

371 MONTAGUE ROAD



No. 12-02

FEE 150.00

COMMONWEALTH OF MASSACHUSETTS

Board of Health, Amherst, MA.

APPLICATION FOR DISPOSAL SYSTEM CONSTRUCTION PERMIT



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

Table with 2 columns: Location, Map/Parcel#, Lot#, Installer's Name, Address, Telephone#, Owner's Name, Address, Telephone#, Designer's Name, Address, Telephone#.

Type of Building: Residence. Lot Size: 6.89 ac sq. ft. Dwelling - No. of Bedrooms: 4. Other - Type of Building: (Remove Disposal). Design Flow: 110 gpd. Calculated design flow: 440. Design flow provided: 518. Plan Date: 7/15/2011. Title: Replacement Plan for Septic System.

DESCRIPTION OF REPAIRS OR ALTERATIONS: 1. Septic System Replacement.

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: Kenton Tharp Date: 7/28/11

Inspections

No. 12-02

FEE 150.00

COMMONWEALTH OF MASSACHUSETTS

Board of Health, Amherst, MA.

CERTIFICATE OF COMPLIANCE

Description of Work: Individual Component(s) Complete System (X). The undersigned hereby certify that the Sewage Disposal System; Constructed ( ), Repaired (X), Upgraded ( ), Abandoned ( ) by: KENTON THARP + DIANE WESTFALL at 371 MONTAGUE ROAD 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. 12-02, dated 7/8/2011. Approved Design Flow (gpd) 518. Installer: [Signature] Designer: [Signature] Inspector: Edith R. Smith Date: 7/29/11

No. 12-02

FEE 150.00

COMMONWEALTH OF MASSACHUSETTS

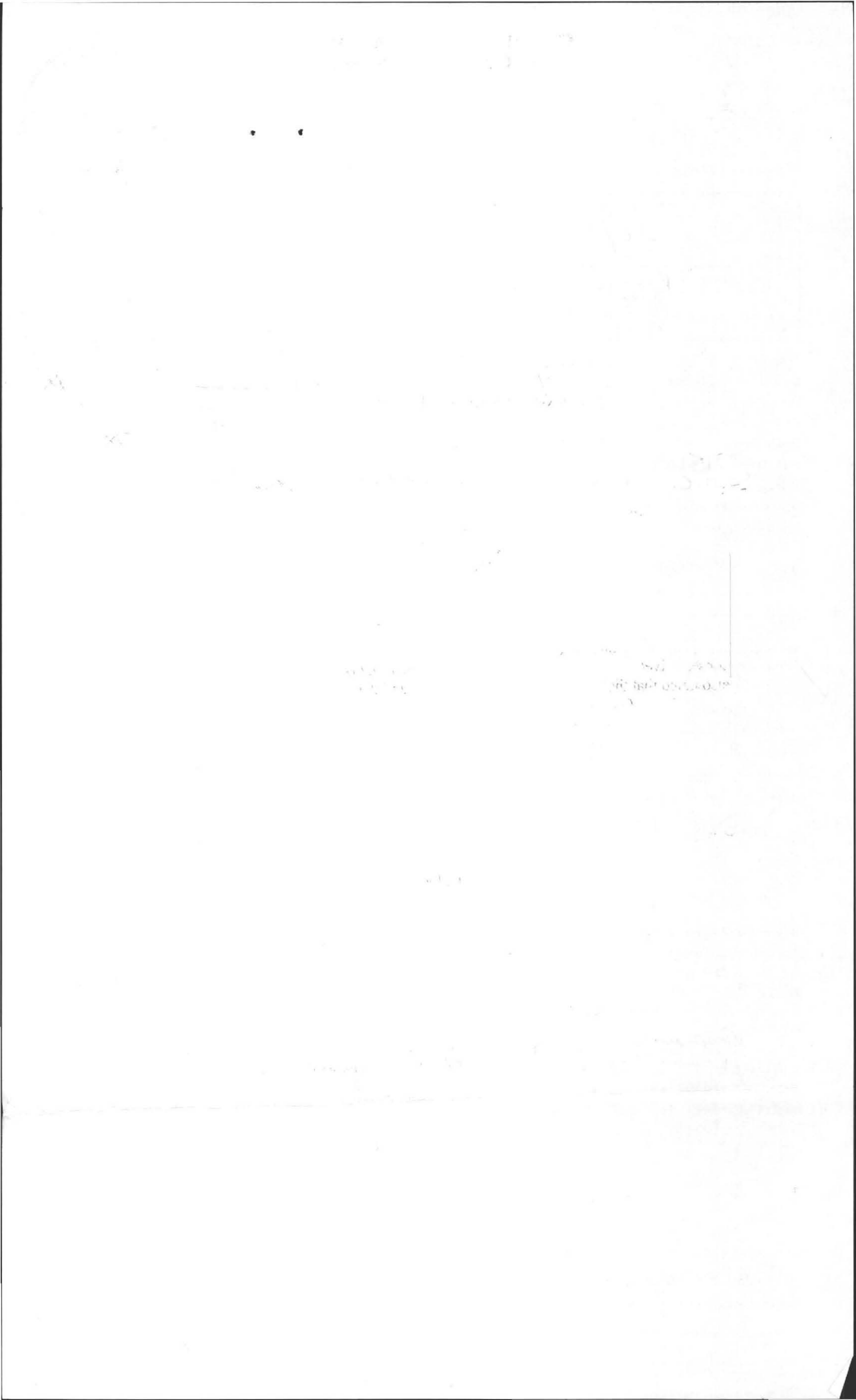
Board of Health, Amherst, MA.

DISPOSAL SYSTEM CONSTRUCTION PERMIT

Permission is hereby granted to; Construct ( ) Repair (X) Upgrade ( ) Abandon ( ) an individual sewage disposal system at 371 MONTAGUE ROAD, AMHERST, MA 01002 as described in the application for Disposal System Construction Permit No. 12-02, dated 7/8/2011.

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

Date 7/12/2011 Board of Health Edith R. Smith ASST. SANITARIAN





## 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

**July 5, 2011**

**Amherst Bd. Of Health**

**RE: Septic System Residence Repair  
Local Upgrade Approval, (Tharpe # 371 Montague Rd)**

With the intent of full compliance with 310 CMR 15.000, (Sanitary Septic Code, Title V), and the understanding that maximum feasible upgrade should be achieved to maximize protection of public health and safety and the environment, a Local Upgrade Approval (& local variance) is requested for the repair of the system at the above mentioned property. It is the opinion of the writer that strict enforcement of the code would be manifestly unjust (310 CMR 15.410) and equivalent protection is provided by the design.

-lack of **5'** of minimum groundwater separation to the bottom of the Stone of the absorption system (310 CMR 15.405, H,1), **4' proposed.**  
(The situation requires this approval in order to minimize fill placement between the septic, property line and house with limitations toward yard & house grade elevations. The System also attempts not to create problematic surface runoff patterns associated with excessively and unnecessarily raising the ground near the noted elevations.

It is understood that the system was sized using an appropriate percolation test and soil identification technique approved by the Massachusetts DEP that utilizes the most conservative/appropriate loading factor for that soil (**Class 1**) (**0.74 GPD @ <2 mpi**). It is also noted that the site is served by **Town water** and that there are no other potable wells noted within 100 feet of the SAS (See Plan). It is my opinion that, given all the possible scenarios for a new disposal system, and due to spatial constraints, this plan best meets the intent on the Sanitary Code and equivalent protection. It is understood that my client must provide you this letter. In addition, a copy of the Local Upgrade Approval from your board and a Plan copy must be sent to Mass. DEP, 436 Dwight St., Springfield, 01103, by the owner, after your approval and prior to the start of construction.

Please feel free to contact me should you have any questions.

Sincerely,  
Cold Spring Environmental Consultants, Inc.

Alan E. Weiss, M.S., R.S.  
Registered Sanitarian Lic. #933

1  
2

3

4



Commonwealth of Massachusetts

City/Town of Amherst

Form 9A – Application for Local Upgrade Approval

DEP has provided this form for use by local Boards of Health. Other forms may be used, but the information must be substantially the same as that provided here. Before using this form, check with your local Board of Health to determine the form they use.

Form 9A is to be submitted to the Local Board of Health for the upgrade of a failed or nonconforming septic system with a design flow of less than 10,000 gpd, where full compliance, as defined in 310 CMR 15.404(1), is not feasible.

System upgrades that cannot be performed in accordance with 310 CMR 15.404 and 15.405, or in full compliance with the requirements of 310 CMR 15.000, require a variance pursuant to 310 CMR 15.410 through 15.415.

NOTE: Local upgrade approval shall not be granted for an upgrade proposal that includes the addition of a new design flow to a cesspool or privy, or the addition of a new design flow above the existing approved capacity of an on-site system constructed in accordance with either the 1978 Code or 310 CMR 15.000.

A. Facility Information

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



1. Facility Name and Address:

Kenton Tharpe

Name

371 Montague Road

Street Address

Amherst

City/Town

MA

State

01002

Zip Code

2. Owner Name and Address (if different from above):

Name

Street Address

City/Town

State

Zip Code

413-883-1188

Telephone Number

3. Type of Facility (check all that apply):

- Residential Institutional Commercial School

4. Describe Facility:

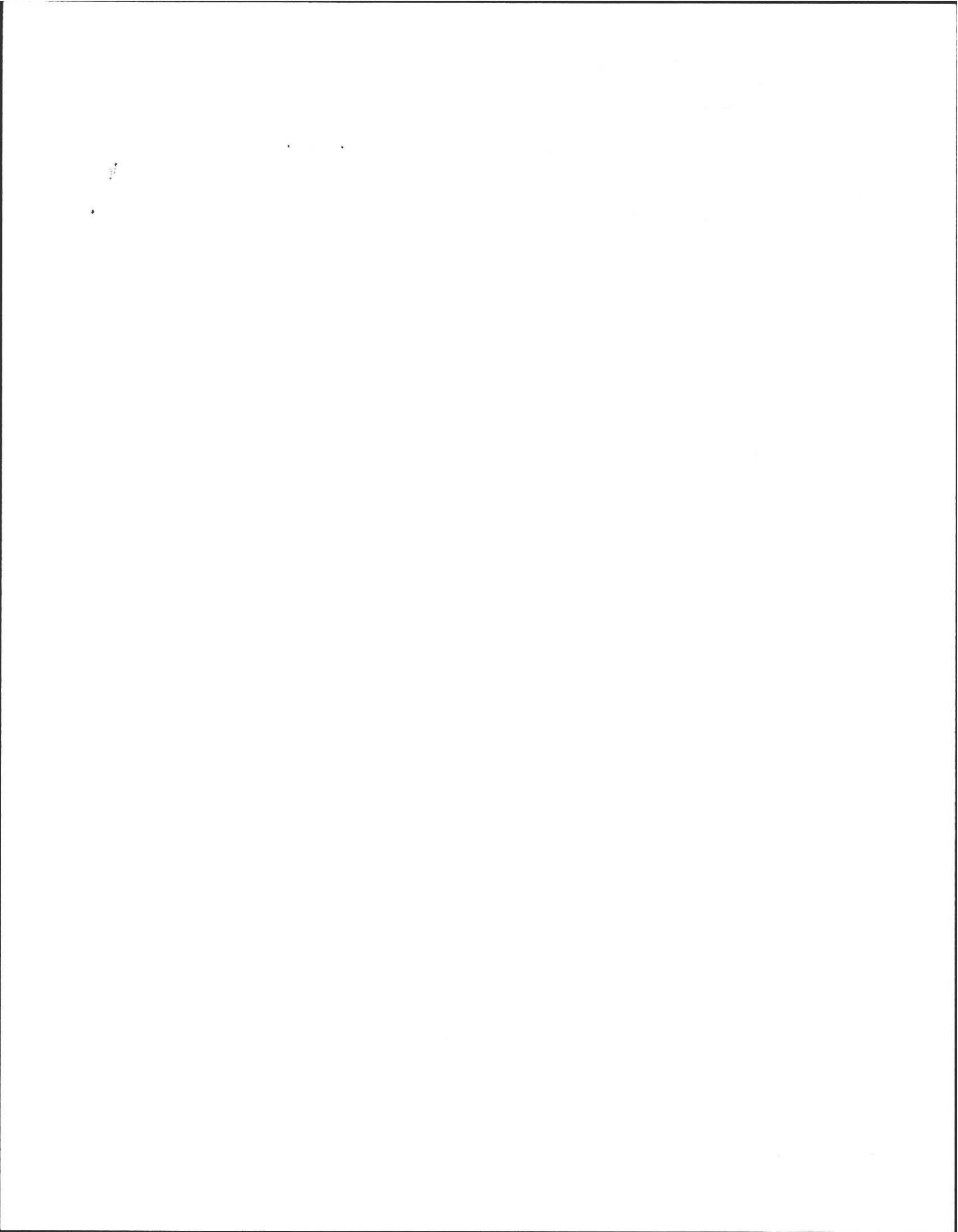
Single Family Res.

5. Type of Existing System:

- Privy Cesspool(s) Conventional Other (describe below):

6. Type of soil absorption system (trenches, chambers, leach field, pits, etc):

Leach field







# Form 9A – Application for Local Upgrade Approval

DEP has provided this form for use by local Boards of Health. Other forms may be used, but the information must be substantially the same as that provided here. Before using this form, check with your local Board of Health to determine the form they use.

## A. Facility Information (continued)

7. Design Flow per 310 CMR 15.203:

Design flow of existing system:	-	_____
	gpd	
Design flow of proposed upgraded system	440	_____
	gpd	
Design flow of facility:	518	_____
	gpd	

## B. Proposed Upgrade of System

1. Proposed upgrade is (check one):

Voluntary       Required by order, letter, etc. (attach copy)

Required following inspection pursuant to 310 CMR 15.301: \_\_\_\_\_  
date of inspection

2. Describe the proposed upgrade to the system:

New L. field & S. tank .  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

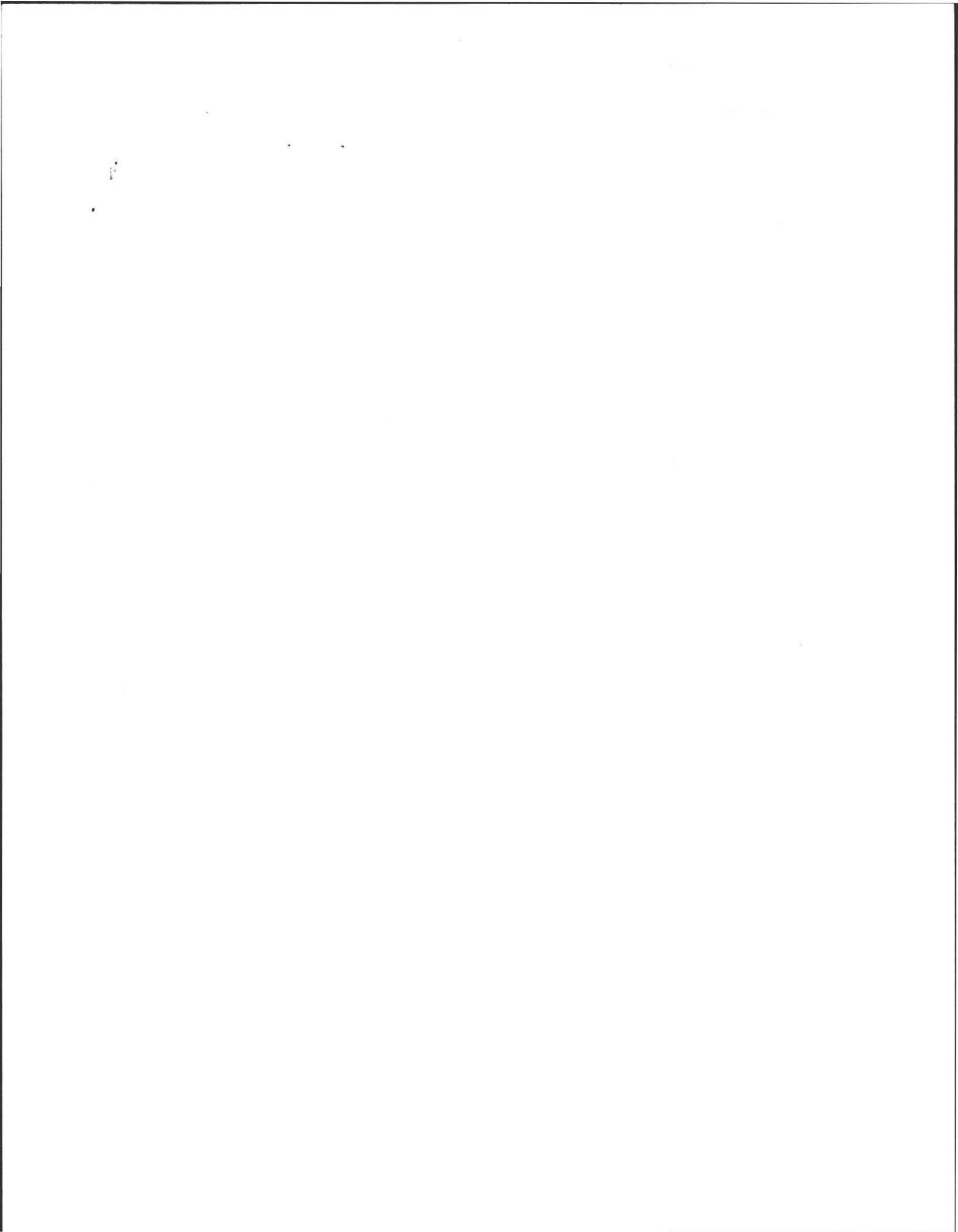
3. Local Upgrade Approval is requested for (check all that apply):

Reduction in setback(s) – describe reductions:  
\_\_\_\_\_  
\_\_\_\_\_

Reduction in SAS area of up to 25%:      SAS size, sq. ft.      % reduction

Reduction in separation between the SAS and high groundwater:

Separation reduction	1.0'	_____
	ft.	
Percolation rate	<2	_____
	min./inch	
Depth to groundwater	4	_____
	ft.	





# Form 9A – Application for Local Upgrade Approval

DEP has provided this form for use by local Boards of Health. Other forms may be used, but the information must be substantially the same as that provided here. Before using this form, check with your local Board of Health to determine the form they use.

## B. Proposed Upgrade of System (continued)

Relocation of water supply well (explain):

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Reduction of 12-inch separation between inlet and outlet tees and high groundwater

Use of only one deep hole in proposed disposal area

Use of a sieve analysis as a substitute for a perc test

Other requirements of 310 CMR 15.000 that cannot be met – describe and specify sections of the Code:

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If the proposed upgrade involves a reduction in the required separation between the bottom of the soil absorption system and the high groundwater elevation, an Approved Soil Evaluator must determine the high groundwater elevation pursuant to 310 CMR 15.405(1)(h)(1). **The soil evaluator must be a member or agent of the local approving authority.**

High groundwater evaluation determined by:

Ed Smith  
Evaluator's Name (type or print)

Signature

<sup>29</sup>  
06.28.2011

## C. Explanation

Explain why full compliance, as defined in 310 CMR 15.404(1), is not feasible. (Each section must be completed)

1. An upgraded system in full compliance with 310 CMR 15.000 is not feasible:

Due to grading to house & sloped yard and existing tank/piping elevation and to minimize fill & runoff.

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2. An alternative system approved pursuant to 310 CMR 15.283 to 15.288 is not feasible:

Would not change request.

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10/10/10

10/10/10



Commonwealth of Massachusetts

City/Town of Amherst

Form 9A – Application for Local Upgrade Approval

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C. Explanation (continued)

3. A shared system is not feasible:

Not applicable

4. Connection to a public sewer is not feasible:

Not available

5. The Application for Local Upgrade Approval must be accompanied by all of the following (check the appropriate boxes):

[X] Application for Disposal System Construction Permit

[X] Complete plans and specifications

[X] Site evaluation forms

[ ] A list of abutters affected by reduced setbacks to private water supply wells or property lines. Provide proof that affected abutters have been notified pursuant to 310 CMR 15.405(2).

[X] Other (List):

D. Certification

"I, the facility owner, certify under penalty of law that this document and all attachments, to the best of my knowledge and belief, are true, accurate, and complete. I am aware that there may be significant consequences for submitting false information, including, but not limited to, penalties or fine and/or imprisonment for deliberate violations."

[Handwritten Signature]

Facility Owner's Signature

Kenton Tharpe

Print Name

Alan Weiss, RS

Name of Preparer

350 Old Enfield Road,

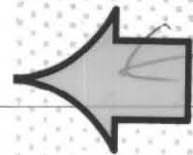
Preparer's address

MA 01007

State/ZIP Code

7/08/11

Date



SIGN & DATE

[Handwritten Initials]

07.05.2011

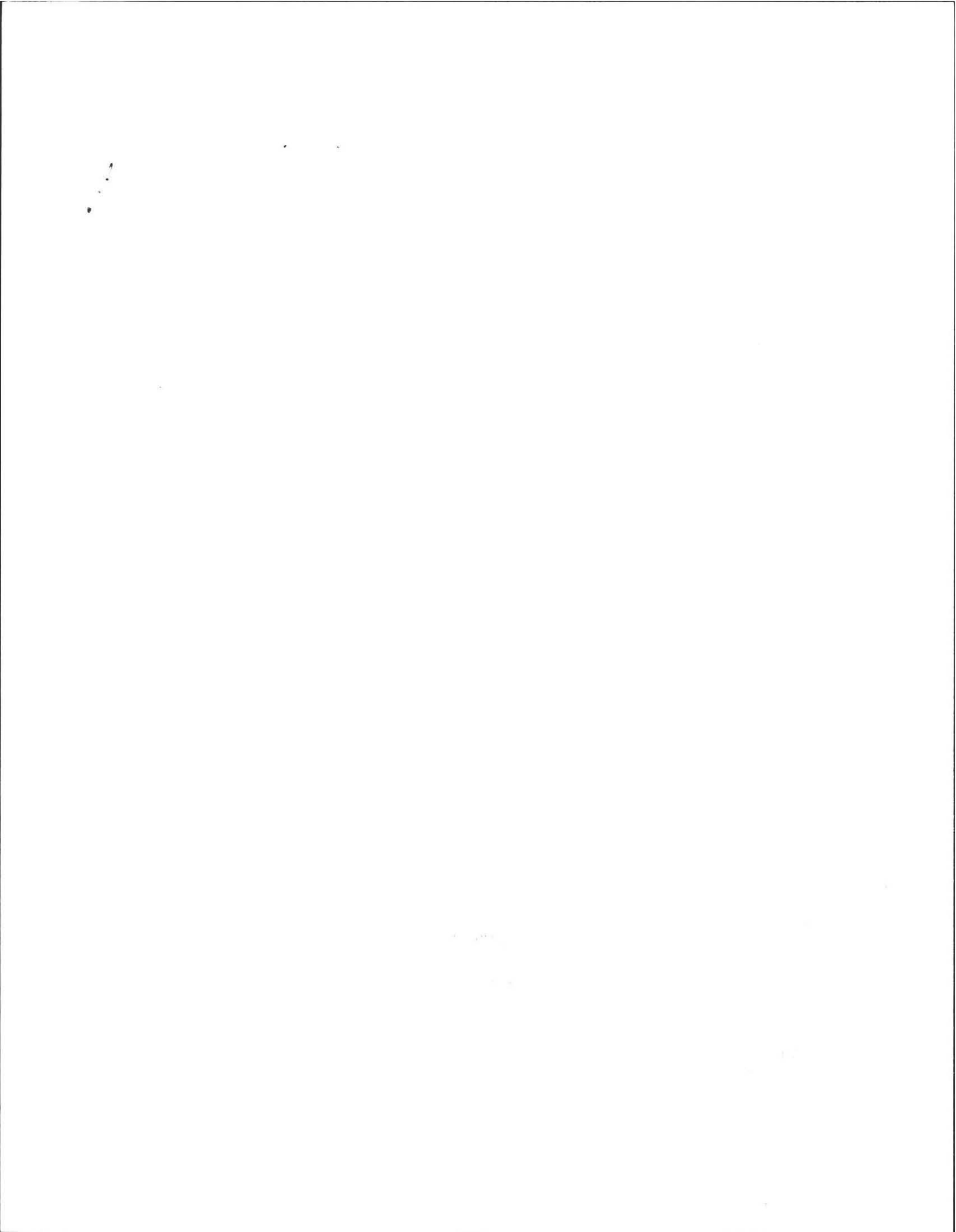
Date

Belchertown

City/Town

413.323.5957

Telephone





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: 6/29/11

Commonwealth of Massachusetts

Aubost, Massachusetts

Soil Suitability Assessment for On-site Sewage Disposal

Performed By: A. Weiss

Date: 6/29/11

Witnessed By: E. Smith

Remove Granda, 43R 5 people

Location Address or Lot # <u>371 Montague RD</u>	Owner's Name, Address, and Telephone # <u>Kenton Thorne</u> <u>371 Montague RD</u> <u>Aubost</u>
New Construction <input type="checkbox"/> Repair <input checked="" type="checkbox"/>	

