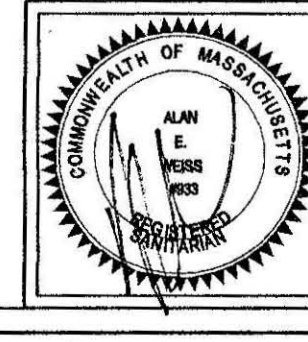
DATE: 10.19.2012  
 SCALE: 1"=30'

DRAWN BY: AEW  
 CHECKED BY: AEW

REVISED:  
 DRAWING NUMBER: 112-3984-1019

**ATTENTION INSTALLER!**  
 CALL DIG SAFE BEFORE YOU DIG! MASSACHUSETTS STATE LAW CHAPTER 82 SECTIONS 40 - 40E REQUIRE THAT PREMARKING OF GAS, ELECTRIC, WATER, TELEPHONE AND CABLE T.V. UTILITY LINES BE MADE A MINIMUM OF 72 HOURS PRIOR TO GROUND BREAK FOR ANY EXCAVATION.

**NOTE: INSTALLER MUST CONTACT ENGINEER/BOH OF HEALTH 48 HOURS PRIOR TO SUBGRADE INSPECTION. INSTALLER MUST HAVE ALL BREAK OUT FILL ON SITE AND IN PLACE PRIOR TO SIGN OFF BY ENGINEER AT TIME OF FINAL INSPECTION OR APPROVAL WILL NOT BE GIVEN TO BACKFILL.**



PROJECT NO.:	13-5			
CITY/TOWN:	AMHERST			
APPLICANT:	HOWES BY LEBLANC			
ADDRESS:	LOT 4 FLAT HILLS ROAD			
DESIGN FLOW:	466	gpd		
REVIEWED BY:	EDMUND SMITH	DATE:		

N/A      OK      NO

GENERAL				
Legal boundaries denoted [310 CMR 15.220(4)(a)]			✓	
Street, Lot, tax parcel number and lot number noted on plan [310 CMR 15.220(4)(u)]			✓	
Locus Provided [310 CMR 15.2204(t)]			✓	
Plan proper scale? (1"=40' for plot plans, 1"= 20' or fewer for components) [310 CMR 15.220(4)]			✓	
Easements shown [310 CMR 15.220(4)(b)]			✓	
System located totally on lot served [310 CMR 15.405(1)(a) for upgrades]- if not, a variance is required [310 CMR 15.412 (4)]			✓	
Location of impervious surfaces (driveways, parking areas etc.) [310 CMR 15.220(4)(d)]			✓	
Location all buildings existing and proposed 310 CMR 15.220 (4)(c)]			✓	
Location and dimensions of system components and reserve areas. [310 CMR 15.220(4)(e)]			✓	
System Calculations [310 CMR 15.220(4)(f)]			✓	
daily flow			✓	
septic tank capacity (required and provided)			✓	
soil absorption system (required and provided)			✓	
whether system designed for garbage grinder			✓	NOT
North arrow [310 CMR 15.220(4)(g)]			✓	
Existing and proposed contours [310 CMR 15.220(4)(g)]			✓	
Location and log of deep observation holes (existing grade el. on each test) [310 CMR 15.220(4)(h)]			✓	
Names of soil evaluator and BOH representative [310 CMR 15.220(4)(h) and (i)]			✓	
Location and date of percolation tests (performed at proper elevation?) [310 CMR 15.220(4)(i)]			✓	
Percolation test results match loading rate? [310 CMR 15.242]			✓	
Certification statement by Soil Evaluator [310 CMR 15.220(4) (j)]			✓	
Observed and Adjusted groundwater (method for adjustment given or indicated) [310 CMR 15.103(3) and 310 CMR 15.220(4)(n)]			✓	

GENERAL cont.	N/A	OK	NO
Location of every water supply, public and private, [310 CMR 15.220(4)(k)]		✓	
within 400 feet of the proposed system location in the case of surface water supplies and gravel packed public water supply wells		✓	
within 250 feet of the proposed system location in the case of tubular public water supply wells		✓	
within 150 feet of the proposed system location in the case of private water supply wells		✓	
Location of all surface waters and wetlands located up to 100 ft. beyond setbacks listed in 310 CMR 15.211 and any catch basins located within 50 ft. [310 CMR 15.220(4)(l)]		✓	
Water lines and other subsurface utilities located [310 CMR 15.220(4)(m)] (if water line cross see 310 CMR 15.211(1)[1])		✓	
Profile of system showing invert elevations of all system components and the bottom of the SAS [310 CMR 15.220(4)(o)]		✓	
Stamp of designer [310 CMR 15.220(1) and 310 CMR 15.220(2)]		✓	
Stamp of Registered Land Surveyor (required if construction activities within 5 ft. of lot line) [310 CMR 15.220(3)]	✓		
Test Holes adequate (two in each of the primary and reserve unless trenches as permitted in 310 CMR 15.102(2) or as approved for an upgrade under LUA at 310 CMR 15.405(1)(k)]		✓	
Test hole adequate to demonstrate four feet of suitable material? [310 CMR 15.103(4)]		✓	
Test Holes adequate to confirm adequate groundwater separation? [310 CMR 15.103(3)]		✓	
Benchmark within 50-75' of system [310 CMR 15.220(4)(q)]		✓	
Materials specifications noted? [various sections of 310 CMR 15.000]		✓	
System components not > 36" deep (unless Local Upgrade Approval or LUA requested) [310 CMR 15.405(1)(b)]		✓	
All system components marked with magnetic tape 15.221(12)		✓	
<b>SEPTIC TANK</b>			
	N/A	OK	No
Size OK? [310 CMR 15.223(1)]		✓	
Inlet tee located ten inches below flow line [310 CMR 15.227(6)]		✓	
Outlet tee 14" or 14" + 5" per foot for increase ft depth [310 CMR 15.227(6)]		✓	
Outlet tee with gas baffle or approved filter [310 CMR 15.227(4)]		✓	
Note regarding installation on stable compacted base [310 CMR 15.228(1)]		✓	

Separation between inlet and outlet tees (no less than liquid depth) [310 CMR 15.227(2)]	<del>✓</del>	✓		
Inlet/Outlet elevations at least 12" above high groundwater (except as described 310 CMR 15.227(5)) or permitted for upgrades under LUA [310 CMR 15.405(1)(k)]	<del>✓</del>	✓		
Minimum cover 9" (Tanks buried more than 9" must have risers on all openings and on the d-box) [310 CMR 15.2228(1) and 310 CMR 15.232(3)(f)]		✓		
Three access covers (inlet and outlet must be 20" or greater) - middle access at least 8" (by 7/07) [310 CMR 15.228(2)]		✓		
Access to within 6" of grade - one port for systems < 1000 gpd, two for systems > 1000 gpd [310 CMR 15.228(2)]		✓		
All at-grade covers secured to unauthorized access? [310 CMR 15.228(2)]				
> 10 ft from building foundation [310 CMR 15.211(1)]		✓		
Buoyancy calculation Required/Done [310 CMR 15.221(8)]	✓			
H-20 Where appropriate? [310 CMR 15.226(3)]	✓			
Setbacks from resources [310 CMR 15.211]		✓		
<b>Multi-Compartment Tanks</b>				
Required when other than single-family dwelling or flow > 1000 gpd [310 CMR 15.223(1)(b)]	✓			
First compartment 200% daily flow; Second compartment 100% daily flow [310 CMR 15.224(2) and (3)]	✓			
"U" pipe through or over baffle, outlet of each compartment with gas baffle or approved filter [310 CMR 15.224(4)]	✓			
<b>BUILDING SEWER AND OTHER PIPING</b>				
	N/A	OK	No	
Located at least ten feet from any water line? [310 CMR 15.222(2)]		✓		
Disposal piping at least 18" below water line (when water and sewer cross, see 310 CMR 15.211(1)[1])	✓			
Cleanouts required/provided? [310 CMR 15.222(8)]	✓			
Thrust blocks specified in force mains? 310 CMR 15.221(6)(c)]	✓			
Slope of sewer line not less than 0.01 (1/8"/ft) 0.02 preferable [310 CMR 15.222(6)]	<del>✓</del>	✓		
Proper pitch on all runs? (.005 within gravity-distributed trenches and beds) [310 CMR 15.251(9) and 310 CMR 15.252(2)(c)]		✓		
Siphon problem/ (leachfield below pump chamber)	✓			
Endcaps or vent manifold specified?		✓		
Size and orientation of discharge holes specified? (not smaller than 3/8" not larger than 5/8") [310 CMR 15.251(8) and 310 CMR 15.252(2)(h)]		✓		
Materials specified (310 CMR 15.251(5) specifies various pipe types allowed)		✓		
<b>DISTRIBUTION BOX</b>				

?

Stable compacted base [310 CMR 15.221(2) and 310 CMR 15.232(2)(a)]		✓		
Splash plate or baffle tee required on inlet/ provided? (when pressure sewer to d-box or steep pitch of gravity sewer) [310 CMR 15.323(3)(a)]	✓			
Riser if deeper than 9" [310 CMR 15.232(3)(f)]		✓		
Inside minimum dimension 12" [310 CMR 15.232(2)(b)]		✓		
Minimum sump 6" [310 CMR 15.232(3)(e)]		✓		
Watertight cover if <2000gpd; waterproof manhole if >2000gpd [310 CMR 15.232(3)(d)]		✓		
<b>PUMP CHAMBERS</b>				
Capacity (emergency storage above working=design flow)? [310 CMR 231(2)]	✓			
Proper setbacks [310 CMR 15.211 (same as septic tanks)]				
Watertight 20-in minium access manhole at least 20" MUST BE TO GRADE [310 CMR 15.231(5)]				
Service components accessible (not too deep with piping, disconnects accessible)				
Alarm floats - alarm on circuit separate from pumps specified?				
Exceeds two units must have two pumps operating in lead-lag mode. [310 CMR 15.231(6) and (8)]				
Stable Compacted Base [310 CMR 15.221(2)]				
Buoyancy calculations needed ? Provided? [310 CMR 15.221 (8)]				
Dosing chamber capacity (required and provided), pump curves and specifications, number of dosing cycles and depth per cycle? [310 CMR 15.220(4)(r )]				
Effluent tee filter provided? [310 CMR 15.231(10)]				
<b>SOIL ABSORPTION SYSTEMS (SAS) GENERAL</b>		N/A	OK	No
Calculations correct?		✓		
4 feet of naturally occurring material demonstrated? [310 CMR 15.240(1)]		✓		
Required separation to groundwater? [310 CMR 15.212]		✓		
Aggregate specified as double washed [310 CMR 15.247(2)]		✓		
System Venting required/provided? (system under driveway or >36" deep) [310 CMR 15.241]				✓
Inspection ports specified and within 3" final grade? [310 CMR 15.240(13)]		✓		
Breakout requirements met? (No violation of breakout elevation within 15 ft of SAS unless barrier) [310 CMR 15.211(1)[4] and Guidance Document]		✓		
<b>GALLERIES,PITS,CHAMBERS 310 CMR 15.253</b>				
Chambers and Gal. in trench configuration supplied with inlet every 20 ft. [310 CMR 15.253(6)]	✓			
Each structure with one inspection manhole (if >2000 gpd must be to grade) [310 CMR 15.253(2)]				



Aggregate 1' minimum- 4' maximum. [310 CMR 15.253(1)(b)]				
2' sidewall credit maximum [310 CMR 15.253(1)(a)]				
In bed configuration, inlet every 40 sq. ft. [310 CMR 15.253(6)]				
<b>TRENCHES 310 CMR 15.251</b>				
Width 2' minimum 3' maximum [310 CMR 15.251(1)(b)]				
100 feet - maximum length [310 CMR 15.251(1)(a)]				
Minimum separation 2x effective depth or width whichever greater (3x if reserve between trenches) [310 CMR 251(1)(d)]				
Situated along contours [310 CMR 15.251(2)]				
Breakout OK? [310 CMR 15.211(1)[4] and Guidance Document]				
<b>BED SAS (Maximum size of bed or field 5000 gpd)</b>				
minimum 2 distribution lines [310 CMR 15.252(2)(a)]			✓	
Maximum separation between lines 6' [310 CMR R15.252(2)(d)]			✓	
Maximum separation between lines and outside of bed 4' [310 CMR 15.252(2)(e)]			✓	
Aggregate depth below discharge pipes 6" minimum, 12" maximum. [310 CMR 15.252(2)(g)]			✓	
Separation between beds 10' minimum. [310 CMR 15.252(2)(f)]	✓			
Bottom area used in calculations only [310 CMR 15.252(2)(i)]			✓	
<b>DID THE PLAN INVOLVE</b>				
	N/A	OK	No	
<i>Pressure Dosed System ? Provided pump and piping calculations as required [310 CMR 15.220(4)(r)]</i>				✓
<i>Groundwater Separation Per 310 CMR 15.240(12) does the groundwater separation take into account mounding.</i>	✓			
Pressure dosing required on all systems >2000gpd or alternative systems under remedial approval [310 CMR 15.254(2) and I/A Remedial Use Approvals]	✓			
If used in gravelless system - make sure jet is directed as not to scour soil interface [Guidance Document]	✓			
Inspections once per year (systems < 2000 gpd) or quarterly (>2000gpd) good to note on plan [310 CMR 15.254(2)(d)]	✓			
<i>Construction in fill - Did the plan specify that the fill shall meet the specification of 310 CMR 15.255(3)?</i>	✓			
Impervious barrier and/or retaining wall ? [Guidance Document]	✓			
Impervious barrier installation must be supervised by designer [310 CMR 15.255(2)(b)]	✓			
Retaining wall must be designed by Registered Professional Engineer [310 CMR 15.255(2)(a)]	✓			
Side slope not exceed 3:1 ? [310 CMR 15.255(2)]		✓		
Breakout requirements met? [310 CMR 15.252(2) and Guidance Document]		✓		
At least 5 ft. from impervious barrier to edge of SAS (10 ft. recommended) [310 CMR 15.255 (2)(e)]		✓		

<i>Gravelless System [I/A Approval Letters]</i>				
Check DEP Approval letters for credits and design conditions	✓			
If used with pressure dosing do not allow pressure discharge to scour soil interface	✓			
<i>Alternative Septic System [I/A Approval Letters]</i>				
Was DEP Approval Letter provided and/or have you reviewed the letter for conditions?	✓			
Is the technology being properly applied and does it meet all DEP Approval Conditions?				
Is there a note on the plan regarding the requirement for perpetual maintenance agreement?				
Any alarms involved on separate circuits				
Did the applicant submit an operation and maintenance manual?				
Has applicant submitted a copy of a maintenance agreement?				
<i>Variances</i>				
Are the variances listed on the plan ? [310 CMR 15.220 (4) (p)]	✓			
RLS Stamp necessary on plan if a component is within five feet of property line [310 CMR 15.412(4)]	✓			
New construction or increased flow proposed - [Refer to 310 CMR 15.414]	✓			
<i>Nitrogen Sensitive Areas</i>				
	N/A	OK	No	
Is the system in a Designated Nitrogen Sensitive Area (Zone II for a public supply well)? [310 CMR 15.214, 310 CMR 15.215 and 310 CMR 15.216 - also refer to Policy regarding upgrades of such existing systems]	✓			
Is the system proposed on the same lot as served by private well ? [310 CMR 15.214(2)]				
Are the nitrogen loads proposed in compliance? [310 CMR 15.216(1)]				
<i>Miscellaneous</i>				
Pumping to septic tank ? [ 310 CMR 15.229]	✓			
Shared System [310 CMR 15.290]	✓			

No. \_\_\_\_\_

COMMONWEALTH OF MASSACHUSETTS

Board of Health, Amherst, MA.

