

445 SWAYS STREET



**October 2012
INVOICE**

AMHERST PUBLIC HEALTH DEPARTMENT

Bangs Community Center
70 Boltwood Walk
Amherst, MA 01002

DATE: October 26, 2012

TO Charles Fawkner
5 Ashton Lane
Millbury, MA 01527

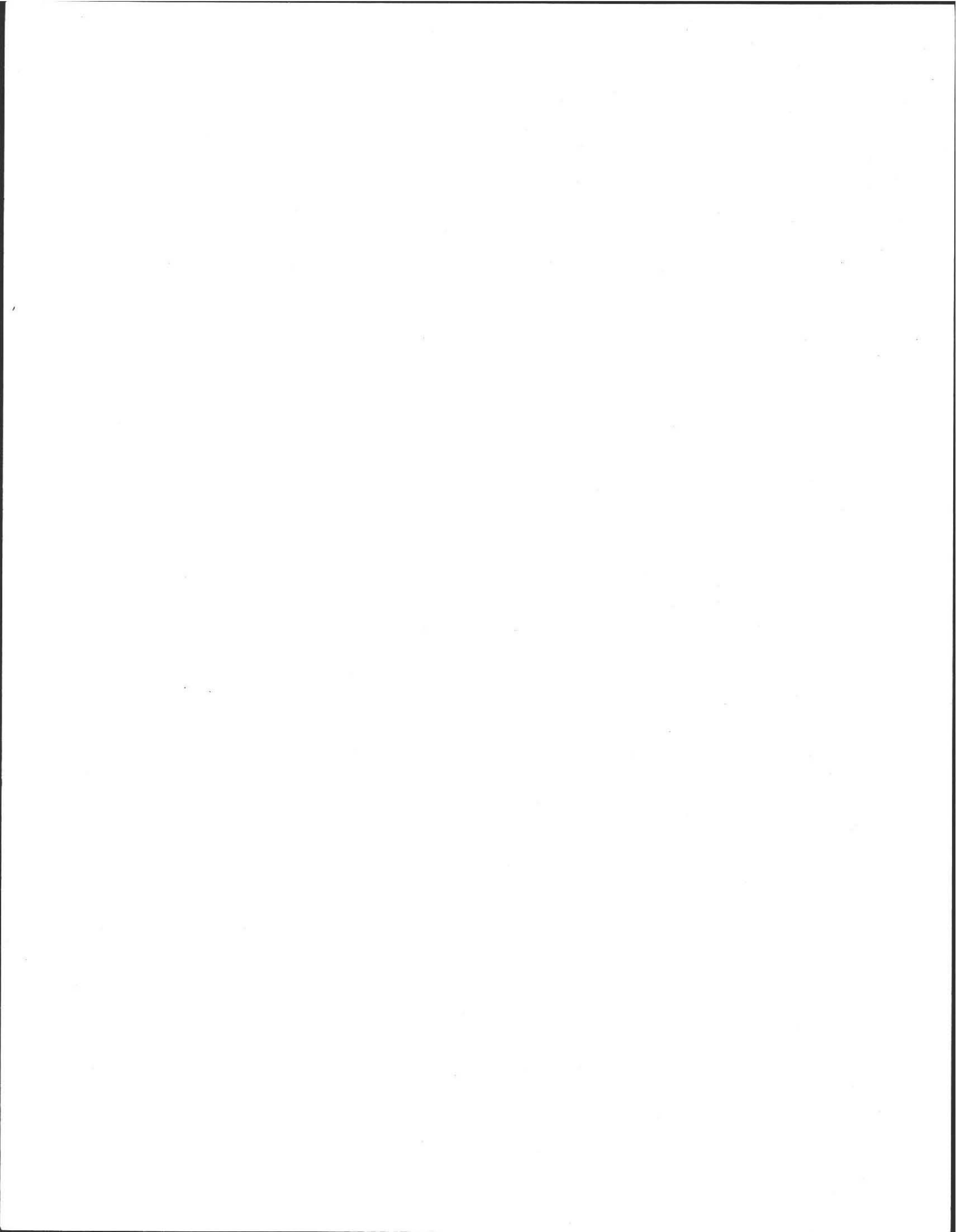
RE: Invoice for Soil Evaluation & Plan Review

Services provided by Edmund Smith

PAYMENT TERMS: 1 Due before Certificate of Compliance can be delivered

QUANTITY	DESCRIPTION	UNIT PRICE	LINE TOTAL
1.00	Soil Evaluation - at 445 Shays Street	\$ 300.00	\$ 300.00
1.00	Plan Review - repair system for 445 Shays Street	\$ 150.00	\$ 150.00
SUBTOTAL			\$ 450.00
SALES TAX			
TOTAL			\$ 450.00

*Application - 15957
Batch - 2620
Application - 15958*



CUST NAME
4 BOLTWOOD AVENUE
11/07/12
CITY, ST, ZIP

***TOWN OF A TOWN HAL
AMHERST M REFERENCE
DATE/TIME 10:53

CUST NAME

0
DEPT

DE HEA011

PERCOLATIO

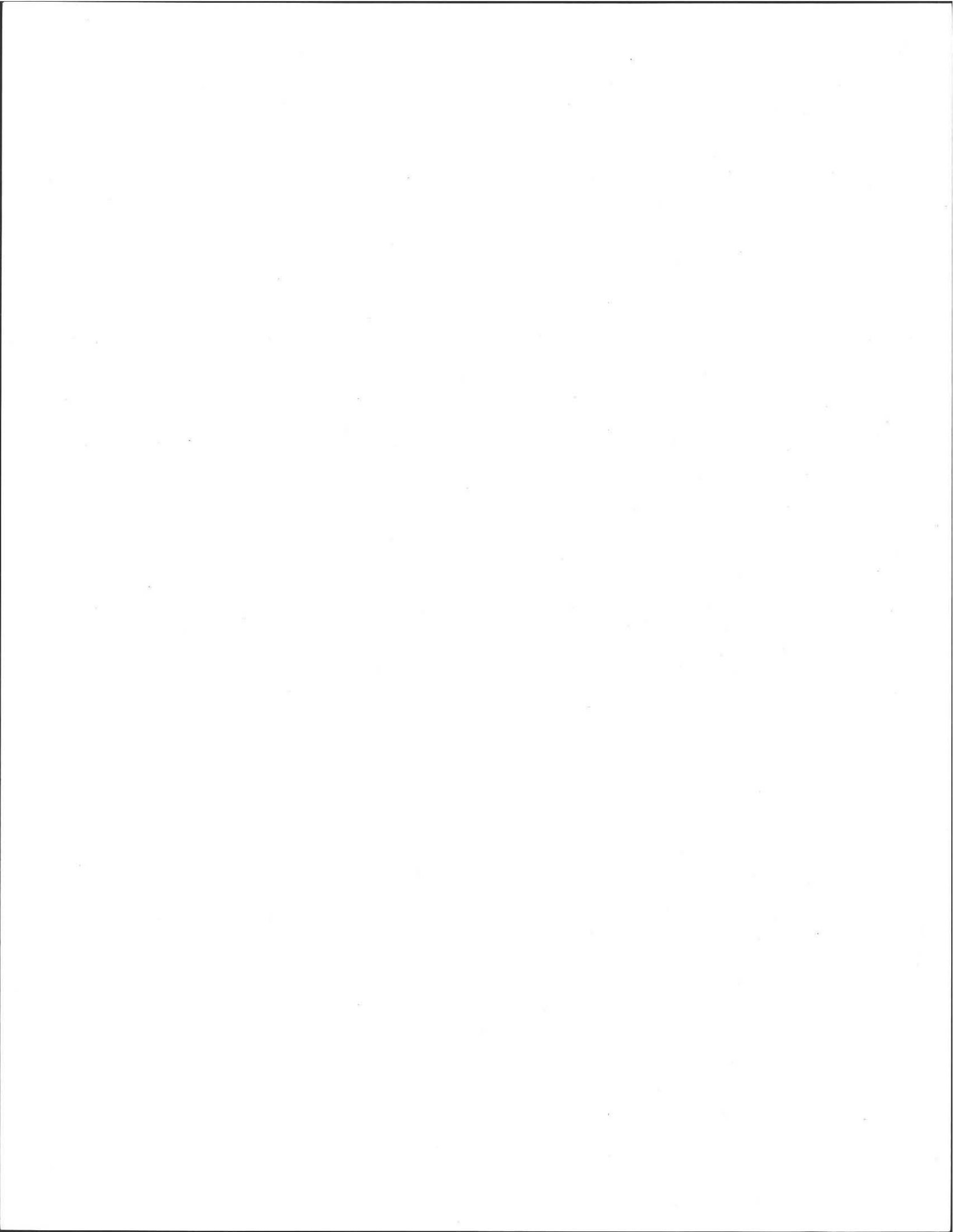
300.

RECPT TOTAL

300.00
CHARLES R QUA CHECK

116

AMOUNT



CUST NAME
4 BOLTWOOD AVENUE
11/07/12
CITY, ST, ZIP

***TOWN OF A TOWN HAL
AMHERST M REFERENCE
DATE/TIME 10:55

CUST NAME

0
DEPT

DE HEA017

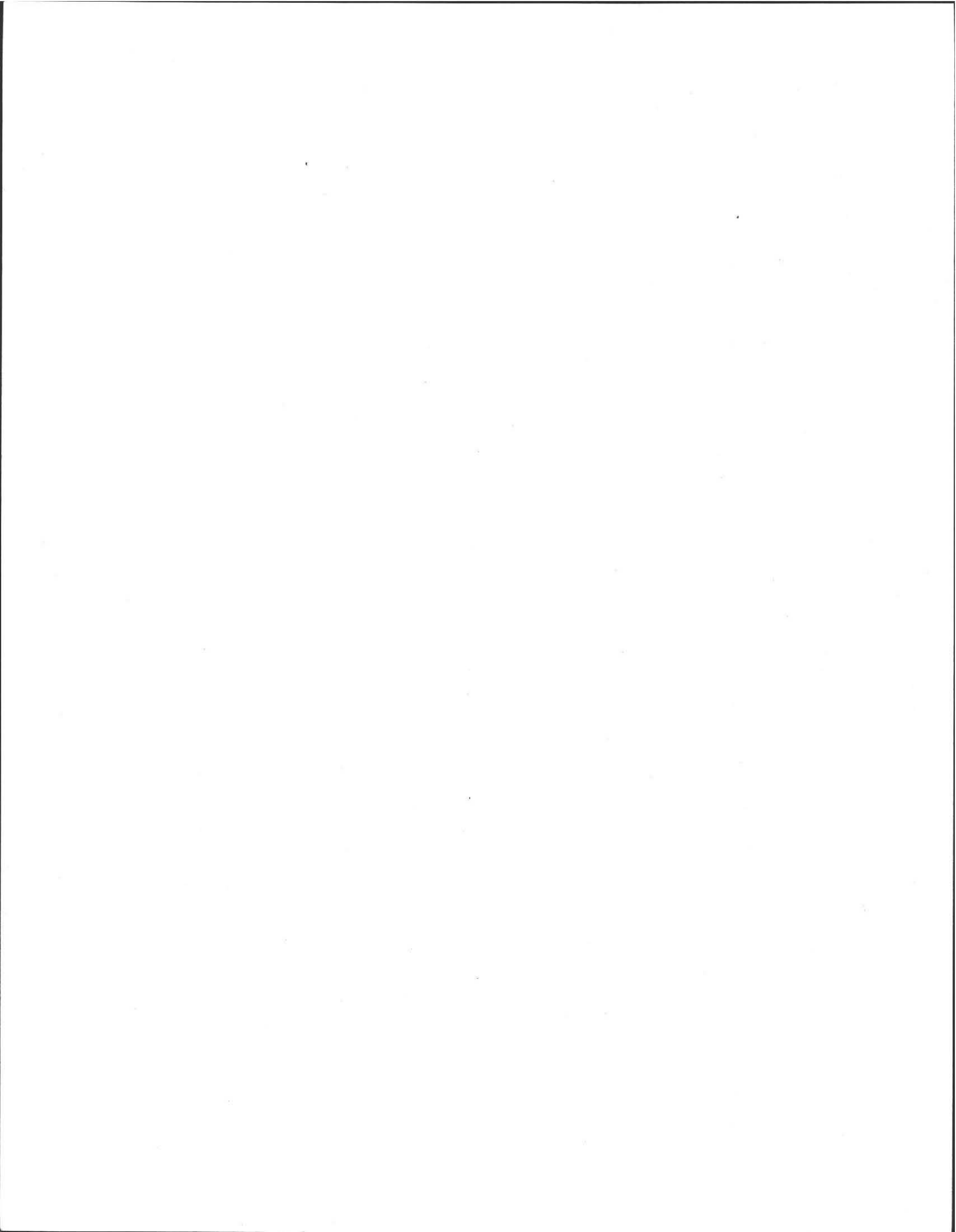
SEPTIC TAN 150.