Office Review

Published Soil Survey Available: No  Yes

Year Published 1989 Publication Scale

Drainage Class g000 Soil Limitations

Soil Map Unit Chaplin  
Finckley

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)

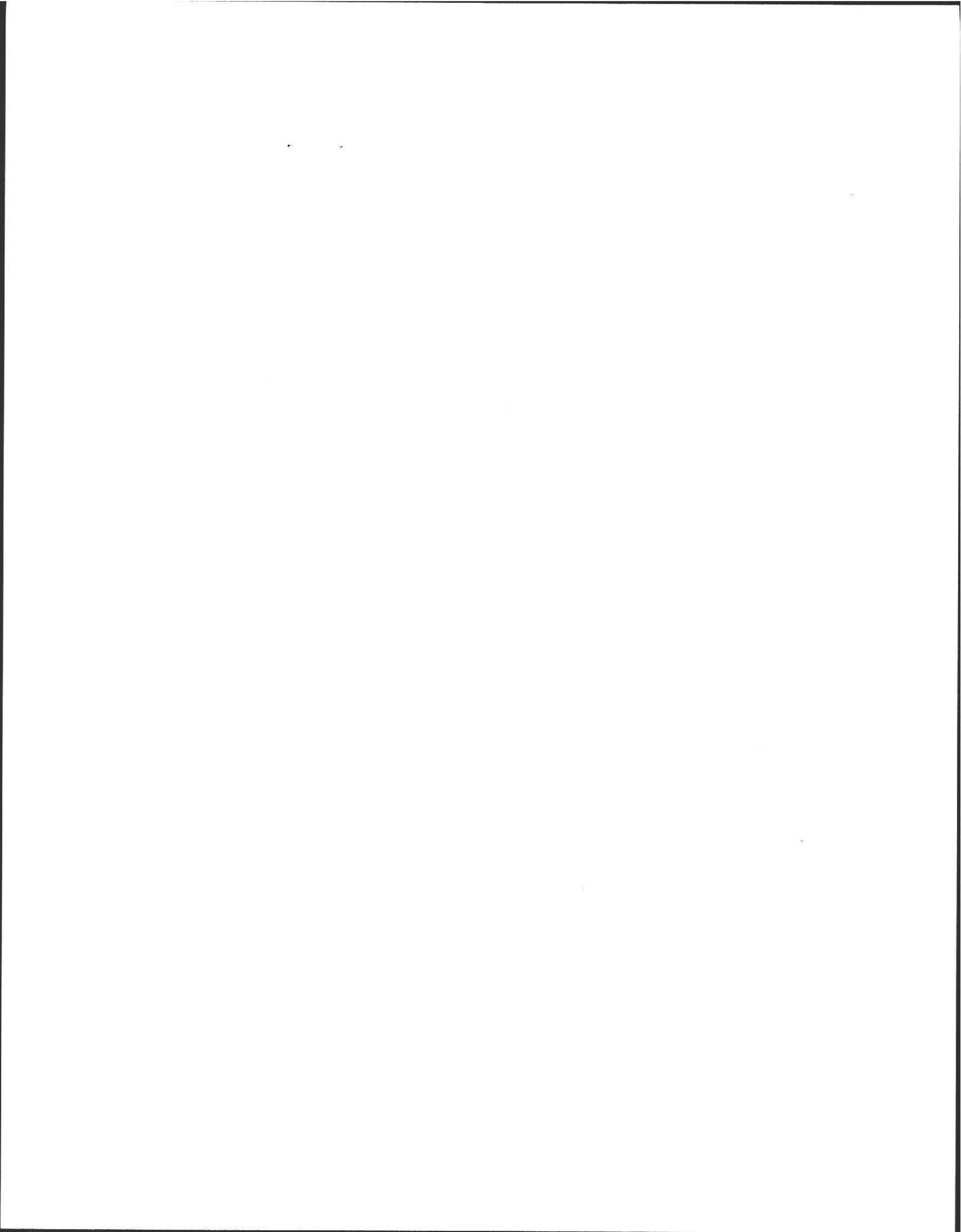
Wetlands Conservancy Program Map (map unit)

Current Water Resource Conditions (USGS): Month

Range :Above Normal  Normal  Below Normal

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







Location Address or Lot No. 371 Montague RD

COMMONWEALTH OF MASSACHUSETTS

Amherst, Massachusetts

Percolation Test*		
Date:	<u>6/29/11</u>	Time: <u>9:00</u>
Observation Hole #		
Depth of Perc	<u>46"</u>	
Start Pre-soak	<u>9:00 AM</u>	
End Pre-soak	<u>9:15</u>	
Time at 12"		
Time at 9"	{ CANT hold Soak water	
Time at 6"		
Time (9"-6")		
Rate Min./Inch	<u>&lt;2</u>	<u>&lt;2</u>

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

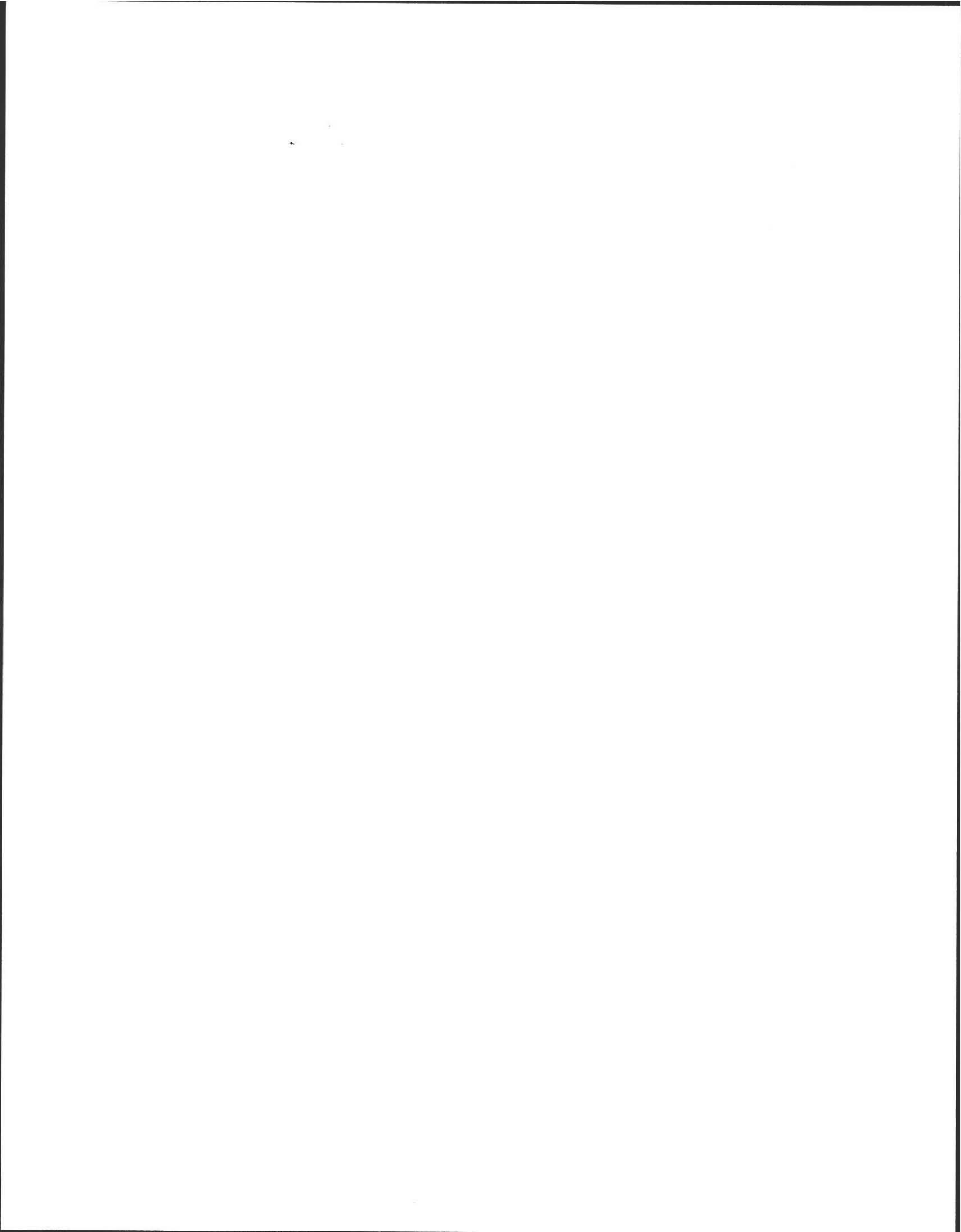
Site Passed  Site Failed

Performed By: A Weiss

Witnessed By: E. Smith

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





Location Address or Lot No. 371 Montague rd

On-site Review

Deep Hole Number H2 Date: 6/29/11 Time: 9:00 Weather Sun 70

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

Land Use Res Slope (%) 3-5 Surface Stones Not

Vegetation Grass

Landform Sloped 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 50' feet  
 Drinking Water Well 100' feet (from)      Other \_\_\_\_\_

\* No B Horizon

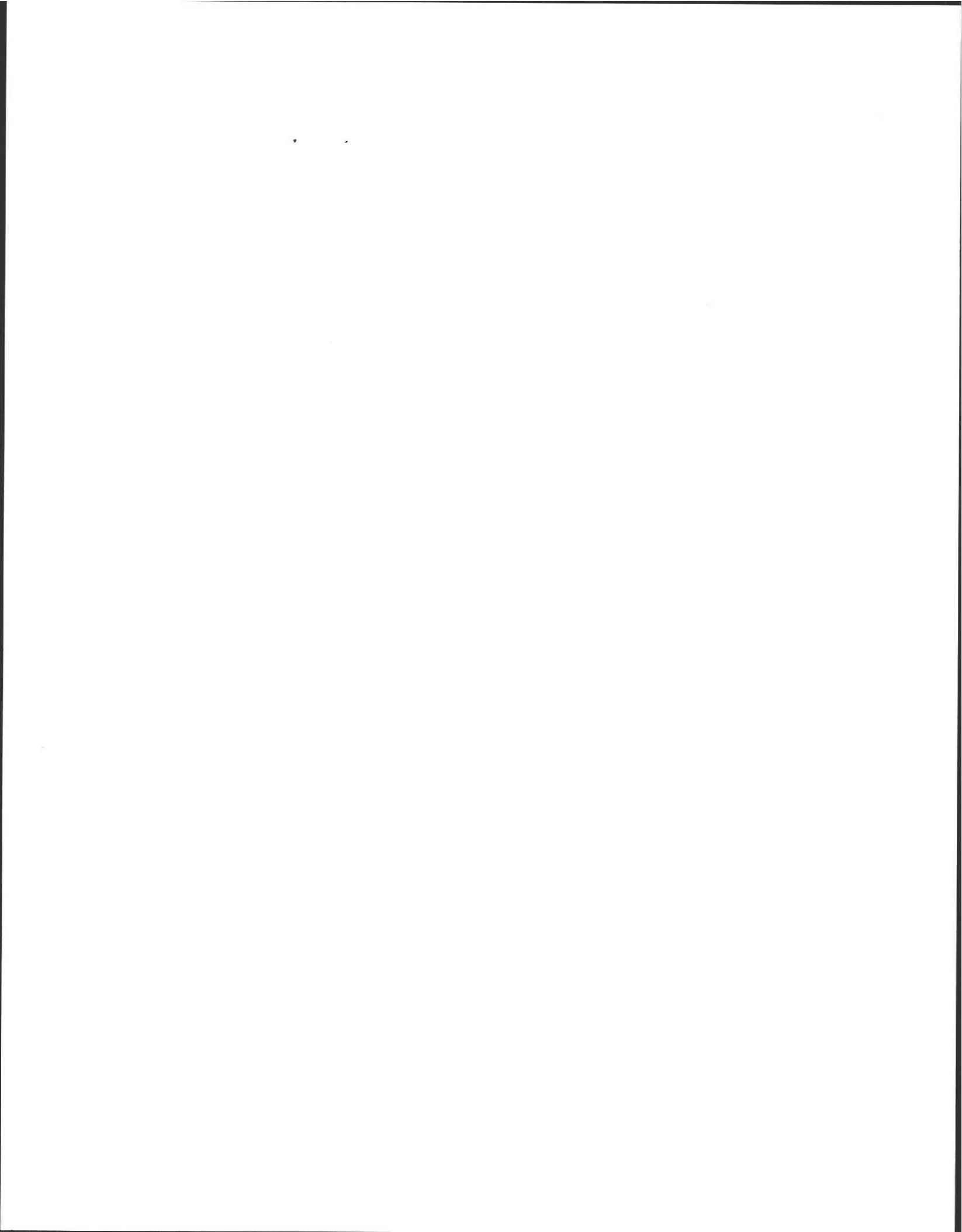
DEEP OBSERVATION HOLE LOG

Depth from Surface (Inches)	Soil Horizon	Soil Texture (USDA)	Soil Color (Munsell)	Soil Mottling	Other (Structure, Stones, Boulders, Consistency, % Gravel)
#1 0-7" 7"-78" 78"-98" 98" → 110"	A-	Fsk	10YR3/3		-Fraba
	C <sub>1</sub>	CS	10YR4/4	50"	-Coarse sand + gravel 15% cobbles, granular, Loose
	C <sub>2</sub>	FS/LS	7.5YR5/6	7.5Y5/8	-F. Sand, little silt.
	C <sub>3</sub>	2 → FSL	2.5Y4/1	7.5YR3/2	-Verm. Silt.
#2 0-12" 12"-65" 65"-80" 80"-90"	A-		10YR3/3	Strong	-Fraba Loose
	C <sub>1</sub>	CS	10YR4/4	78"	-Coarse Sand + gravel 15% cobbles, granular, Loose
	C <sub>2</sub>	fs/LS	7.5YR/6	2.5Y5/9	-F. Sand, granular, Loose.
	C <sub>3</sub>	FSL	2.5Y4/1	2.5YR3/2 Strong	-silt, Vermed.

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

Parent Material (geologic) outwash      Depth to Bedrock: 110"  
 Depth to Groundwater: Standing Water in the Hole: Not      Weeping from Pit Face: Not  
 Estimated Seasonal High Ground Water: 78"-80"





Location Address or Lot No. 371 Montague 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 78-80" 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

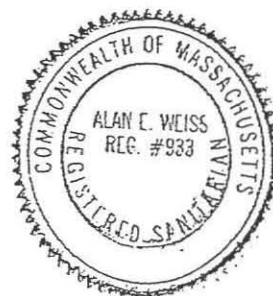
Does at least four feet of naturally occurring pervious material exist in all areas observed throughout the area proposed for the soil absorption system? YES

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

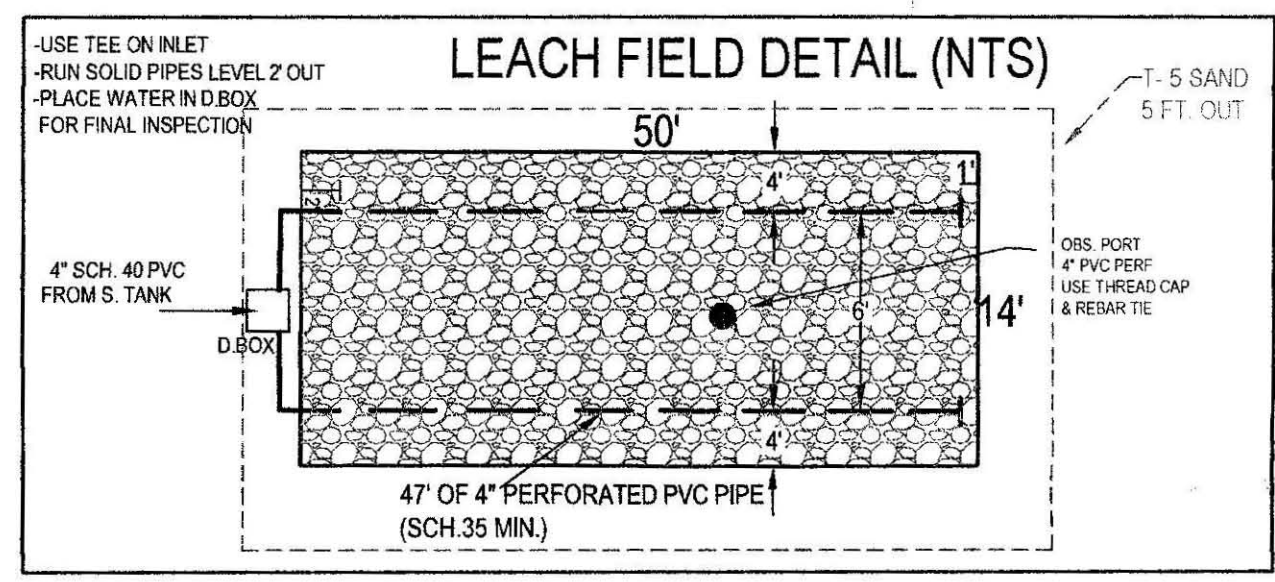
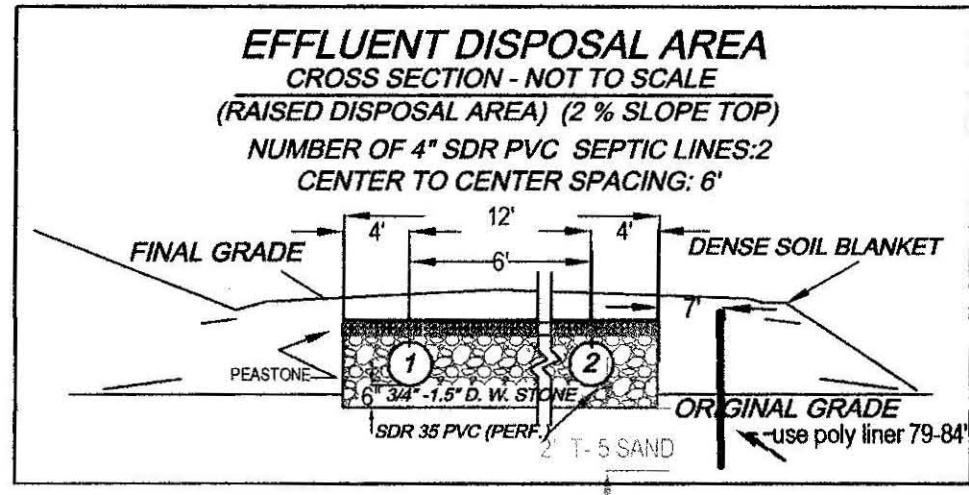
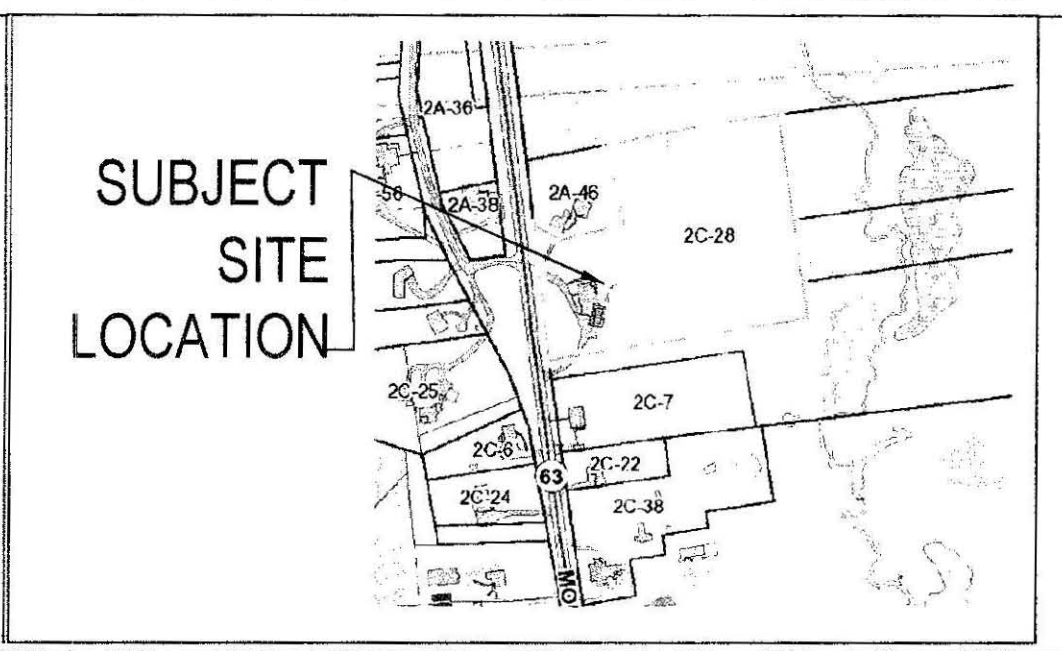
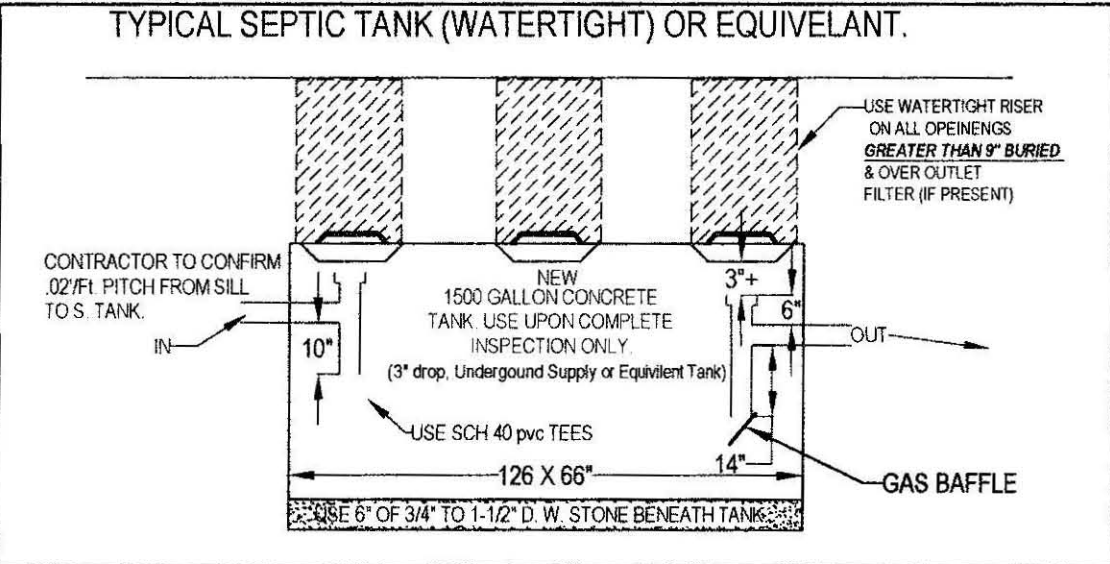
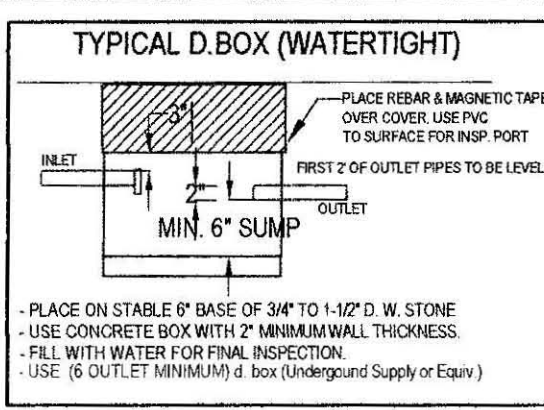
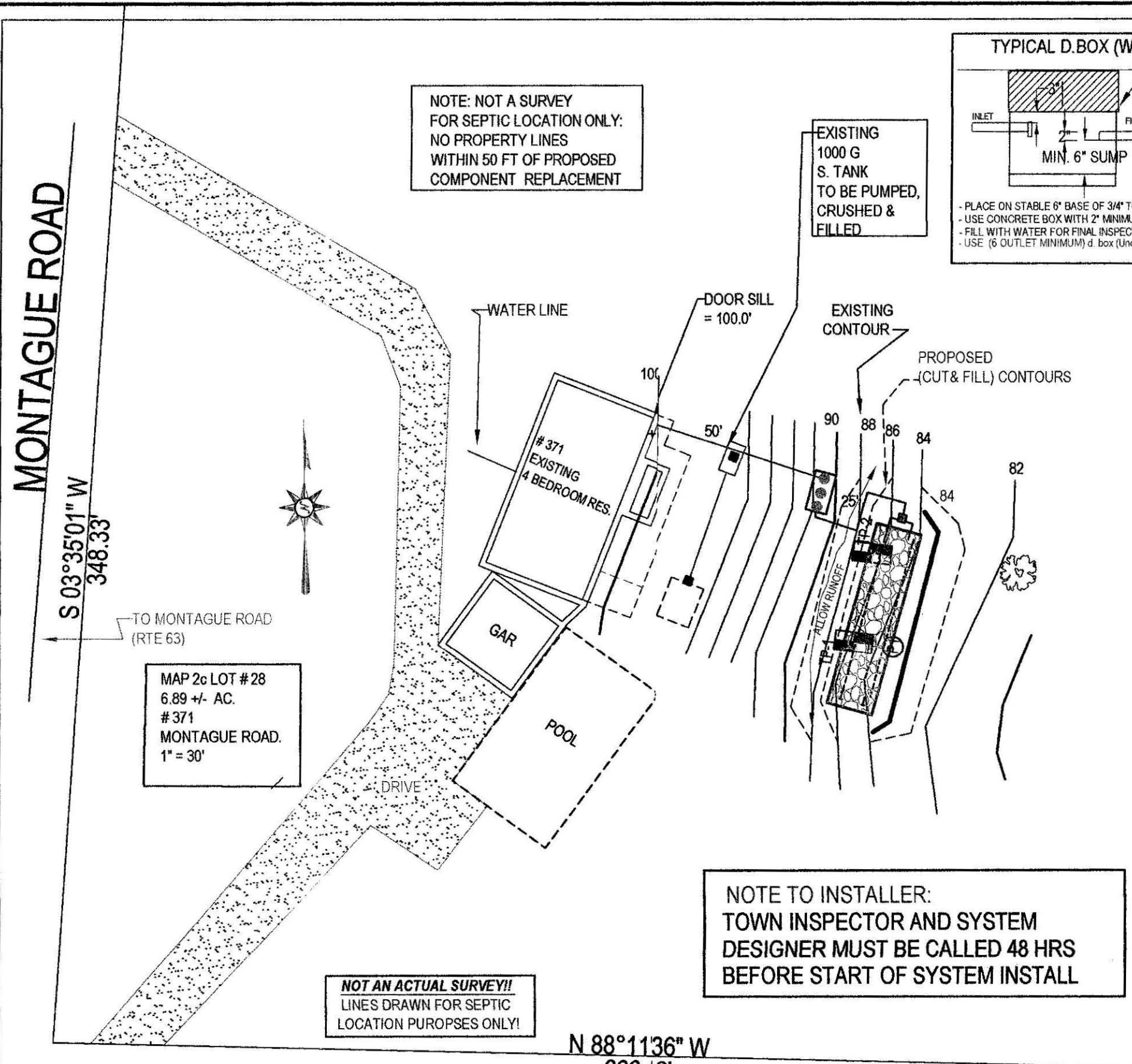
Certification