APPLICATION FOR DISPOSAL SYSTEM CONSTRUCTION PERMIT



Application for a Permit to Construct  Repair ( ) Upgrade ( ) Abandon ( ) -  Complete System  Individual Components

Location <u>LOT 4</u>	Owner's Name <u>Ken Leblanc</u>
Map/Parcel# <u>Map 3D, LOT 21, Parton</u>	Address <u>POB-307, S. Hadley, MA 01077</u>
Lot# <u># 4</u>	Telephone#
Installer's Name <u>Rue Drive Excavating</u>	Designer's Name <u>Alan Weiss, R.S.</u>
Address <u>Hadley, MA</u>	Address <u>Beldertown, MA</u>
Telephone# <u>504-1814</u>	Telephone# <u>413-323-5757</u>

Type of Building Proposed 4 BR. Home Lot Size 44,970 sq. ft.  
 Dwelling - No. of Bedrooms \_\_\_\_\_ Garbage grinder (  )  
 Other - Type of Building \_\_\_\_\_ No. of persons \_\_\_\_\_ Showers ( ), Cafeteria ( )  
 Other Fixtures \_\_\_\_\_  
 Design Flow (min. required) 440 gpd Calculated design flow 466 Design flow provided 466 gpd  
 Plan: Date 10/19/12 Number of sheets 1 Revision Date \_\_\_\_\_  
 Title Septic system + Well Location Plan  
 Description of Soil(s) L.S. (Class 1)  
 Soil Evaluator Form No. \_\_\_\_\_ Name of Soil Evaluator A. Weiss Date of Evaluation 6/8/12

DESCRIPTION OF REPAIRS OR ALTERATIONS Proposed New Const.

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 Kenneth C. Blue Date 10-26-12

Inspections \_\_\_\_\_

No. \_\_\_\_\_

COMMONWEALTH OF MASSACHUSETTS

Board of Health, \_\_\_\_\_, 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: \_\_\_\_\_ at \_\_\_\_\_

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. \_\_\_\_\_, dated \_\_\_\_\_, Approved Design Flow \_\_\_\_\_ (gpd)

Installer: \_\_\_\_\_

Designer: \_\_\_\_\_ Inspector: \_\_\_\_\_ Date: \_\_\_\_\_

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

No. \_\_\_\_\_

COMMONWEALTH OF MASSACHUSETTS

Board of Health, \_\_\_\_\_, MA.

DISPOSAL SYSTEM CONSTRUCTION PERMIT

Permission is hereby granted to; Construct ( ) Repair ( ) Upgrade ( ) Abandon ( ) an individual sewage disposal system at \_\_\_\_\_ as described in the application for

Disposal System Construction Permit No. \_\_\_\_\_, dated \_\_\_\_\_.

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





# COLD SPRING ENVIRONMENTAL CONSULTANTS INC.

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- 2IE Site Investigations
- Subsurface Investigations
- Pollution Remediation
- LSP on Staff
- Forensic Septic Investigations

- Percolation Tests
- Septic Designs
- Regulatory Compliance
- Recycling and Solid Waste
- Second Opinions

## Percolation Testing Reports

Prepared by:

Cold Spring Environmental Consultants, Inc.  
350 Old Enfield Road  
Belchertown, MA. 01007

Prepared for:

WD Cows

Cinda Jones, President  
POB 9677  
N. Amherst, MA 01059

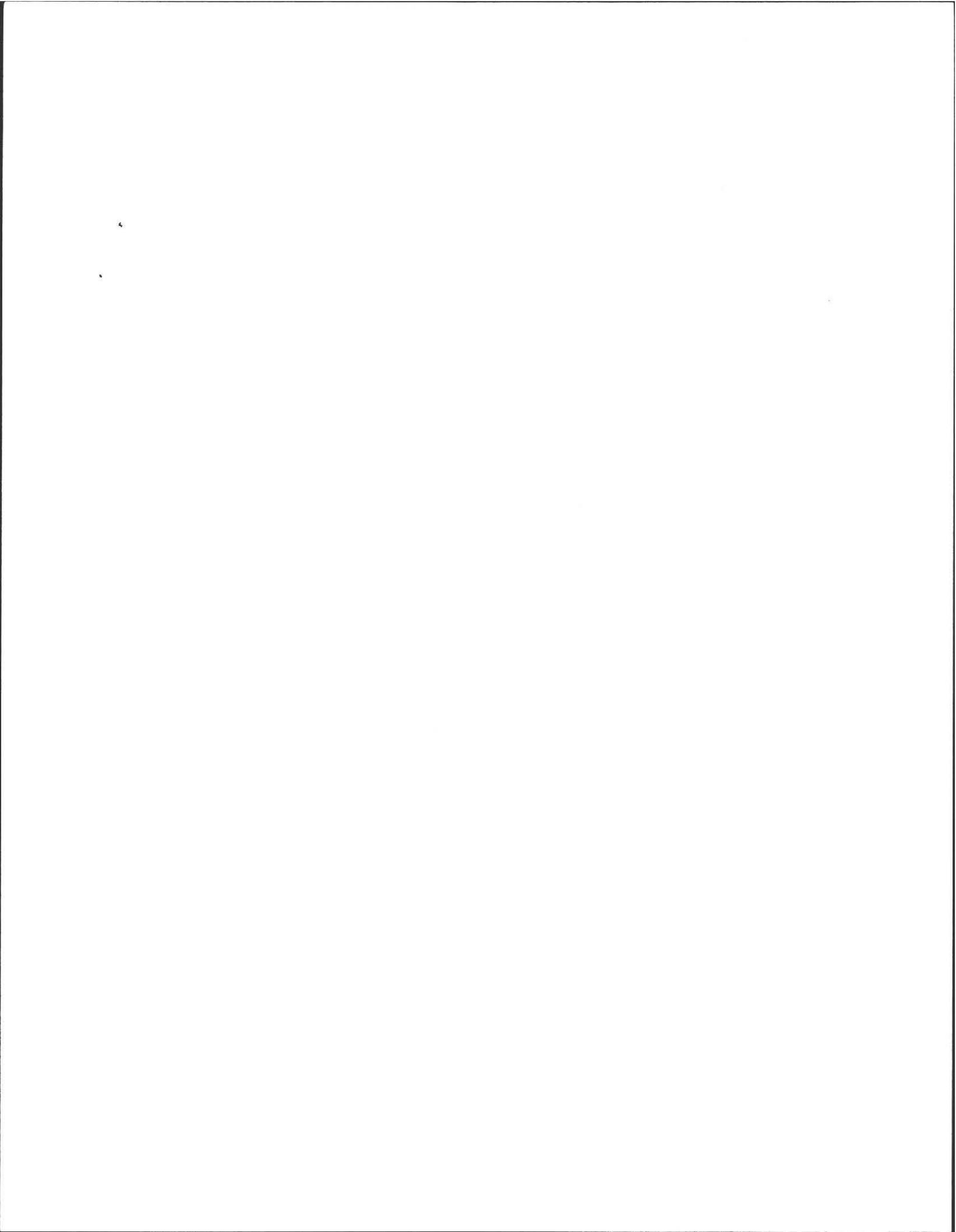
Location:

Lot # 4 (Map 3D, Lot 21 (portion))  
Flat Hills Road  
Amherst, MA

**Project Number:** 109-3285-1203

**System Evaluator:** Alan Weiss, RS

**Date:** June 9, 2012





ALAN E. WEISS, M.S., R.S., L.S.P.

Licensed Site Professional  
Registered Sanitarian  
Hydrogeologist  
President

- Wetland Consults
- Soil and Water Testing
- 21E Site Investigations
- Percolation Tests and
- Septic Designs
- Title 5 Inspections

350 Old Enfield Rd.  
Belchertown, MA 01007  
(413) 323-5957 & 323-4916 (FAX)  
aweiss@charter.net

Date: 6/8/12

Commonwealth of Massachusetts  
Amherst, Massachusetts

Soil Suitability Assessment for On-site Sewage Disposal

Performed By: A. Weiss

Date: 6/8/12

Witnessed By: E. Smith

Location Address or Lot # <u>(LOT #4) Map 3D to 21 (Percol)</u> <u>Flat Hills RD -</u>	Owner's Name: <u>c/o Sarah La Cour</u> Address, and <u>W.D. Cawls</u> Telephone # <u>POB. 9677, 134 Montague RD</u> <u>N. Amherst, MA 01057</u>
New Construction <input checked="" type="checkbox"/> Repair <input type="checkbox"/>	

(549 - 1403 x - 337)

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)

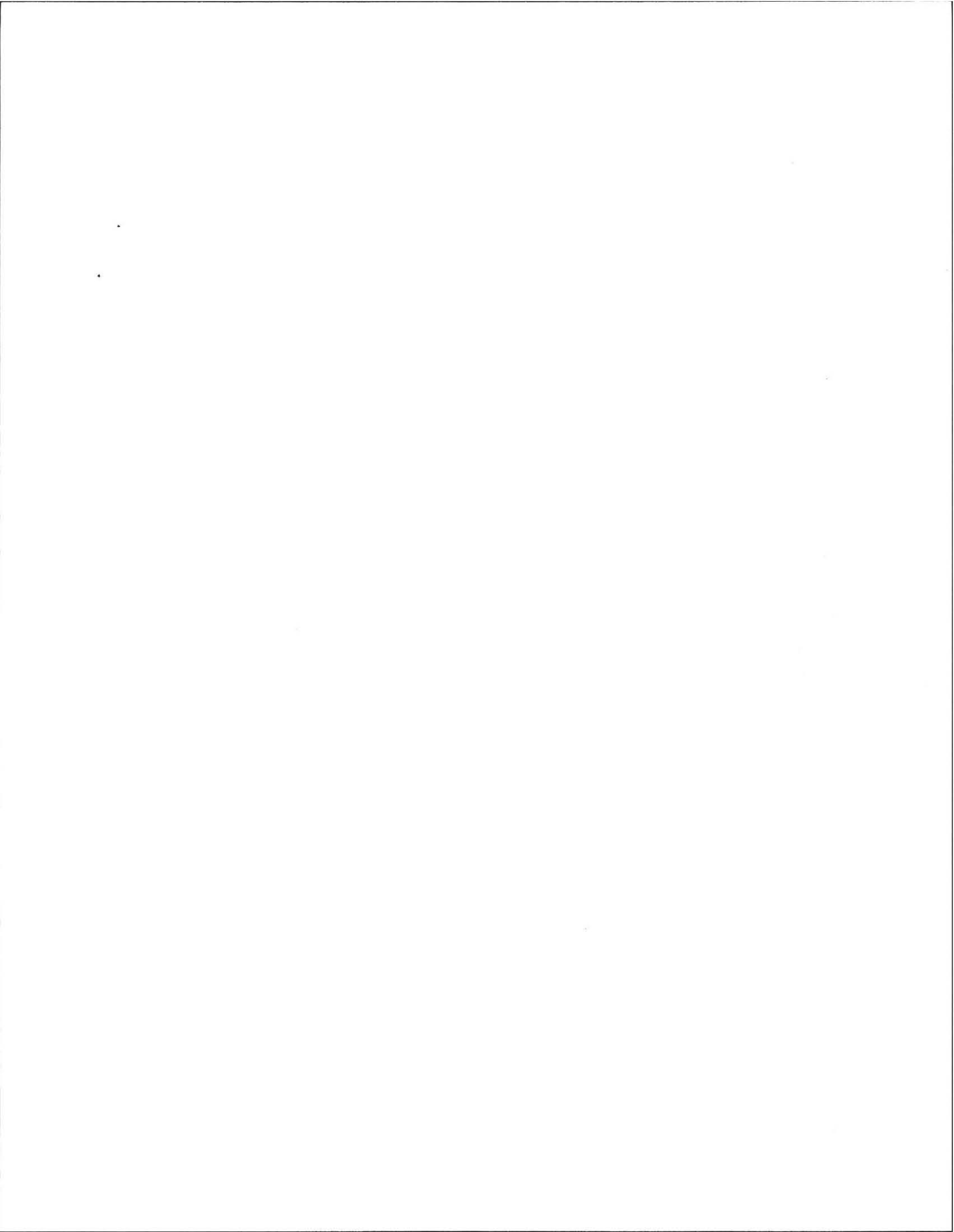
Wetlands Conservancy Program Map (map unit)

Current Water Resource Conditions (USGS): Month

Range : Above Normal  Normal  Below Normal

Other References Reviewed: \_\_\_\_\_







Location Address or Lot No. Lot #4, Flat Hills Rd

COMMONWEALTH OF MASSACHUSETTS

Amherst, Massachusetts

Percolation Test*		
Date: <u>6/8/12</u>		Time: <u>8/8/12 9:00 AM</u>
Observation Hole #	Perc # (1)	Perc # (2)
Depth of Perc	<u>48"</u>	<u>49"</u>
Start Pre-soak	<u>9:35</u>	<u>10:00</u>
End Pre-soak	<u>9:52</u>	<u>10:16</u>
Time at 12"	<u>9:52</u>	<u>10:22</u>
Time at 9"	<u>9:59</u>	<u>10:30</u>
Time at 6"	<u>10:14</u>	<u>10:38</u>
Time (9"-6")	<u>15 min</u>	<u>8</u>
Rate Min./Inch	<u>5 <math>\frac{min}{IN}</math></u>	<u>3 <math>\frac{min}{IN}</math></u>

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

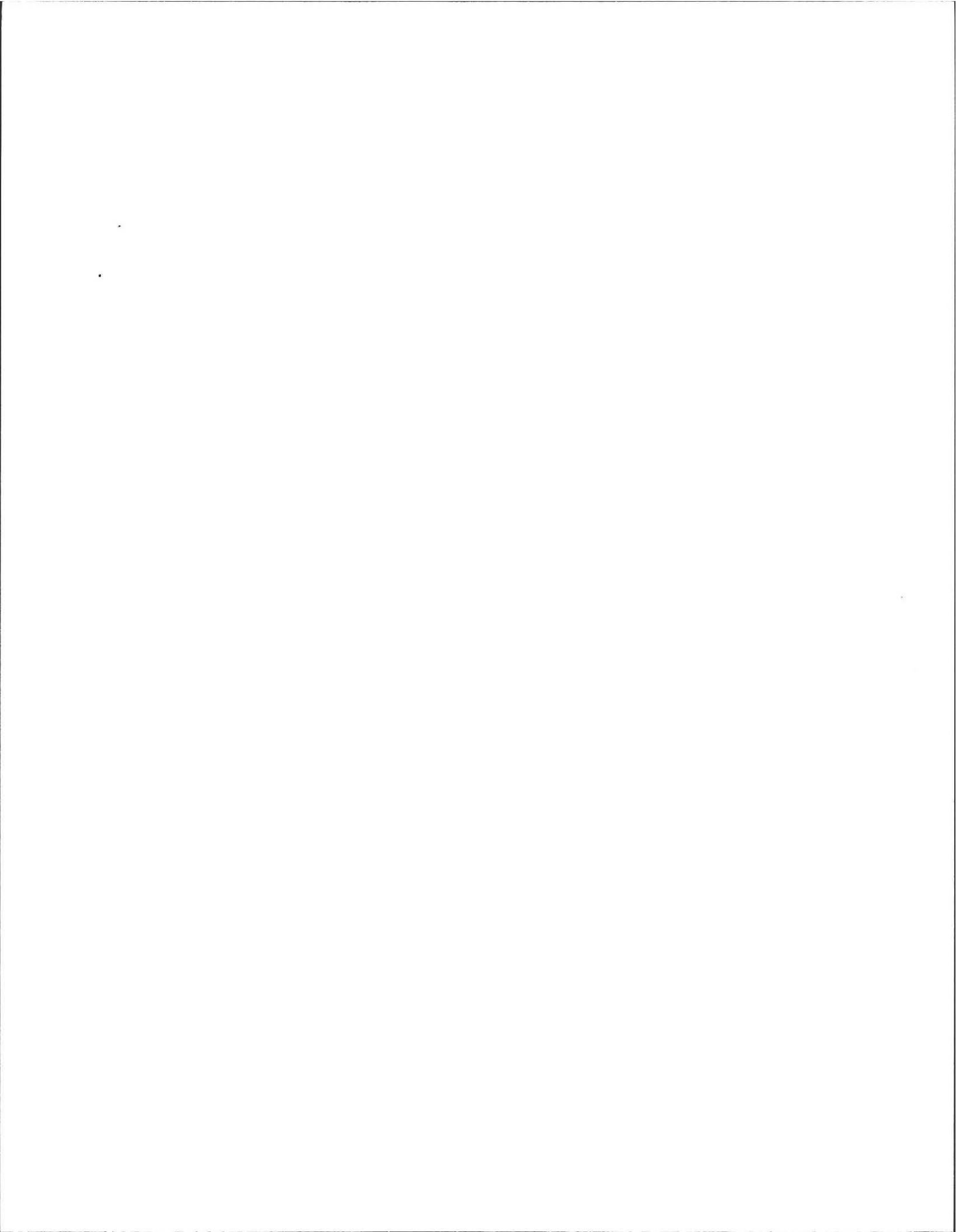
Site Passed  Site Failed

Performed By: Alan Weiss RS

Witnessed By: Ed. Smith

Comments: \_\_\_\_\_





Location Address or Lot No. "LOT" 4. Flat Hills RD

Determination for Seasonal High Water Table

Method Used:

- Depth observed standing in observation hole ..... inches
- Depth weeping from side of observation hole ..... inches
- Depth to soil mottles 60-62" inches
- Ground water adjustment ..... feet

Index Well Number ..... Reading Date ..... Index well level

Adjustment factor ..... Adjusted ground water level .....