RECPT TOTAL

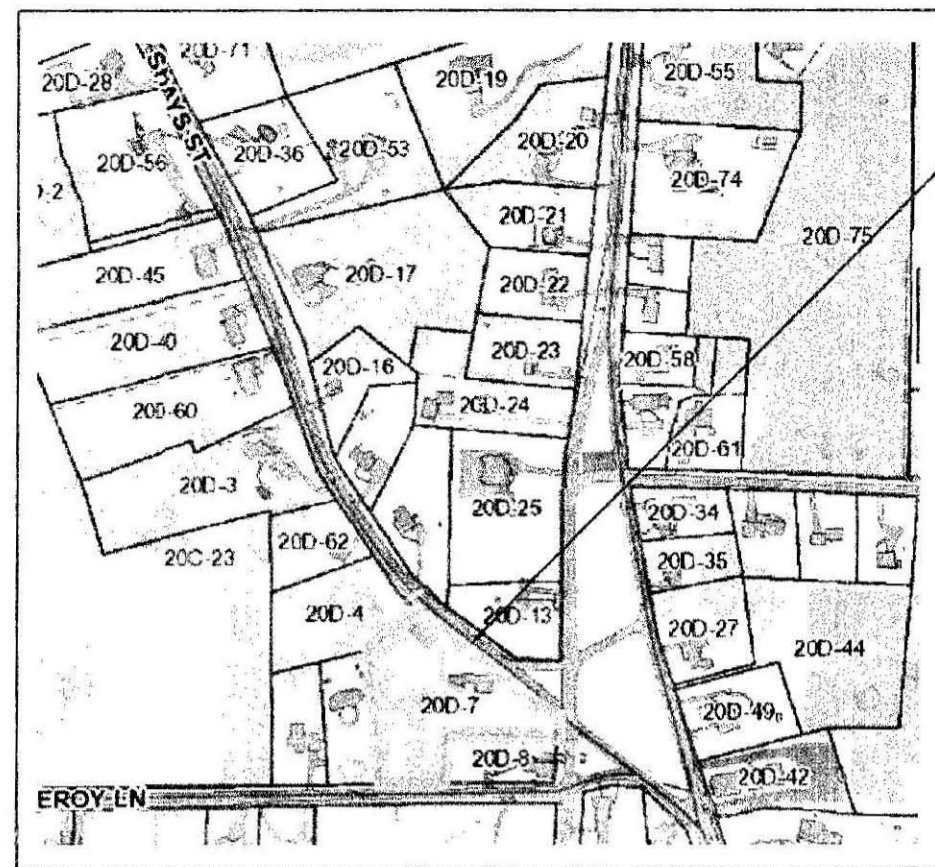
150.00
CHARLES R QUA CHECK

116

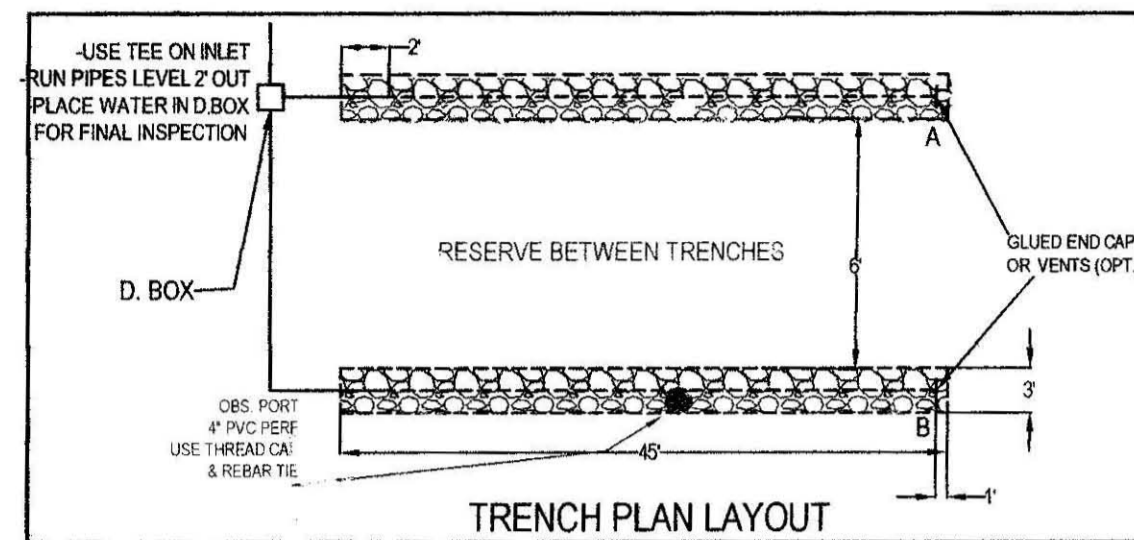
AMOUNT



PLOT PLAN
MAP 20d LOT 7
SCALE: 1"=30'
1.95± ac.



SUBJECT SITE LOCATION



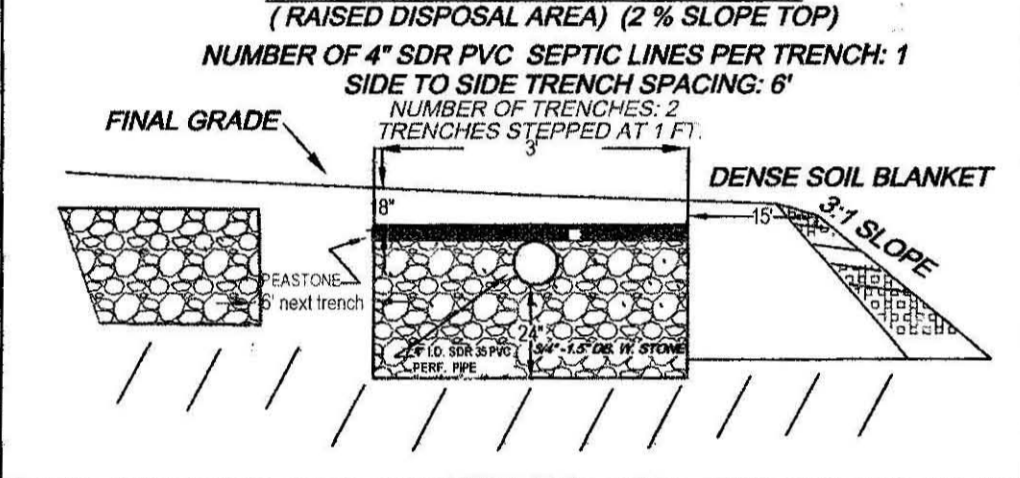
- GRAVITY SLOPE SEPTIC SYSTEM OPERATION AND MAINTENANCE NOTES FOR HOMEOWNER.**
- 1.) HAVE TANK PUMPED EVERY 2 YEARS.
 - 2.) MAINTAIN AREA OVER SEPTIC SYSTEM AS GRASSY OR SIMILAR GROUND COVER.
 - 3.) DO NOT PLANT ANY TREES OR DEEP ROOTING SHRUBS WITHIN 10 FEET OF SYSTEM.
 - 4.) USE ONLY LIQUID DETERGENTS & 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

DESIGN NOTES AND CALCULATIONS:

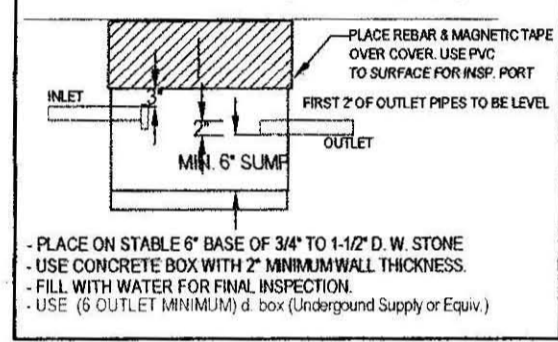
- 1.) 4 (BEDROOM HOME) = 440 GPD. REQUIRED.
-Use TWO TRENCHES: 3' WIDE X 45' LONG WITH 24" OF 3/4" TO 1 1/2" DBL WASHED STONE BELOW INVERT
- BOTTOM AREA: 2 TRENCHES X (3' W X 45' L) = 270 SF.
- SIDE AREA: 2 TRENCHES X (2.0' HT X 45' L) X 2 SIDES = 360 SF
- END AREA: 2 ENDS X (2.0' HT X 3' W) X 2 ENDS = 24 SF.
- TOTAL AREA: 654 SF X .74 GAL/SF = 484 GPD
3. GARBAGE DISPOSAL NOT ALLOWED, TO BE REMOVED****
4. NO OTHER PRIVATE WELLS WITHIN 150 FEET OF SAS.
5. NO OTHER WETLANDS WITHIN 100 FEET OF SAS, FILE RDA WITH CONSV. COMM.
6. USE NEW 1,500 GAL 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.
NOTE:
- D. BOXES WITH MORE THAN 9" OF COVER SOIL MUST HAVE RISERS TO 6" OF SURFACE.
7B ALL PLASTIC RISERS MUST BE SECURED WITH STAINLESS STEEL SCREWS.
8. USE APPROVED (.75"-1 1/2") DBL. WASHED STONE UNDER TANK & D. BOX FOR 6".
-CONFIRM STONE PROPERLY DOUBLE WASHED PRIOR TO PLACEMENT.
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 (SIEE CONTOURS), SUBGRADE INSP. REQ'D.
13. USE TRENCHES 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 30" MIN. AS NEEDED (INSPECTION REQUIRED).
- CLEAR PAST BASE OF B (MIN. 30") & SCARIFY UNDER TRENCH PRIOR TO TITL 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 PERIC. 50"
- PERC RATE = <2 MIN / IN,
- CLASS 1, C. SAND SOIL RATING
16. NO TREES WITHIN 10 FT. OF NEW LEACH AREA.
17. ENGINEER & TOWN TO INSPECT SUBGRADE, TOWN AND ENGINEER INSPECT AT FINAL.
18. BM=100.00 @ (SILL, 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.