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 *AL* Date 6/29/11







**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 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.

**DESIGN NOTES AND CALCULATIONS:**

1.) 4 (BEDROOM HOME) = 440 GPD MIN. REQUIRED.

- Use LEACHING FIELD 14' WIDE X 50' LONG WITH 6" OF 3/4" TO 1-1/2" DBL WASHED STONE BELOW INVERT :

- BOTTOM AREA: L. FIELD (14' W X 50' L) = 700 SF.

- TOTAL AREA: 700 SF X .74 GAL/SF = 518 GPD PROVIDED.

3. GARBAGE DISPOSAL NOT PERMITTED. \*\*Must be confirmed removed.

4. NO OTHER PRIVATE WELLS WITHIN 150 FEET OF SAS.

5. NO OTHER WETLANDS WITHIN 100 FEET OF SAS.

6. USE 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.

7B. ANY / ALL PLASTIC RISERS MUST BE SECURED WITH STAINLESS STEEL SCREWS.

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 (not required for repairs).

11. SLOPE CALCS: (SEE CONTOURS), SUBGRADE INSP. REQD.

13. USE FIELD DUE TO TOPOGRAPHY AND SPACE OF LOT WITH RESPECT TO LOCATION AND ELEVATION OF RESIDENCE & ESHGW (310 CMR 15.240)

14. USE 2% MIN. SLOPE OVER SAS

- CLEAR TOP AND SUB TO 24" MIN. AS NEEDED (INSPECTION REQUIRED).

- CLEAR PAST BASE OF B (MIN. 24") & 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. (E. SMITH, BOH AGENT).

- DEPTH OF PIERC. 46"

- PERC RATE = < 2 MIN / IN.

- CLASS 1, SAND S. SOIL RATING

16. NO TREES WITHIN 10 FT. OF NEW LEACH AREA.

17. ENGINEER TO INSPECT SUBGRADE, TOWN AND ENGINEER INSPECT AT FINAL.

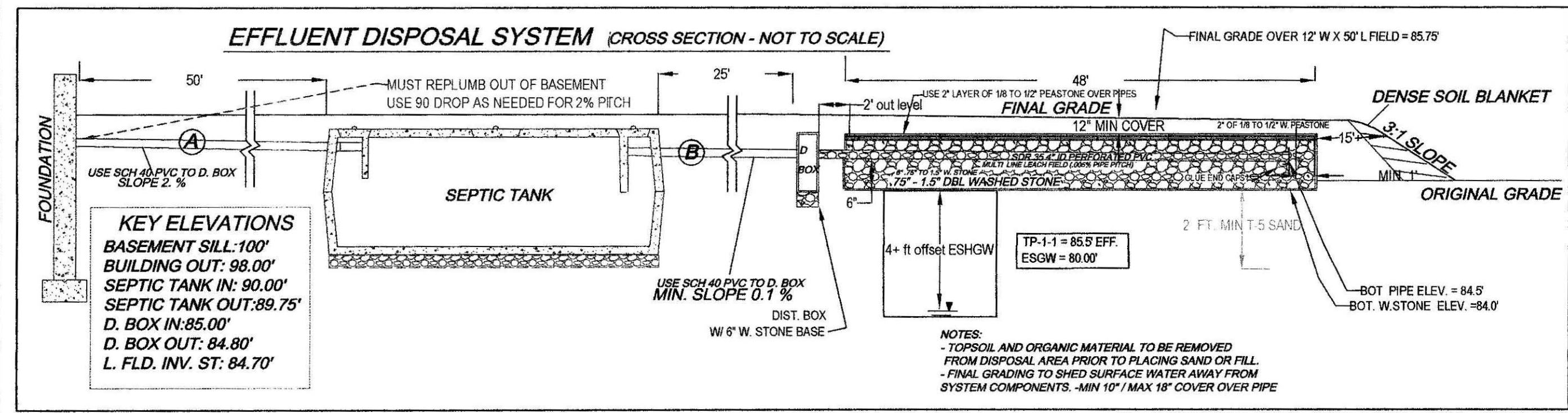
18. BM=100.00 @ (SLAB., as noted), CONFIRM PROPER PIPE SLOPES

- 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:**

TP-1 EFF. ELEV: 99.2				SOIL EVALUATOR: A. WEISS, RS				DATE OF EVALUATION: 06.29.2011						
DEPTH:	HORIZ:	TEXTURE:	COLOR (MUNSELL)	MATERIAL:	DEPTH:	HORIZ:	TEXTURE:	COLOR (MUNSELL)	MATERIAL:	DEPTH:	HORIZ:	TEXTURE:	COLOR (MUNSELL)	MATERIAL:
0-6"	Af	fill	-		0-6"	Af	FILL	-						
6-116"	C1	LS	10 YR 6.3	F. SAND, SOME M-C SAND	8-96"	C1	LS	10 YR 6.2	F. SAND, SOME M-C SAND					
				GRANULAR, 10% GRAVEL					GRANULAR, 10% GRAVEL					
				TR. SILT					TR. SILT					
OXIDES: NOT OBSERVED				OXIDES: NOT OBSERVED				OXIDES: NOT OBSERVED						
STANDING H2O: NOT OBSERVED				STANDING H2O: NOT OBSERVED				STANDING H2O: NOT OBSERVED						
WEEPING: NOT OBSERVED				WEEPING: NOT OBSERVED				WEEPING: NOT OBSERVED						
BEDROCK: 116'+				BEDROCK: 96'+				BEDROCK: 96'+						

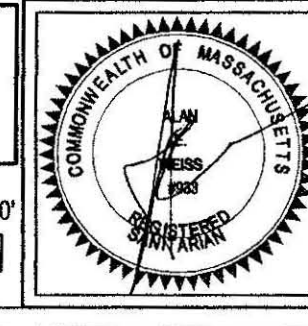
**GRAVITY SLOPE SEPTIC SYSTEM OPERATION AND MAINTENANCE NOTES FOR HOMEOWNER.**

- 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.

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

**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.**



**SEPTIC SYSTEM REPAIR PLAN FOR KENTON THARPE**  
371 MONTAGUE 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

DATE: 07.05.2011  
DRAWN BY: ALAN WEISS  
REVISIONS:

SCALE: 1"=30'

DRAWING NUMBER: 111-3554-0413

MONTAGUE ROAD

S 03°35'01" W  
348.33'

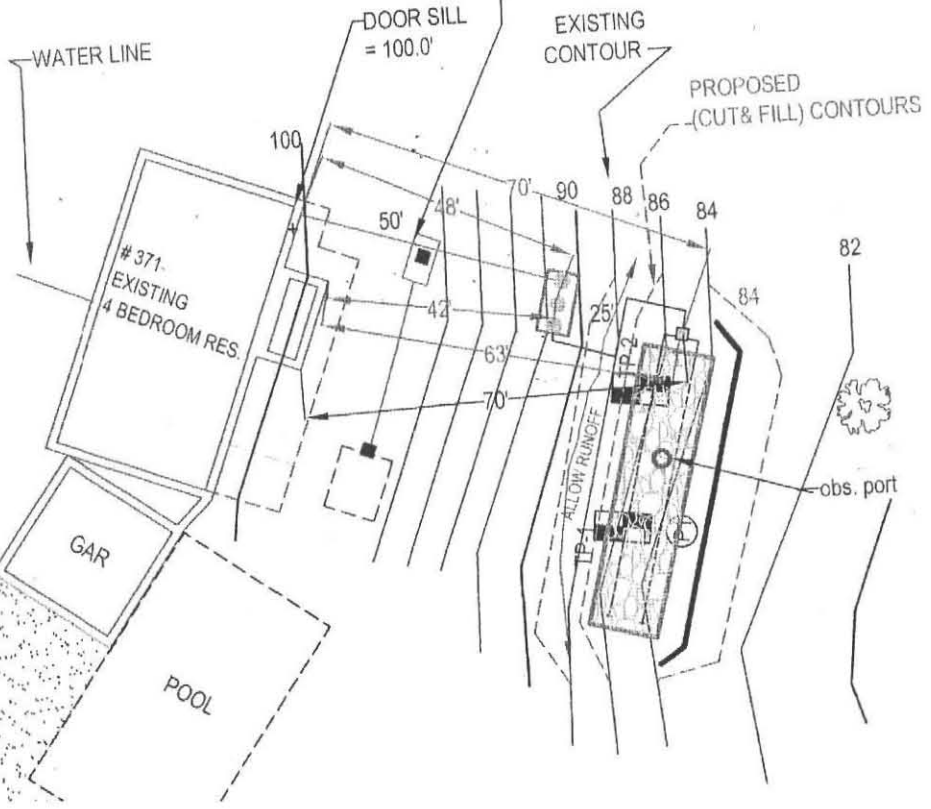
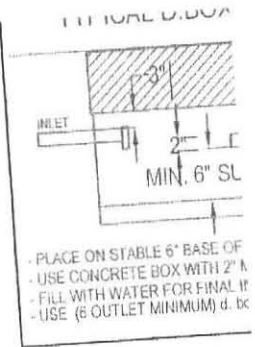
As Built 07.29.2011  
MAP 2c LOT # 28  
6.89 +/- AC.  
# 371  
MONTAGUE ROAD.  
1" = 30'



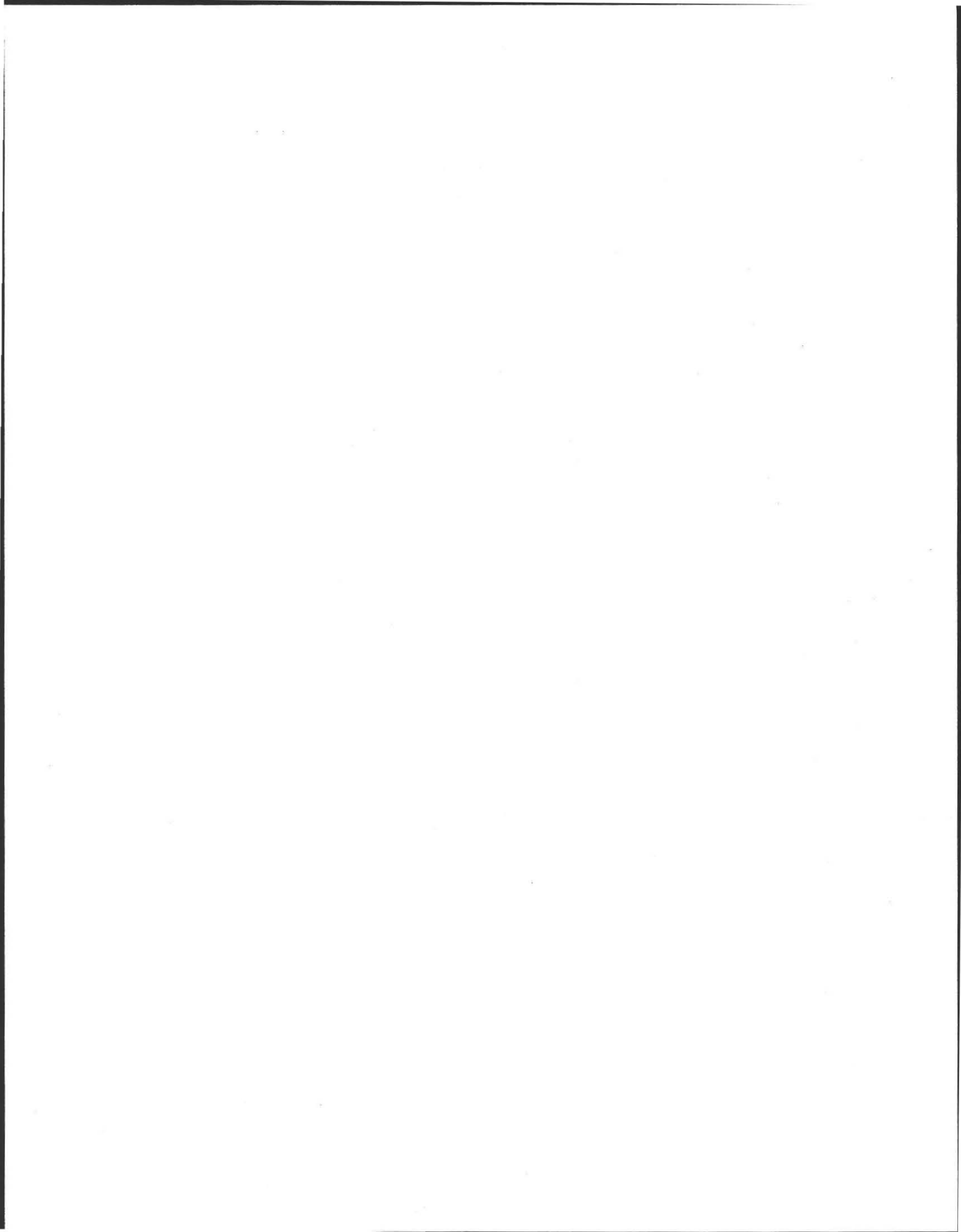
TO MONTAGUE ROAD  
(RTF 63)

NOTE: NOT A SURVEY  
FOR SEPTIC LOCATION ONLY:  
NO PROPERTY LINES  
WITHIN 50 FT OF PROPOSED  
COMPONENT REPLACEMENT

EXISTING  
1000 G  
S. TANK  
TO BE PUMPED,  
CRUSHED &  
FILLED







MONTAGUE ROAD

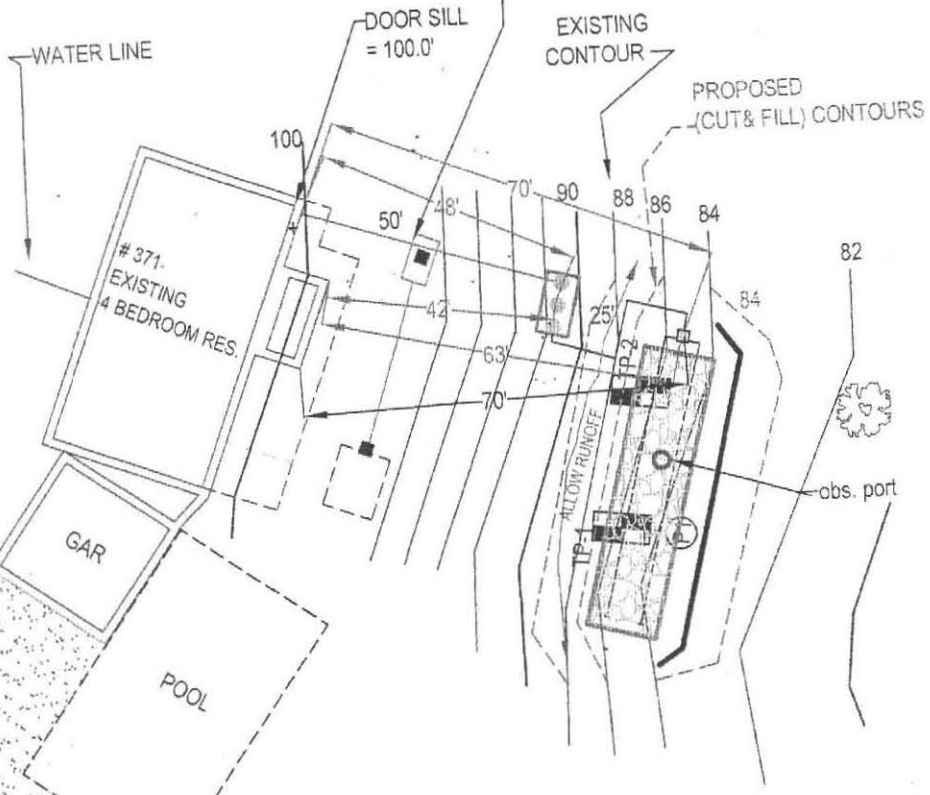
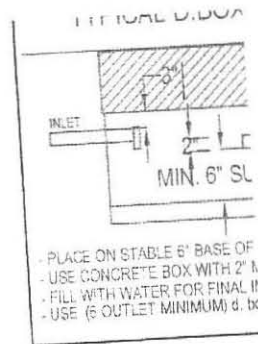
S 03°35'01" W  
348.33'

As Built 07.29.2011  
MAP 2c LOT # 28  
6.89 +/- AC.  
# 371  
MONTAGUE ROAD.  
1" = 30'

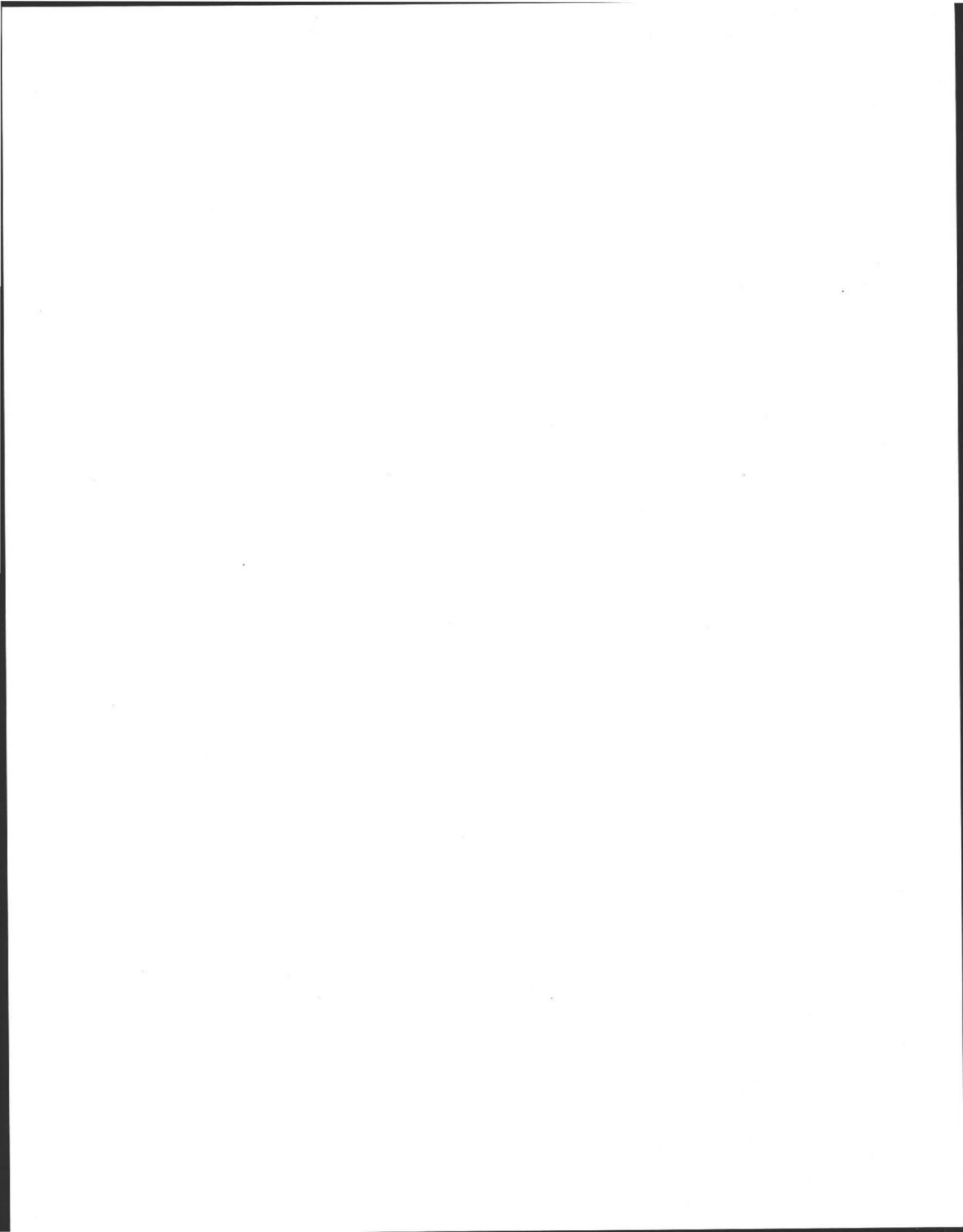


NOTE: NOT A SURVEY  
FOR SEPTIC LOCATION ONLY:  
NO PROPERTY LINES  
WITHIN 50 FT OF PROPOSED  
COMPONENT REPLACEMENT

EXISTING  
1000 G  
S. TANK  
TO BE PUMPED,  
CRUSHED &  
FILLED



TO MONTAGUE ROAD  
(R.F.E. 63)





Commonwealth of Massachusetts  
City/Town of  
**Septic System Installation Checklist**

DEP has provided this form for use by local Boards of Health if they wish to do so.