Depth of Naturally Occurring Pervious Material

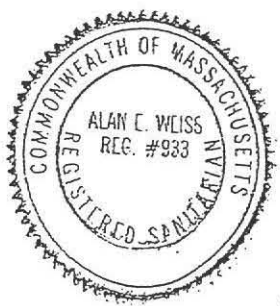
Does at least four feet of naturally occurring pervious material exist in all areas observed throughout the area proposed for the soil absorption system? YES

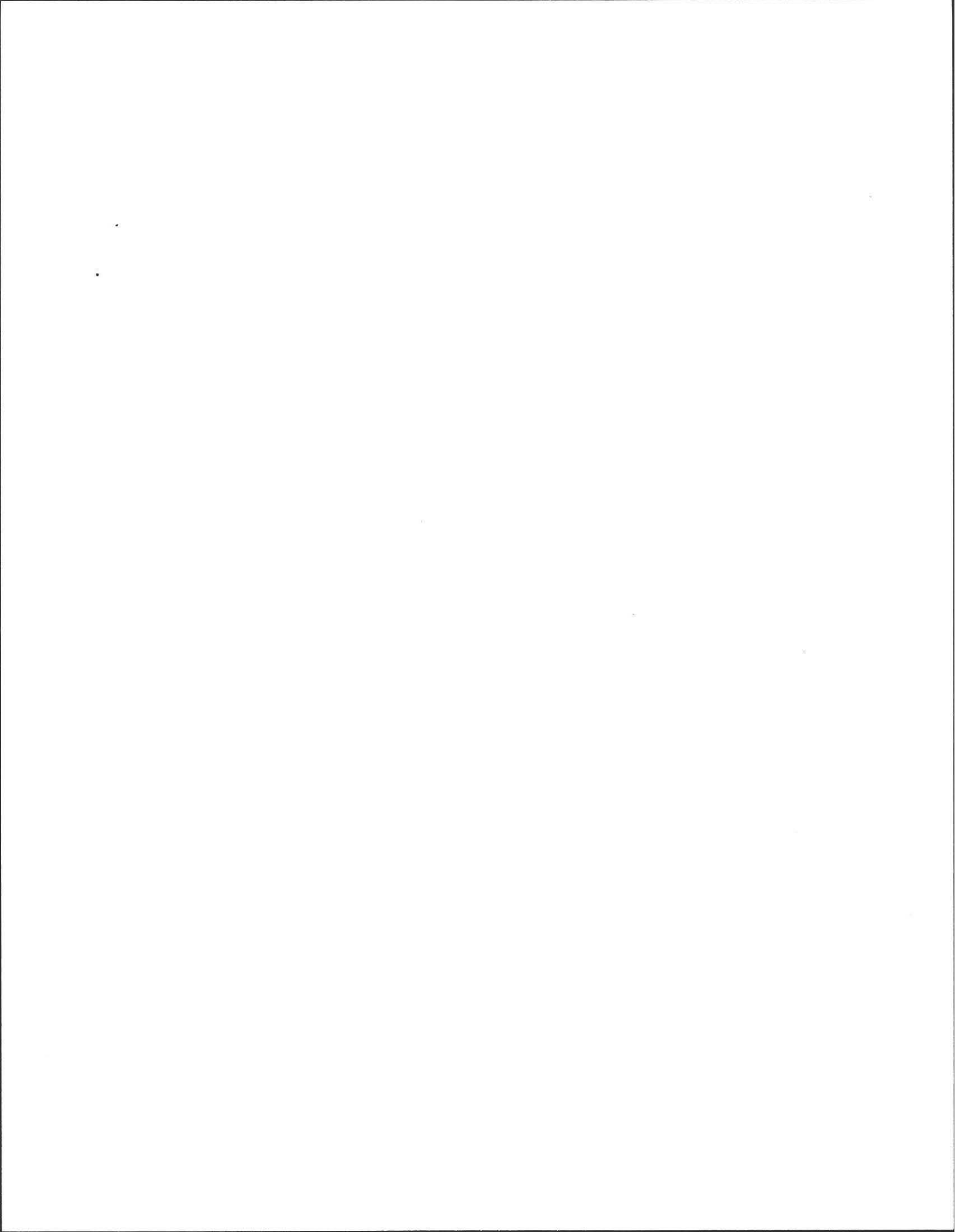
If not, what is the depth of naturally occurring pervious material?       

Certification

I certify that on 6/95 (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 6/8/12





Location Address or Lot No. Lot #4 Flat Hills RD

On-site Review

Deep Hole Number 1D4 Date: 6/8/12 Time: 9:00 Weather SW 70°

Location (identify on site plan) \_\_\_\_\_

Land Use Wooded Slope (%) 2 Surface Stones 4-5

Vegetation Mixed deciduous

Landform Terrace

Position on landscape (sketch on the back) \_\_\_\_\_

Distances from:  
 Open Water Body 100' feet      Drainage way 50' feet  
 Possible Wet Area 100' feet      Property Line 40' feet  
 Drinking Water Well 100' feet      Other \_\_\_\_\_

DEEP OBSERVATION HOLE LOG

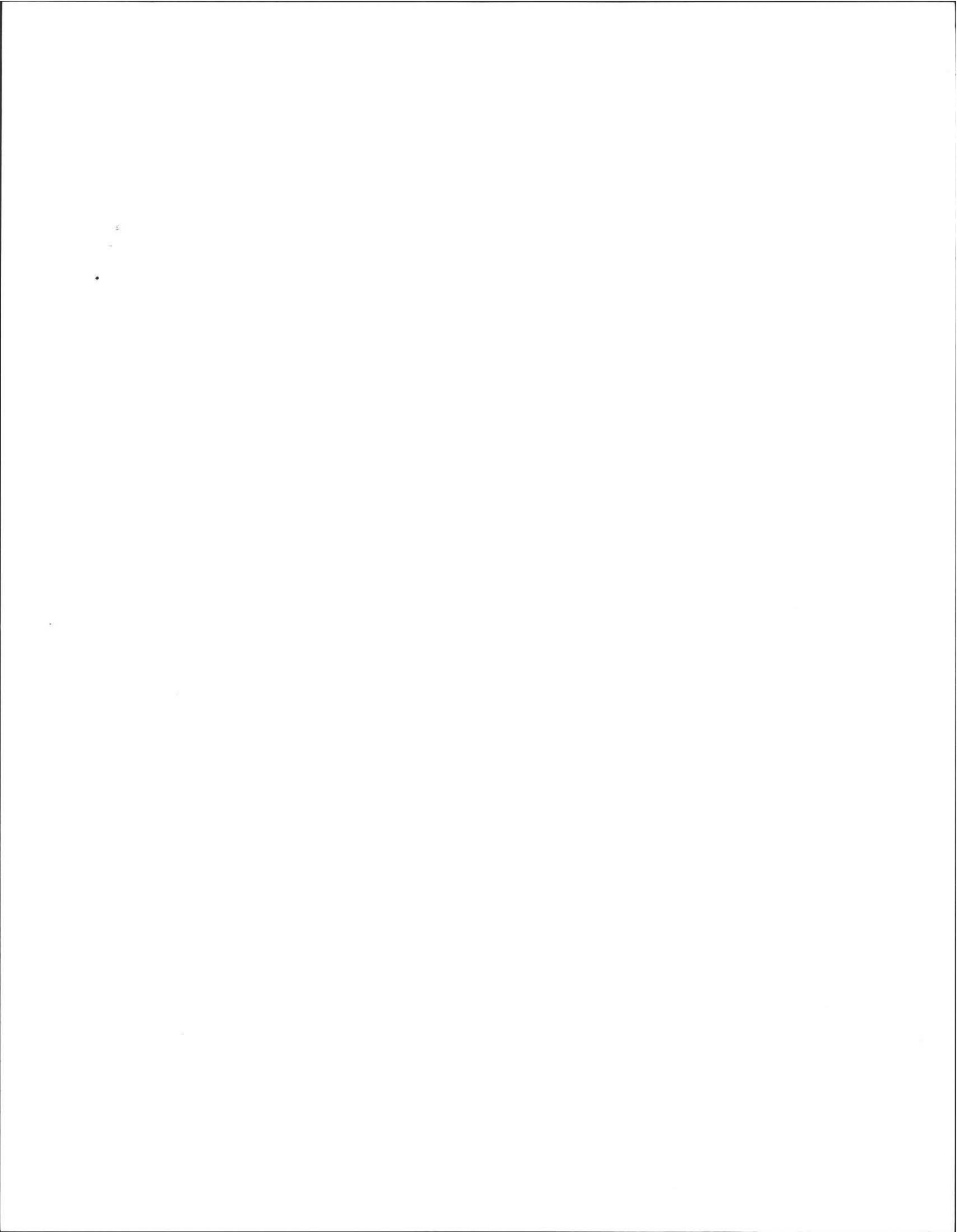
1  
2  
3  
4

Depth from Surface (Inches)	Soil Horizon	Soil Texture (USDA)	Soil Color (Munsell)	Soil Mottling	Other (Structure, Stones, Boulders, Consistency, % Gravel)
0-9" 9"-25" 25-112"	A Bw C1	F&L LS LS	10YR 3/3 10YR 4/2 2.5Y 4/3	60" 2.5Y 4/2	Friable Friable Loose F. Sandy Ablation till, 15% Stones Loose
0-8" 8-20" 20-86"	A Bw C1	F&L LS LS	↓	60" 2.5Y 4/2	Friable Friable Loose F. Sandy Ablation till Loose, 15% Stones
0-8" 8-22" 22"-96"	A Bw C1	F&C LS LS	↓	72" 2.5Y 4/2	Same as #1 ↓
0-7" 7'-25" 25-87"	A Bw C1	F&L LS LS	↓	72"	Same as #1 ↓

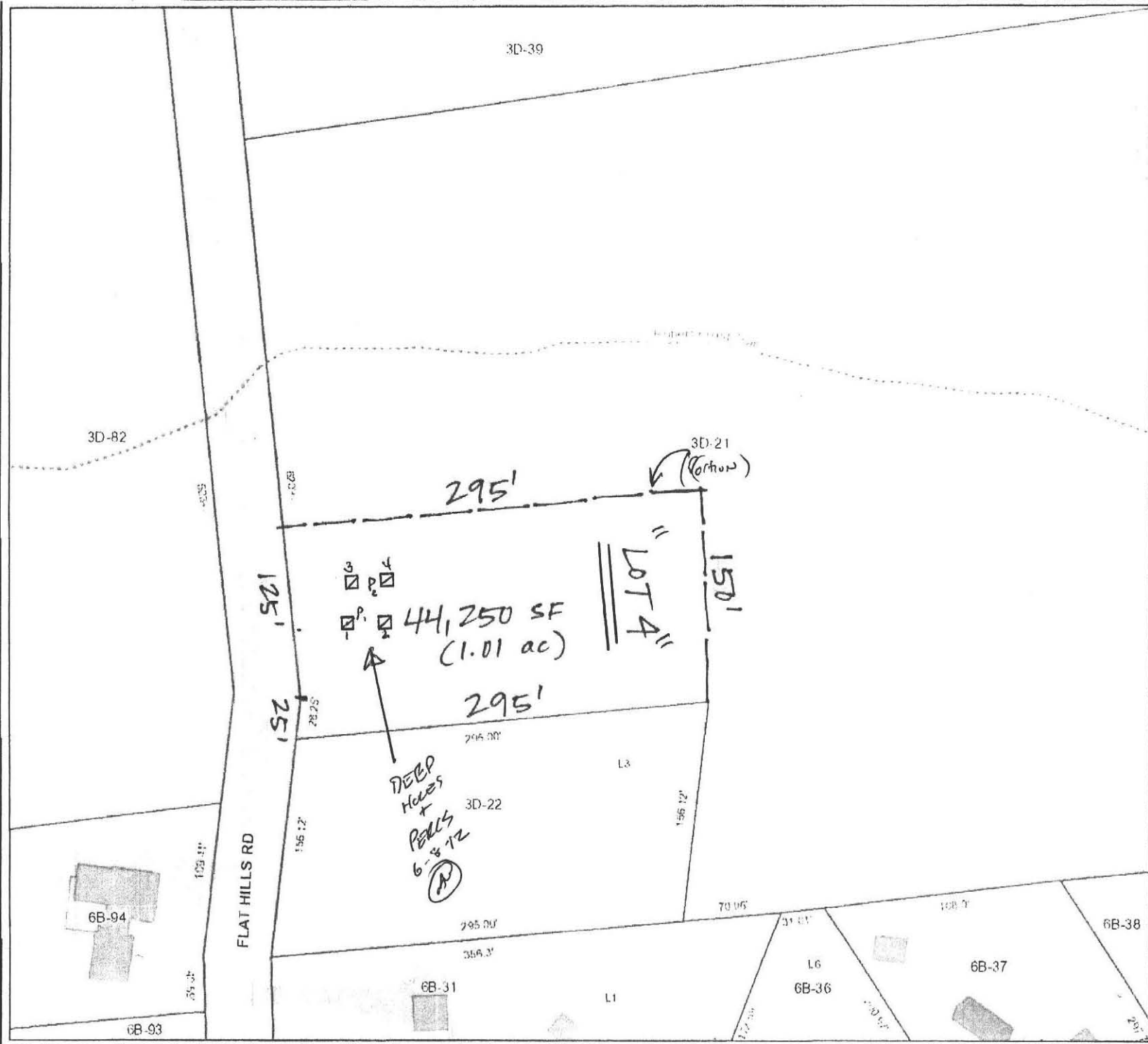
\* MINIMUM OF 2 HOLES REQUIRED AT EVERY PROPOSED DISPOSAL AREA

Parent Material (geologic) Ablation till      Depth to Bedrock: 86" - 112"  
 Depth to Groundwater: Standing Water in the Hole: Not      Weeping from Pit Face: Not  
 Estimated Seasonal High Ground Water: 60-72"





WDC Flat Hills Rd- Lot 4



- |                           |                        |
|---------------------------|------------------------|
| <b>Property Map</b>       | <b>Driveways</b>       |
| Property Lines            | Driveway Paved         |
| Property Line             | Driveway Unpaved       |
| Hydrographic Property     | Sidewalks              |
| Right of Way Line         | Transportation         |
| Town Boundary             | Paved street polygons  |
| Other Property Lines      | Unpaved street poly    |
| Former Property Line      | Bridges                |
| Subdivision Lot Line      | Bridge docking and str |
| Easements                 | Foot Bridge            |
|                           | Rail Bridge            |
| <b>Basemap</b>            |                        |
| Trails                    |                        |
| Rail Lines                |                        |
| <b>Structures</b>         |                        |
| Building                  |                        |
| Foundation or in const    |                        |
| Outbuilding or Miscell    |                        |
| Deck, Porch, Stairs or    |                        |
| Mobile home, Trailer      |                        |
| Swimming Pool             |                        |
| Building Ruins            |                        |
| Water storage tank        |                        |
| <b>Rivers and Streams</b> |                        |
| Streams                   |                        |
| Major Culverts            |                        |
| Hydro Connector           |                        |
| Headwalls, Floodwalls     |                        |
| <b>Landcover</b>          |                        |
| Brush and scrub vege      |                        |
| Tree and forest vege      |                        |
| Cultivated field          |                        |
| Gravel pile               |                        |
| Quarry                    |                        |
| Misc Impervious Surfa     |                        |
| <b>Parking</b>            |                        |
| Parking Paved             |                        |
| Parking Unpaved           |                        |