SHAYS STREET

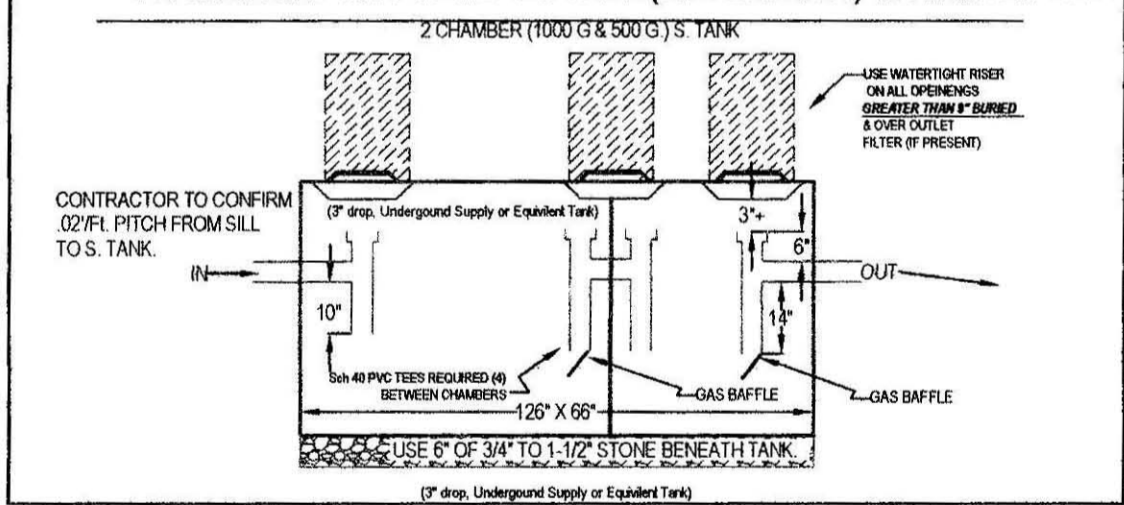
EFFLUENT DISPOSAL TRENCH CROSS SECTION - NOT TO SCALE (RAISED DISPOSAL AREA) (2% SLOPE TOP)



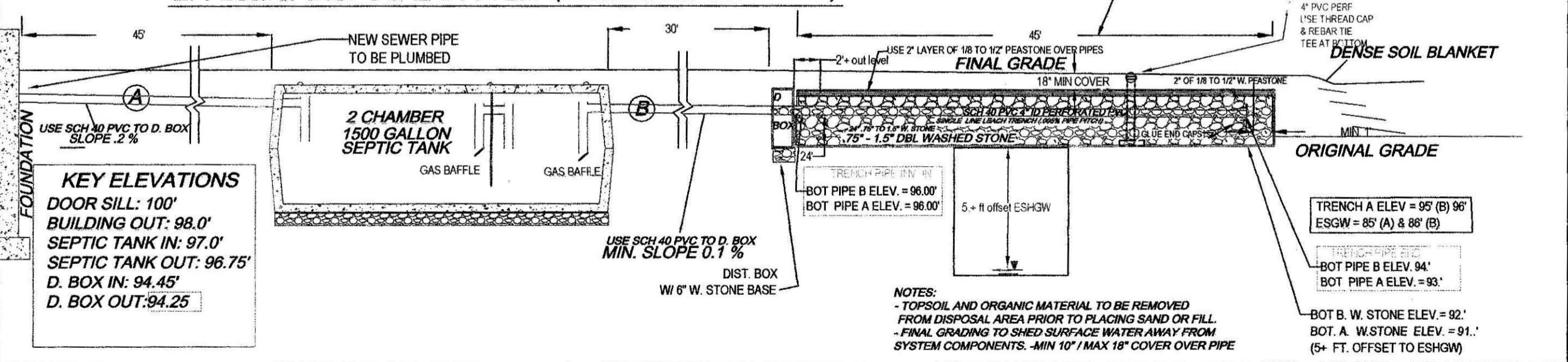
TYPICAL D.BOX (WATERTIGHT)



TYPICAL NEW 1500 G. SEPTIC TANK (WATERTIGHT) OR EQUIVALENT.



EFFLUENT DISPOSAL SYSTEM (CROSS SECTION - NOT TO SCALE)



KEY ELEVATIONS
DOOR SILL: 100'
BUILDING OUT: 98.0'
SEPTIC TANK IN: 97.0'
SEPTIC TANK OUT: 96.75'
D. BOX IN: 94.45'
D. BOX OUT: 94.25'

NOTES:
- TOPSOIL AND ORGANIC MATERIAL TO BE REMOVED FROM DISPOSAL AREA PRIOR TO PLACING SAND OR FILL.
- FINAL GRADING TO SHED SURFACE WATER AWAY FROM SYSTEM COMPONENTS. MIN 10" / MAX 18" COVER OVER PIPE

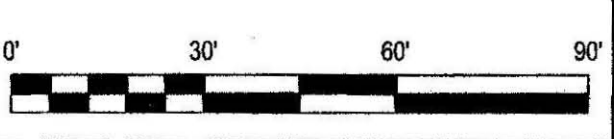
TEST PIT LOG:				SOIL EVALUATOR: A. WEISS, RS		DATE OF EVALUATION: 10.26.2012					
TP-1: 95'	DEPTH:	HORIZ:	TEXTURE:	COLOR (MUNSELL):	MATERIAL:	TP-2	DEPTH:	HORIZ:	TEXTURE:	COLOR (MUNSELL):	MATERIAL:
	0-12"	A	SL	10 YR 3.2	FRIABLE, FIBROUS		0-12"	A	SL	10 YR 3.2	FIBROUS
	12-25"	Bw	LS	10 YR 4.4	F-M SANDY		12-27"	Bw	LS	10 YR 4.4	F-M SANDY
	25-123"	C1	CS	2.5Y 5.3	C. SAND & GRAVEL		27-120"	C1	CS	2.5Y 5.3	C.SAND & GRAVEL
					15% COBBLES, ROUNDED						15% COBBLES
	OXIDES:				NOT OBSERVED		OXIDES:				NOT OBSERVED
	EHW:						EHW:				
	STANDING H2O:				NOT OBSERVED		STANDING H2O:				NOT OBSERVED
	WEEPING:				NOT OBSERVED		WEEPING:				NOT OBSERVED
	BEDROCK:				123'+		BEDROCK:				120' - 126'+

SEPTIC SYSTEM REPAIR PLAN FOR CHARLES FAULKNER
445 SHAYS STREET
AMHERST MA
Cold Spring Environmental Consultants Inc.
350 Old Enfield Road
Belchertown, MA. 01007



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.



P&ID NO: (413) 323-5957
FAX: (413) 323-4916
DATE: 10.29.2012
DRAWN BY: ALAN WEISS
SCALE: 1"=30'
REVISED:
DRAWING NUMBER: 112-3992-1026



Commonwealth of Massachusetts
 City/Town of Amherst
**Application for Disposal System
 Construction Permit**
 Form 1A

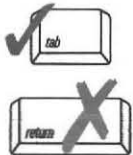


13-3
 Number
 \$ 150 (plan review)
 Fee 300 (soil eval.)

DEP has provided this form for use by local Boards of Health if they choose to do so. Before using the form, check with your local Board of Health to make sure that they will accept it.

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.



Application is hereby made for a permit to: Construct a new on-site sewage disposal system
 Repair or replace an existing on-site sewage disposal system
 Repair or replace an existing system component

1. Location of Facility:

445 Shays Street
 Address or Lot #
 Amherst MA 01002
 City/Town State Zip Code

2. Owner Information

Charles Falkner
 Name
 5 Ashton Lane
 Address (if different from above)
 Millbury MA 01527
 City/Town State Zip Code
 Telephone Number

3. Installer Information

At Konieczny ADAMS
 Name
 River Dr
 Address
 Hadley MA 01035
 City/Town State Zip Code
 549*5396
 Telephone Number

4. Designer Information

Alan Weiss, RS, # 933, Hydrogeologist
 Name
 350 Old Enfield Road
 Address
 Belchertown MA 01007
 City/Town State Zip Code
 413.323.5957
 Telephone Number

1

1000



Commonwealth of Massachusetts
 City/Town of Amherst
**Application for Disposal System
 Construction Permit**
 Form 1A

Number _____
 \$ _____
 Fee

A. Facility Information (continued)

5. Type of Building:

- Dwelling Garbage Grinder (check if present)

Other: Type of Building 4 Bedroom _____ Number of Persons Served _____

- Showers Number of showers _____ Cafeteria Other fixtures _____

Specify other fixtures: _____

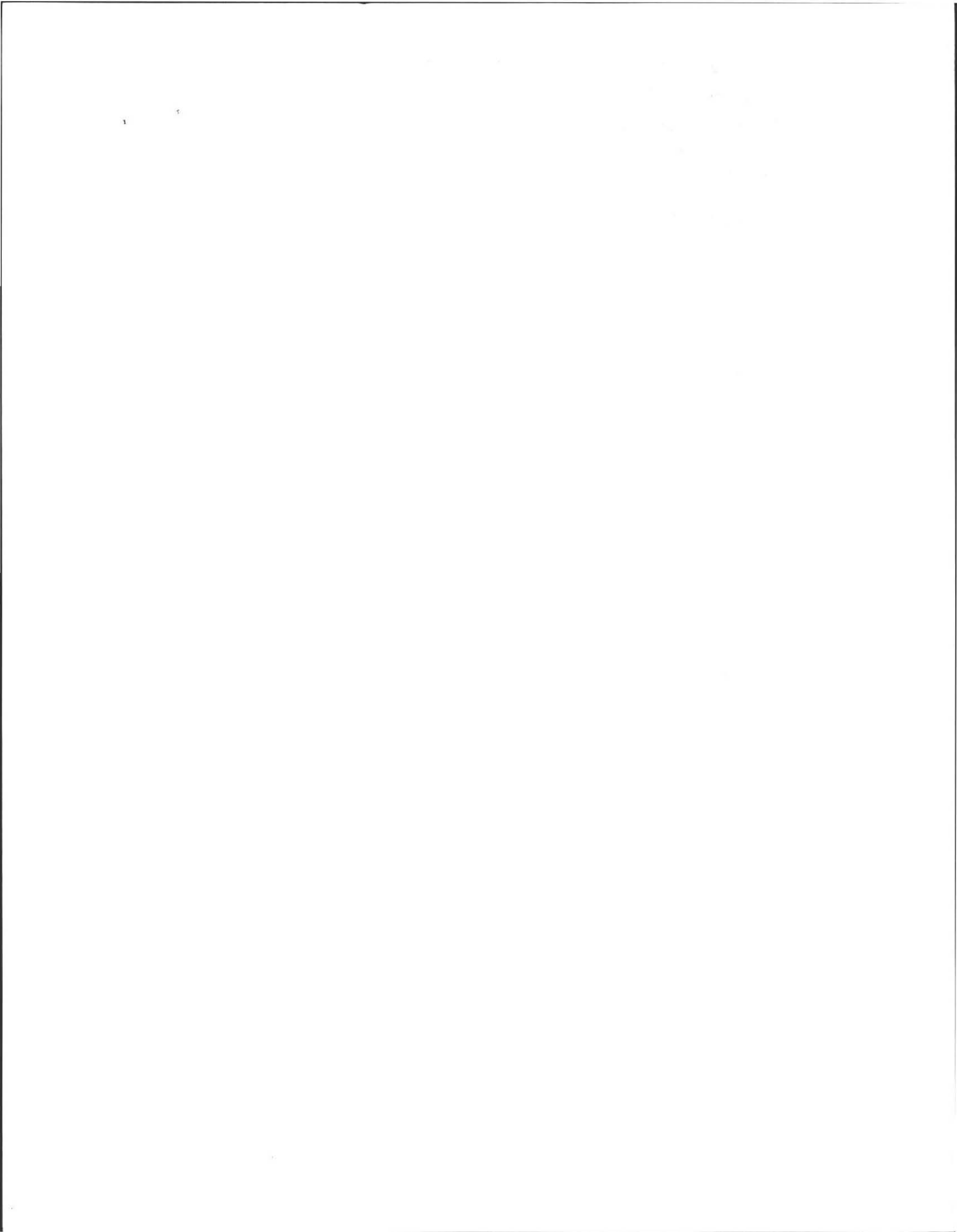
6. Design Flow: 440 _____
 Gallons per Day
 Calculated Daily Flow: 484 _____
 Gallons

7. Plan: 10.29.2012 _____
 Date of Original
1 _____
 Number of Sheets Revision Date
Septic System Repair Plan _____
 Title of Plan

8. Description of Soil:
LS: C. sand & Gravel _____

9. Nature of Repairs or Alterations (if applicable):
New S. tank and L. field _____

10. Date last inspected: _____
 Date





Commonwealth of Massachusetts
 City/Town of Amherst
**Application for Disposal System
 Construction Permit**
 Form 1A

Number _____
 \$ _____
 Fee _____

B. Agreement

The undersigned agrees to ensure the construction and maintenance of the aforescribed on-site sewage disposal system in accordance with the provisions of Title 5 of the Environmental Code and not to place the system in operation until a Certificate of Compliance has been issued by this Board of Health.