**A. Applicant Information**

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



K. THARP  
Name

371 MONTAGUE ROAD  
Address

AMHERST MA 01012  
City State Zip Code

12-02  
Disposal System Construction Permit # Map Lot

RIVER DRIVE  
Installer

ALAN WEISS  
Designer

ED SMITH, JADERIA M.R.  
Board of Health Representative

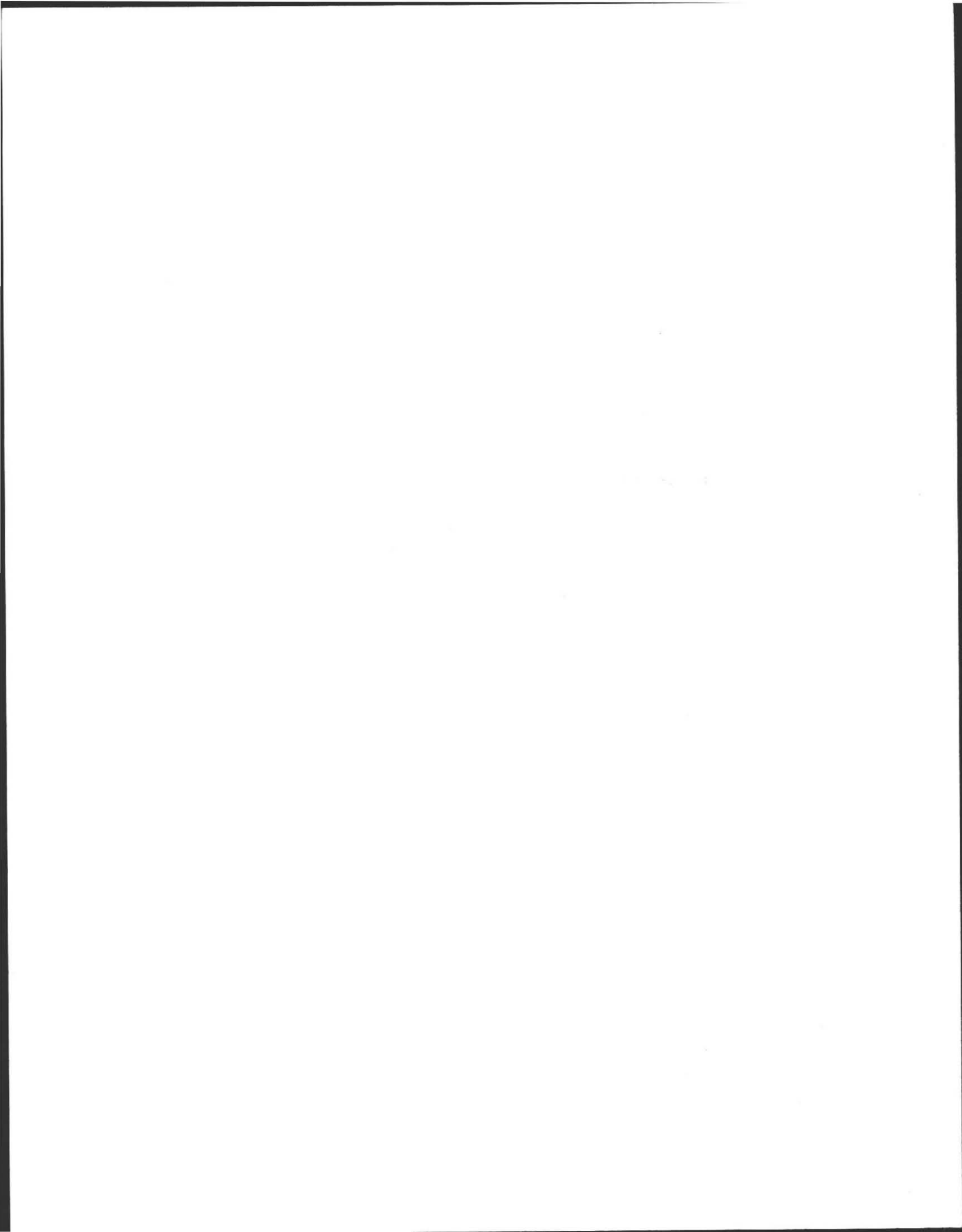
Inspection Dates:

Tank: \_\_\_\_\_ Leach Area: \_\_\_\_\_  
Date: 7.29.2011 Date: \_\_\_\_\_

Final: \_\_\_\_\_ Other: \_\_\_\_\_  
Date: \_\_\_\_\_ Date: \_\_\_\_\_

**B. Application Checklist**

1. Pre-Construction Conference	Approved	N/A	Problem
Sieve analysis supplied for sand	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Current approved plans (3 copies)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
System staked prior to construction	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On-site check for tank water-tightness	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Abandonment of existing system (repairs)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Plan revision(s)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Conditions/Approvals	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
O/M Plan on file	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DEP approval on file	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>





Commonwealth of Massachusetts  
 City/Town of  
**Septic System Installation Checklist**

**B. Application Checklist (cont.)**

2. Construction Inspection

		Approved	N/A	Problem
a) Building Sewer (310 CMR 15.222)				
All waste pipes tied into building sewer	Basement check	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schedule 40 PVC 4" or cast iron	Verify by reading pipe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Minimum slope of 0.01-0.02	Visual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pipe laid in continuous straight line	Visual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pipe laid on compact, firm base	Visual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cleanouts precede all changes in alignment/grade	Verify by visual/tape	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cleanout provided every 100 ft.	Verify by visual/tape	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Backfill material clean	Visual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Septic Tank (310 CMR 15.223)				
Tank is set level with 6" stone under (15.228)	Check with level	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tank is required size/loading per plan	Verify with plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inlet and outlet are at proper location (15.227)	Verify with plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tank is water tight (15.226)	Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outlet tees extend 6" above flow line	Verify by visual/tape	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Approved filter device placed at outlet	DEP list	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Gas baffle installed at outlet tee	Visual	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inlet and outlet tees on center line	Visual	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tank is backfilled with acceptable material	Visual	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Notes:

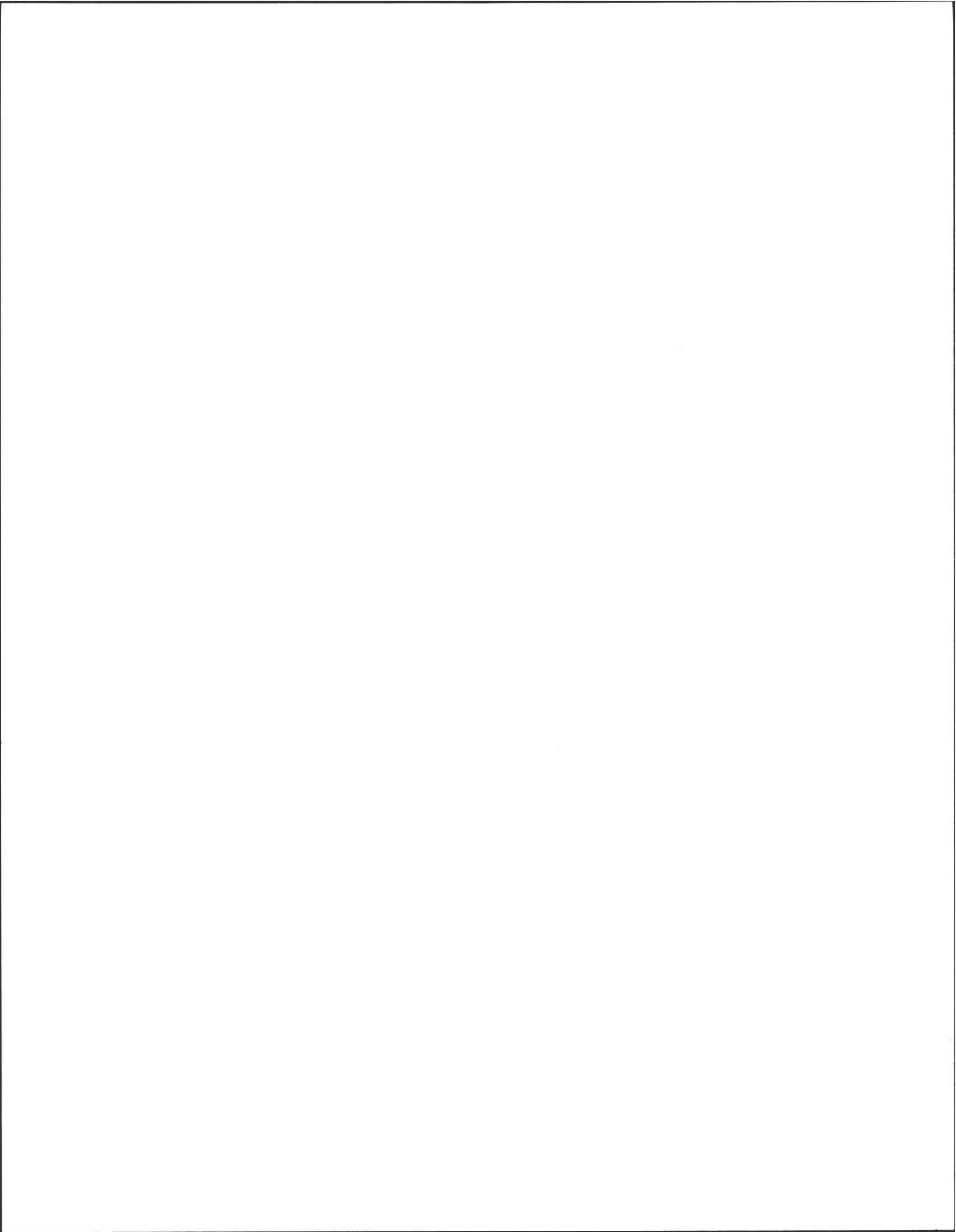
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Commonwealth of Massachusetts  
 City/Town of  
**Septic System Installation Checklist**

**B. Application Checklist (cont.)**

		Approved	N/A	Problem
c) Distribution Box (310 CMR 15.232)				
All outlet pipes at same elevation	Check by adding water	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number of outlets <u>2</u> per plan	Number of laterals	<u>2</u> per plan		
Inlet tee min. 1" over outlet	Visual and w/tape	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D box set on level base	Visual	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Top of D box 36" max depth	Visual and w/tape	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D box is water-tight	Add water	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D box has a minimum of 2" thick wall and 12" inside dimension		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Pump Chamber (310 CMR 15.231)				
Tank is set level	Visual and w/level	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Proper volume is provided	Check plan and tank	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Float elevations set per plan	Measure w/tape	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Min. 2" delivery line to D box	Visual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number of pumps: _____		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Specified pump provided or designers approval for equal pump		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Correct pump sequence		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Covers set to grade		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Electrical permit provided		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6" of stone beneath chamber	Visual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chamber is water-tight	Test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Min. 9" cover provided	Visual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Correct loading provided per plan	Visual on tank	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Notes:

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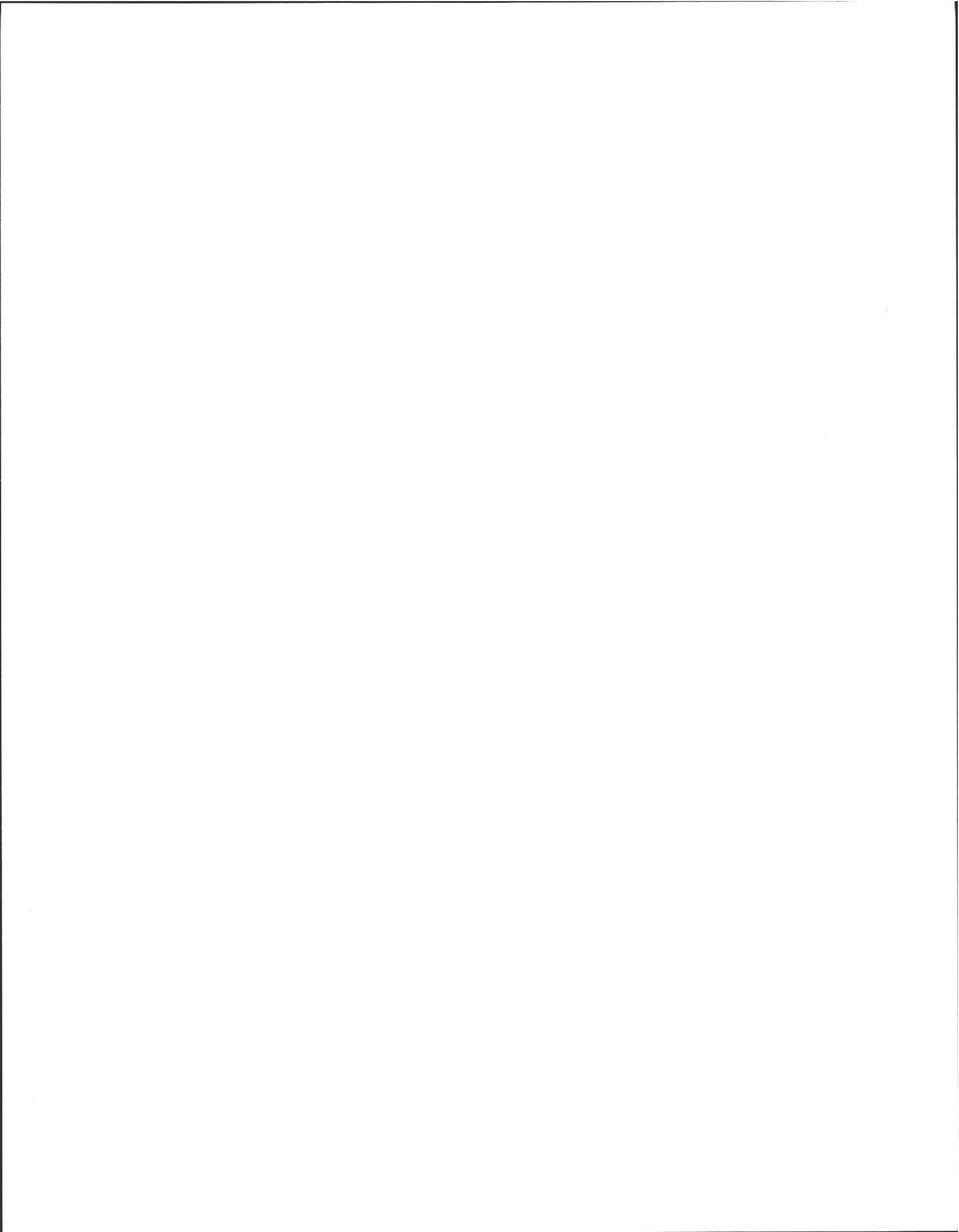




Commonwealth of Massachusetts  
 City/Town of  
**Septic System Installation Checklist**

**B. Application Checklist (cont.)**

e) Leaching Facility (310 CMR 15.240)		Approved	N/A	Problem
No frozen material used including back fill	Visual	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No clay, tailings or stones larger than 6" for cover material		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Soil at bottom/sides of excavation matches info on deep holes		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All impervious layers removed	Visual	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No remaining A/B horizons	Visual	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Groundwater conditions match plan and deep holes	Visual/check plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vented if under impervious cover per plan (15.241)		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Vent is protected from precipitation and animal entry		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cover of a minimum of 9" over leach area		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pipe slope equal to 0.005	Check w/transit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leach area per design (15.241)		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Excavation is level and at required depth	Visual/check plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Removal of 5 ft material and replacement (if in fill)	Visual/check plan	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Back fill material is acceptable	Visual	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Final contours correct per plan	Check with plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Surface/subsurface drainage away from leach area		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Final grade and side slopes are stable		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Distribution lines are capped, vented, or connected together		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Impermeable barrier (15.255[2])		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Retaining wall inspected by PE		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Retaining wall is water-proofed		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Retaining wall/barrier is at correct depth/height		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

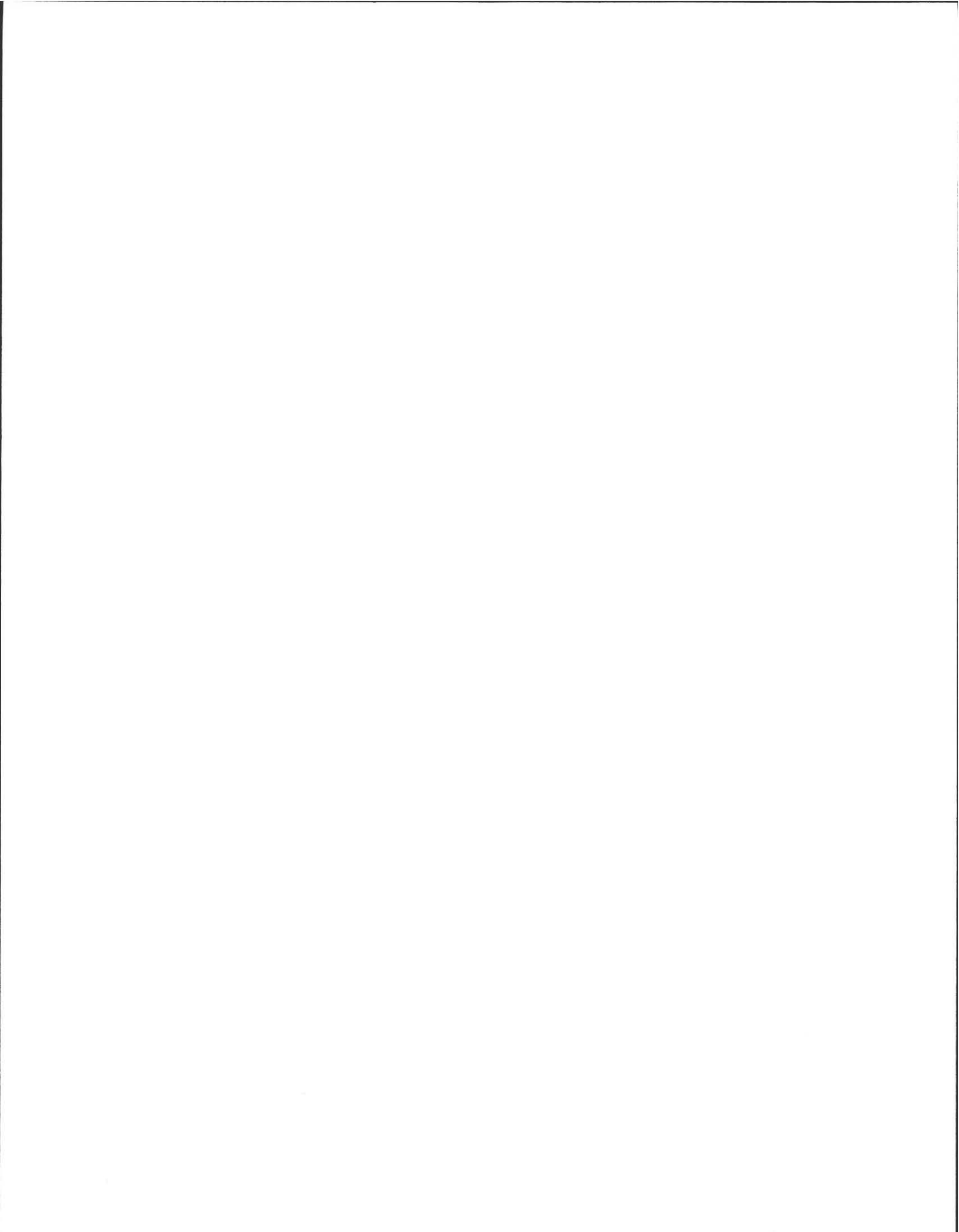




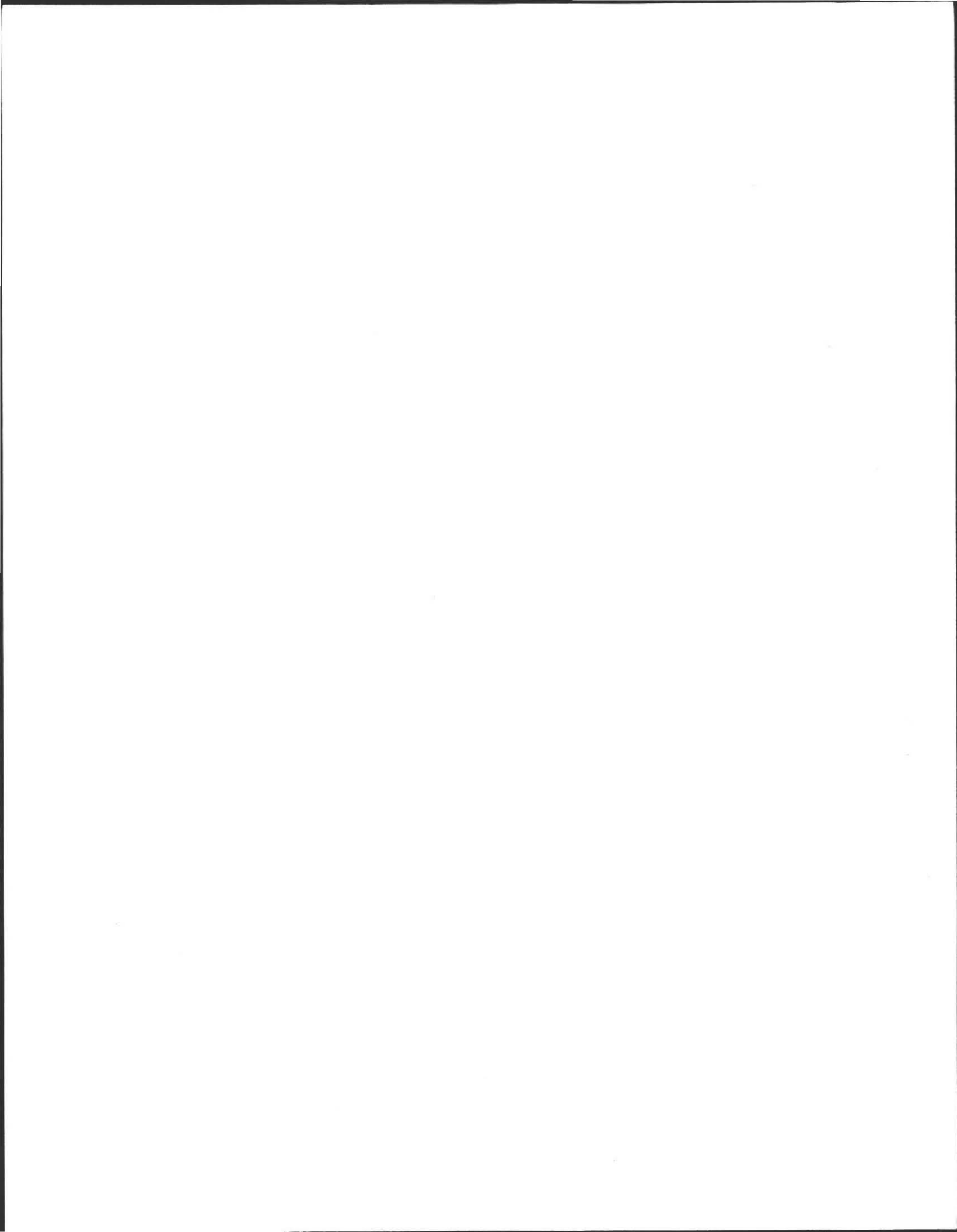
Commonwealth of Massachusetts  
 City/Town of  
**Septic System Installation Checklist**

**B. Application Checklist (cont.)**

		Approved	N/A	Problem
f) Leaching trenches (310 CMR 15.251)				
Number of trenches:	<u>2</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Depth of trenches:	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Width of trenches:	_____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trench spacing per plan		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stone is double-washed [3/4" to 1 1/2"] (15.247)		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Leaching fields (310 CMR 15.242)				
Length of field:	<u>50'</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Width of field:	<u>14'</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Min. of 2 distribution lines		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Separation distance conforms to plan		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stone is double-washed [3/4" to 1 1/2"] (15.247)		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h) Leaching Pits (310 CMR 15.253)				
Number of pits:	_____	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Depth of pits:	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stone is double-washed [3/4" to 1 1/2"] (15.247)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Each pit has min. 1 20" access cover		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Piping network and configuration of pits/chambers per plan		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i) Tight Tank (310 CMR 15.260)				
Tank is set level with 6" stone under	Visual and with level	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Tank is proper size per plan	Visual with plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pumping contract has been provided		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Covers to grade	Visual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AV alarm set at 3/5 tank capacity	Check floats by raising	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
AV alarm test on separate circuit	Set off alarm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>







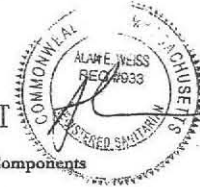
No. \_\_\_\_\_

FEE \_\_\_\_\_

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>371 Montague Rd</u>	Owner's Name	<u>Kenton Thorne</u>
Map/Parcel#	<u>2c/28</u>	Address	<u>371 Montague Rd.</u>
Lot#	<u>28</u>	Telephone#	<u>883-1188</u>
Installer's Name	<u>River Dr. Ex.</u>	Designer's Name	<u>Alan Weiss</u>
Address	<u>Hadley, MA.</u>	Address	<u>Baldwin, MA.</u>
Telephone#	<u>584-1814</u>	Telephone#	<u>413-323-5757</u>

Type of Building Residence Lot Size 6.89Ac sq. ft.  
 Dwelling - No. of Bedrooms 3 Bedroom Garbage grinder ( )  
 Other - Type of Building \_\_\_\_\_ No. of persons \_\_\_\_\_ Showers ( ), Cafeteria ( )  
 Other Fixtures \_\_\_\_\_  
 Design Flow (min. required) \_\_\_\_\_ gpd Calculated design flow \_\_\_\_\_ Design flow provided \_\_\_\_\_ gpd  
 Plan: Date 4/3/2011 Number of sheets \_\_\_\_\_ Revision Date \_\_\_\_\_  
 Title D. Box Replacment plan.  
 Description of Soil(s) \_\_\_\_\_  
 Soil Evaluator Form No. \_\_\_\_\_ Name of Soil Evaluator \_\_\_\_\_ Date of Evaluation \_\_\_\_\_

DESCRIPTION OF REPAIRS OR ALTERATIONS D. Box Replacment only.