Horizontal Datum: MA Stateplane Coordinate System, Zone 4151, Datum NAD83, Feet  
Vertical Datum: NAVD88, Feet

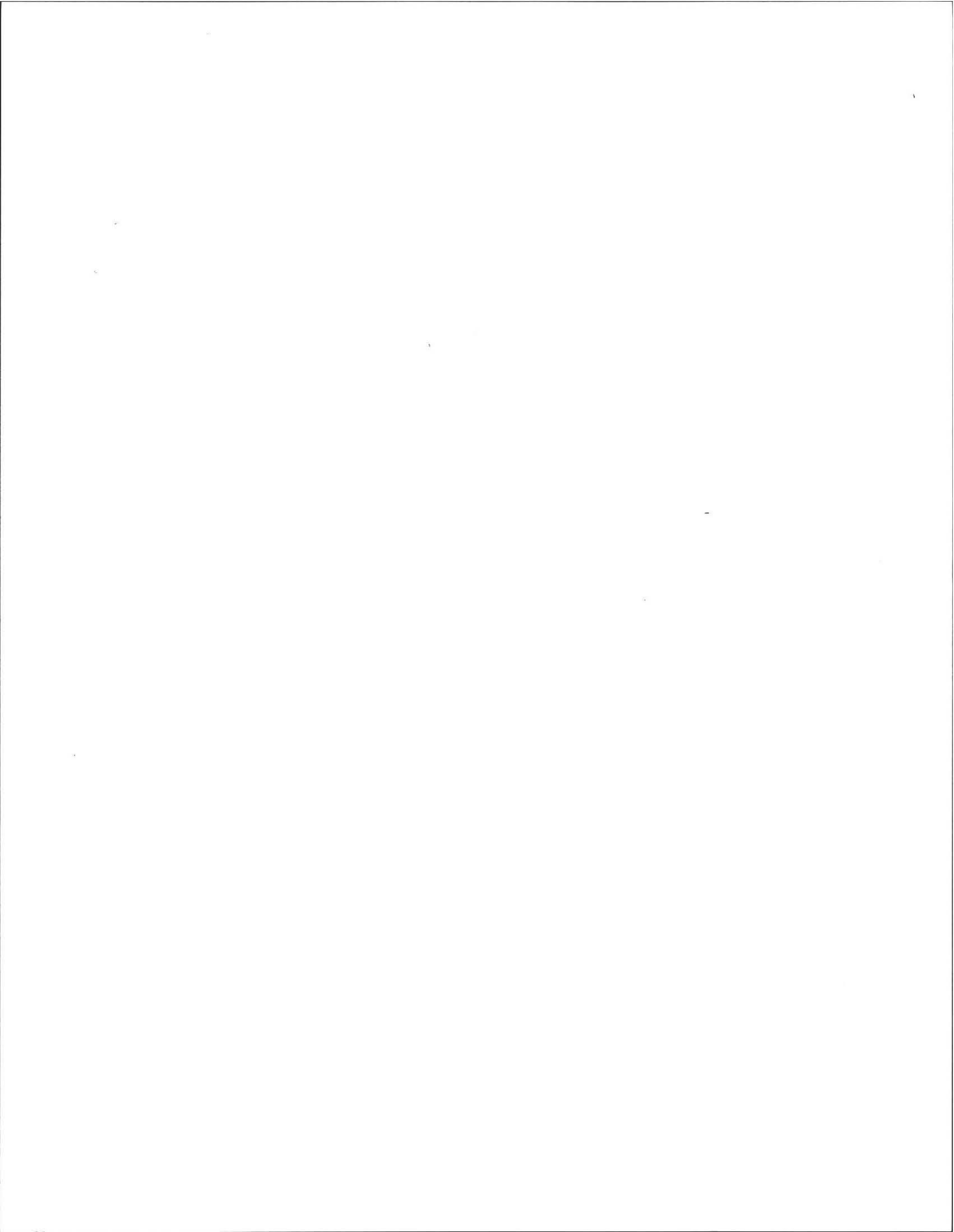
Planimetric & topographic basemap features compiled at 1"=40' scale from April, 2009 Aerial Photography  
Parcels compiled to match the basemap, revisions are ongoing.

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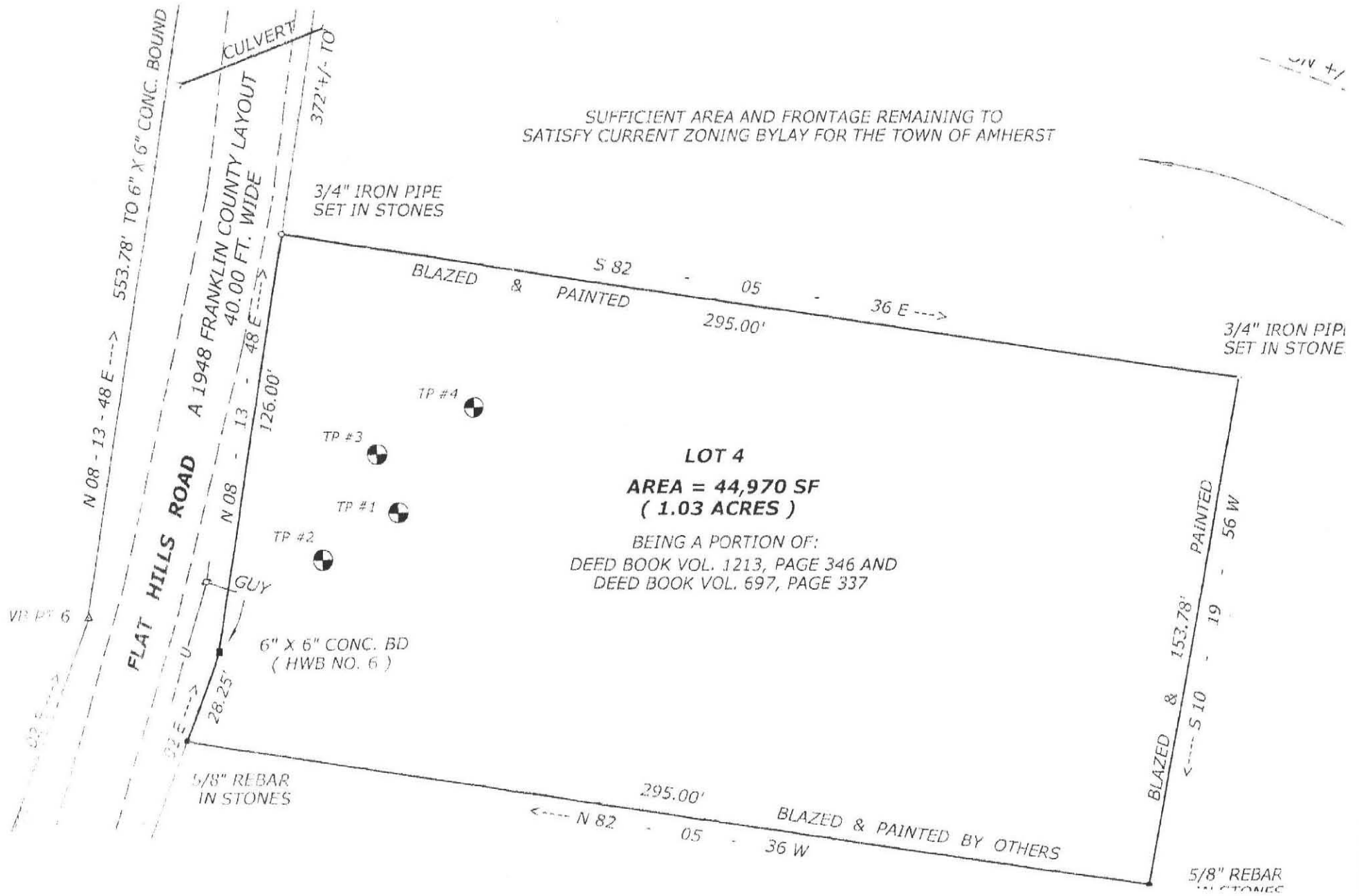
THE TOWN OF AMHERST MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, CONCERNING THE ACCURACY, COMPLETENESS, RELIABILITY, OR SUITABILITY OF THESE DATA. THE TOWN OF AMHERST DOES NOT ASSUME ANY LIABILITY ASSOCIATED WITH THE USE OR MISUSE OF THIS INFORMATION.

1" = 100 ft









SUFFICIENT AREA AND FRONTAGE REMAINING TO SATISFY CURRENT ZONING BYLAW FOR THE TOWN OF AMHERST

**LOT 4**  
**AREA = 44,970 SF**  
**( 1.03 ACRES )**

BEING A PORTION OF:  
 DEED BOOK VOL. 1213, PAGE 346 AND  
 DEED BOOK VOL. 697, PAGE 337

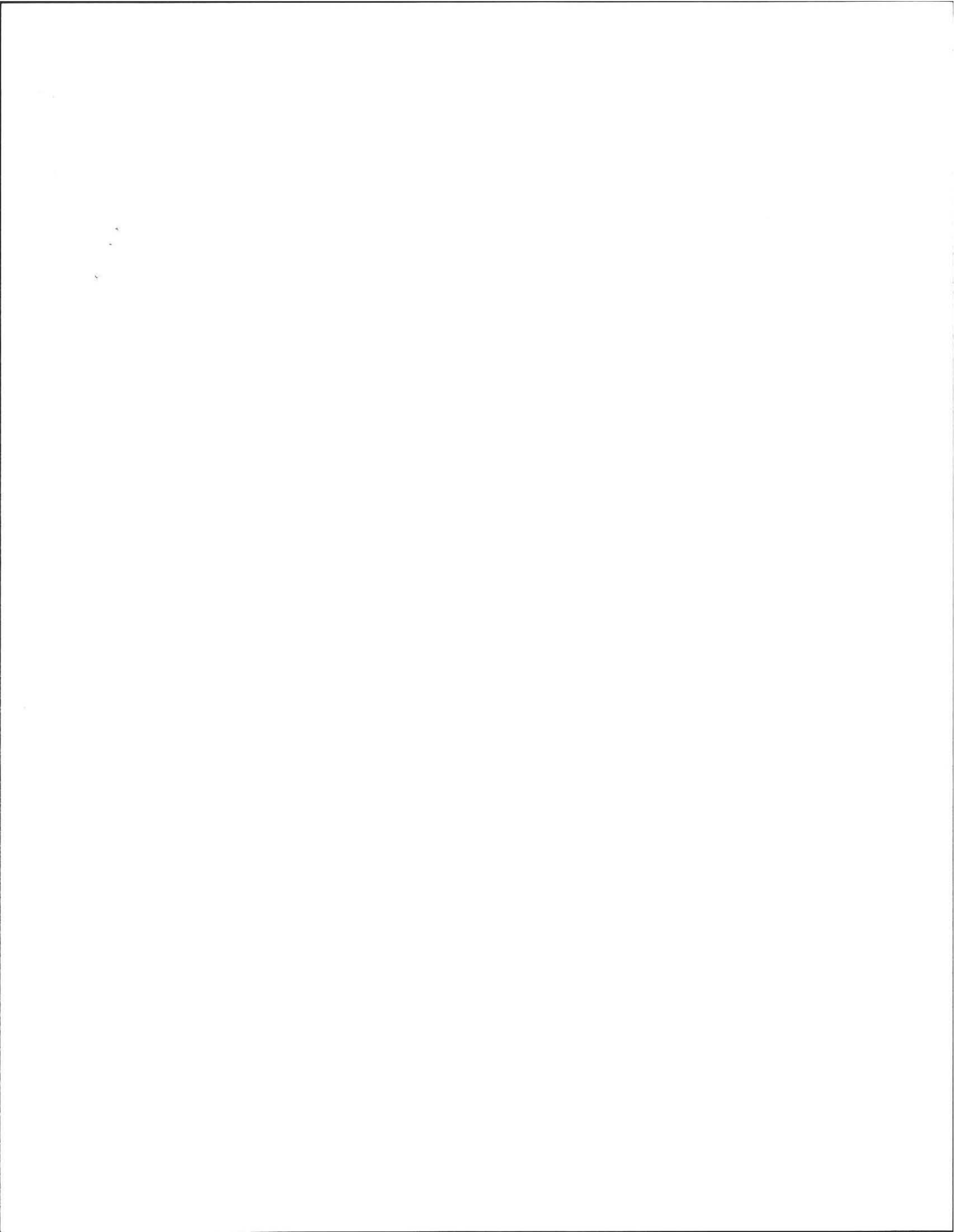
N 08 - 13 - 48 E ---> 553.78' TO 6" X 6" CONC. BOUND  
 FLAT HILLS ROAD  
 A 1948 FRANKLIN COUNTY LAYOUT  
 40.00 FT. WIDE  
 372' +/- TO  
 3/4" IRON PIPE SET IN STONES  
 3/4" IRON PIPE SET IN STONE  
 5/8" REBAR IN STONES  
 5/8" REBAR IN STONES  
 N 08 - 13 - 48 E ---> 126.00'  
 N 08 - 13 - 48 E ---> 28.25'  
 GUY  
 6" X 6" CONC. BD ( HWB NO. 6 )  
 TP #4  
 TP #3  
 TP #1  
 TP #2  
 31 E --->  
 VIB PT 6  
 92 E --->

BLAZED & PAINTED  
 S 82 - 05 - 36 E --->  
 295.00'

BLAZED & PAINTED BY OTHERS  
 N 82 - 05 - 36 W  
 295.00'

BLAZED & PAINTED  
 S 10 - 19 - 56 W  
 153.78'