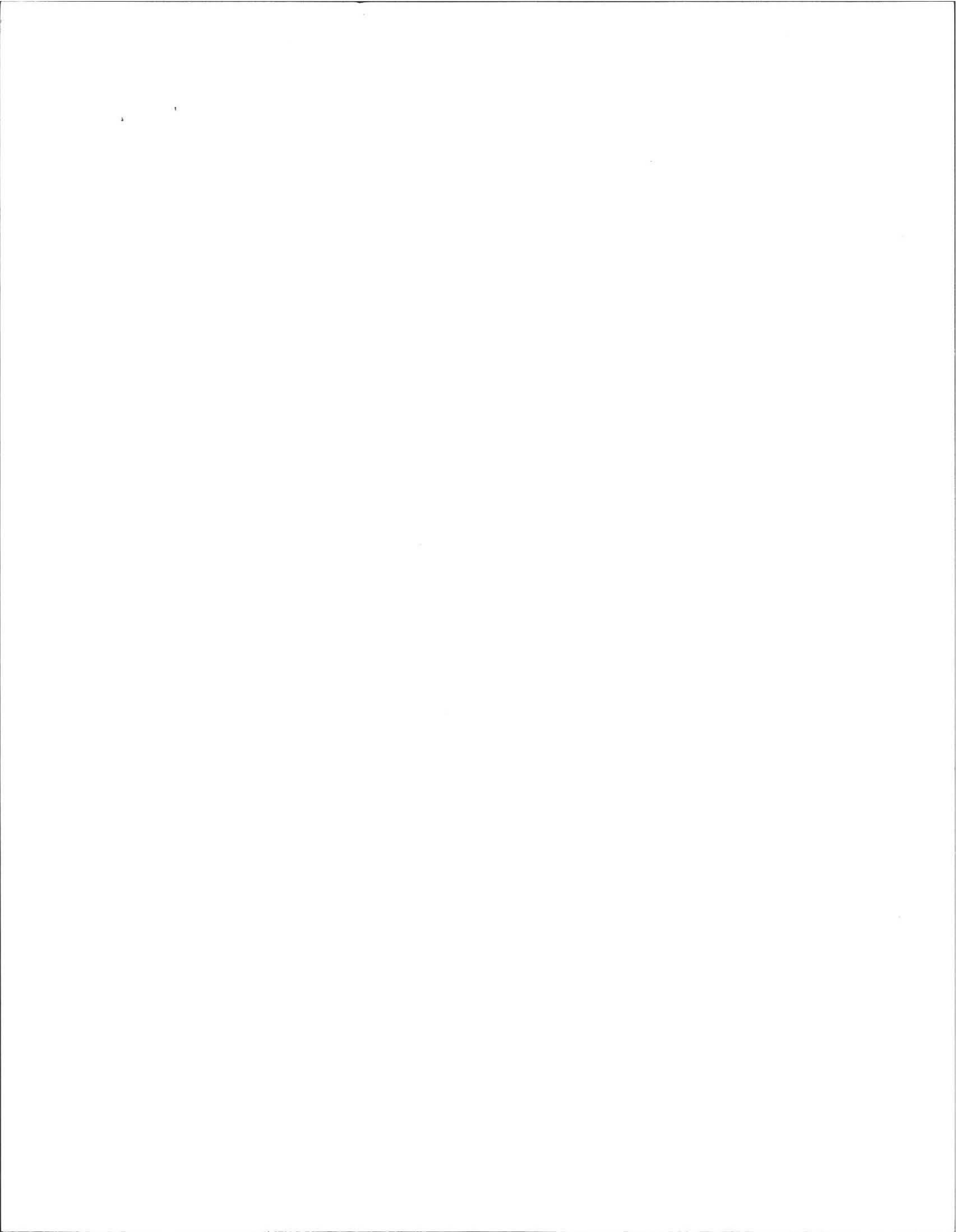
Signature _____ Date _____

Application Approved By:

Edward R. Smith
 Name

11/1/2012
 Date

Application **Disapproved** for the following reasons:





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: 10/26/12

Commonwealth of Massachusetts
Amherst, Massachusetts

Soil Suitability Assessment for On-site Sewage Disposal

Performed By: A. Weiss, R.S.
Witnessed By: E. Smith, B.O.H.

Date: 10/26/12

Location Address or Lot # Map 20D, LOT 7 445 Shay St, Amherst	Owner's Name, Address, and Telephone # Charles Faulkner 5 Ashton Lane Millbury, MA 01527
New Construction <input type="checkbox"/> Repair <input checked="" type="checkbox"/> 01002	

Office Review

Published Soil Survey Available: No Yes

Year Published _____ Publication Scale _____
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)

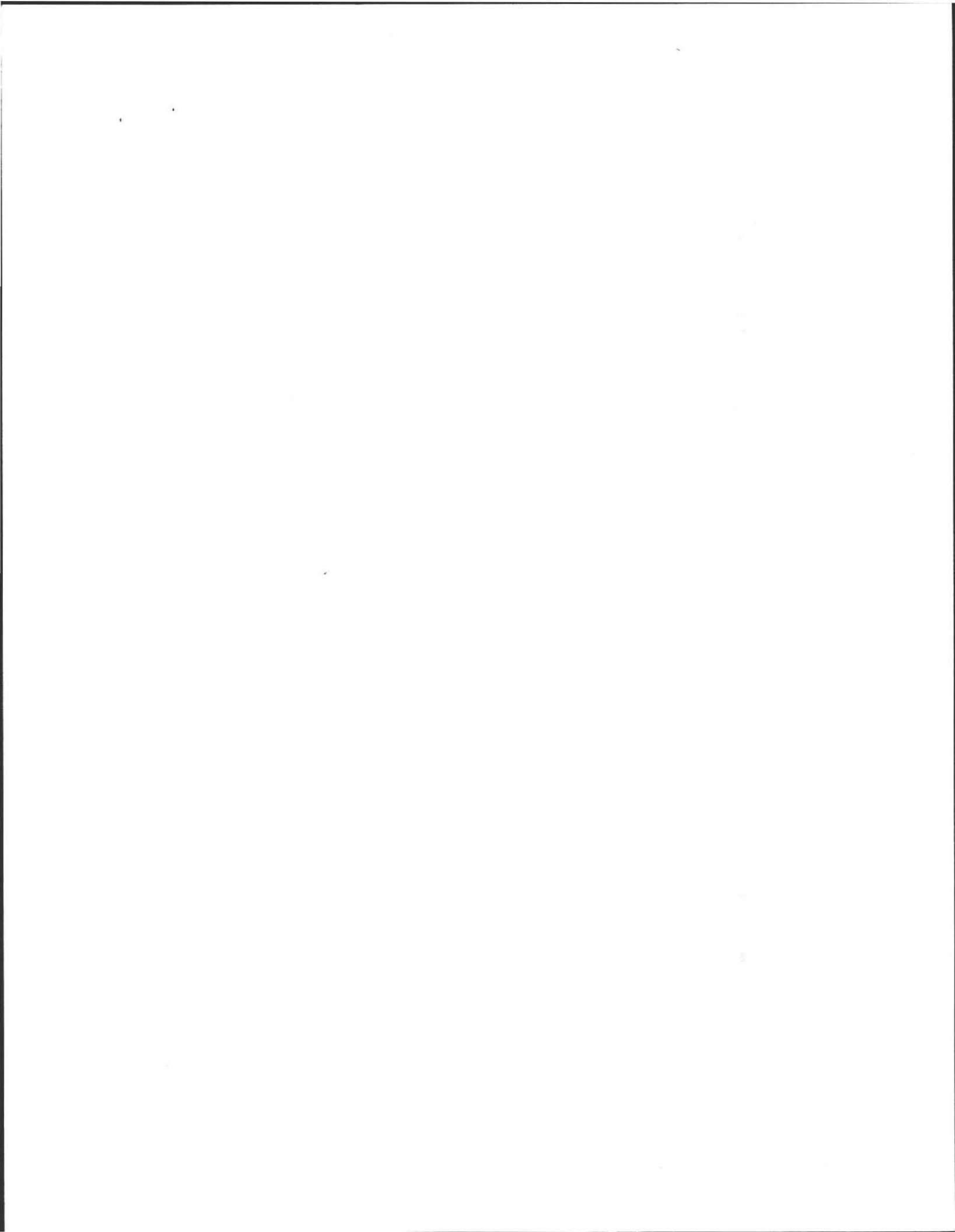
Wetlands Conservancy Program Map (map unit)

Current Water Resource Conditions (USGS): Month

Range: Above Normal Normal Below Normal

Other References Reviewed: _____





Location Address or Lot No. 445 Shays St

COMMONWEALTH OF MASSACHUSETTS

Amherst, Massachusetts

Percolation Test*		
Date: ...	<u>10/26/12</u>	Time: ...
Observation Hole #	<u>P # 1</u>	
Depth of Perc	<u>50'</u>	
Start Pre-soak	<u>10:40</u>	
End Pre-soak		
Time at 12"	<u>COULD NOT</u>	<u>Re-perc</u>
Time at 9"	<u>HOLD</u>	
Time at 6"	<u>SOAK</u>	
Time (9"-6")	<u>↓</u>	
Rate Min./Inch	<u><2</u>	

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

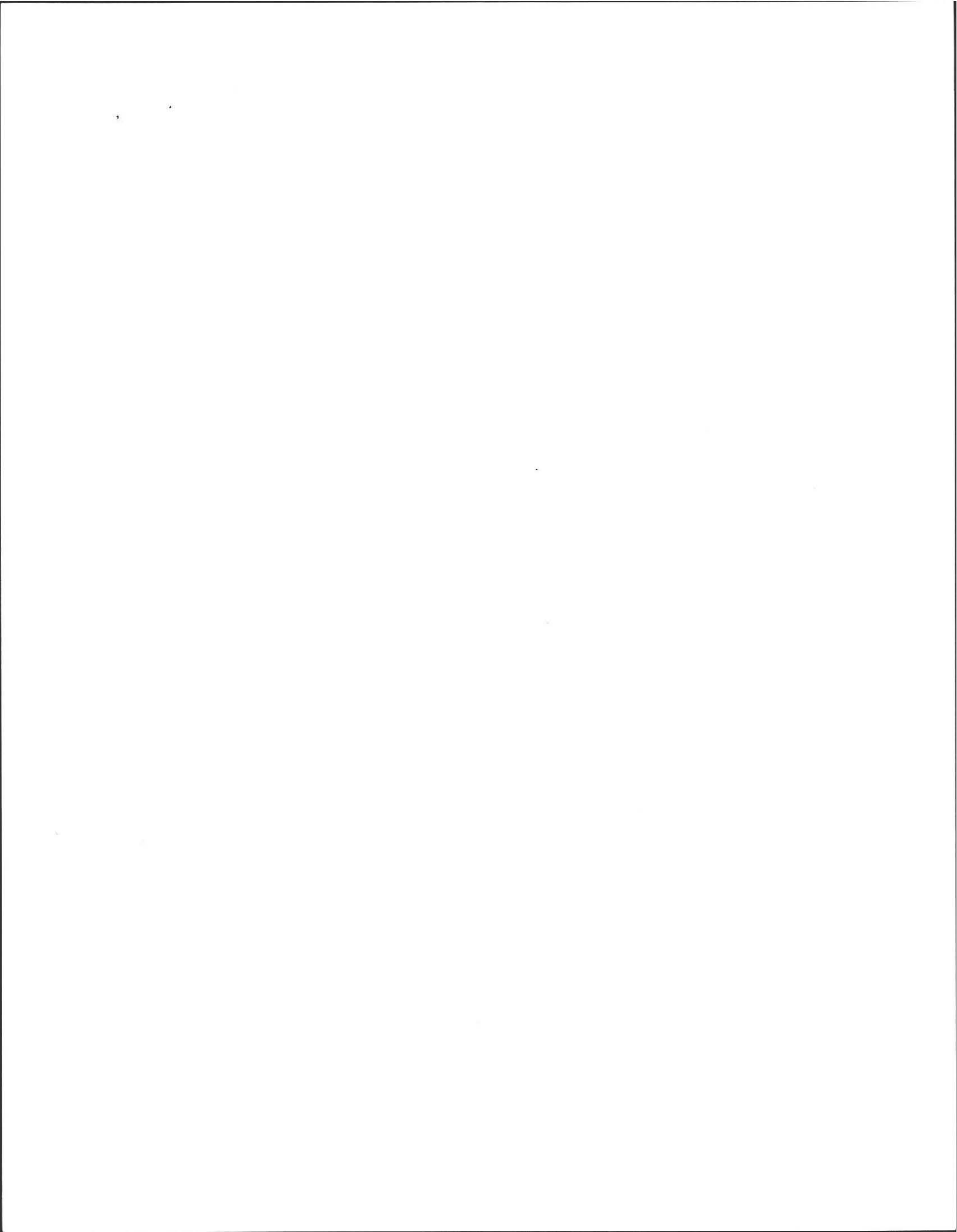
Site Passed Site Failed

Performed By: Alan Weiss, RS

Witnessed By: _____

Comments: _____





Location Address or Lot No. 445 Shays St.