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 \_\_\_\_\_ Date \_\_\_\_\_

Inspections \_\_\_\_\_



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

FEE \_\_\_\_\_

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. \_\_\_\_\_

FEE \_\_\_\_\_

COMMONWEALTH OF MASSACHUSETTS

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

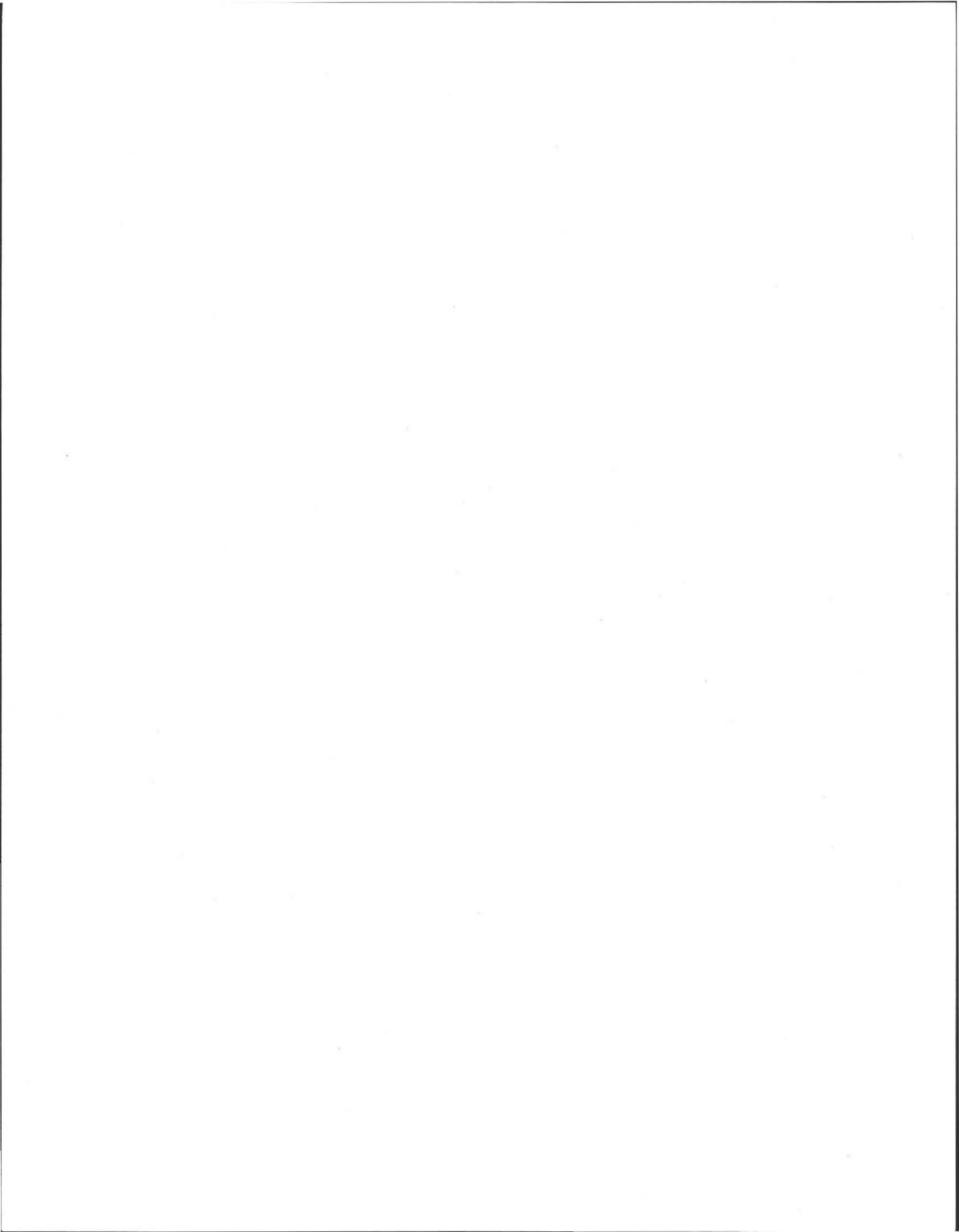
DISPOSAL SYSTEM CONSTRUCTION PERMIT

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

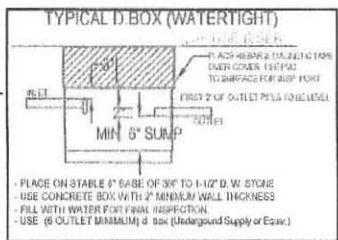
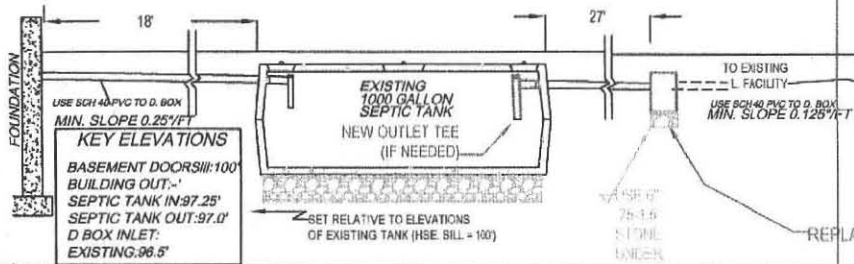
Disposal System Construction Permit No. \_\_\_\_\_, dated \_\_\_\_\_.

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



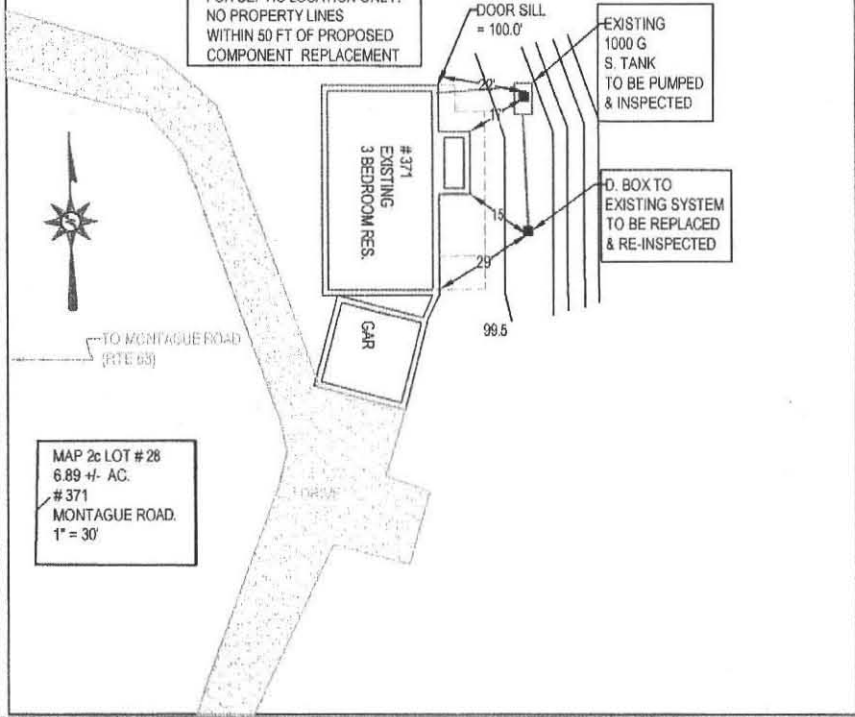


**EFFLUENT DISPOSAL SYSTEM (CROSS SECTION - NOT TO SCALE)**



**KEY ELEVATIONS**  
 BASEMENT DOOR SILL: 100'  
 BUILDING OUT-: SEPTIC TANK IN: 97.25'  
 SEPTIC TANK OUT: 97.0'  
 D BOX INLET: EXISTING: 96.5'

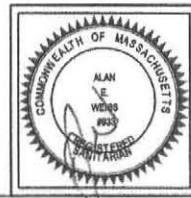
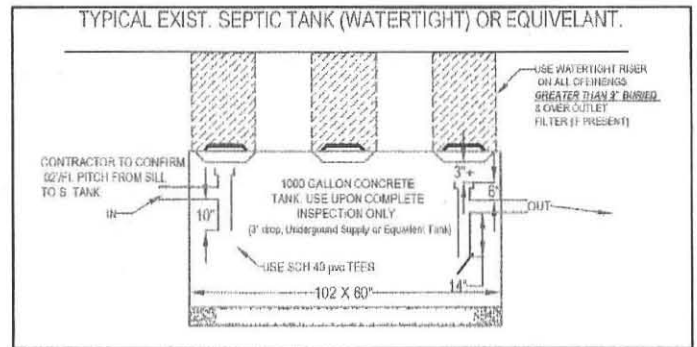
NOTE: NOT A SURVEY FOR SEPTIC LOCATION ONLY: NO PROPERTY LINES WITHIN 50 FT OF PROPOSED COMPONENT REPLACEMENT



MAP 2c LOT #28  
 6.89 +/- AC.  
 #371  
 MONTAGUE ROAD.  
 1" = 30'

**NOTE TO INSTALLER:**  
 LOCATE AND ESTABLISH L. AREA AS FUNCTIONING FIRST. IF FAILED, CONTACT DESIGNER IMMEDIATELY STOP TANK INSTALL PLAN. OTHERWISE PROCEED WITH:  
 1. Pump, crush and remove old component.  
 2. Install new D. BOX tank as noted on plan as per 310 CMR 15.00, with proper 5/8-40 base and gas baffle or outlet filter.  
 3. Contact Designer and local Health official for proper inspection prior to backfill.

NOTE: NO GAURANTEE OF LEGNTH OF FUNCTION OF L. FIELD IS ADDRESSED. FIELD FOUND FUNCTIONAL AT TIME OF COMPONENT CHANGEOUT.

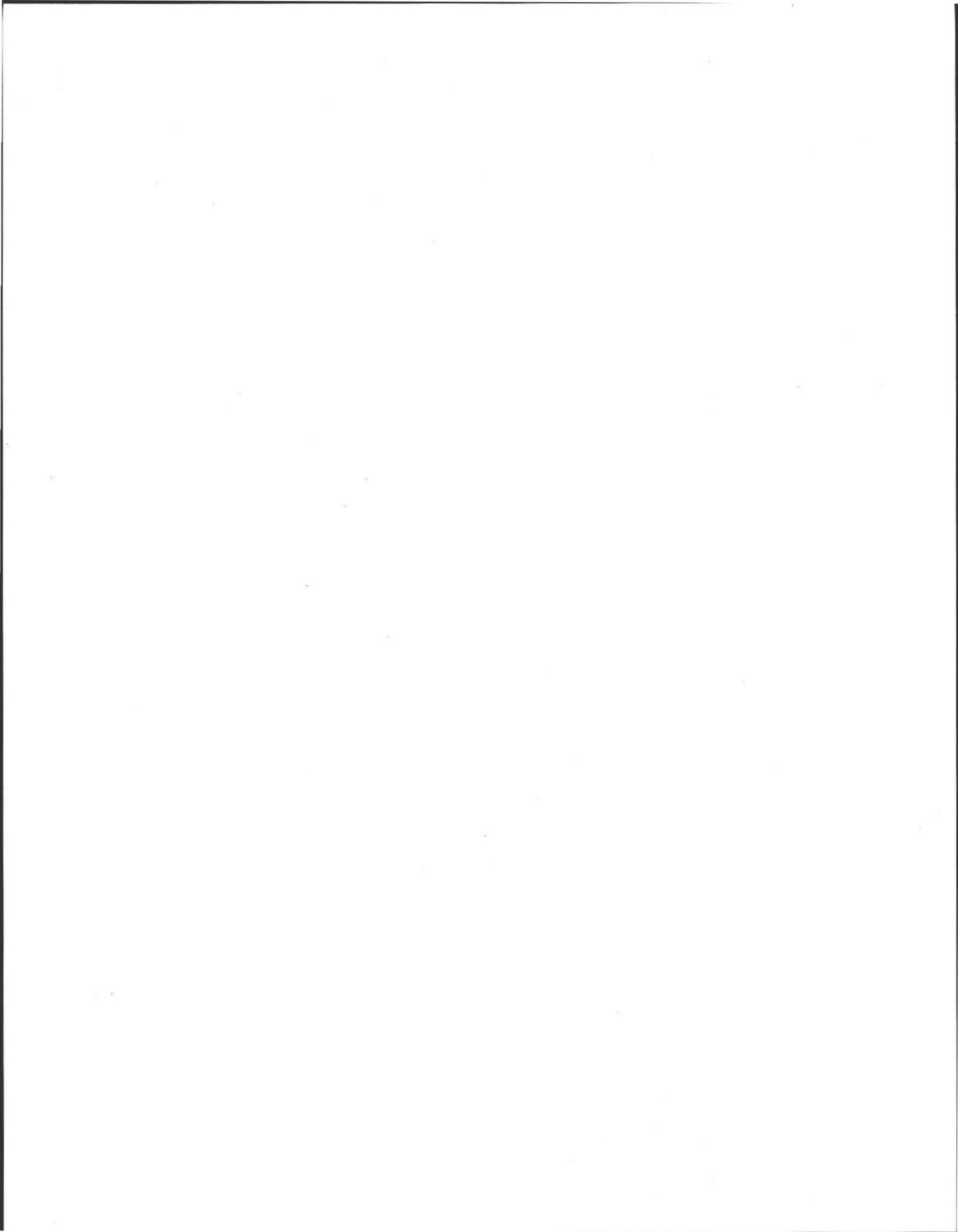


**DIST BOX REPLACEMENT PLAN FOR  
 KENTON THARPE  
 371 MONTAGUE ROAD  
 AMHERST, MA**

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

PJFO, INC. (413) 323-5957  
 FAX: (413) 323-4916  
 e-Mail: ACWCES@charter.net

DATE: 04.13.2011	DRAWN BY: ALAN WEISS	REVISED:
SCALE: 1"=30'	DRAWING NUMBER: 111-3554-0413	



PERMITS/INSP PAYMENT RECPT#: 12004411  
\*\*\*TOWN OF AMHERST\*\*\*  
TOWN HALL  
4 BOLTWOOD AVENUE  
AMHERST MA 01002

DATE: 07/15/11 TIME: 10:15  
CLERK: publichea DEPT:

PAID BY: KENTON F THARP  
PAYMENT METH: CHECK 4911

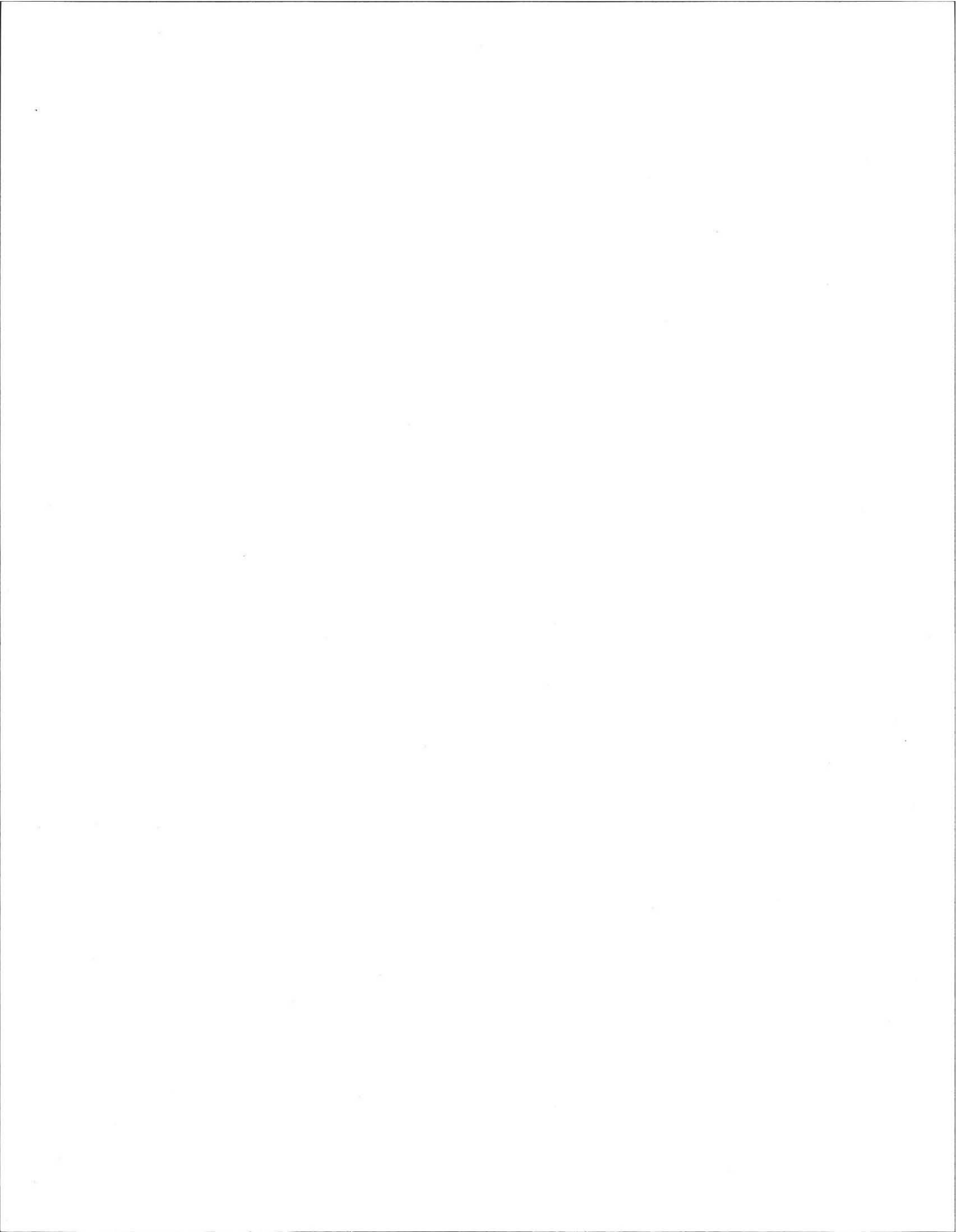
REFERENCE: 9886

AMT TENDERED: 150.00  
AMT APPLIED: 150.00  
CHANGE: .00

SITE ADDRESS: SEPTIC PLAN REVIEW

FEES:  
HEA017 150.00

TOTAL PAID: 150.00



# July 2011 INVOICE

## AMHERST PUBLIC HEALTH DEPARTMENT

Bangs Community Center  
70 Boltwood Walk  
Amherst, MA 01002

DATE: July 12, 2011

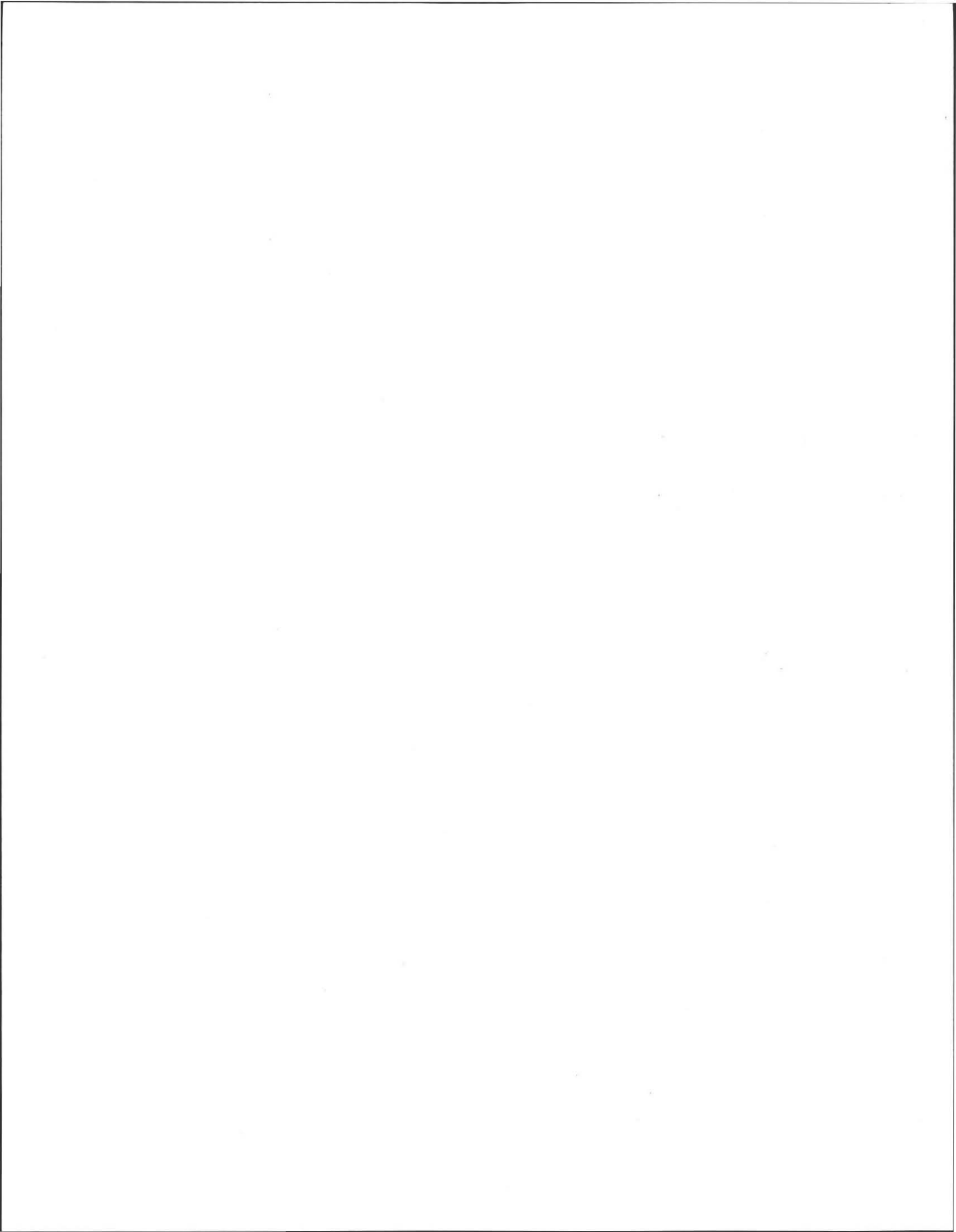
**TO** Kenton F. Tharp & Diane A. Westfall  
371 Montague Road-  
Amherst, MA 01002