514 +/-

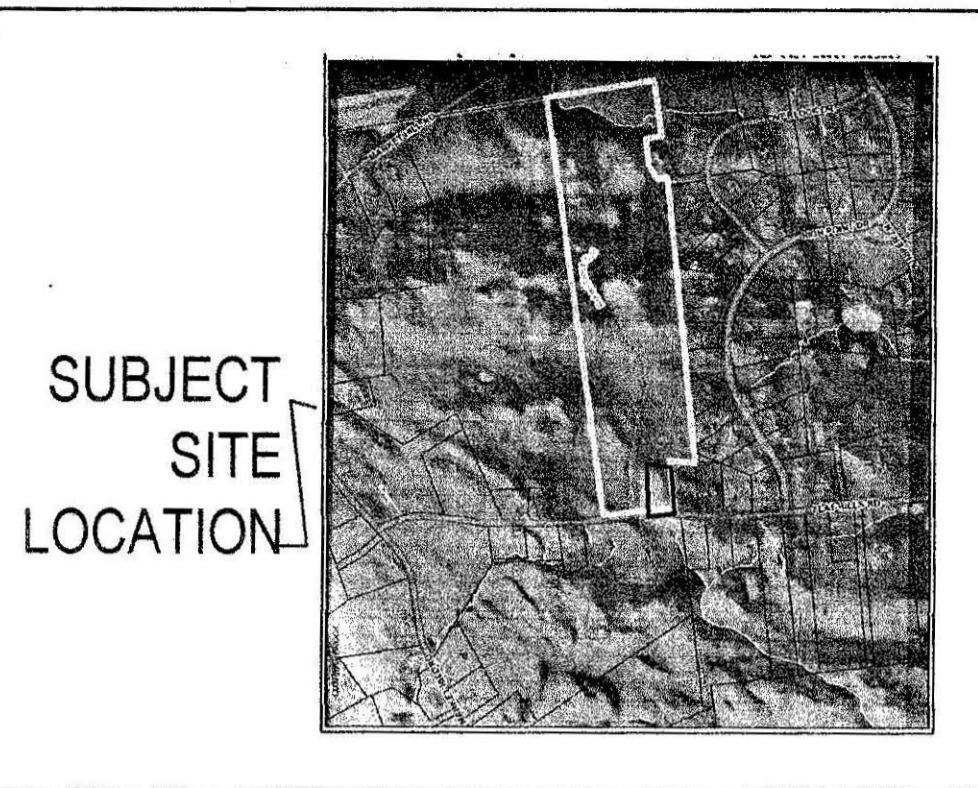
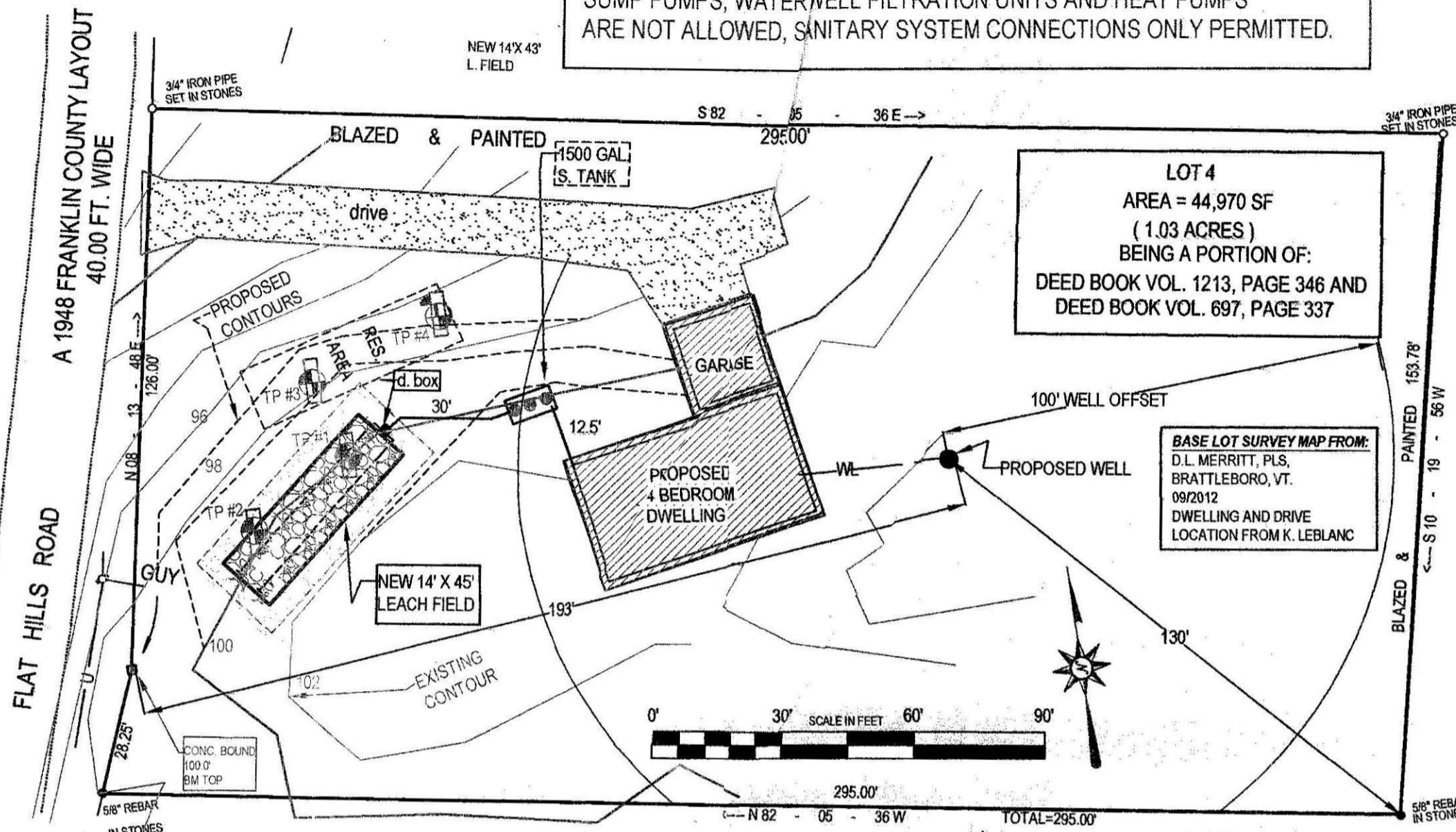


**GRAVITY SLOPE SEPTIC SYSTEM OPERATION AND MAINTENANCE NOTES FOR HOMEOWNER:**

- HAVE TANK PUMPED EVERY 2 YEARS.
- MAINTAIN AREA OVER SEPTIC SYSTEM AS GRASSY OR SIMILAR GROUND COVER.
- DO NOT PLANT ANY TREES OR DEEP ROOTING SHRUBS WITHIN 10 FEET OF SYSTEM.
- USE ONLY LIQUID DETERGENTS & LOW FLOW WASHERS.
- WIPE ALL OIL AND GREASE FROM COOKWARE AND DISPOSE IN TRASH NOT SEPTIC.
- All Toilets and Faucets must be confirmed to not be leaking, because one leaking fixture can fail a septic system in ONE DAY.

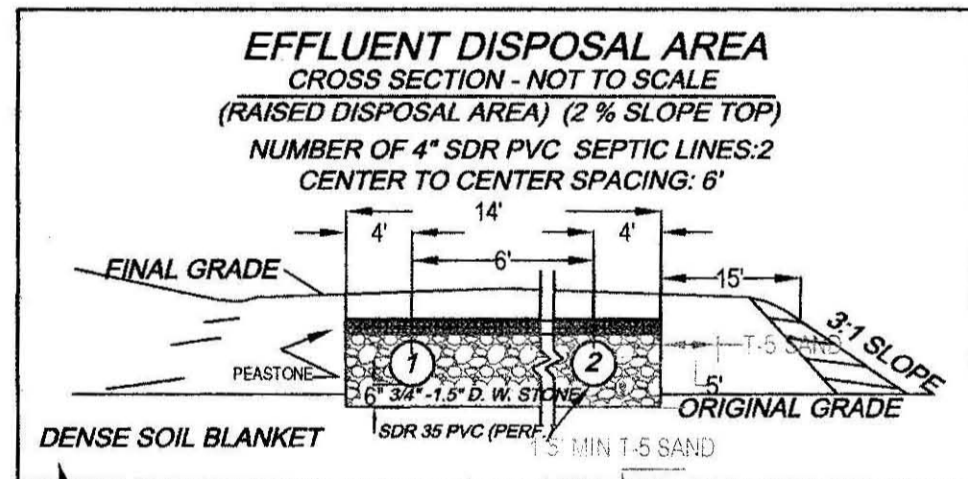
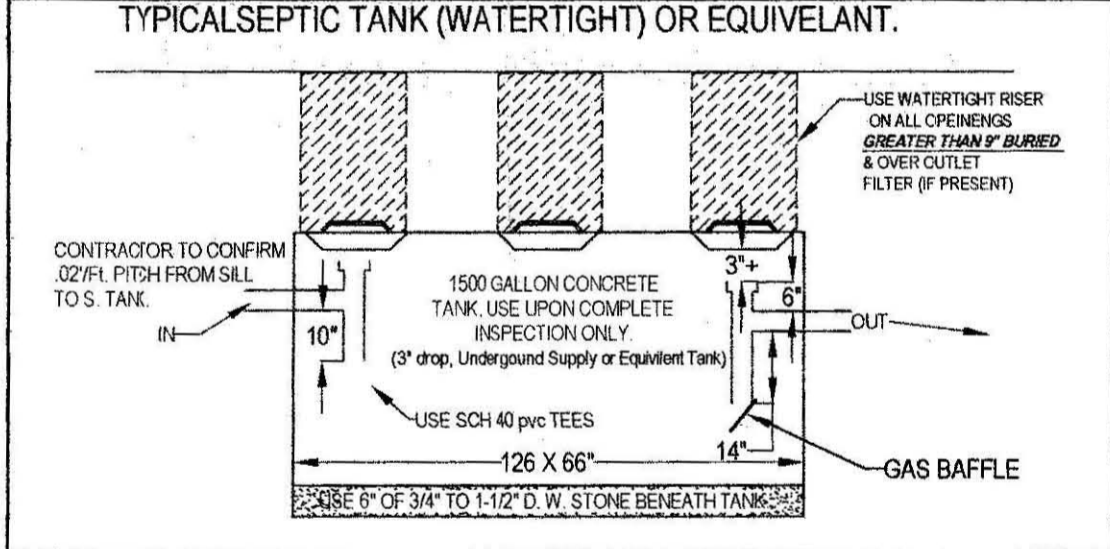
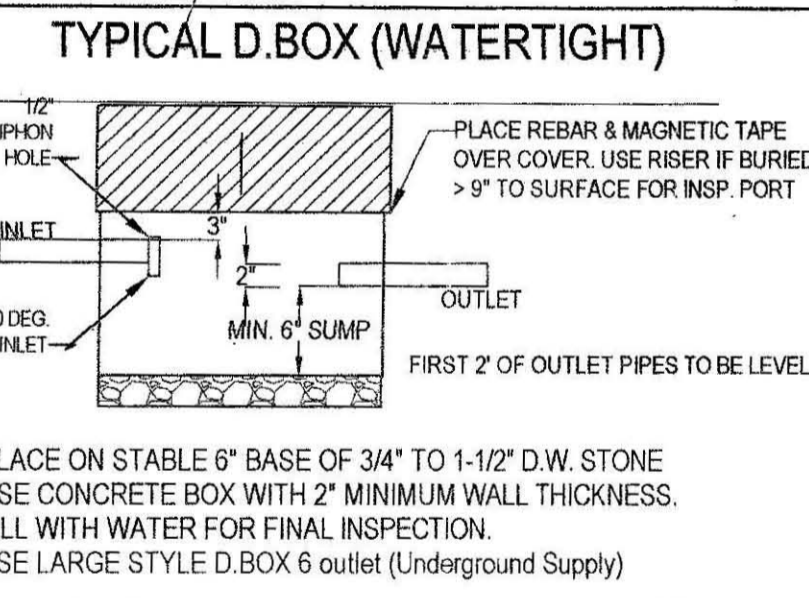
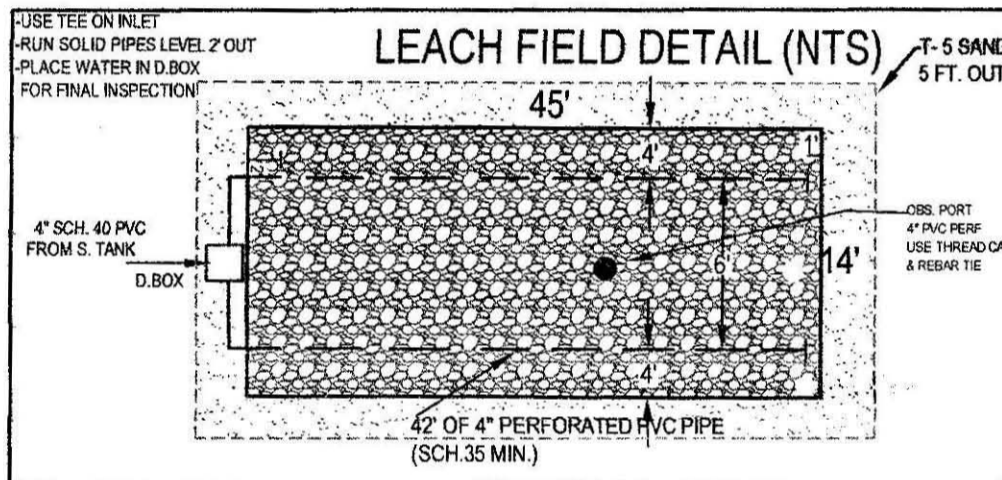
**NOTE TO HOMEOWNER: FILL, WHERE USED, ARE REQUIRED BY STATE CODE TO MAXIMIZE THE DISTANCE FROM THE BOTTOM OF THE LEACHING FIELD TO THE TOP OF THE ESTIMATED HIGH GROUNDWATER. THIS "SEPARATION" FROM HIGH GROUNDWATER (3, 4, OR 5 FEET), IS NOT THE SAME AS THE HEIGHT OF THE FINISHED MOUND SURFACE. THE ACTUAL FINISHED MOUND IS TYPICALLY HIGHER THAN THE "SEPARATION". BY SIGNING PERMIT YOU ACKNOWLEDGE THAT COLD SPRING ENVIRONMENTAL CONSULTANTS INC. IS NOT RESPONSIBLE FOR THE AESTHETICS OF FILLED OR MOUNDED SYSTEMS.**

**NOTE TO HOMEOWNER AND CONTRACTOR:**  
CONNECTIONS FROM HEATING SYSTEM, AIR CONDITIONERS, SUMP PUMPS, WATER WELL FILTRATION UNITS AND HEAT PUMPS ARE NOT ALLOWED, SANITARY SYSTEM CONNECTIONS ONLY PERMITTED.



**DESIGN NOTES AND CALCULATIONS:**

- 4 BEDROOM HOME X 110 GPD / BR = 440 GPD. REQUIRED.
  - Use ONIE FIELD: 14' WIDE X 45' LONG WITH 6" OF 3/4" TO 1 1/2" DBL WASHED STONE BELOW INVERT
  - BOTTOM AREA: 14' W X 45' L = 602 SF.
  - SIDE AREA: 0 SF.
  - TOTAL AREA: 630 SF X 0.74 GAL/SF = 466.5 GPD
- GARBAGE DISPOSAL NOT ALLOWED, ...
- NO OTHER PRIVATE WELLS WITHIN 150 FEET OF SAS.
- NO OTHER WETLANDS WITHIN 100 FEET OF SAS
- USE NEW S. TANK AS NOTED & MAINTAIN 0.02 PITCH FROM SILL TO S. TANK
  - INSTALL & INSPECT SCH. 40 TEES / BAFFLES (10" INLET, 14" OUTLET),
- NOTE:
  - ALL COMPONENTS OF NEW SYSTEM MUST BE MARKED WITH MAGNETIC TAPE. BE SURE TO MAINTAIN 3" CLEARANCE FROM TOP OF TEES TO BOTTOM OF TANK COVERS & BOXES.
- USE LARGE STYLE (6 OUTLET) D.BOX ONLY.
- ALL D. BOX OUTLET PIPES LEVEL FOR FIRST 2'. BOXES MUST HAVE 2" CONC. WALLS
  - NOTE:
    - D. BOXES WITH MORE THAN 9" OF COVER SOIL MUST HAVE RISERS TO 6" OF SURFACE.
- USE (.75"-1 1/2") STONE UNDER TANK & D. BOX FOR 6" FOR STABLE BASE.
  - USE ONLY IDBL. WASHED APPROVED (.75"-1.5") FOR PLACEMENT IN LEACH AREA.
- USE PROPER SCH. 40 PVC TEES AS SHOWN.
- PRE & POST CONTOURS NOTED AS NECESSARY, RESERVE AS NOTED.
- SLOPE CALCS (SEE CONTOURS). SUBGRADE INSP. REQ'D.
- USE FIELD DUE TO TOPOGRAPHY AND SPACE OF LOT WITH RESPECT TO LOCATION AND ELEVATION OF RESIDENCE (310 CMR 15.240)
- USE 2% MINI. SLOPE OVER SAS
  - CLEAR TOP AND SUB TO 25" MIN. AS NEEDED (INSPECTION REQUIRED).
  - CLEAR PAIST BASE OF B (MIN. 25") & SCARIFY UNDER BED PRIOR TO TITTLE V SAND/STONE PLACEMENT.
  - EXCAVATE EXISTING LOAM, SUB AND ANY EXISTING DEBRIS, DIRTY FILL OR PRIOR SYSTEM IF PRESENT.
- SOIL EVALUATION BY A. WEISS, RS. ON 06.08.2012 (E. SMITH, BOH AGENT).
  - DEPTH OF: PERC. 48 & 49"
  - PERC RATE = 3 & 5 MIN / IN,
  - CLASS 1(L,S) SOIL RATING
- NO TREES WITHIN 10 FT. OF NEW LEACH FIELD.
- ENGINEER & TOWN (IF REQUIRED) TO INSPECT SUBGRADE, TOWN AND ENGINEER INSPECT AT FINAL.
- BM=100.00 @ (TOP OF CONC. BOUND AS NOTED), CONFIRM PROPER PIPE SLOPES
  - USE/INSPECT SCH. 40 PIPE FOR PIPE FROM HOUSE TO NEW OR EXISTING TANK
- GRADE MULCH AND SEED OVER SAS AS NOTED.
- INSTALLATION IN LOW GROUNDWATER SEASON RECOMMENDED.
- USE OBSERVATION PORT NEAR CENTER OF STONE BED HAVE 4" PERFORATED, PVC INSPECTION PORTALS TO BOTTOM OF STONE BED, WITH RISER TO 3" OF SURFACE & THREADED CAP & MARK WITH RE-BAR.