On-site Review

Deep Hole Number 112 Date: 10/26/12 Time: 10/30 Weather Clouds 60%

Location (identify on site plan) _____

Land Use Old Farm use Slope (%) 2 Surface Stones yes

Vegetation grassy

Landform terrace

Position on landscape (sketch on the back) _____

Distances from:

Open Water Body 100' feet
 Drainage way _____ feet
 Possible Wet Area 100' feet
 Property Line 20' feet
 Drinking Water Well 100' feet
 Other _____

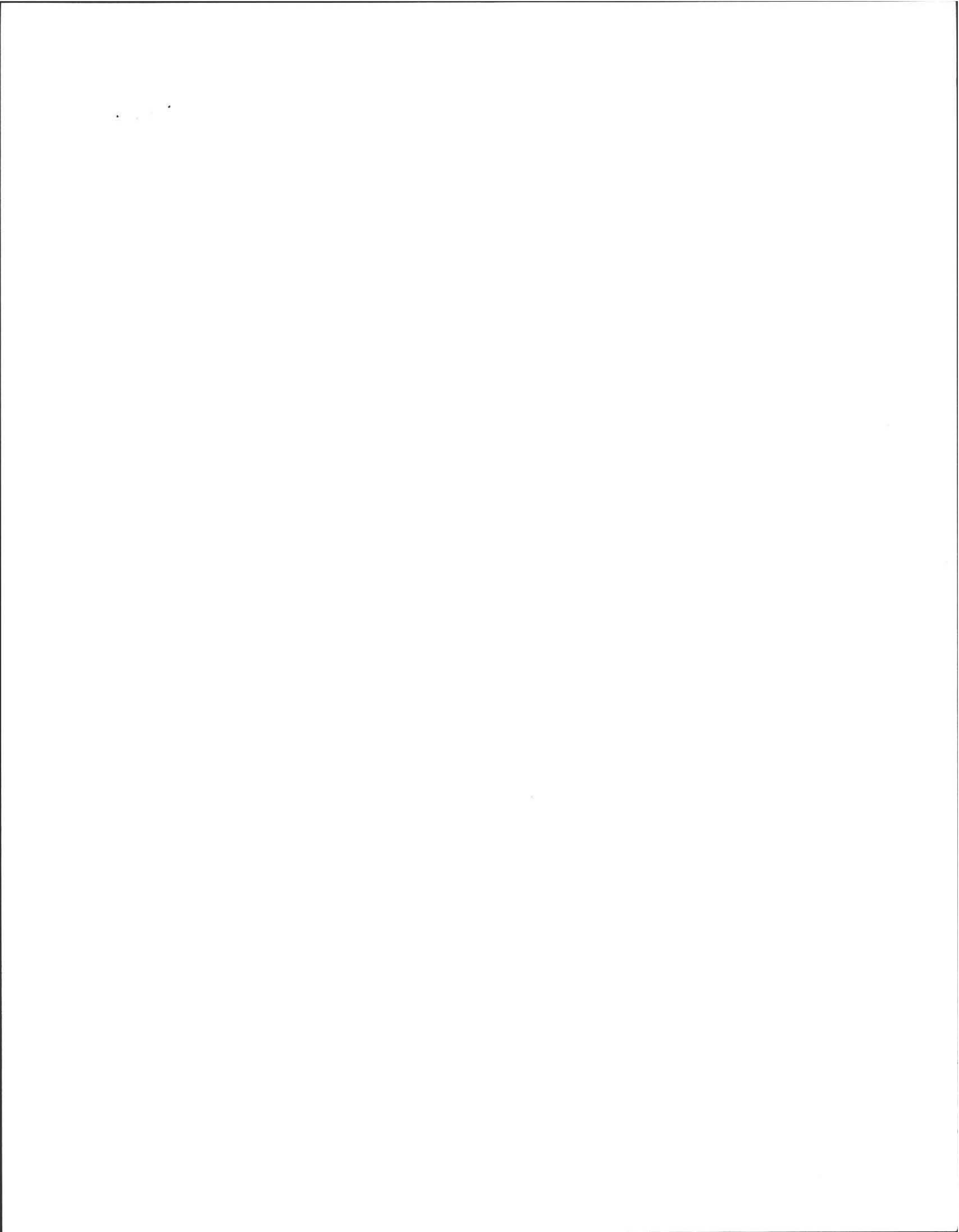
DEEP OBSERVATION HOLE LOG*

Depth from Surface (Inches)	Soil Horizon	Soil Texture (USDA)	Soil Color (Munsell)	Soil Mottling	Other (Structure, Stones, Boulders, Consistency, % Gravel)
# 1 0-12" 12-25" 25-123"	A	FSL	10YR 3/2	Not obs	- Fibrous, Fract.
	B	LS	10YR 4/4		- F.M. Sandy.
	C ₁	CS	2.5Y 5/3		C. Sand + gravel Well bedded; 15% cobbles
# 2 0-12" 12-27" 27"-170"	A	FSL	10YR 3/2	Not obs	- Fibrous
	Bw	LS	10YR 4/4		- F.M. Sandy.
	C ₁	CS	2.5Y 5/3		C. Sand + gravel well bedded, 15% cobbles

* MINIMUM OF 2 HOLES REQUIRED AT EVERY PROPOSED DISPOSAL AREA

Parent Material (geologic) Outwash Depth to Bedrock: 1'
 Depth to Groundwater: Standing Water in the Hole: Not obs Weeping from Pit Face: Not obs
 Estimated Seasonal High Ground Water: 120'







- Property Map**
 - Property Lines
 - Property Line
 - Hydrographic Property
 - Right of Way Line
 - Town Boundary
- Lot Lines**
 - Former Property Line
 - Subdivision Lot Line
- Easements**
- Basemap 2008**
 - Trails
 - Rail Lines
- Structures**
 - Building
 - Foundation or In constr
 - 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**
- Transportation**
 - Paved street (10-15 ft)
 - Unpaved street (10-15 ft)
- Bridges**
 - Bridge deck (10-15 ft)
 - Foot Bridge
 - Rail Bridge

Horizontal Datum: MA Stateplane Coordinate System, Zone 4161, Datum NAD83, Feet
 Vertical Datum: NAVD88, Feet

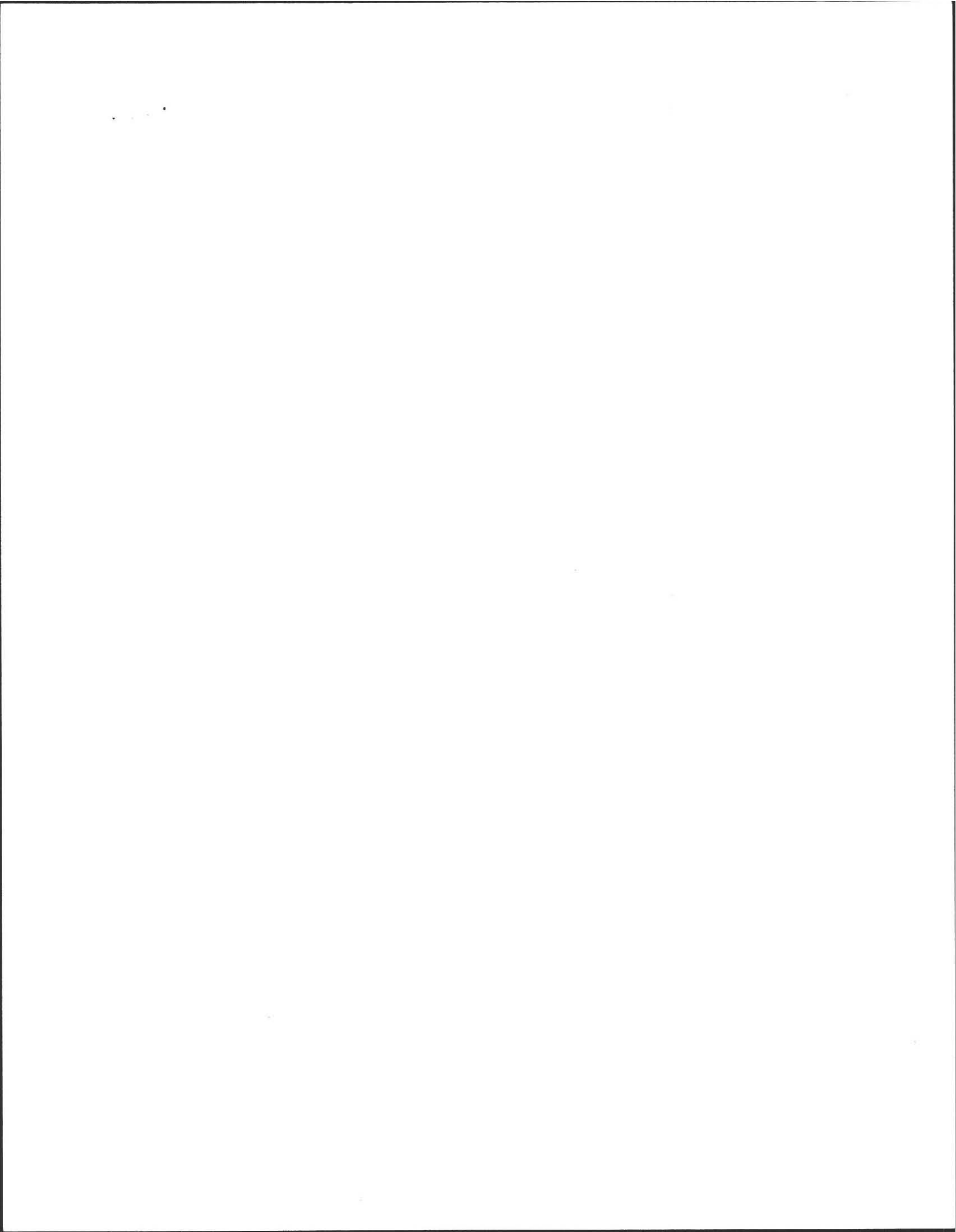
Planimetric & topographic basemap features compiled at 1"=40' scale from April, 2008 Aerial Photography
 Parcels compiled to match the basemap; revisions are ongoing.