**RE:** Invoice for Plan Review

Services provided by Edmund Smith

**PAYMENT TERMS: PAID IN FULL**

QUANTITY	DESCRIPTION	UNIT PRICE	LINE TOTAL
1.00	Plan Review	\$ 150.00	\$ 150.00
	Rec'd today your check #4911 for \$150.00		
	this invoice is paid in full/thank you		
<b>SUBTOTAL</b>			\$ 150.00
<b>SALES TAX</b>			
<b>TOTAL</b>			\$ 150.00



Plan: 371 MONTAGUARD

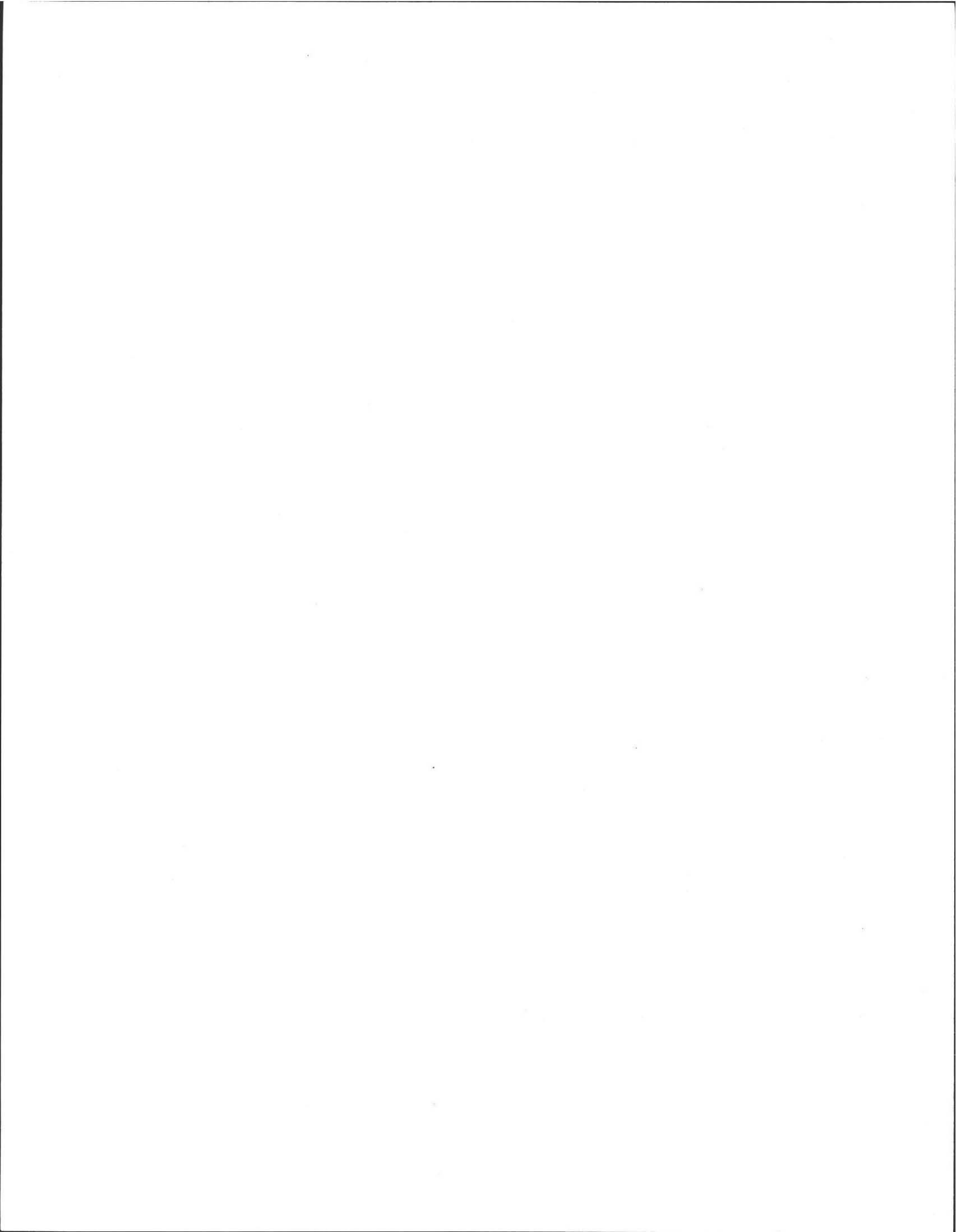
Designed by: ALAN WEISS  
CHECK LIST FOR SEPTIC PLANS

REPAIR -  
COMPLETE REPLACEMENT

- Application page attached to plan
- PE or RS stamp, date, signature
- Variances to property line setback distances must have Surveyor Stamp. 15270 (3)
- Legal boundaries noted
- Easements noted
- Dwellings and buildings existing or proposed noted
- Location of driveway or parking areas, other impervious areas
- Location and dimensions of reserve area (new) CMR 15.248(1), 15.104(4)
- System design calculations
- Garbage grinder Y or N
- Benchmark not disturbed during construction, within 75 feet of facility CMR 15.220 (4)(q)
- North arrow CMR 15.200 (4) (g)
- Contours
- Deep hole location and data
- Perc hole location and data
- Elevations
- Names of approving authority and soil evaluator CMR 15.211 p. 49
- Location of every water supply, public and private. CMR 15.220(k):
  - Within 400 feet of system in case of surface water and gravel packed public water supply
  - Within 250 feet of system in case of tubular public water supply
  - Within 150 feet of private supply wells 100' septic sys. ; 50' tank
- Well statement if applicable
- Location of any surface waters, rivers, vegetated wetlands
- Location of water lines and other subsurface utilities
- Observed and adjusted ground water elevation in the vicinity of system 15.220 (4)(n)
- Profile of system
- Locus plan to show location of facility, including nearest street
- Materials of construction and specs for system
- Gas Baffle 15.227.4
- Pipe in center line of tank 310 CMR 15.227, 15.06(8)
- Double washed stone
- Schedule 40 PVC for trafficked areas, house to tank
- Distances noted from house to tank, etc.
- If dosing is proposed, design and specs of dosing system
- When alternative technology is required, complete plan and specs, including hydraulic profile
- Trenches preferred over beds CMR 15.240 (6)
- Buoyancy calculations for tanks or components partly below H2O table 15.221(8) p. 56
- 3 to 1 slope outside of mound, toe ending 5 feet from property line
- Local upgrade requests on the plan
- Local upgrade forms attached to application
- Note on plan listing all variances sought in conjunction with the plan

NOTES: approved 7.17.2011 *Edmund R. Smith*







Commonwealth of Massachusetts

City/Town of

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

A. Facility Information

Owner Name

371 MONTAGUE ROAD

Street Address

AMHERST

City

MA  
State

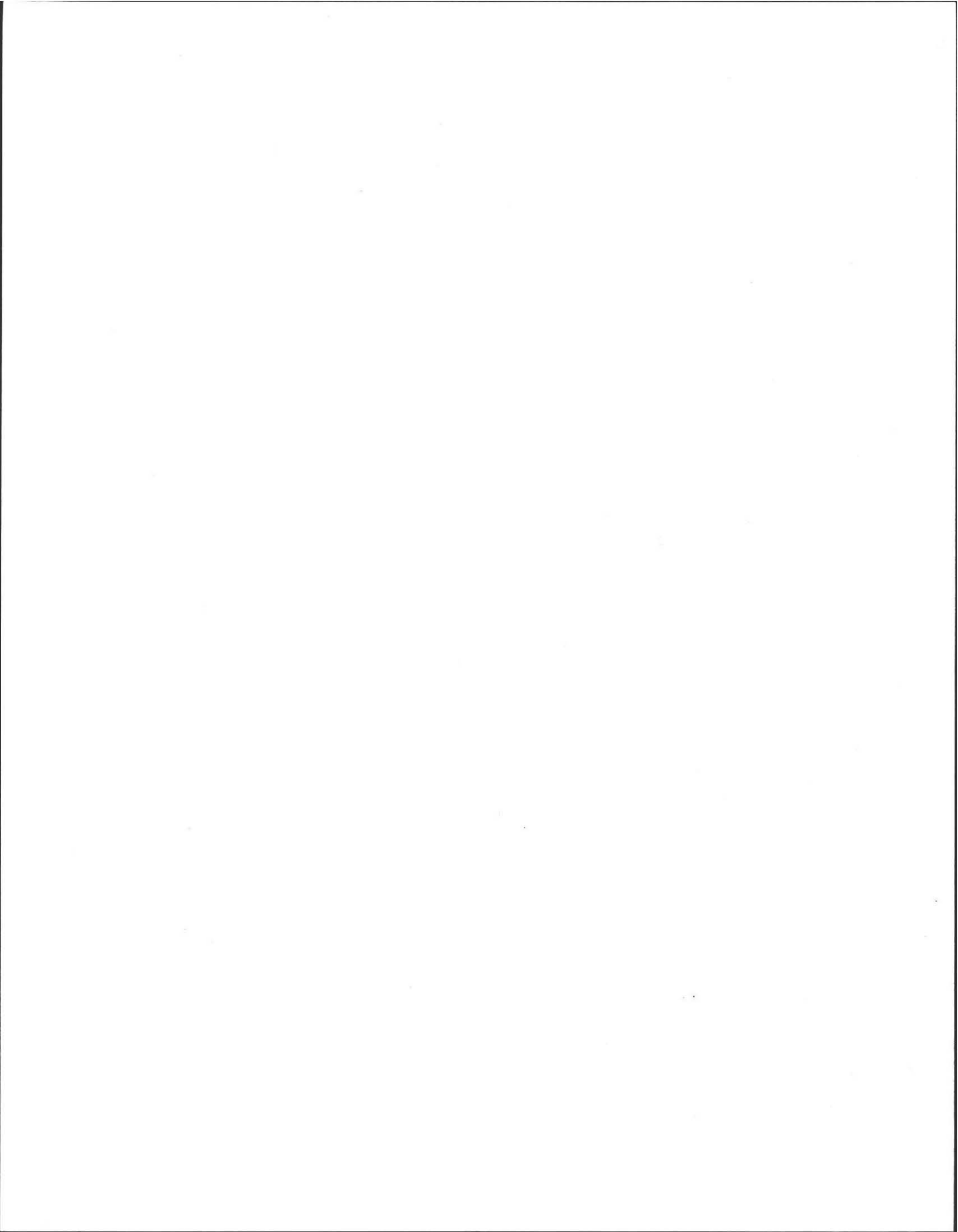
Map/Lot #

01002

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 \_\_\_\_\_  
 SEE ATTACHED - SEVERAL  
 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): \_\_\_\_\_  
 Range:  Above Normal  Normal  Below Normal  
 Month/Year
- Other references reviewed: \_\_\_\_\_



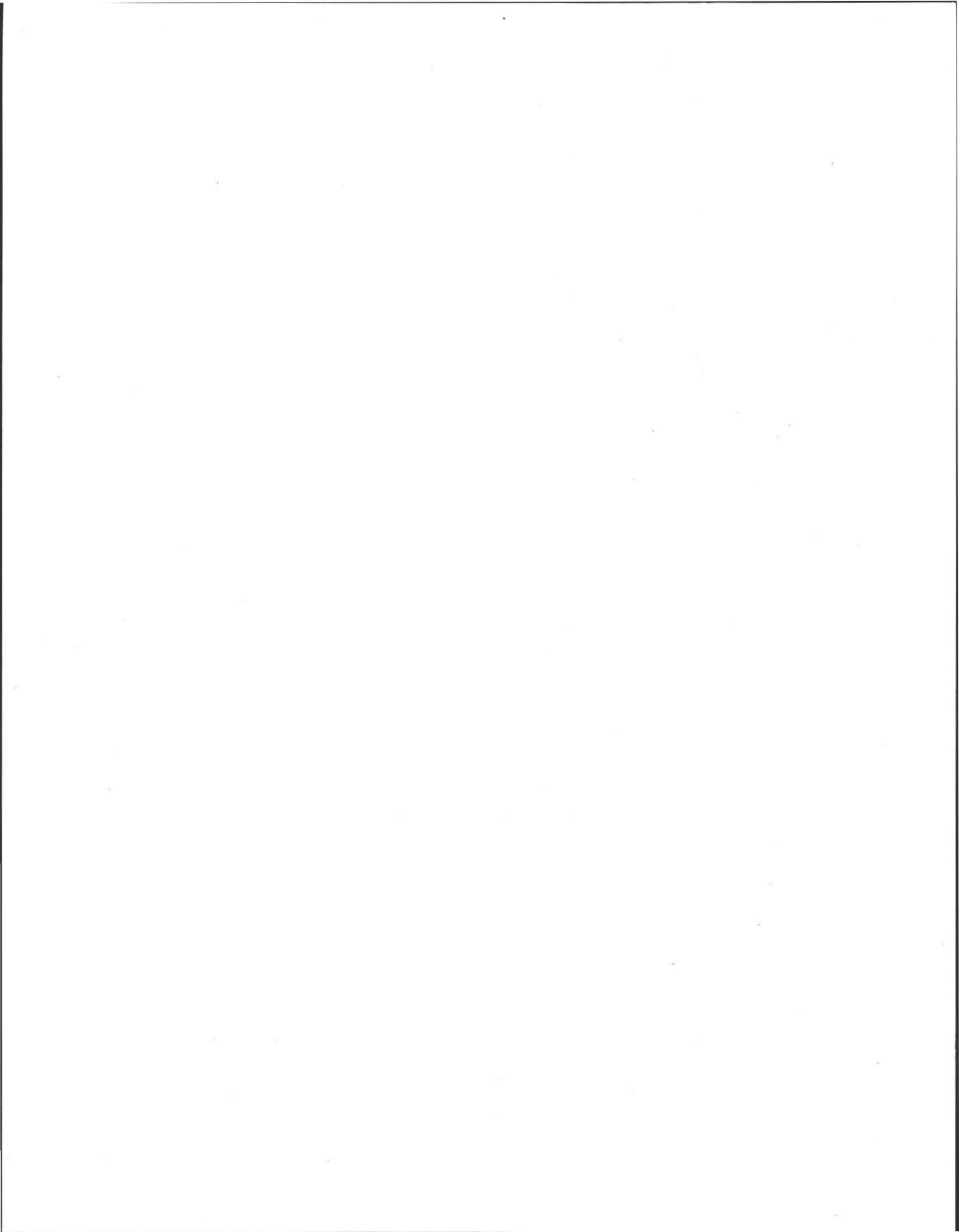
Zoom to location: 371 Montague Road, Amherst ma

**Map Unit Legend**



Area (Ac)	Map Symbol	Map Unit
12.4	39A	<i>Scarboro muck, 0 to 1 percent slopes</i>
11.9	254C	<i>Merrimac fine sandy loam, 8 to 15 percent slopes</i>
10.0	711C	<i>Charlton-Rock outcrop-Hollis complex, sloping</i>
9.8	254B	<i>Merrimac fine sandy loam, 3 to 8 percent slopes</i>
8.2	260B	<i>Sudbury fine sandy loam, 3 to 8 percent slopes</i>
7.9	225A	<i>Belgrade silt loam, 0 to 3 percent slopes</i>
4.9	258B	<i>Amostown fine sandy loam, 3 to 8 percent slopes</i>
4.3	711E	<i>Charlton-Rock outcrop-Hollis complex, steep</i>
3.9	255B	<i>Windsor loamy sand, 3 to 8 percent slopes</i>
3.9	275B	<i>Agawam fine sandy loam, 3 to 8 percent slopes</i>
3.9	255C	<i>Windsor loamy sand, 8 to 15 percent slopes</i>
3.6	220C	<i>Boxford silt loam, 8 to 15 percent slopes</i>
2.6	251B	<i>Haven very fine sandy loam, 3 to 8 percent slopes</i>
2.6	253C	<i>Hinckley loamy sand, 8 to 15 percent slopes</i>
1.5	225B	<i>Belgrade silt loam, 3 to 8 percent slopes</i>
0.3	30A	<i>Ravnham silt loam, 0 to 3 percent slopes</i>
0.2	1	<i>Water</i>
0.1	250B	<i>Pollux fine sandy loam, 3 to 8 percent slopes</i>
0.0	254D	<i>Merrimac fine sandy loam, 15 to 25 percent slopes</i>

AREA OF DEEP PITS

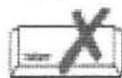




Commonwealth of Massachusetts  
 City/Town of  
**Percolation Test**  
 Form 12

Percolation test results must be submitted with the Soil Suitability Assessment for On-site Sewage Disposal. DEP has provided this form for use by local Boards of Health. Other forms may be used, but the information must be substantially the same as that provided here. Before using this form, check with the local Board of Health to determine the form they use.

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



**A. Site Information**

Owner Name  
371 MONTAGUE ROAD  
 Street Address or Lot #  
AMHERST MA State 01002 Zip Code  
 City/Town Telephone Number  
Am  
 Contact Person (if different from Owner)

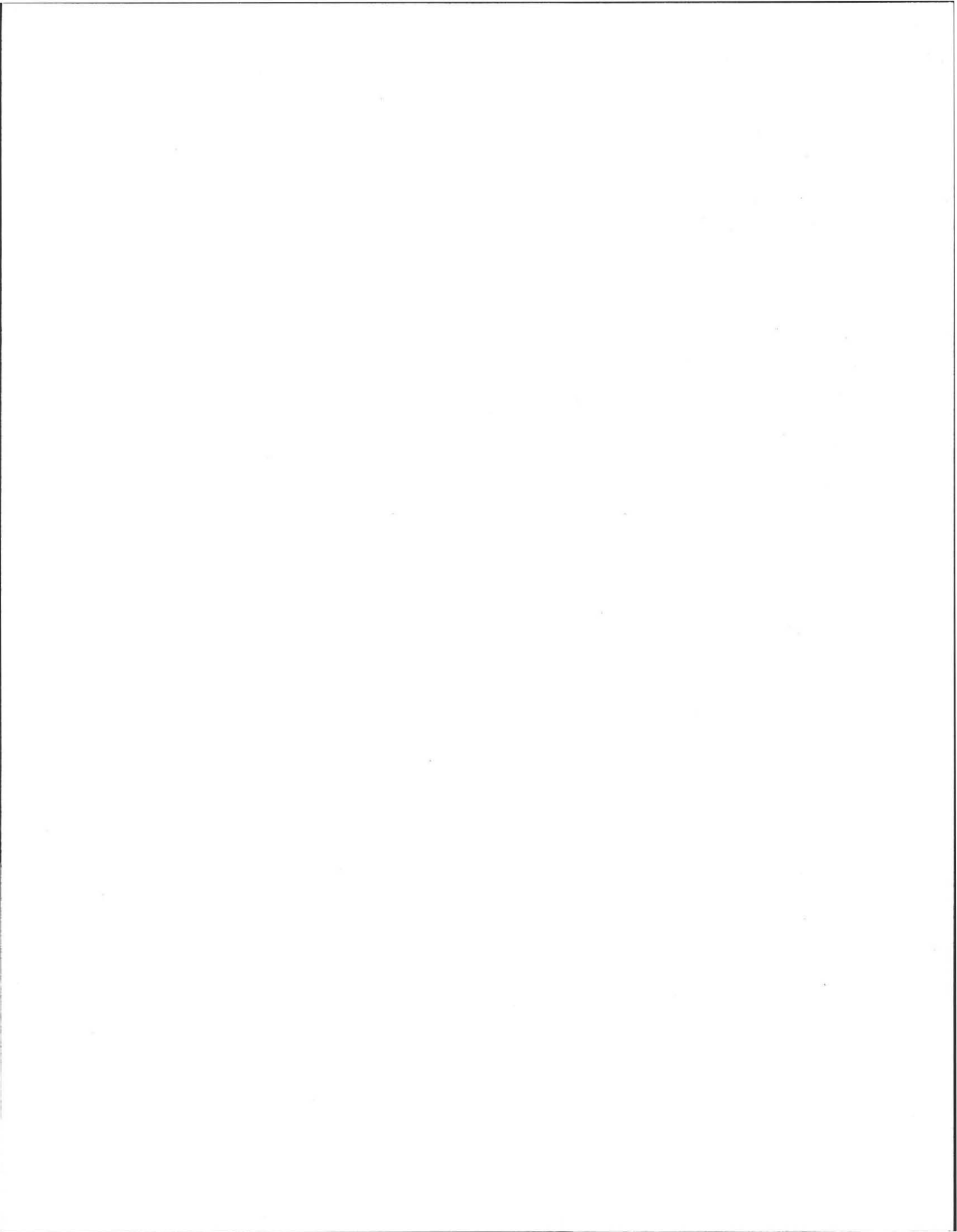
**B. Test Results**

	<u>6-29-2011</u> Date	<u>8:45</u> Time	<u>6-29-2011</u> Date	<u>4:00</u> Time
Observation Hole #	<u>1</u>			
Depth of Perc	<u>46"</u>			
Start Pre-Soak	<u>9 AM</u>			
End Pre-Soak	<u>9:15</u>			
Time at 12"	<u>CAN'T HOLD SOAK</u>			
Time at 9"	↓			
Time at 6"				
Time (9"-6")				
Rate (Min./Inch)	<u>&lt; 2 MINS/INCH</u>			
	Test Passed: <input checked="" type="checkbox"/>		Test Passed: <input type="checkbox"/>	
	Test Failed: <input type="checkbox"/>		Test Failed: <input type="checkbox"/>	

Test Performed By: ALAN WEISS

Witnessed By: EDMOND SALETTE

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





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         6-29-2011    

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	A	10YR <sup>3/3</sup>									
7-78	AC <sub>1</sub>	10YR <sup>4/4</sup>				COARSE SAND & GRAVEL	15%	GRANULAR LOOSE			
78-98	C <sub>2</sub>	7 1/2 YR <sup>5/6</sup>	80"	7 1/2 YR <sup>3/2</sup> 7 1/2 YR <sup>5/6</sup>	MANDEARISE RED	FINE SAND/ LOAMY SAND					
98-110	C <sub>3</sub>	2 1/2 YR				FINE SANDY LOAM/ VARIED SILT					

Additional Notes:

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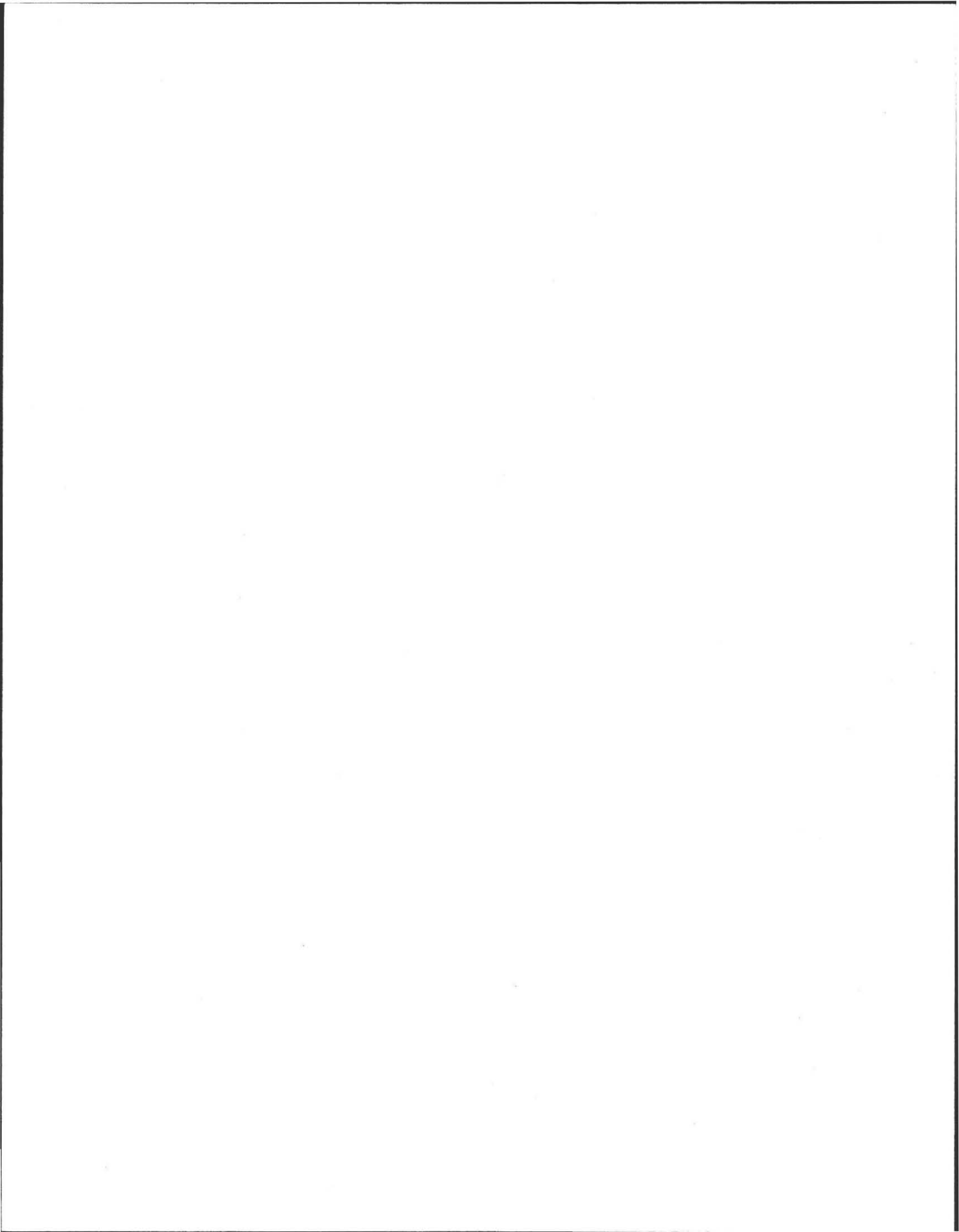