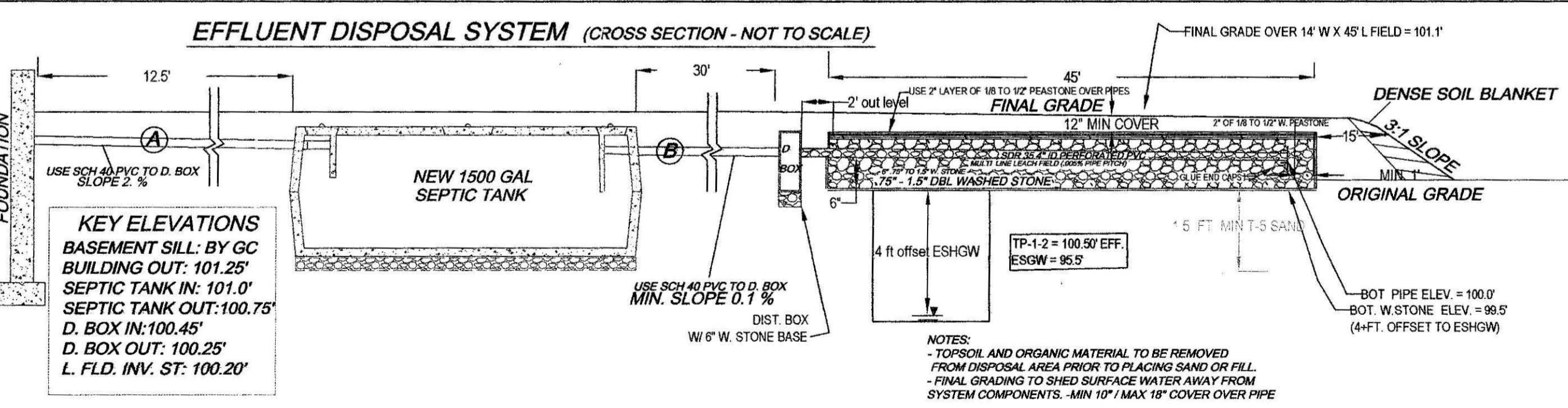


**TEST PIT LOG:**

SOIL EVALUATOR: A. WEISS, RS

DATE OF EVALUATION: 06.08.2012

TP-1 EFF. ELEV: 100' EFF.				TP-2 EFF. ELEV: 100'					
DEPTH	HORIZ.	TEXTURE (MUNSELL)	MATERIAL	DEPTH	HORIZ.	TEXTURE (MUNSELL)	MATERIAL		
0-9"	A	FSL	10 YR 3.3	FRIABLE, LOOSE	0-8"	A	FSL	10 YR 3.3	FRIABLE, LOOSE
9-25"	Bw	LS	10 YR 4.6	FRIABLE, LOOSE	8-20"	Bw	LS	10 YR 4.6	FRIABLE, MED. SAND
25-112"	C1	LS	2.5 Y 4.3	F-MED. SND ABL. TILL GRANULAR, LOOSE 15% GRAV. & BOULDERS	20-86"	C1	LS	2.5 Y 4.3	F-MED. SND ABL. TILL GRANULAR, LOOSE 15% GRAV. & BOULDERS
OXIDES: 60"				OXIDES: 60"					
EHWT: 60"				EHWT: 60"					
STANDING H2O: NOT OBSERVED				STANDING H2O: NOT OBSERVED					
WEEPING: NOT OBSERVED				WEEPING: NOT OBSERVED					
BEDROCK: 112'+				BEDROCK: 86'+					



**TEST PIT LOG:**

SOIL EVALUATOR: A. WEISS, RS

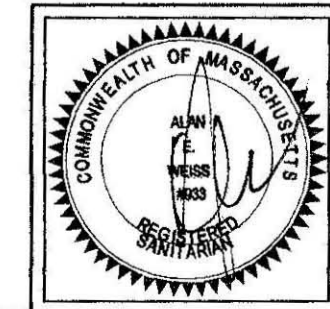
DATE OF EVALUATION: 06.08.12

TP-3 EFF. ELEV: 97' EFF.				TP-4 EFF. ELEV: 97'					
DEPTH	HORIZ.	TEXTURE (MUNSELL)	MATERIAL	DEPTH	HORIZ.	TEXTURE (MUNSELL)	MATERIAL		
0-8"	A	FSL	10 YR 3.3	FRIABLE, LOOSE	0-7"	A	FSL	10 YR 3.3	FRIABLE, LOOSE
8-22"	Bw	LS	10 YR 4.6	FRIABLE, MED. SAND	7-25"	Bw	LS	10 YR 4.6	FRIABLE, MED. SAND
22-96"	C1	LS	2.5 Y 4.3	F-MED. SND ABL. TILL GRANULAR, LOOSE 15% GRAV. & BOULDERS	25-87"	C1	LS	2.5 Y 4.3	F-MED. SND ABL. TILL GRANULAR, LOOSE 15% GRAV. & BOULDERS
OXIDES: 72"				OXIDES: 72"					
EHWT: 72"				EHWT: 72"					
STANDING H2O: NOT OBSERVED				STANDING H2O: NOT OBSERVED					
WEEPING: NOT OBSERVED				WEEPING: NOT OBSERVED					
BEDROCK: 96'+				BEDROCK: 87'+					

SEPTIC SYSTEM & WELL LOCATION PLAN FOR KEN LEBLANC  
MAP 3D LOT 21 (portion), "lot 4" FLAT HILLS ROAD  
AMHERST, MA

**Cold Spring Environmental Consultants Inc.**  
350 Old Enfield Road  
Belchertown, MA 01007

PHONE: (413) 323-5957  
FAX: (413) 323-4916  
e-Mail: AEW@CSES@charter.net



**ATTENTION INSTALLER!**  
CALL DIG SAFE BEFORE YOU DIG! MASSACHUSETTS STATE LAW CHAPTER 82 SECTIONS 40 - 40E REQUIRE THAT PREMARKING OF GAS, ELECTRIC, WATER, TELEPHONE AND CABLE T.V. UTILITY LINES BE MADE A MINIMUM OF 72 HOURS PRIOR TO GROUND BREAK FOR ANY EXCAVATION.

NOTE: INSTALLER MUST CONTACT ENGINEER/BD OF HEALTH 48 HOURS PRIOR TO SUBGRADE INSPECTION. INSTALLER MUST HAVE ALL BREAK OUT FILL ON SITE AND IN PLACE PRIOR TO SIGN OFF BY ENGINEER AT TIME OF FINAL INSPECTION OR APPROVAL WILL NOT BE GIVEN TO BACKFILL.

DATE: 10.19.2012	DRAWN BY: AEW	REVISED:
SCALE: 1"=30'	CHECKED BY: AEW	DRAWING NUMBER: 112-3984-1019



## COLD SPRING ENVIRONMENTAL CONSULTANTS INC.

---

- 2IE Site Investigations
- Subsurface Investigations
- Pollution Remediation
- LSP on Staff
- Forensic Septic Investigations

- Percolation Tests
- Septic Designs
- Regulatory Compliance
- Recycling and Solid Waste
- Second Opinions

### Percolation Testing Reports

Prepared by:

Cold Spring Environmental Consultants, Inc.  
350 Old Enfield Road  
Belchertown, MA. 01007

Prepared for:

WD Cows

Cinda Jones, President  
POB 9677  
N. Amherst, MA 01059

Location:

Lot # 4 (Map 3D, Lot 21 (portion))  
Flat Hills Road  
Amherst, MA

Project Number: 109-3285-1203

System Evaluator: Alan Weiss, RS

Date: June 9, 2012



ALAN E. WEISS, M.S., R.S., L.S.P.

Licensed Site Professional  
Registered Sanitarian  
Hydrogeologist  
President

- Wetland Consults
- Soil and Water Testing
- 21E Site Investigations
- Percolation Tests and
- Septic Designs
- Title 5 Inspections

350 Old Enfield Rd.  
Belchertown, MA 01007  
(413) 323-5957 & 323-4916 (FAX)

aeweiss@charter.net

Date: 6/8/12

Commonwealth of Massachusetts  
Amherst, Massachusetts

Soil Suitability Assessment for On-site Sewage Disposal

Performed By: A. Weiss

Date: 6/8/12

Witnessed By: E. Smith

Location Address or Lot # <u>(LOT #4) Map 30 to JZ1 (parted) Flat Hills RD</u>	Owner's Name, Address, and Telephone # <u>c/o Sarah La Cour c/o D. Cawls POB. 9677, 134 Montague RD N. Amherst, MA 01057</u>
New Construction <input checked="" type="checkbox"/> Repair <input type="checkbox"/>	<u>(549 - 1403 X - 337)</u>

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 References Reviewed: \_\_\_\_\_



WDC Flat Hills Rd- Lot  
4



- |                           |                        |
|---------------------------|------------------------|
| <b>Property Map</b>       | <b>Driveways</b>       |
| Property Lines            | Driveway Paved         |
| Property Line             | Driveway Unpaved       |
| Hydrographic Property     | Sidewalks              |
| Right of Way Line         | Transportation         |
| Town Boundary             | Paved street polygons  |
| Other Property Lines      | Unpaved street polyg   |
| Former Property Line      | <b>Bridges</b>         |
| Subdivision Lot Line      | Bridge decking and str |
| Easements                 | Foot Bridge            |
|                           | Rail Bridge            |
| <b>Basemap</b>            |                        |
| Trails                    |                        |
| Rail Lines                |                        |
| <b>Structures</b>         |                        |
| Building                  |                        |
| Foundation or in const    |                        |
| Outbuilding or Miscall    |                        |
| Deck, Porch, Stairs or    |                        |
| Mobile home, Trailer      |                        |
| Swimming Pool             |                        |
| Building Ruins            |                        |
| Water storage tank        |                        |
| <b>Rivers and Streams</b> |                        |
| Streams                   |                        |
| Major Culverts            |                        |
| Hydro Connector           |                        |
| Headwalls, Floodwalls     |                        |
| <b>Landcover</b>          |                        |
| Brush and scrub vega      |                        |
| Tree and forest veget     |                        |
| Cultivated field          |                        |
| Gravel pile               |                        |
| Quarry                    |                        |
| Misc Impervious Surfs     |                        |
| <b>Parking</b>            |                        |
| Parking Paved             |                        |
| Parking Unpaved           |                        |

Horizontal Datum: MA Stateplane Coordinate System, Zone 4151, Datum NAD83, Feet  
Vertical Datum: NAVD86, Feet

Planimetric & topographic basemap features compiled at 1"=40' scale from April, 2008 Aerial Photography. Parcels compiled to match the basemap. revisions are ongoing.

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1" = 100 ft



Location Address or Lot No. Lot #4, Flat Hills Rd

COMMONWEALTH OF MASSACHUSETTS

Amherst, Massachusetts

Percolation Test*		
Date: <u>6/8/12</u>		Time: <u>6/8/12 9:00 AM</u>
Observation Hole #	Perc # (1)	Perc # (2)
Depth of Perc	<u>48"</u>	<u>49"</u>
Start Pre-soak	<u>9:35</u>	<u>10:00</u>
End Pre-soak	<u>9:52</u>	<u>10:16</u>
Time at 12"	<u>9:52</u>	<u>10:22</u>
Time at 9"	<u>9:59</u>	<u>10:30</u>
Time at 6"	<u>10:14</u>	<u>10:38</u>
Time (9"-6")	<u>15 min</u>	<u>8</u>
Rate Min./Inch	<u>5 <math>\frac{min}{in}</math></u>	<u>3 <math>\frac{min}{in}</math></u>

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

Site Passed  Site Failed

Performed By: Alan Weiss RS

Witnessed By: Ed. Smith

Comments: \_\_\_\_\_



Location Address or Lot No. Lot #4 Flat Hills RD

On-site Review

Deep Hole Number 1D4 Date: 6/8/12 Time: 9:00 Weather SW 70°

Location (identify on site plan) \_\_\_\_\_

Land Use Wooded Slope (%) 2 Surface Stones 4-5

Vegetation Mixed deciduous

Landform Terraced

Position on landscape (sketch on the back) \_\_\_\_\_

Distances from:

Open Water Body 100' feet      Drainage way 50' feet  
 Possible Wet Area 100' feet      Property Line 40' feet  
 Drinking Water Well 100' feet      Other \_\_\_\_\_

DEEP OBSERVATION HOLE LOG\*

	Depth from Surface (Inches)	Soil Horizon	Soil Texture (USDA)	Soil Color (Munsell)	Soil Moisture	Other (Structure, Stones, Boulders, Consistency, % Gravel)
# 1	0-9" 9"-25" 25-112"	A Bw C <sub>i</sub>	F&L LS LS	10YR 3/3 10YR 4/6 2.5Y 4/3	60" 2.5Y 4/2	Frable Frable Loose F. Sandy Ablation fill, 15% Stones Loose
# 2	0-8" 8-20" 20-86"	A Bw C <sub>i</sub>	F&L LS LS	↓	60" 2.5Y 4/2	Frable Frable Loose F. Sandy Ablation fill Loose, 15% Stones
# 3	0-8" 8-22" 22"-96"	A Bw C <sub>i</sub>	Fsc LS LS	↓	72" 2.5Y 4/2	Same as #1 ↓
# 4	0-7" 7'-25" 25-87"	A Bw C <sub>i</sub>	F&L LS LS	↓	72"	Same as #1 ↓

\* MINIMUM OF 2 HOLES REQUIRED AT EVERY PROPOSED DISPOSAL AREA

Parent Material (geologic) Ablation fill      Depth to Bedrock: 86" ±  
 Depth to Groundwater: Standing Water in the Hole: Not      Weeping from Pit Face: Not  
 Estimated Seasonal High Ground Water: 60-72"





Location Address or Lot No. "Lot" 4. Flat Hill Road

Determination for Seasonal High Water Table

Method Used:

- Depth observed standing in observation hole ..... inches
- Depth weeping from side of observation hole ..... inches
- Depth to soil mottles 60-62 inches
- Ground water adjustment ..... feet

Index Well Number ..... Reading Date ..... Index well level

Adjustment factor ..... Adjusted ground water level .....