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" = 60 ft





Location Address or Lot No. 445 Shays St

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 120" inches (Assured)
- Ground water adjustment feet

Index Well Number Reading Date Index well level

Adjustment factor Adjusted ground water level

Depth of Naturally Occurring Pervious Material

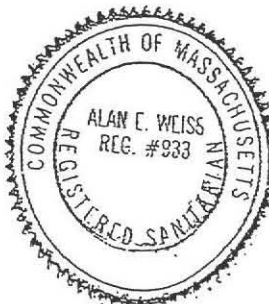
Does at least four feet of naturally occurring pervious material exist in all areas observed throughout the area proposed for the soil absorption system? yes

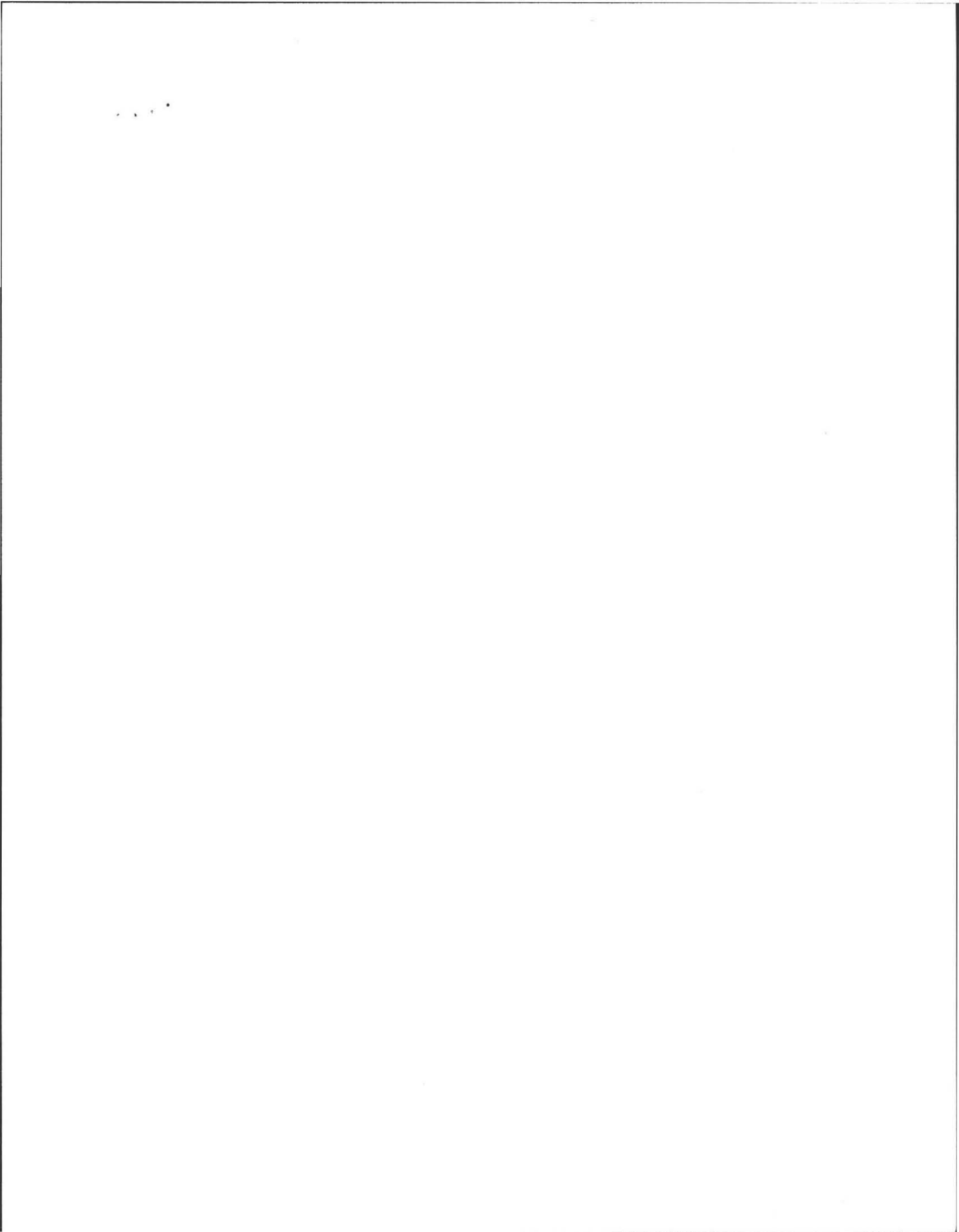
If not, what is the depth of naturally occurring pervious material? _____

Certification

I certify that on 6/1995 (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 10/26/12







Commonwealth of Massachusetts
 City/Town of Amherst
**Application for Disposal System
 Construction Permit**
 Form 1A

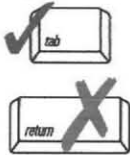


Number _____
 Fee _____

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Application is hereby made for a permit to: Construct a new on-site sewage disposal system
 Repair or replace an existing on-site sewage disposal system
 Repair or replace an existing system component

1. Location of Facility:

445 Shays Street
 Address or Lot #
 Amherst MA 01002
 City/Town State Zip Code

2. Owner Information

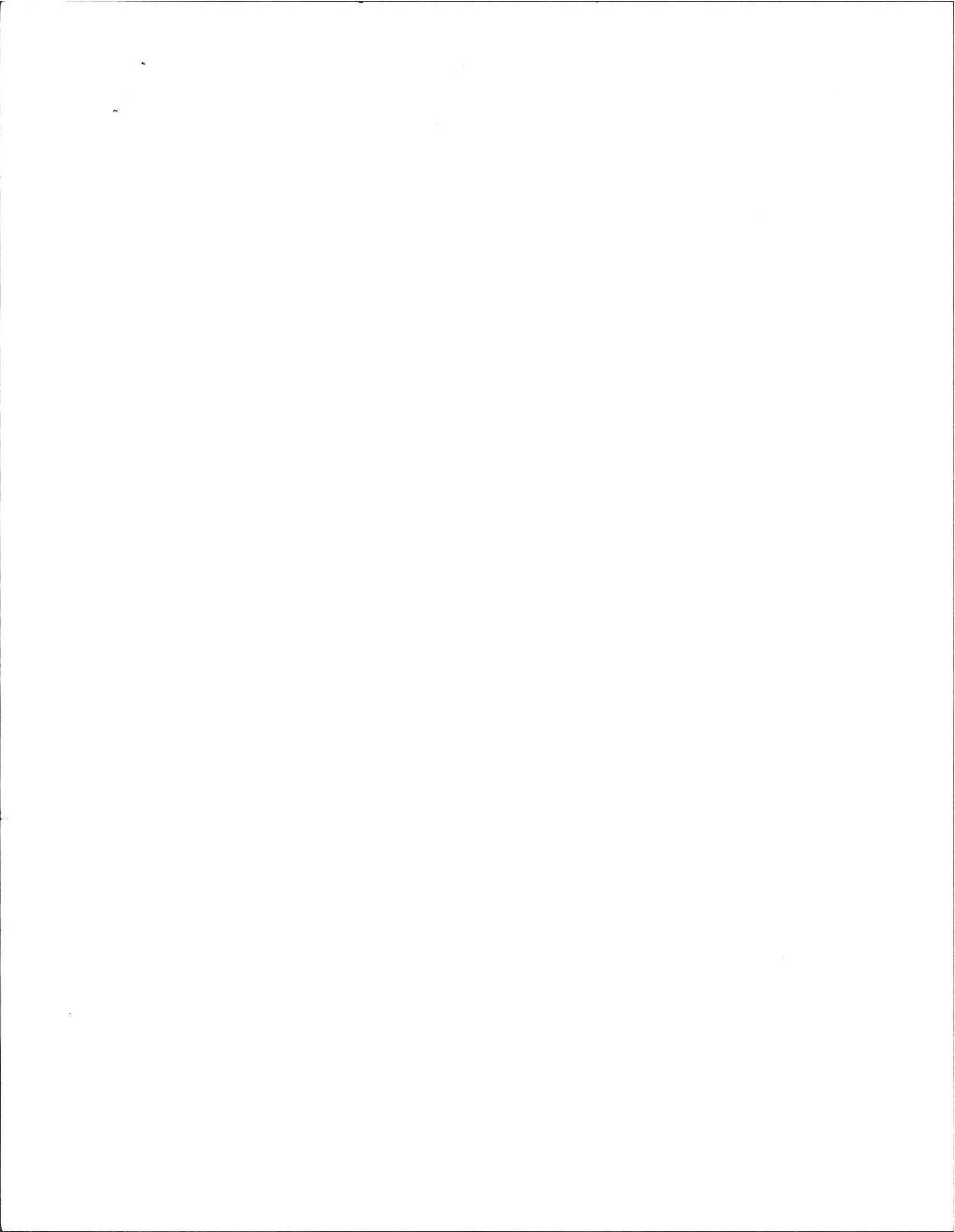
Charles Falkner
 Name
 5 Ashton Lane
 Address (if different from above)
 Millbury MA 01527
 City/Town State Zip Code
 Telephone Number _____

3. Installer Information

Al Konieczny
 Name
 River Dr
 Address
 Hadley MA 01035
 City/Town State Zip Code
 Telephone Number 549*5396

4. Designer Information

Alan Weiss, RS, # 933, Hydrogeologist
 Name
 350 Old Enfield Road
 Address
 Belchertown MA 01007
 City/Town State Zip Code
 Telephone Number 413.323.5957





Commonwealth of Massachusetts
 City/Town of Amherst
**Application for Disposal System
 Construction Permit**
 Form 1A

Number _____

\$ _____
 Fee

A. Facility Information (continued)

5. Type of Building:

Dwelling

Garbage Grinder (check if present)

Other: Type of Building

4 Bedroom

Number of Persons Served _____

Showers

Number of showers _____

Cafeteria

Other fixtures

Specify other fixtures: _____

6. Design Flow:

440

Gallons per Day

Calculated Daily Flow:

484

Gallons

7. Plan:

10.29.2012

Date of Original

1

Number of Sheets

Revision Date

Septic System Repair Plan

Title of Plan

8. Description of Soil:

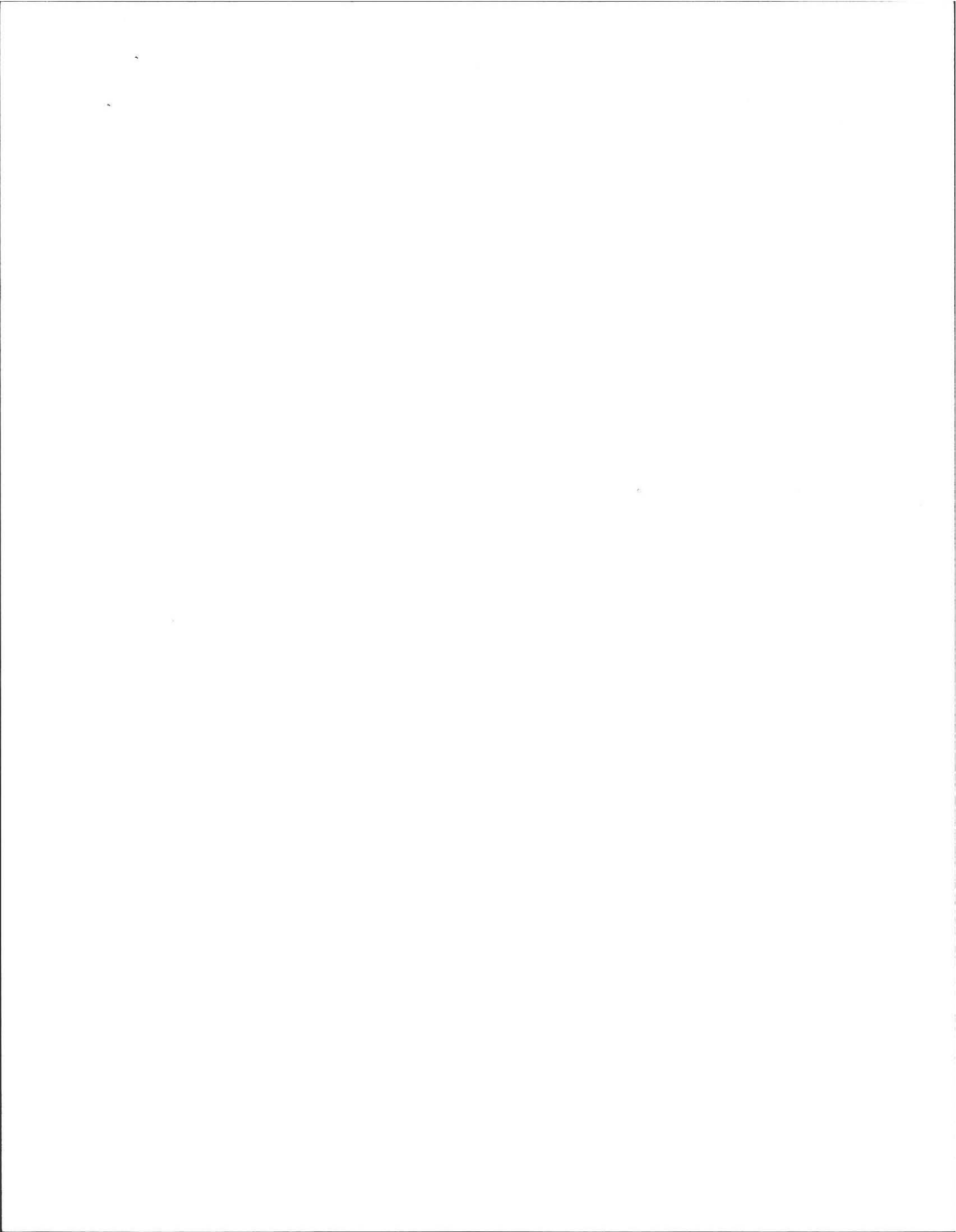
LS: C. sand & Gravel

9. Nature of Repairs or Alterations (if applicable):

New S. tank and L. field

10. Date last inspected:

-
 Date





Commonwealth of Massachusetts
 City/Town of Amherst
**Application for Disposal System
 Construction Permit**
 Form 1A