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Commonwealth of Massachusetts  
City/Town of

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

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

Deep Observation Hole Number: #2 6-29-2011

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			
0-12		10YR 3/3									
12-68		10 YR 4/4				COARSE SAND/ GRAVEL		15%	GRANULAR	LOOSE	
68-80		7 1/2 YR 5/6	7 1/2 YR 5/6	7 1/2 YR 5/6	HAND. RED	FINE SAND/ LOAMY SAND					
80-90		2 1/2 YR				FINE SAND/ LOAM/SHRED SILT					

Additional Notes:

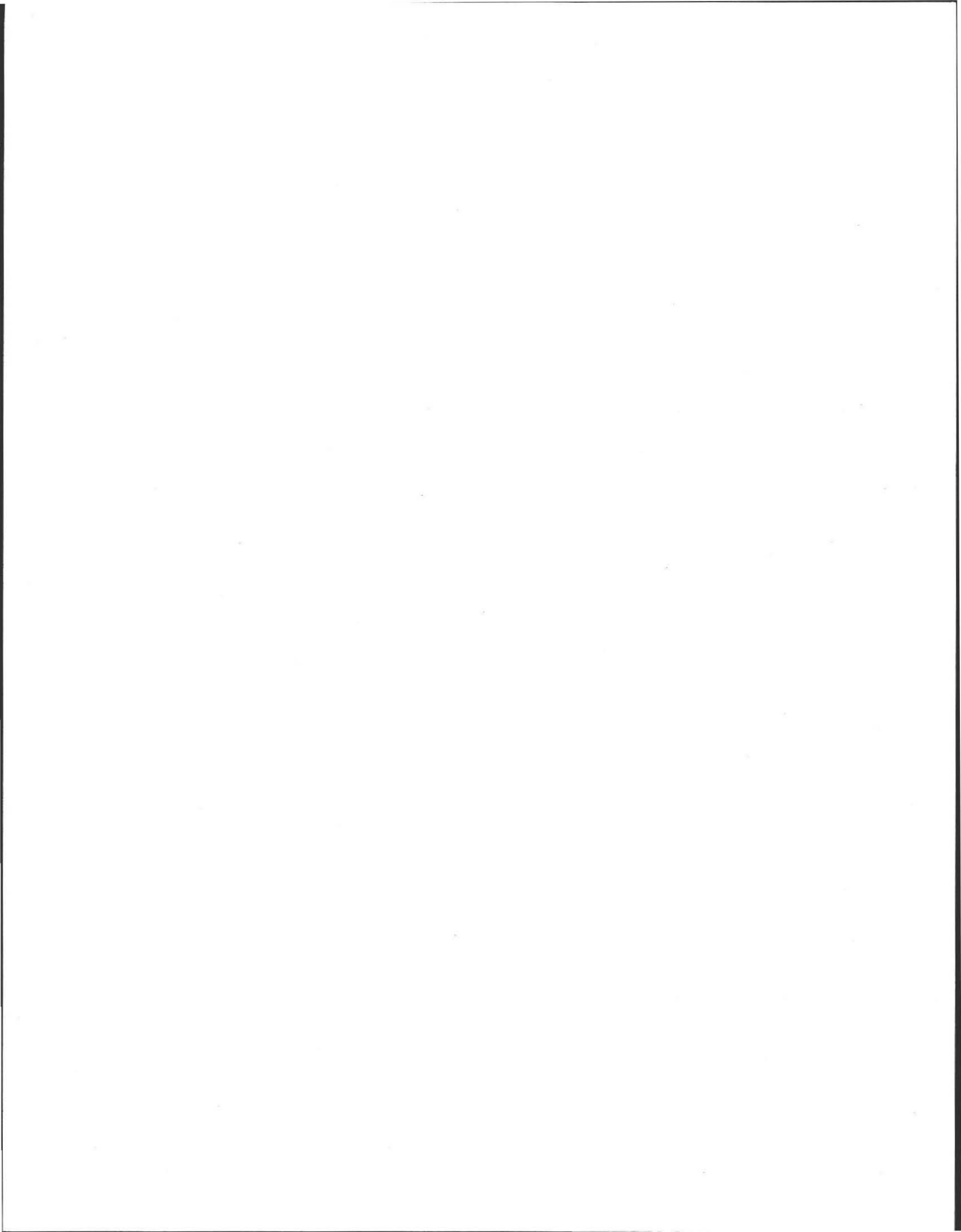
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MERIDIAN OF THE 1945 L.O. OF MONTAGUE ROAD

MASS. ROUTE 63

1945 LAYOUT - SEE PLAN BOOK 28 PAGE 18 ETC.

ROAD

5' 01" E  
(115.748M)

TOTAL 1709.98'  
348.33' (106.171M)

(521.171M)

I.P.(SET)

N 88° 11' 36" W

666.12'

(203.033M)

S.B.(FND.)

S 04° 17' 40" W

(161.392M)

S.B.(FND.)

2  
6.891±ACRES  
(2.789±HACTARES)

1  
1.000 ACRES  
(0.405±HECTARES)

LAND OF W. D. COWLS, INC.

I.P.(SET)  
N 89° 10' 47" E  
214.98' (65.526M)

I.P.(SET)

674.36'

(205.545M)

I.P.(SET)  
203.25' (61.951M)  
500° 49' 13" E

459.38' (140.019M)

SUBJECT TO DRAINAGE EASEMENT  
BOOK 1017 PAGE 193

I.P.(SET)

BOOK 1446 PAGE 370

150.00' (45.720M)

43.28' (13.19M)

MHB (FND.)

I.P.(SET)

166.39' (50.716M)

I.P.(SET)

5 89° 10' 47" W

I.P.(SET)

16.5' WIDE R.O.W.

A.T. & T. CABLE

N 49° 02' 40" W  
80.59' (24.564M)  
DWELLING

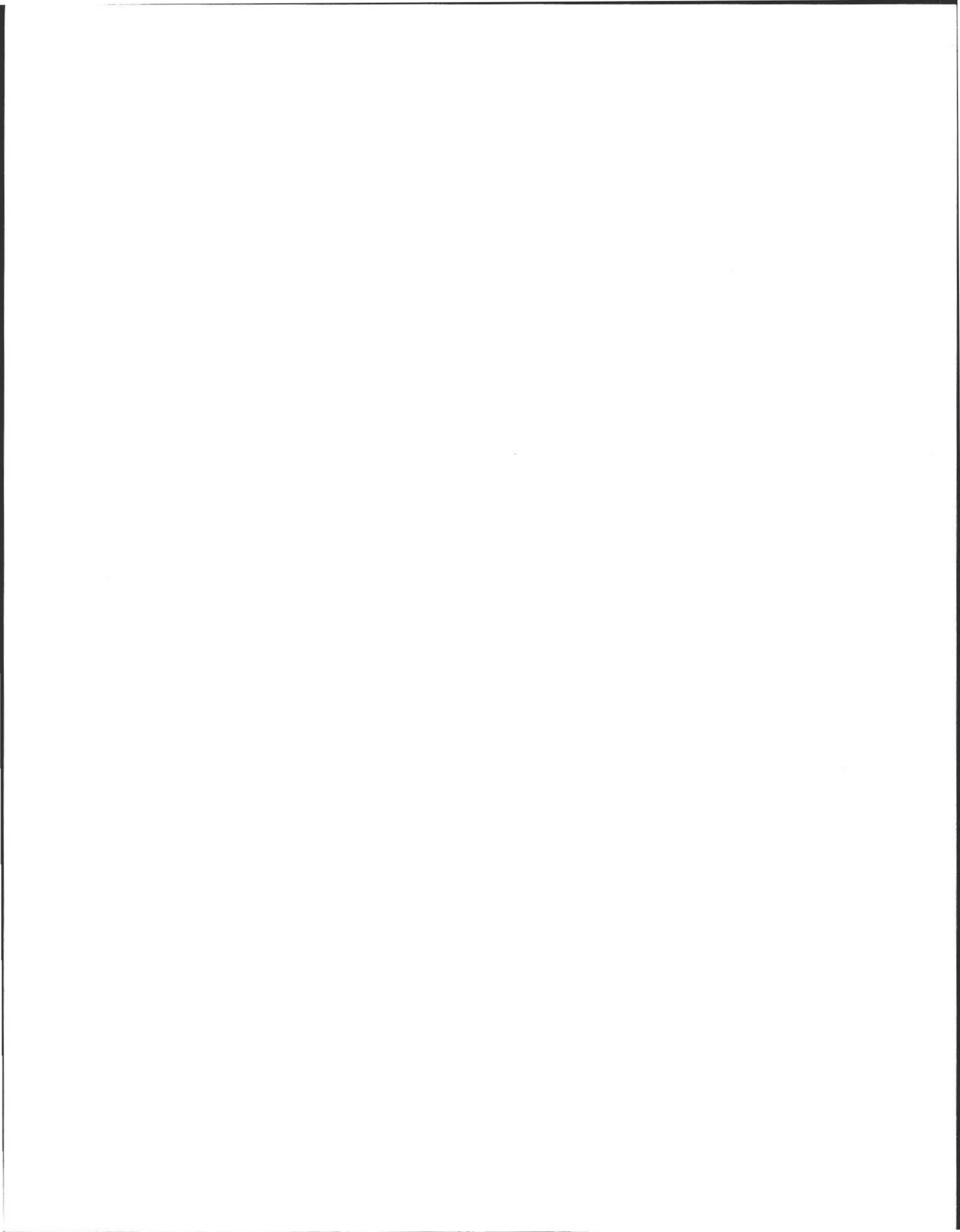
DWELLING

DWELLING

DWELLING

DWELLING

POOL



No. ....

FEE .....

THE COMMONWEALTH OF MASSACHUSETTS

BOARD OF HEALTH

Town OF Amherst

Application for Disposal Works Construction Permit



Application is hereby made for a Permit to Construct (X) or Repair ( ) an Individual Sewage Disposal System at:

Location - Address: Montague Road, 1 or Lot No. 371 Montague Rd, Amherst, Ma.

Owner: Kenton Tharp, Address: 371 Montague Rd, Amherst, Ma.

Type of Building: Dwelling - No. of Bedrooms: 5, Expansion Attic ( ), Garbage Grinder (NO), Other - Type of Building: , No. of persons: , Showers ( ) - Cafeteria ( )

Design Flow: 55 gallons per person per day, Total daily flow: 688 gallons, Septic Tank - Liquid capacity: 1500 gallons, Length: 10.5', Width: 5.66', Diameter: , Depth: 5.33', Disposal Trench - No.: 5, Width: 2', Total Length: 200', Total leaching area: 200 sq. ft. Sides, Seepage Pit No.: , Diameter: , Depth below inlet: 0.5', Total leaching area: 400 sq. ft. Bottom

Percolation Test Results: Performed by: F.A. Filios, Date: December 16, 1986, Test Pit No. 1: 4 minutes per inch, Depth of Test Pit: 91", Depth to ground water: NONE, Test Pit No. 2: , minutes per inch, Depth of Test Pit: 76", Depth to ground water: 7.5"

Description of Soil: Enclosed, Nature of Repairs or Alterations - Answer when applicable: , Agreement: The undersigned agrees to install the aforementioned Individual Sewage Disposal System in accordance with the provisions of TITLE 5 of the State Sanitary Code - The undersigned further agrees not to place the system in operation until a Certificate of Compliance has been issued by the board of health.

Signed: , Date: , Application Approved By: , Date: , Application Disapproved for the following reasons: , Date: , Permit No.: , Issued: , Date:

THE COMMONWEALTH OF MASSACHUSETTS

BOARD OF HEALTH

Town OF Amherst

Certificate of Compliance

THIS IS TO CERTIFY, That the Individual Sewage Disposal System constructed (X) or Repaired ( ) by: , Installer: at: Lot 1, Montague Road has been installed in accordance with the provisions of TITLE 5 of The State Sanitary Code as described in the application for Disposal Works Construction Permit No. .... dated: .....

THE ISSUANCE OF THIS CERTIFICATE SHALL NOT BE CONSTRUED AS A GUARANTEE THAT THE SYSTEM WILL FUNCTION SATISFACTORY.

DATE: ....., Inspector: .....

THE COMMONWEALTH OF MASSACHUSETTS

BOARD OF HEALTH

Town OF Amherst

Disposal Works Construction Permit

Permission is hereby granted: Kenton Tharp to Construct (X) or Repair ( ) an Individual Sewage Disposal System at No. Lot 1, Montague Road, Street as shown on the application for Disposal Works Construction Permit No. .... Dated: .....

DATE: ....., Board of Health

CHECK OR FILL IN WHERE APPLICABLE

Town of Amherst

Resolution of the Board of Health  
At a meeting of the Board of Health of the Town of Amherst, held on the 14th day of June, 1900.

Resolved, That the Board of Health do hereby certify that the following persons have been vaccinated against smallpox, to-wit:

John Smith	1900
James Brown	1900
William Green	1900
Thomas White	1900
Robert Black	1900
Henry Grey	1900
Charles King	1900
Edward Lee	1900
George Hall	1900
Frank Adams	1900
Samuel Baker	1900
Benjamin Clark	1900
Richard Evans	1900
Joseph Foster	1900
Samuel Gardner	1900
John Harrison	1900
William Johnson	1900
Thomas Jones	1900
Robert King	1900
Henry Lee	1900
Charles Miller	1900
Edward Moore	1900
George Myers	1900
Frank Nelson	1900
Samuel Phillips	1900
Benjamin Reed	1900
Richard Scott	1900
Joseph Taylor	1900
Samuel Walker	1900
John Young	1900
William Zane	1900

Town of Amherst

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BOARD OF HEALTH

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Richard Evans	1900
Joseph Foster	1900
Samuel Gardner	1900
John Harrison	1900
William Johnson	1900
Thomas Jones	1900
Robert King	1900
Henry Lee	1900
Charles Miller	1900
Edward Moore	1900
George Myers	1900
Frank Nelson	1900
Samuel Phillips	1900
Benjamin Reed	1900
Richard Scott	1900
Joseph Taylor	1900
Samuel Walker	1900
John Young	1900
William Zane	1900

DEEP SOIL LOGS

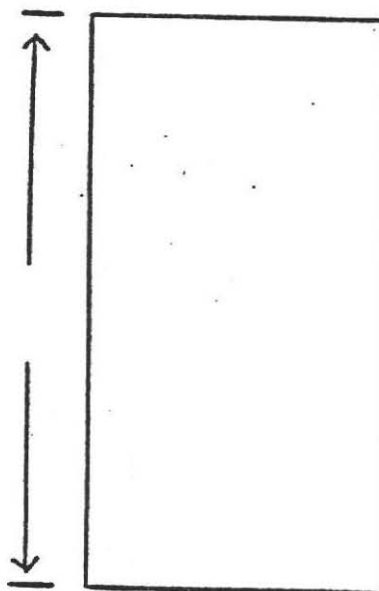
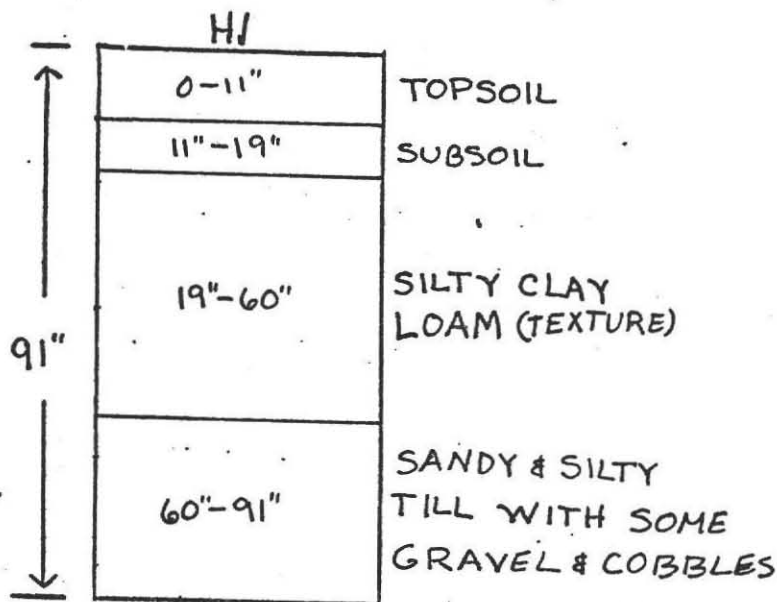
OWNER Kenton Tharp

DATE December 16, 1986

LOCATION Montague Road,  
Amherst, MA

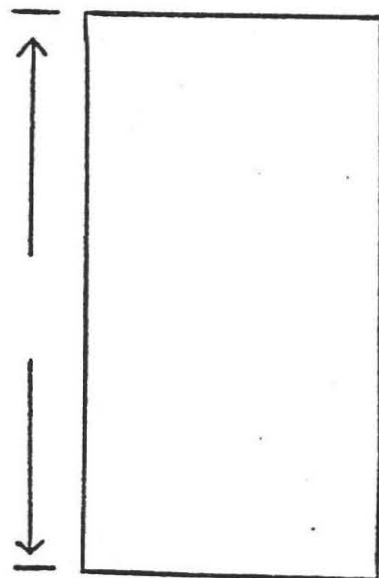
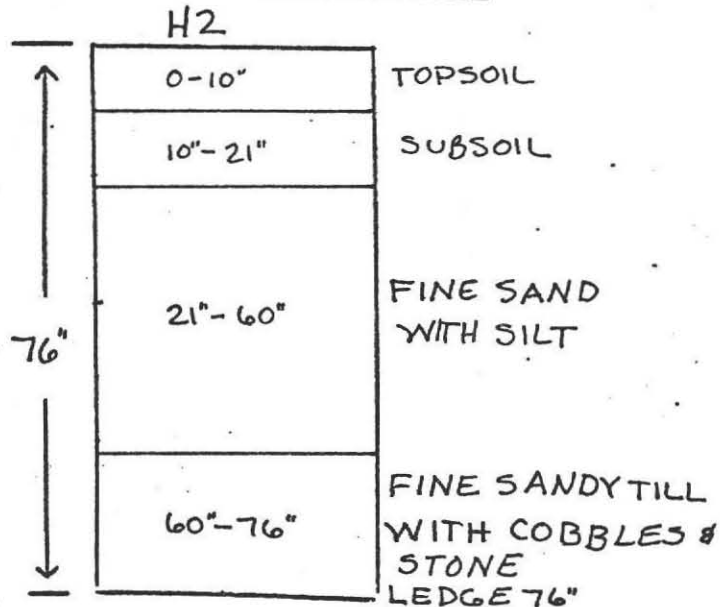
OBSERVER F.A. Filios

B of H Charlie Drake



GROUND WATER NONE

GROUND WATER \_\_\_\_\_

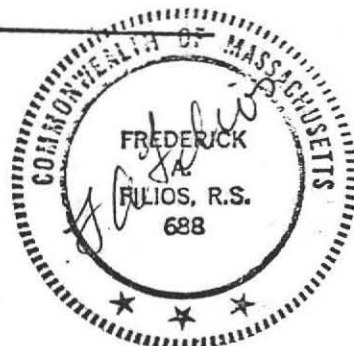


GROUND WATER 75"

GROUND WATER \_\_\_\_\_

PERCOLATION RATE AT 41":

4 min./inch







# PLAN SHOWING SEWAGE DISPOSAL SYSTEM

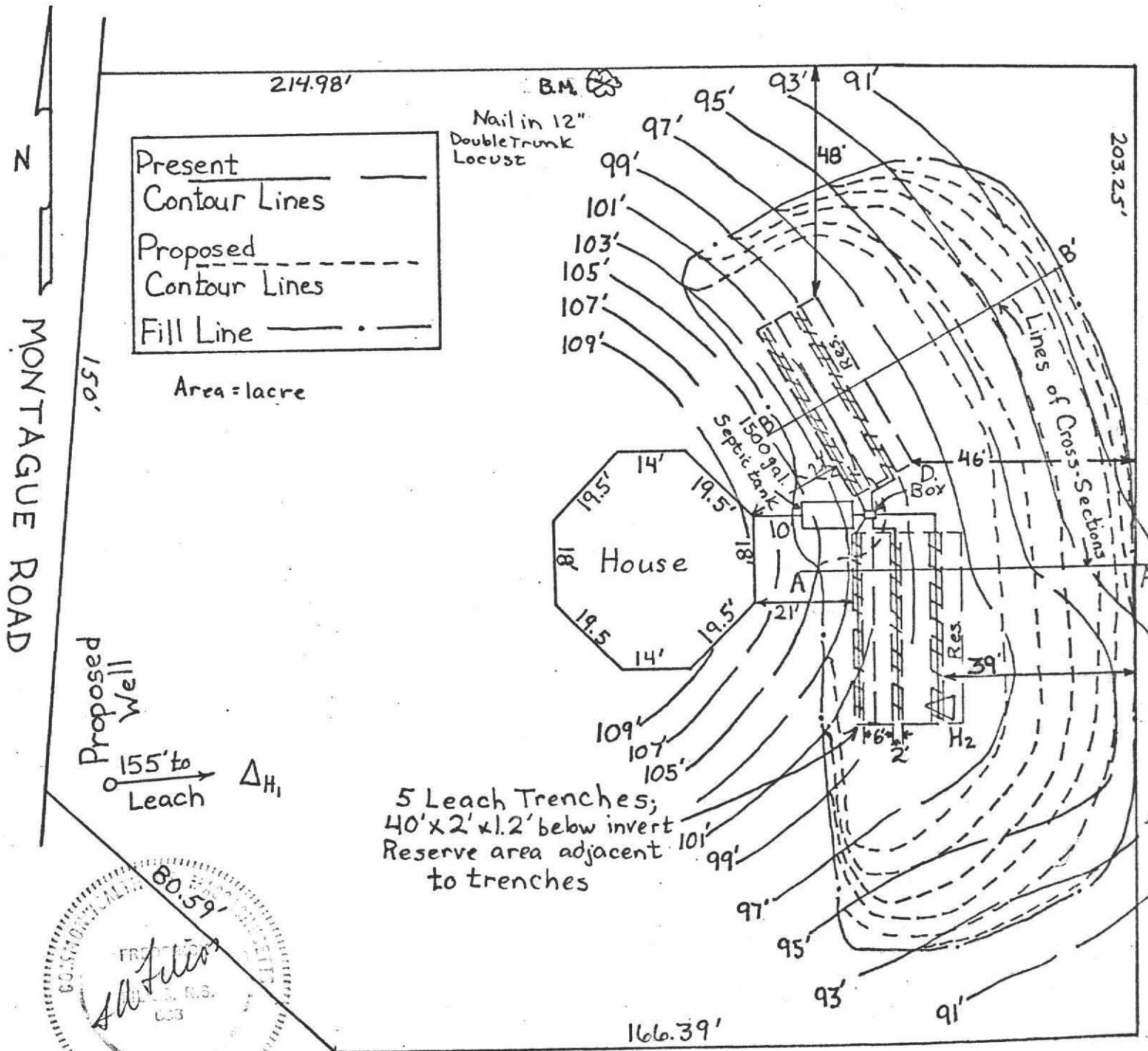
FOR: Kenton Tharp  
371 Montague Road  
Amherst, MA. 01002