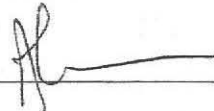
Depth of Naturally Occurring Pervious Material

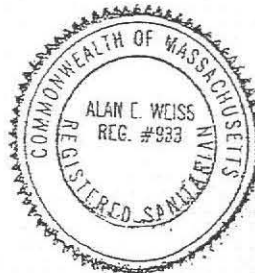
Does at least four feet of naturally occurring pervious material exist in <sup>1</sup>all areas observed throughout the area proposed for the soil absorption system? YES

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

Certification

I certify that on 6/95 (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  Date 6/8/12



6/8/2012

look on Alan's e-mail  
for Cynthia's Email

LOT #4  
FLAT HILLS RD,  
AMHERST, MA



Commonwealth of Massachusetts  
City/Town of

**Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal**

Sarah LeCom - land use planner  
for Cowles

**A. Facility Information**

Cowles (BUILDING LOT)  
Owner Name

Street Address

Map/Lot #

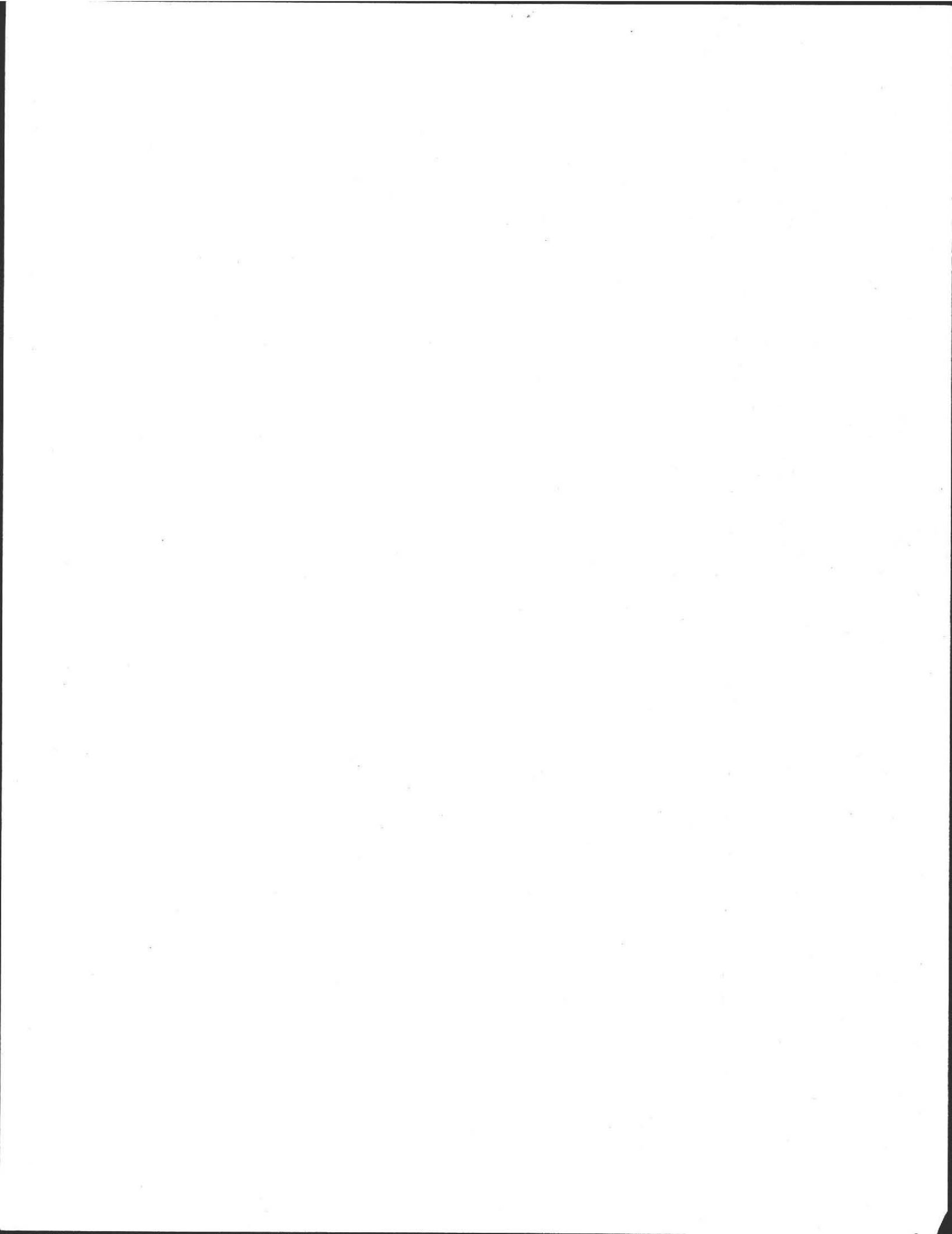
City

State

Zip Code

**B. Site Information**

- (Check one)  New Construction  Upgrade  Repair
- Published Soil Survey Available?  Yes  No  
 If yes:                      Year Published                      Publication Scale                      Soil Map Unit  
                     Soil Name                      Soil Limitations
- Surficial Geological Report Available?  Yes  No  
 If yes:                      Year Published                      Publication Scale                      Map Unit  
                     Geologic Material                      Landform
- Flood Rate Insurance Map  
 Above the 500-year flood boundary?  Yes  No Within the 100-year flood boundary?  Yes  No  
 Within the 500-year flood boundary?  Yes  No Within a velocity zone?  Yes  No
- Wetland Area: National Wetland Inventory Map                      Map Unit                      Name                       
 Wetlands Conservancy Program Map                      Map Unit                      Name
- Current Water Resource Conditions (USGS):                      Month/Year Range:  Above Normal  Normal  Below Normal
- Other references reviewed:





Commonwealth of Massachusetts

City/Town of

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review (minimum of two holes required at every proposed primary and reserved disposal area)

Deep Observation Hole Number: \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ Weather \_\_\_\_\_

1. Location

Ground Elevation at Surface of Hole: \_\_\_\_\_ Location (identify on plan): \_\_\_\_\_

2. Land Use \_\_\_\_\_ (e.g., woodland, agricultural field, vacant lot, etc.) Surface Stones \_\_\_\_\_ Slope (%) \_\_\_\_\_

Vegetation \_\_\_\_\_ Landform \_\_\_\_\_ Position on Landscape (attach sheet) \_\_\_\_\_

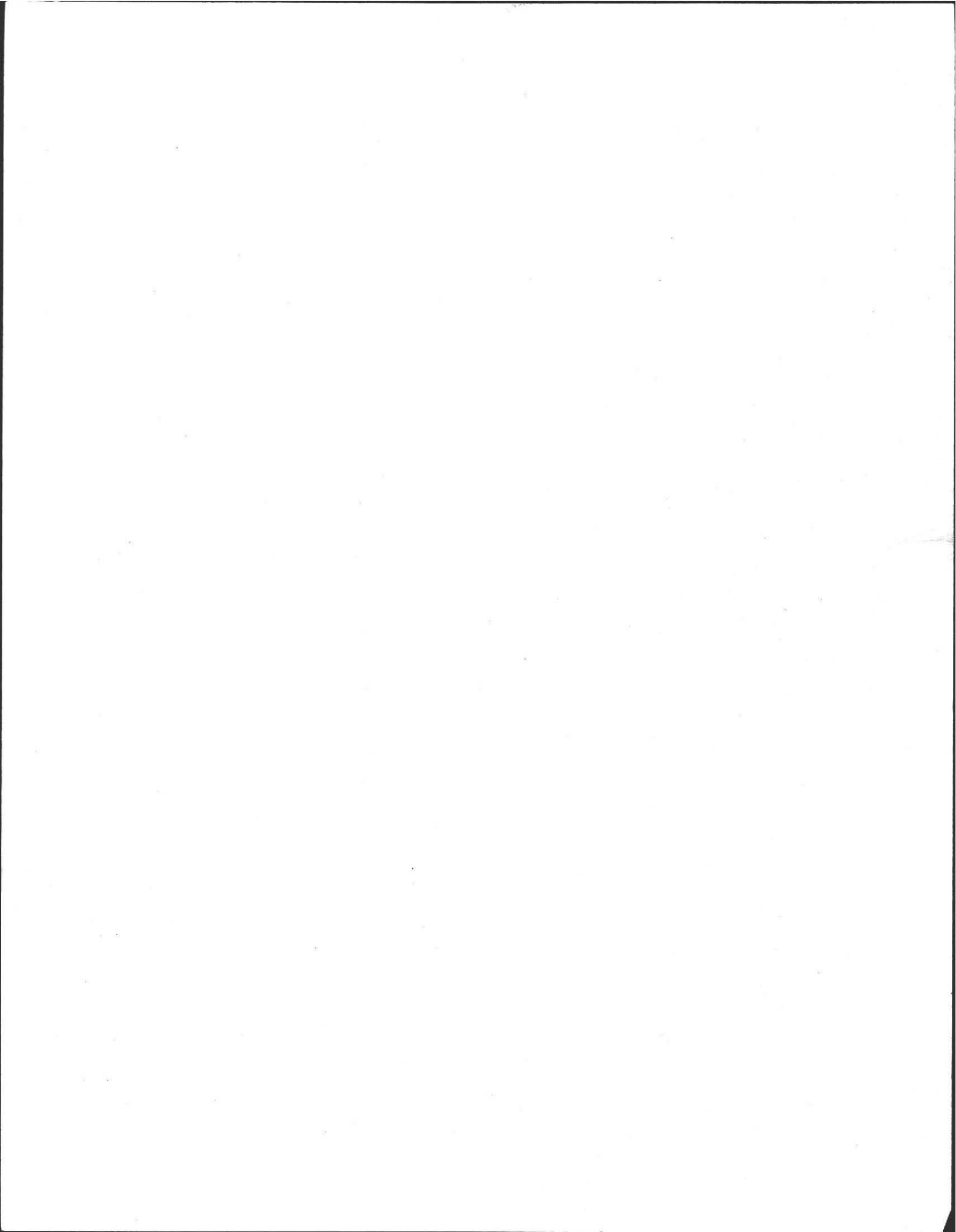
3. Distances from: Open Water Body \_\_\_\_\_ feet Drainage Way \_\_\_\_\_ feet Possible Wet Area \_\_\_\_\_ feet
Property Line \_\_\_\_\_ feet Drinking Water Well \_\_\_\_\_ feet Other \_\_\_\_\_ feet

4. Parent Material: \_\_\_\_\_ Unsuitable Materials Present:  Yes  No

If Yes:  Disturbed Soil  Fill Material  Impervious Layer(s)  Weathered/Fractured Rock  Bedrock

5. Groundwater Observed:  Yes  No If yes: Depth Weeping from Pit \_\_\_\_\_ Depth Standing Water in Hole \_\_\_\_\_

Estimated Depth to High Groundwater: \_\_\_\_\_ inches \_\_\_\_\_ elevation





Commonwealth of Massachusetts  
City/Town of

**Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal**

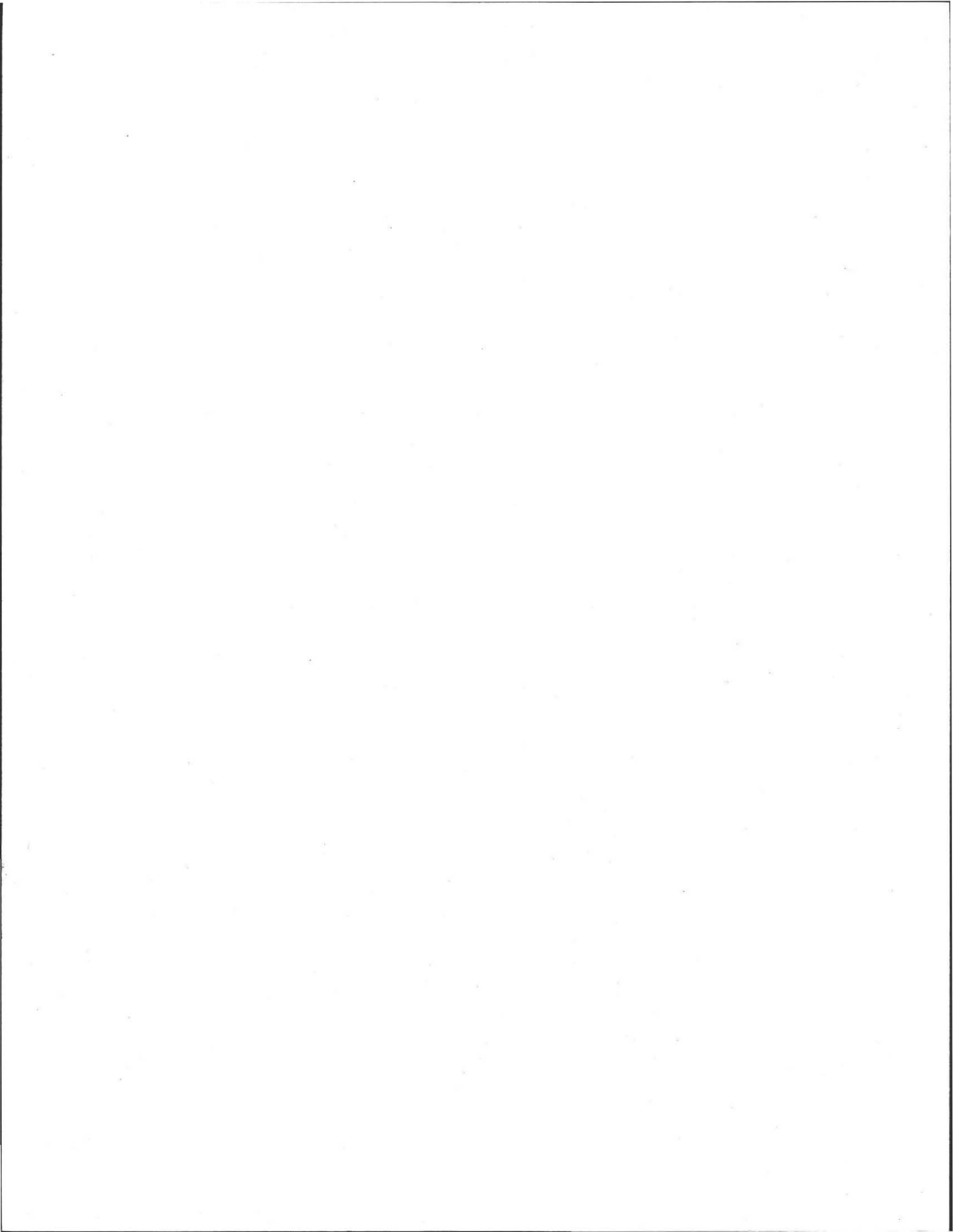
**C. On-Site Review** (continued)

Deep Observation Hole Number: \* 1 CLOSER TO ROAD

Depth (In.)	Soil Horizon/ Layer	Soil Matrix: Color- Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0-9"	A	10YR 3/3				FSL					
9-25"	B	10YR 4/4				LS					
Bottom 25- 112"	C	2.5Y 4/3				LS					

Additional Notes:

9:35 SOAK  
9:52 15 MINS.  
9:59 9"  
10:11 6" ZONE





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C. On-Site Review (continued)

Deep Observation Hole Number: \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ Weather \_\_\_\_\_

1. Location

Ground Elevation at Surface of Hole: \_\_\_\_\_ Location (identify on plan): \_\_\_\_\_

2. Land Use \_\_\_\_\_ (e.g., woodland, agricultural field, vacant lot, etc.) Surface Stones \_\_\_\_\_ Slope (%) \_\_\_\_\_

Vegetation \_\_\_\_\_ Landform \_\_\_\_\_ Position on Landscape (attach sheet) \_\_\_\_\_

3. Distances from: Open Water Body \_\_\_\_\_ feet Drainage Way \_\_\_\_\_ feet Possible Wet Area \_\_\_\_\_ feet
Property Line \_\_\_\_\_ feet Drinking Water Well \_\_\_\_\_ feet Other \_\_\_\_\_ feet

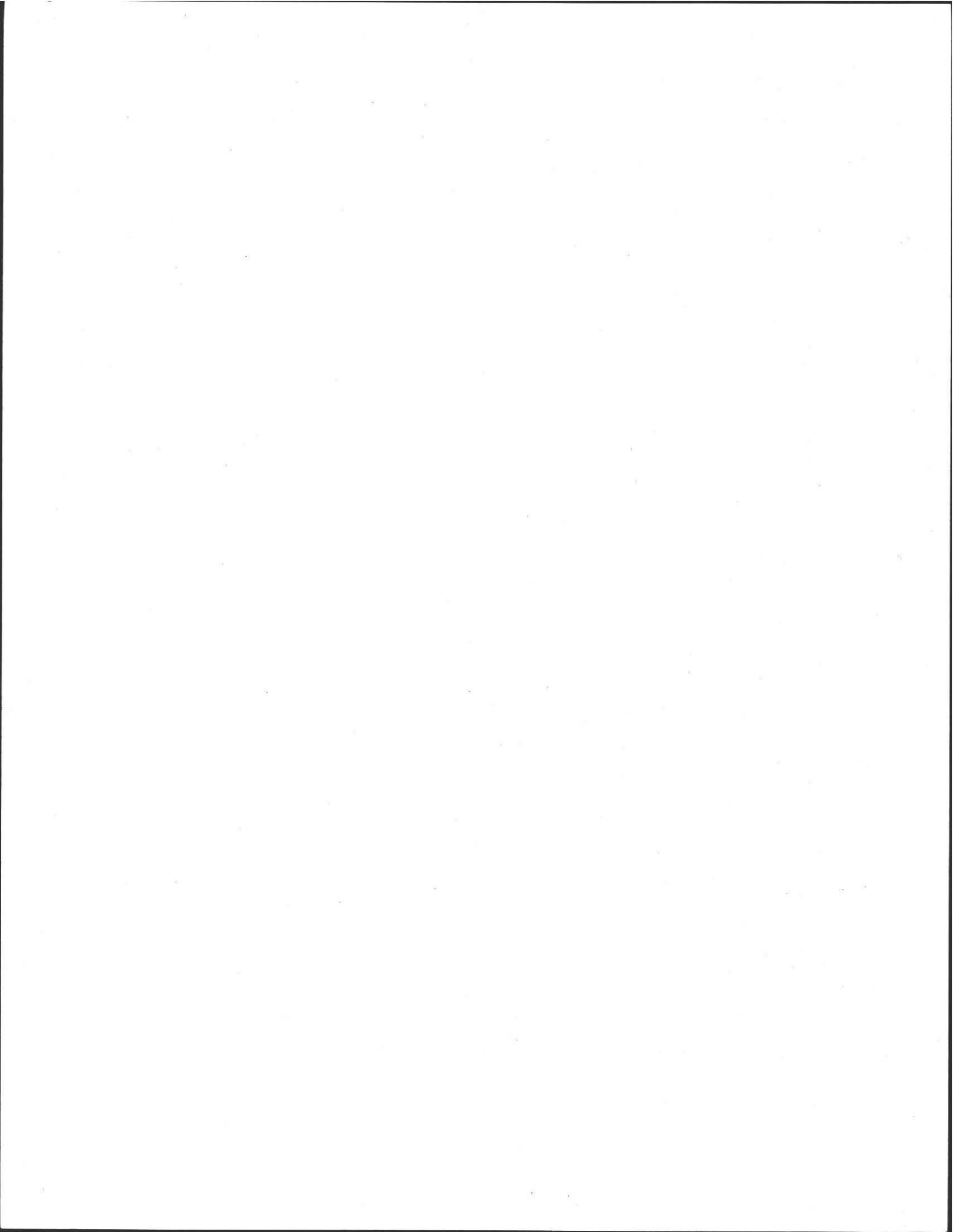
4. Parent Material: \_\_\_\_\_ Unsuitable Materials Present:  Yes  No