Number _____
 \$ _____
 Fee _____

B. Agreement

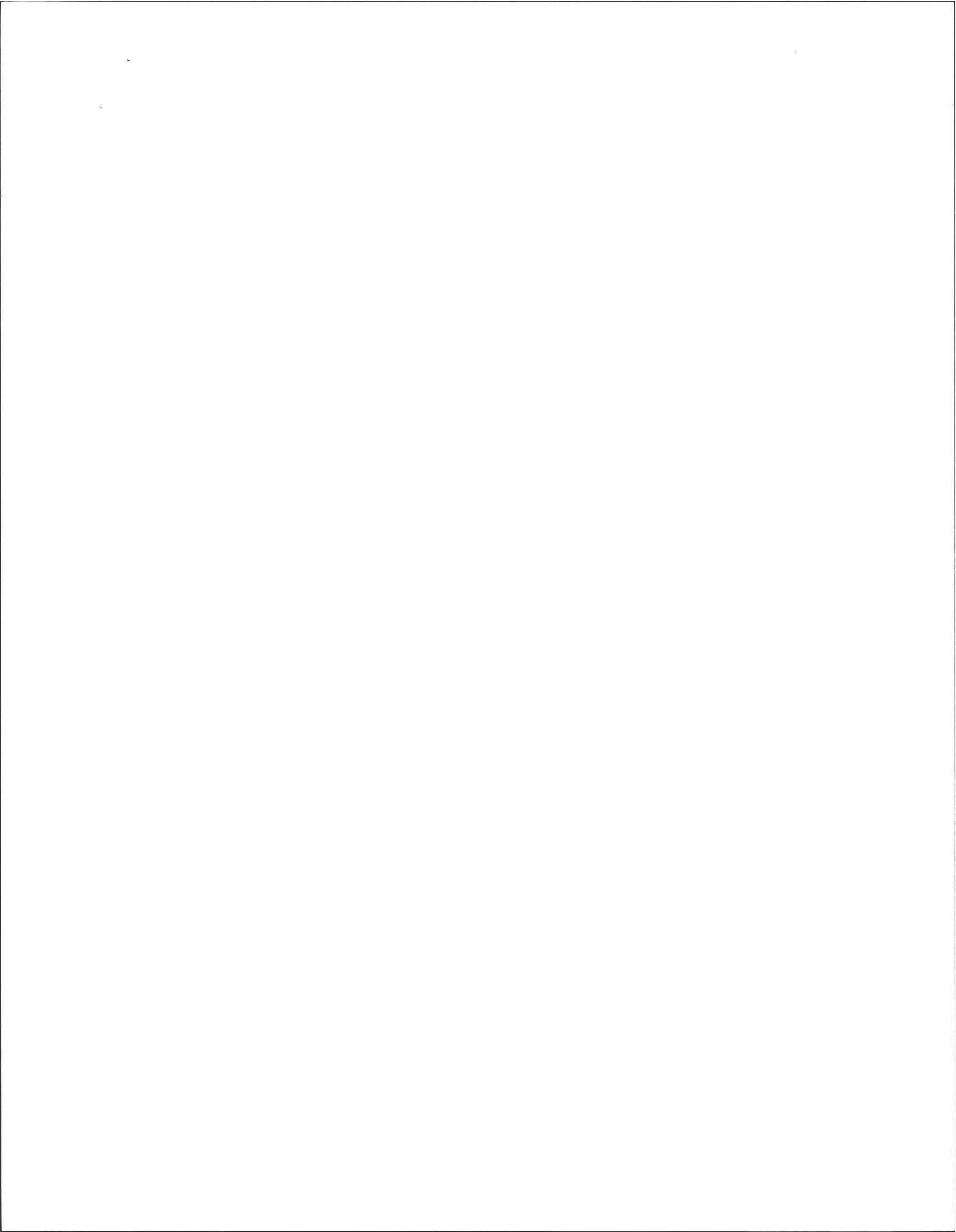
The undersigned agrees to ensure the construction and maintenance of the **aforedescribed on-site sewage disposal system** in accordance with the provisions of Title 5 of the Environmental Code and not to place the system in operation until a Certificate of Compliance has been issued by this Board of Health.

Signature _____ Date _____

Application Approved By:

Name _____ Date _____

Application **Disapproved** for the following reasons:





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: 10/26/12

Commonwealth of Massachusetts
Amherst, Massachusetts

Soil Suitability Assessment for On-site Sewage Disposal

Performed By: A. Weiss, R.S.

Witnessed By: E. Smith, B.O.H.

Date: 10/26/12

Location Address or Lot # Map 20D, LOT 7 445 Shay St, Amherst 01002	Owner's Name, Address, and Telephone # Charles Faulkner 5 Ashton Lane Millbury, MA 01527
--	---

Office Review

Published Soil Survey Available: No Yes

Year Published _____ Publication Scale _____
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) _____

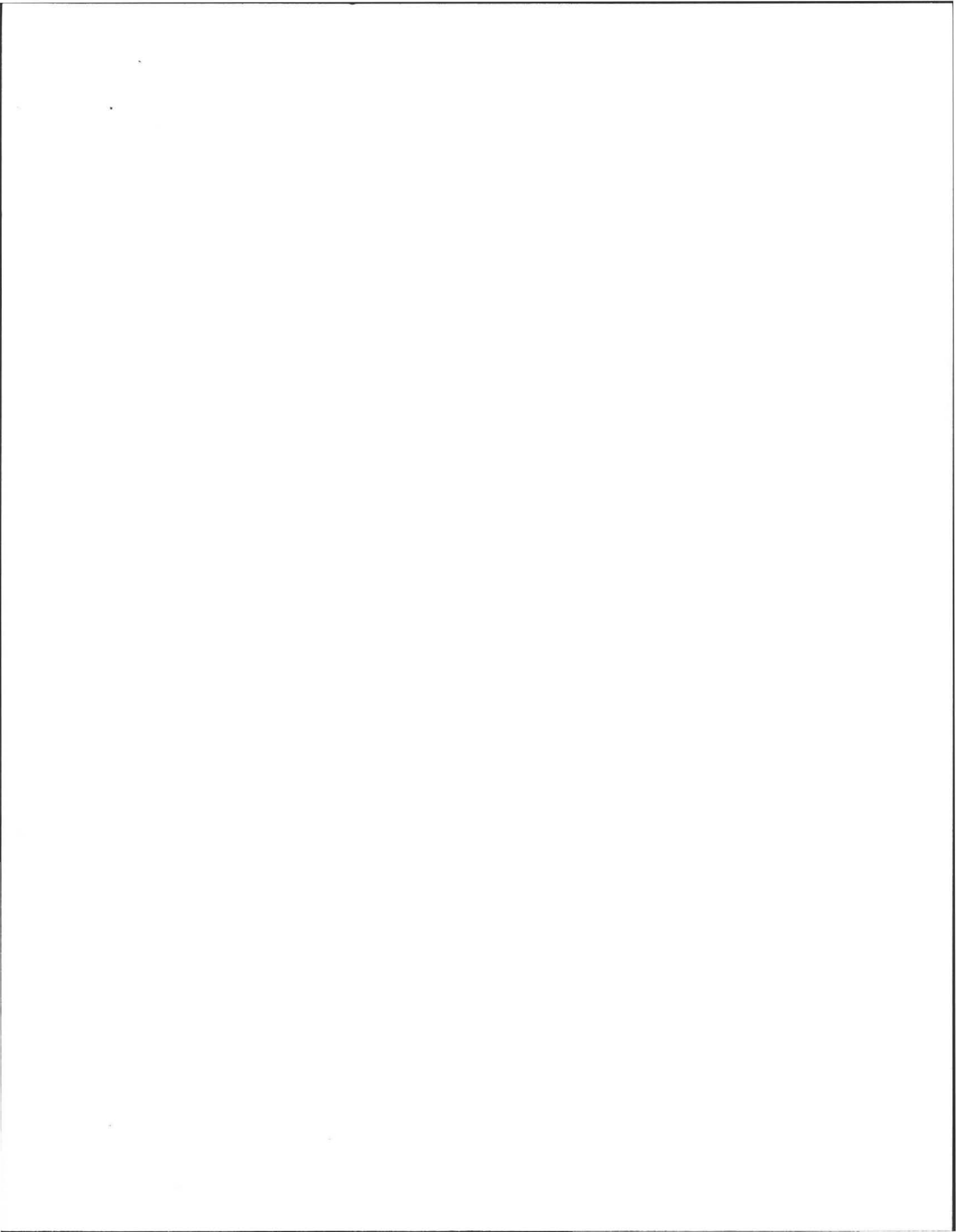
Wetlands Conservancy Program Map (map unit) _____

Current Water Resource Conditions (USGS): Month _____

Range: Above Normal Normal Below Normal

Other References Reviewed: _____





Location Address or Lot No. 445 Shays St

COMMONWEALTH OF MASSACHUSETTS

Aubost, Massachusetts

Percolation Test*		
Date: ...	<u>10/26/12</u>	Time: ...
Observation Hole #	<u>P # 1</u>	
Depth of Perc	<u>50'</u>	
Start Pre-soak	<u>10:40</u>	
End Pre-soak		
Time at 12"	<u>COULD NOT</u>	<u>Repair</u>
Time at 9"	<u>HOLD</u>	
Time at 6"	<u>SOAK</u>	
Time (9"-6")	<u>↓</u>	
Rate Min./Inch	<u>< 2</u>	
	<u>< 2</u>	