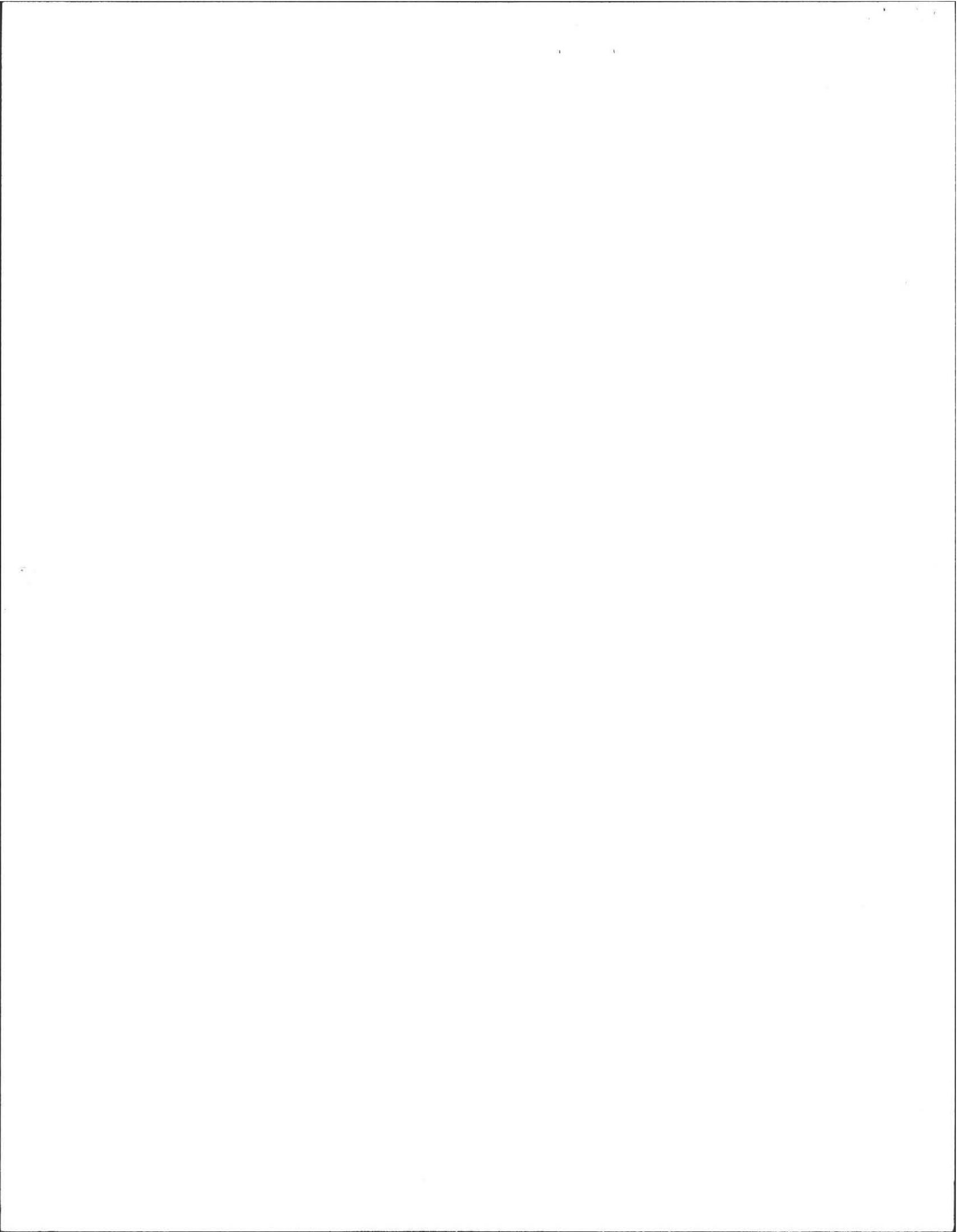
BY: F.A. Filios  
69 Pelham Road  
Amherst, MA.

SITE: Lot 1  
Montague Road  
Amherst, MA.

SCALE: 1" = 30'

DATE: March 17, 1987



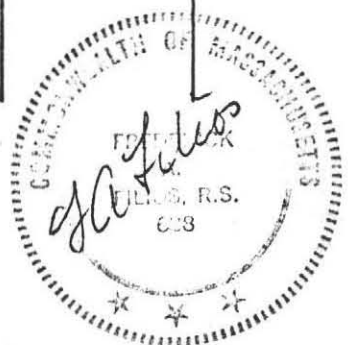
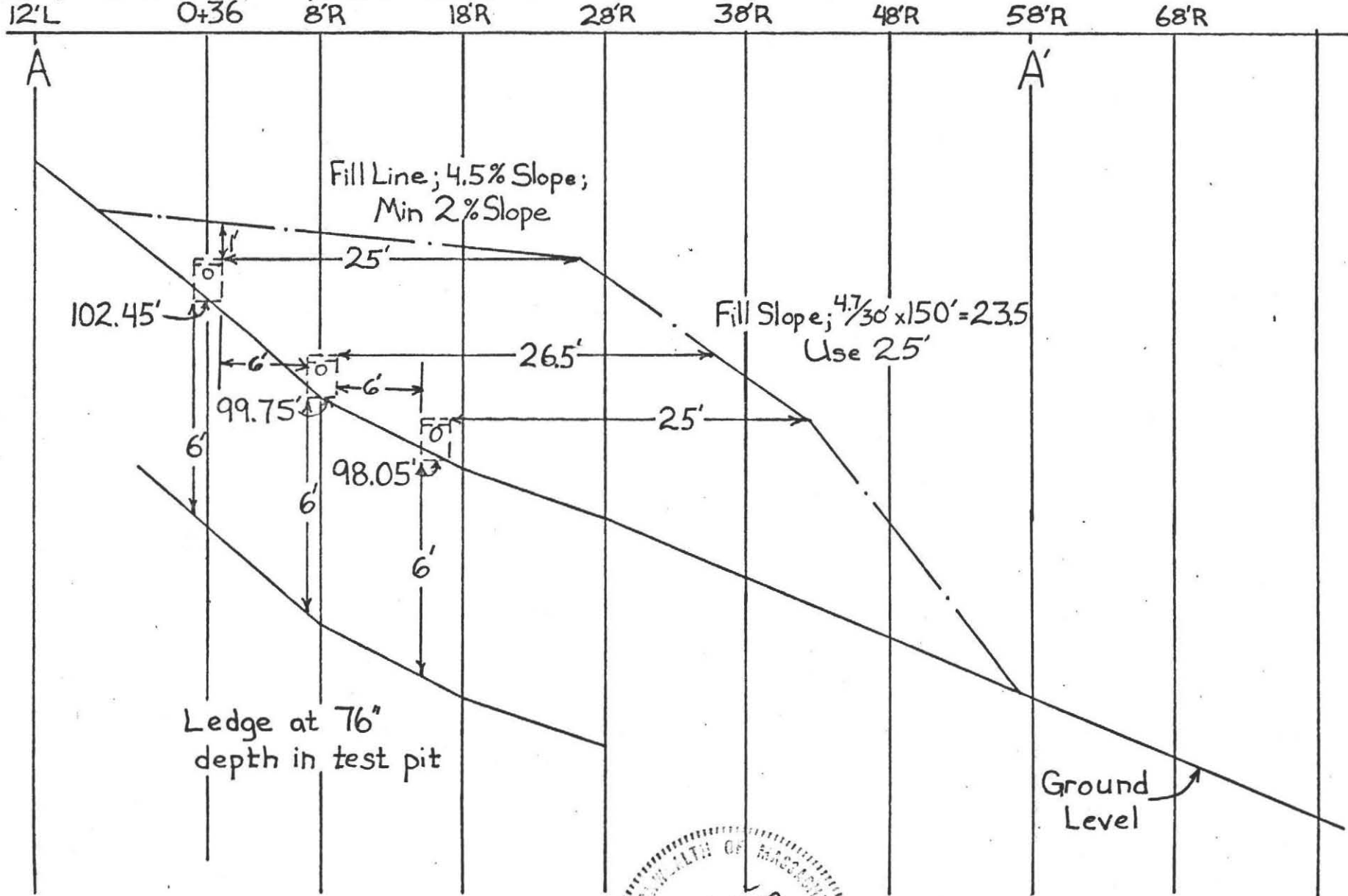


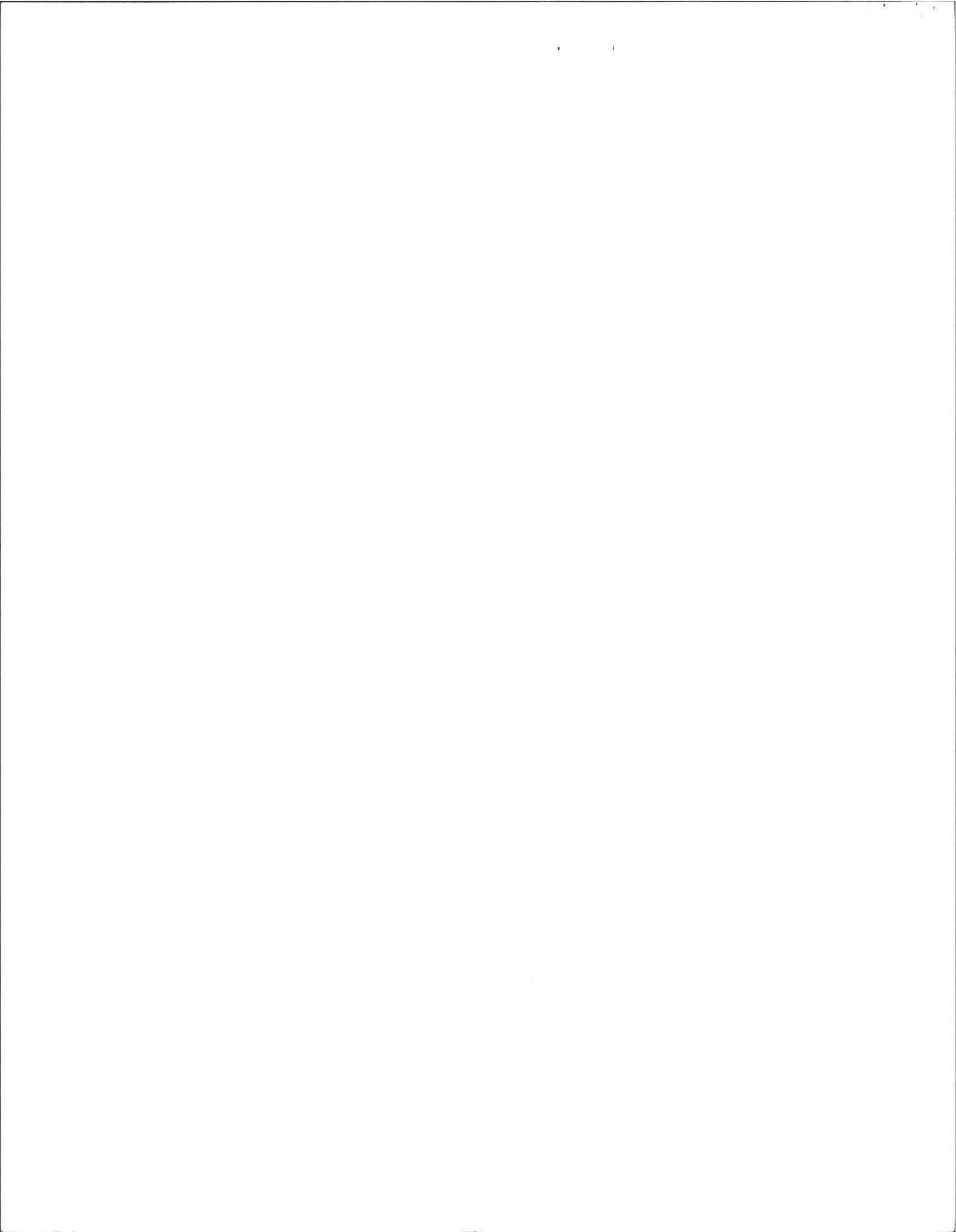
Kenton Tharp

# Cross-Section; A-A'

By: F.A. Filios  
Scale: Horiz.: 1"=10'  
Vert: 1"=4'

At: Lot 1, Montague Rd, Amherst, Ma.



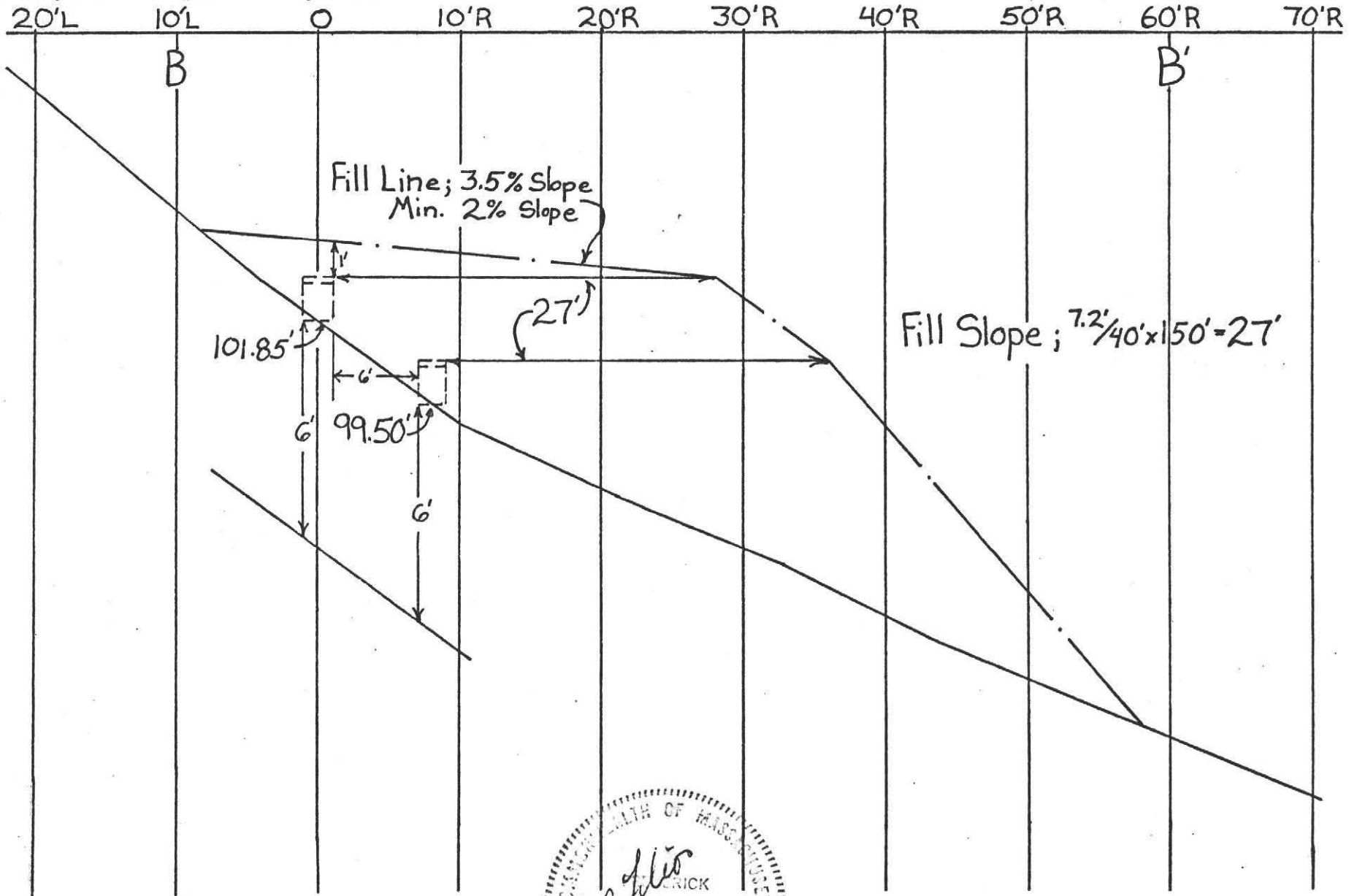


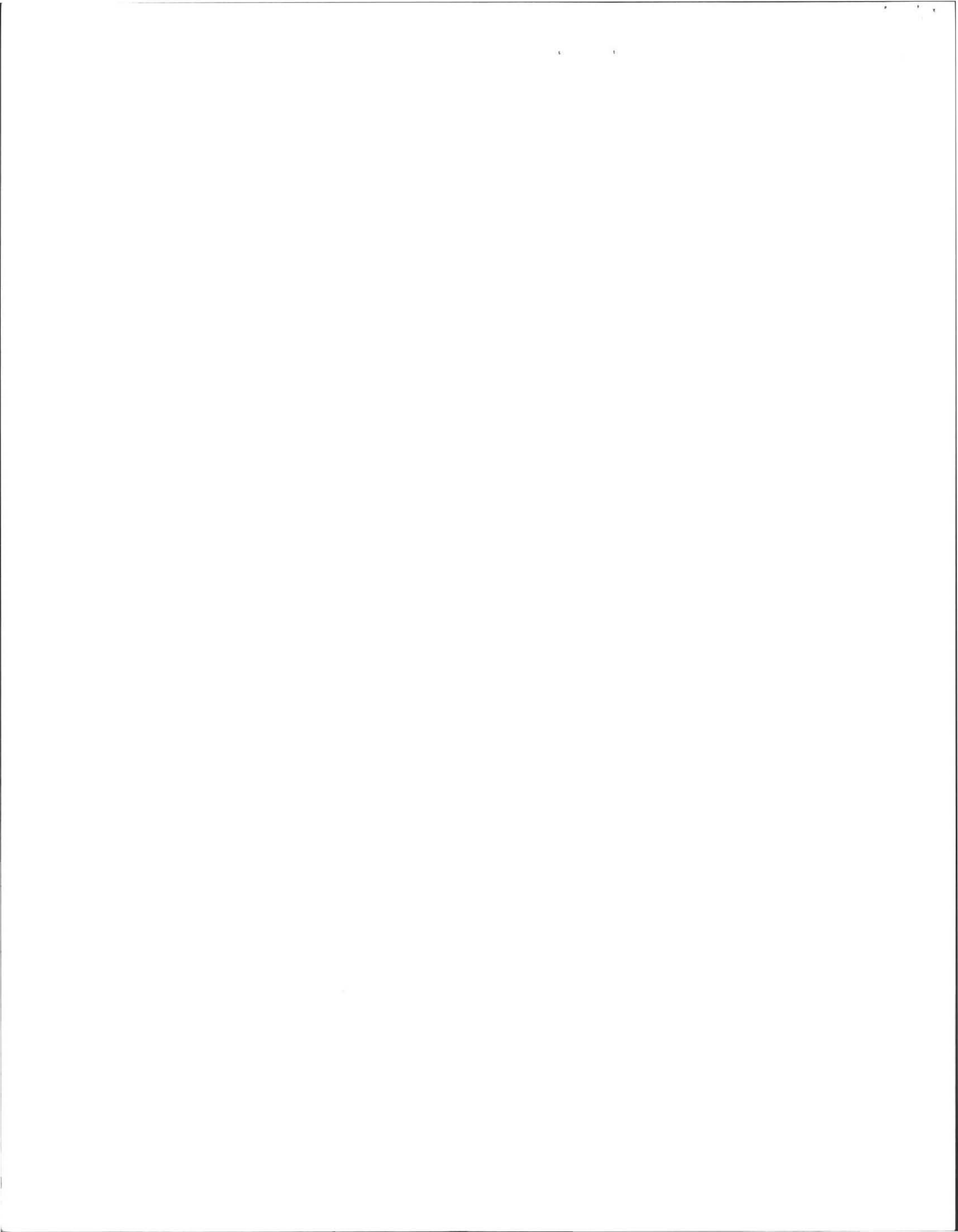
Kenton Tharp

# Cross-Section; B-B'

By: F.A. Filios  
Scale: Horiz.: 1"=10'  
Vert: 1"=4'

At: Lot 1, Montague Rd, Amherst, Ma.



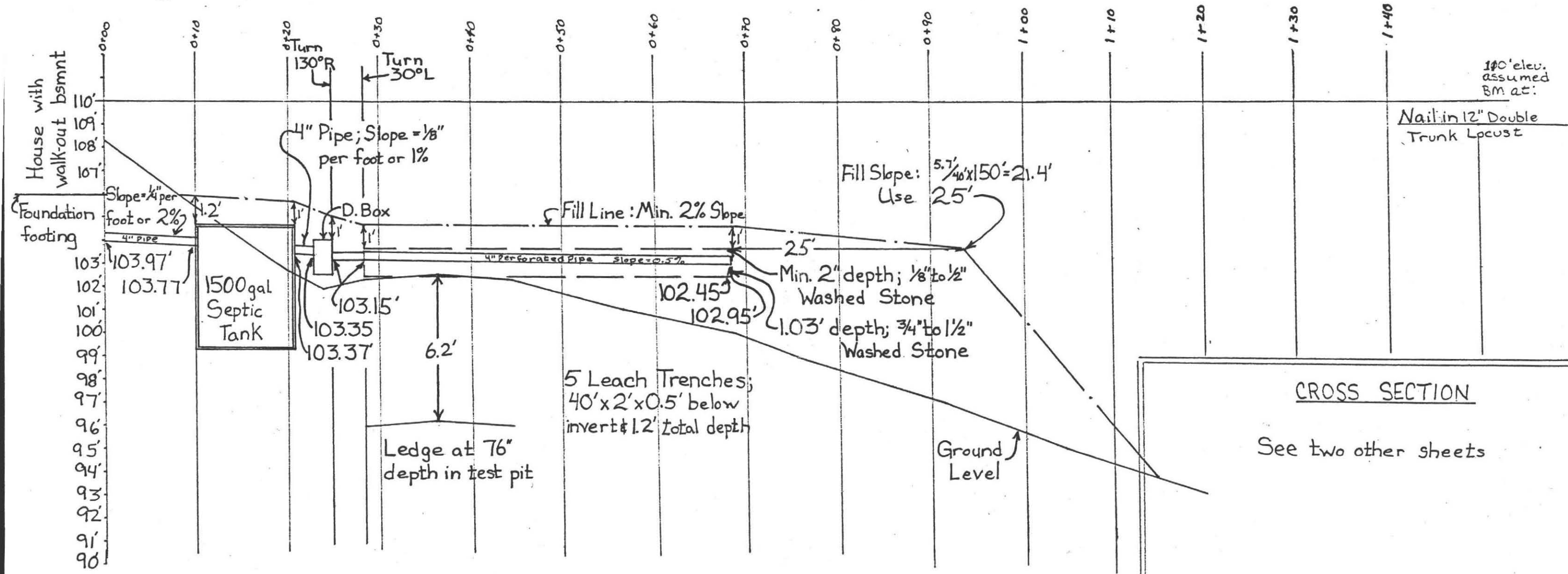


# PROFILE OF SEPTIC SYSTEM

FOR: Kenton Tharp  
371 Montague Rd, Amherst, Ma.  
 SITE: Lot 1  
Montague Rd, Amherst, Ma.

BY: Frederick A. Filios  
69 Pelham Road  
Amherst, MA  
01002

DATE: March 17, 1987  
 SCALE: Horizontal: 1" = 10'  
 Vertical: 1" = 4'



## CROSS SECTION

See two other sheets

### SPECIFICATIONS

ALL MATERIALS AND CONSTRUCTION WILL BE IN ACCORDANCE WITH COMM. OF MASS. D.E.Q.E. STATE ENVIRONMENTAL CODE TITLE 5.

### CALCULATIONS

Required Flow; 5 Bdms @ 110 gal/bdms x 125% = 688 gal/day  
 Perc. Rate = 4 min/in; allows 2 gal/ft<sup>2</sup> Sides & 0.83 gal/ft<sup>2</sup> Btm.  
 Design Flow; 5 Leach trenches: 40' x 2' x 0.5' below invert

---

5 x 40' x 0.5' x 2 x 2 gal/ft<sup>2</sup> = 400 gal/day Sides  
 5 x 40' x 2' x 0.83 gal/ft<sup>2</sup> = 332 gal/day Btm.  
 Allows 732 gal/day capacity