If Yes:  Disturbed Soil  Fill Material  Impervious Layer(s)  Weathered/Fractured Rock  Bedrock

5. Groundwater Observed:  Yes  No If yes: Depth Weeping from Pit \_\_\_\_\_ Depth Standing Water in Hole \_\_\_\_\_

Estimated Depth to High Groundwater: \_\_\_\_\_ inches \_\_\_\_\_ elevation







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**C. On-Site Review** (continued)

Deep Observation Hole Number:   #2     FARTHER FROM ROAD  

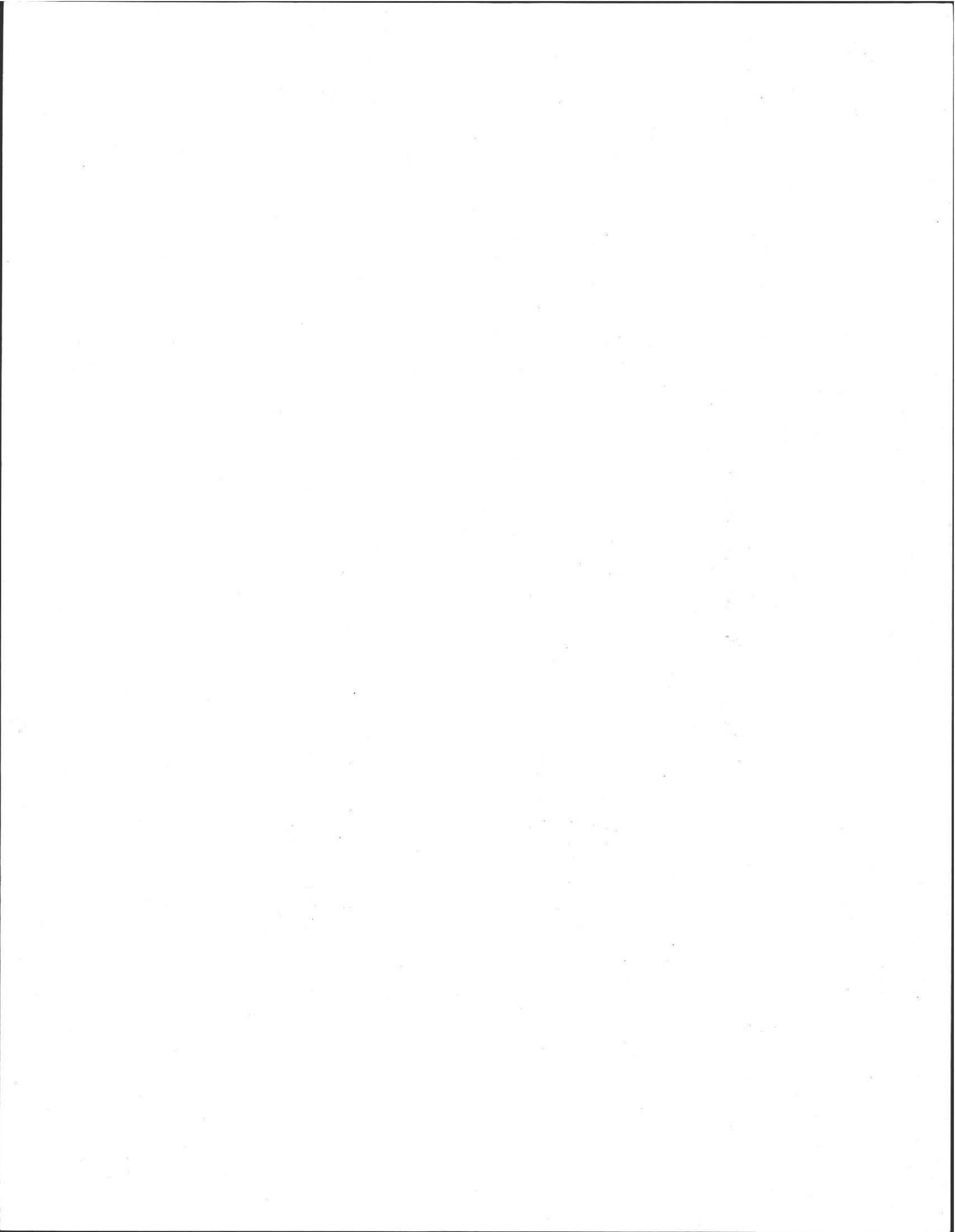
Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color- Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0-8	A	10YR 3/3				FSL					
8-20	B	10YR 4/6				LS					
20-86	C	2.5Y 4/3	60"			LS					

Additional Notes:

  10:05     SPAW  

  10:14  

  10:22     9"

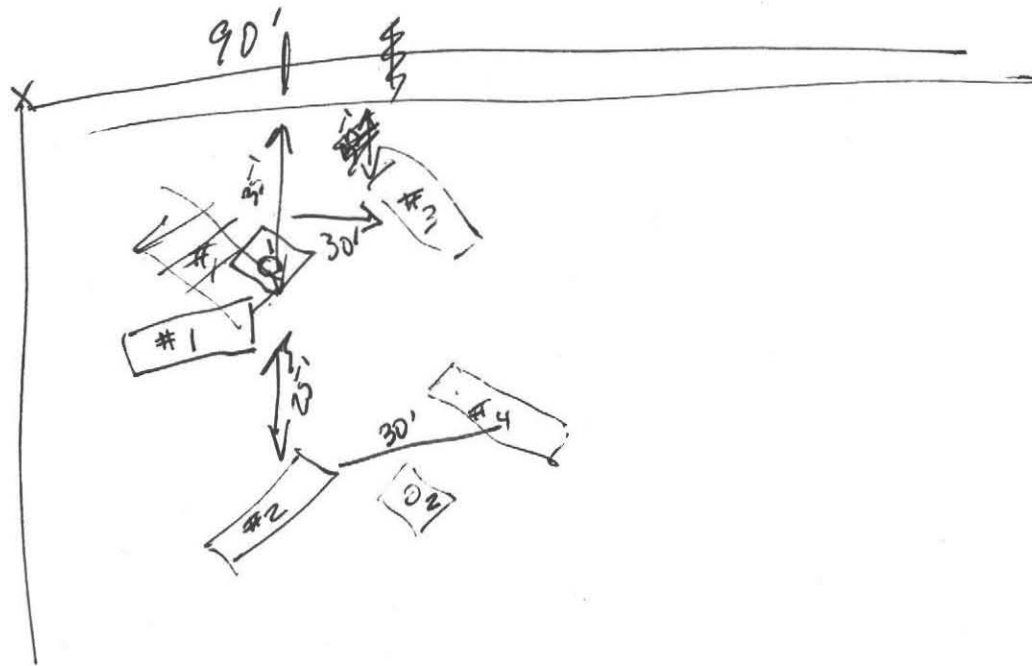


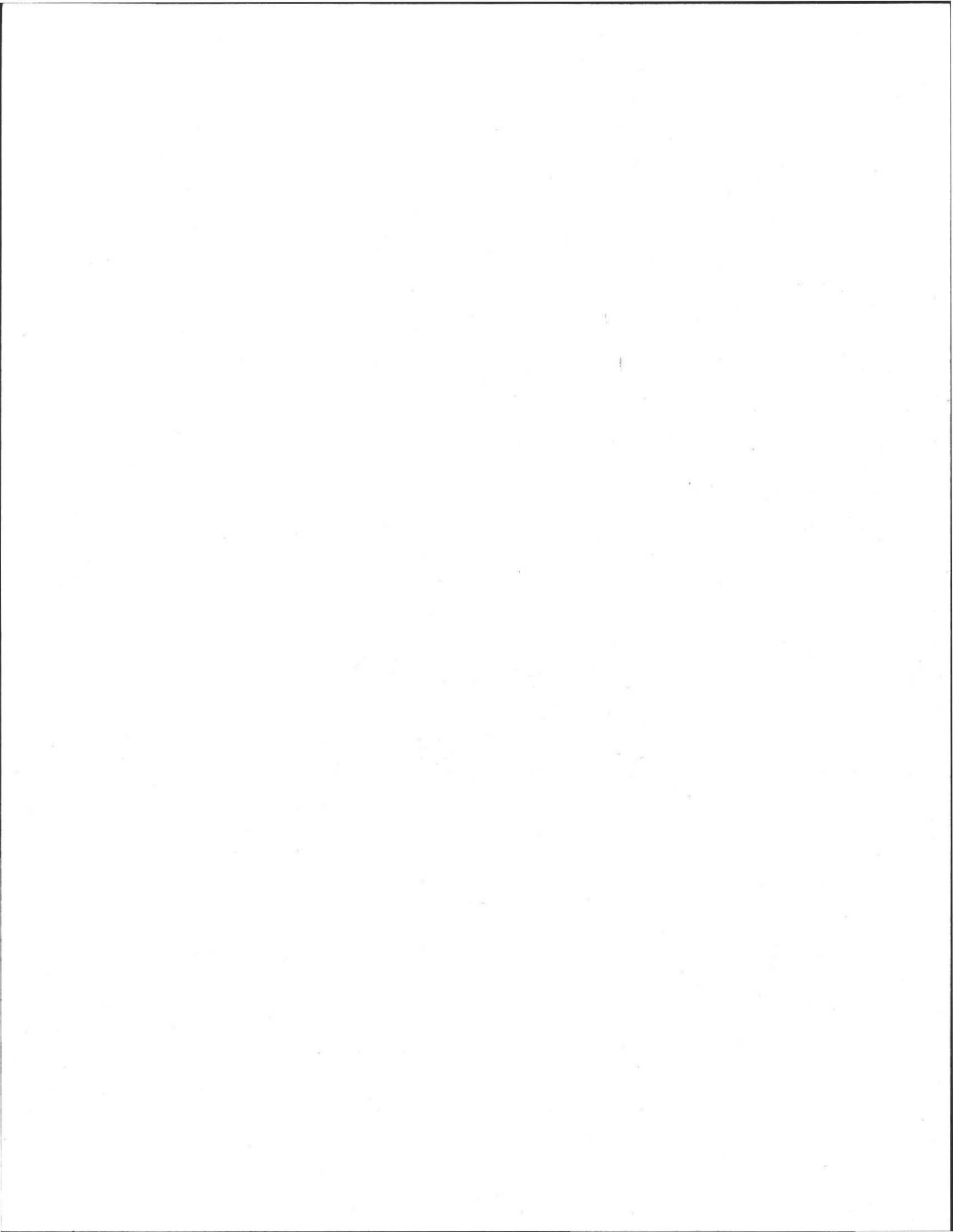


# Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

## Field Diagrams

Use this sheet for field diagrams:







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**C. On-Site Review** (continued)

Deep Observation Hole Number:     #3    

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color- Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0-8	A					FSL					
8-22	B					LS					
22-96	C	2.5Y4/2	72"			LS					

Additional Notes:

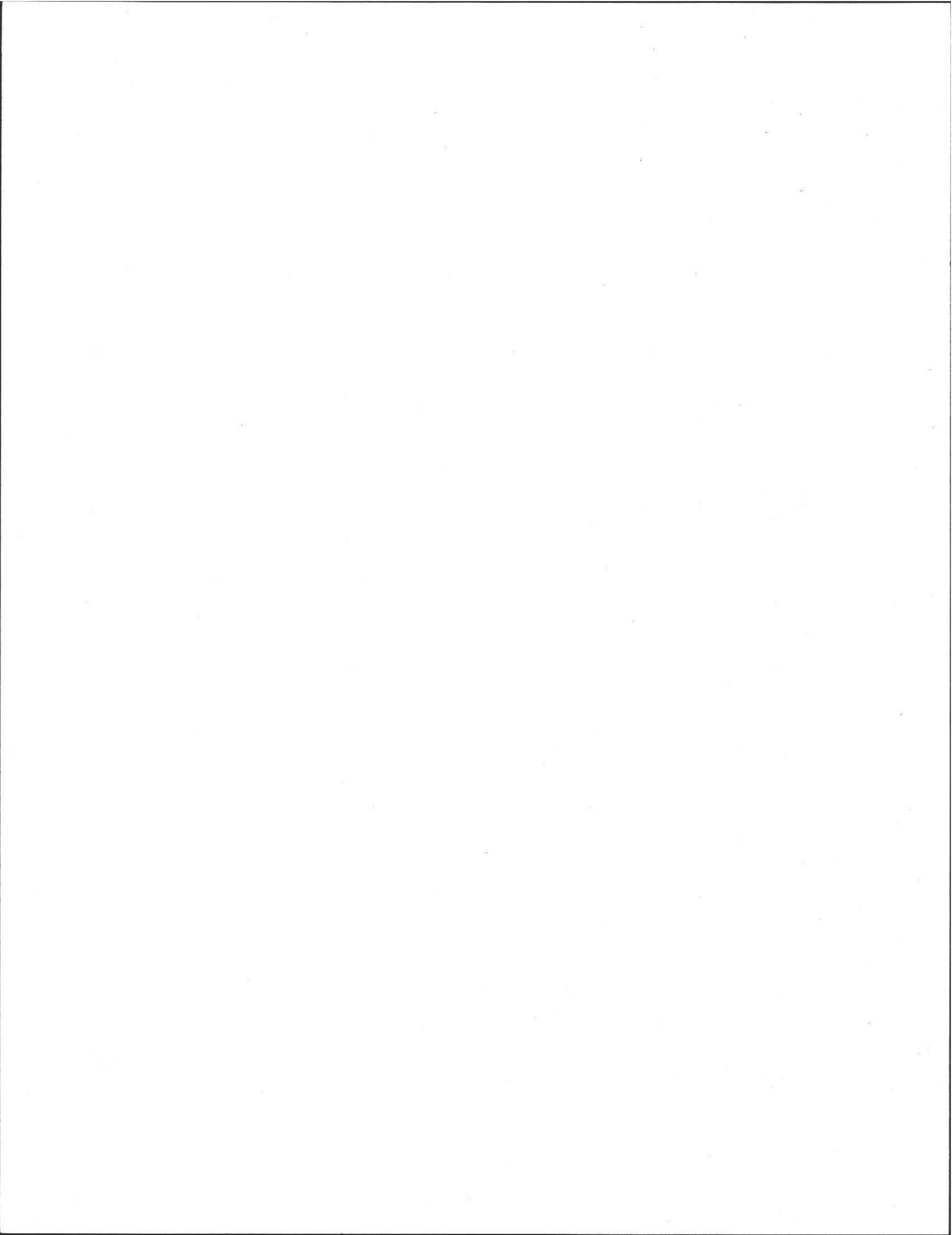
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C. On-Site Review (continued)

Deep Observation Hole Number: #4

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color- Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0-7											
7-25											
25-87"											

Additional Notes: FINE SANDY ABRADED TILL