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

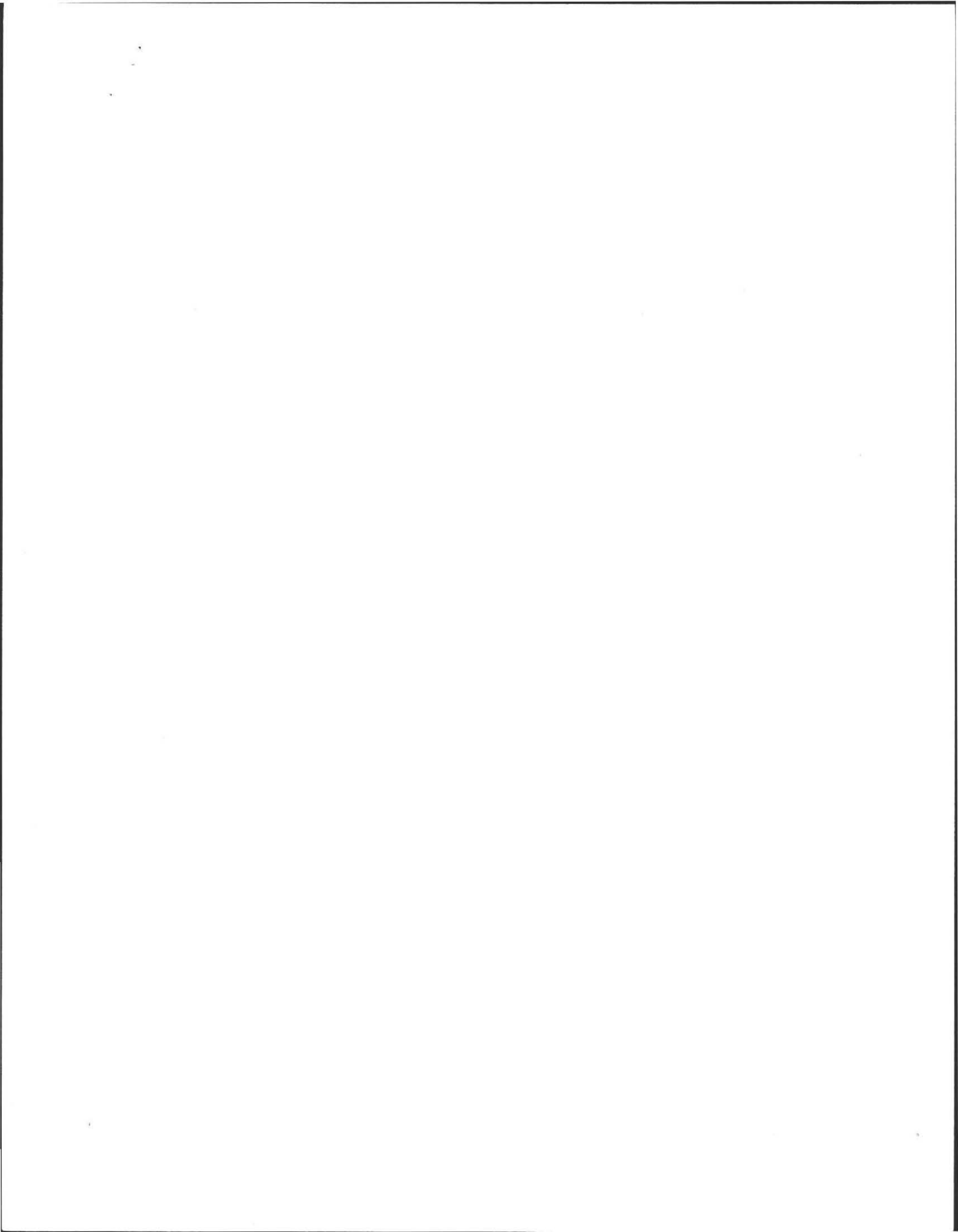
Site Passed Site Failed

Performed By: Alan Weiss, RS

Witnessed By: _____

Comments: _____





Location Address or Lot No. 445. Shays St.

On-site Review

Deep Hole Number 1+2 Date: 10/26/12 Time: 10/30 Weather Clouds 60°

Location (identify on site plan) _____

Land Use Old Farm use Slope (%) 2 Surface Stones yes

Vegetation grass

Landform Terrace

Position on landscape (sketch on the back) _____

Distances from:

Open Water Body 100' feet Drainage way _____ feet

Possible Wet Area 100' feet Property Line 20' 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)
# 1 // 0-12" 12-25" 25-123"	A	FSL	10YR3/2	Not obs ==	-Fibrous, Fract.
	B	LS	10YR4/4		-F. m. Sandy.
	C ₁	CS	2.5Y 5/3		C. Sand + gravel Well bedded, 15% cobbles
# 2 // 0-12" 12-27" 27"-120"	A	FSL	10YR3/2	Not obs ==	-Fibrous
	Bw	LS	10YR4/4		-F. m. Sandy.
	C ₁	CS	2.5Y 5/3		C. Sand + gravel well bedded, 15% cobbles

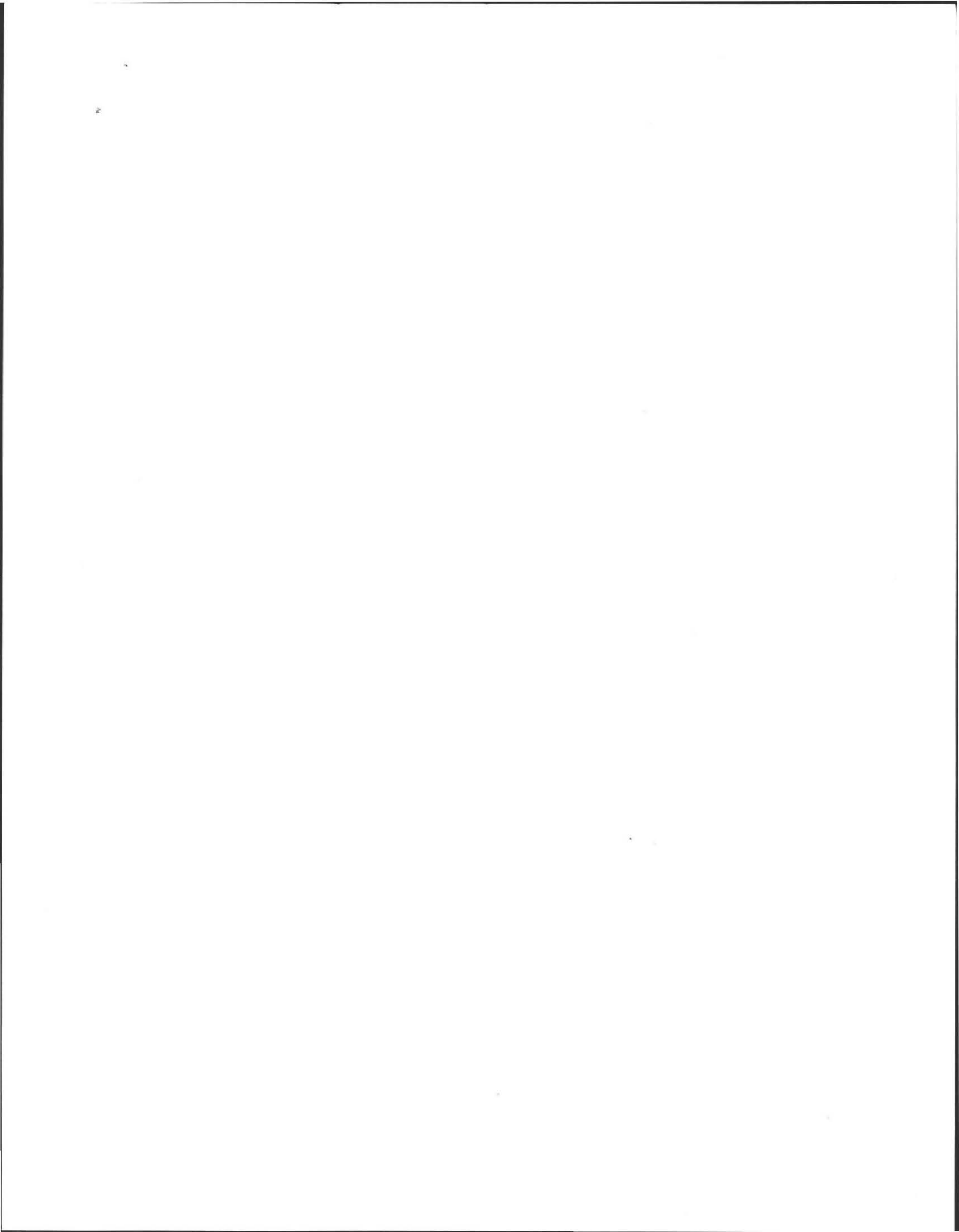
* MINIMUM OF 2 HOLES REQUIRED AT EVERY PROPOSED DISPOSAL AREA

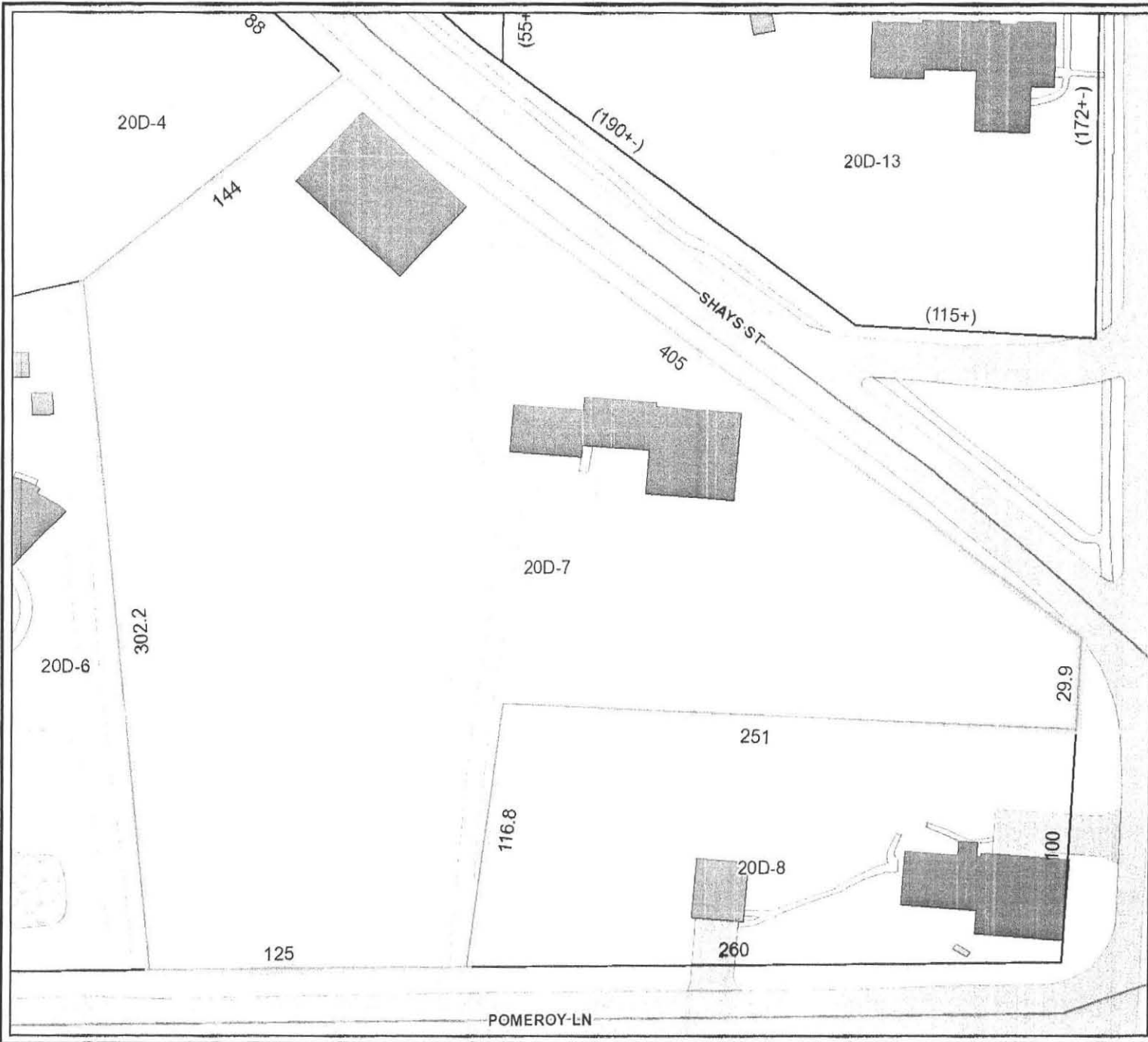
Parent Material (geologic) outwash Depth to Bedrock: 1'

Depth to Groundwater: Standing Water in the Hole: Not obs Weeping from Pit Face: Not obs

Estimated Seasonal High Ground Water: 120"







- 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 constr
 - 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 Surfs
- Parking**
- Parking Paved
 - Parking Unpaved
- Driveways**
- Driveway Foundation
 - Driveway (No Drive)
- Sidewalks**
- Sidewalk
- Transportation**
- Paved street (no bridge)
 - Unpaved street (no bridge)
- Bridges**
- Bridge deck (no superstr)
 - 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 compliance
 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" = 60 ft





Location Address or Lot No. 445 Shays St

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 120" inches (Assured)
- Ground water adjustment feet

Index Well Number Reading Date Index well level
 Adjustment factor Adjusted ground water level

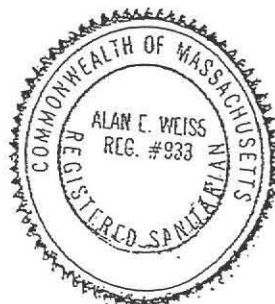
Depth of Naturally Occurring Pervious Material

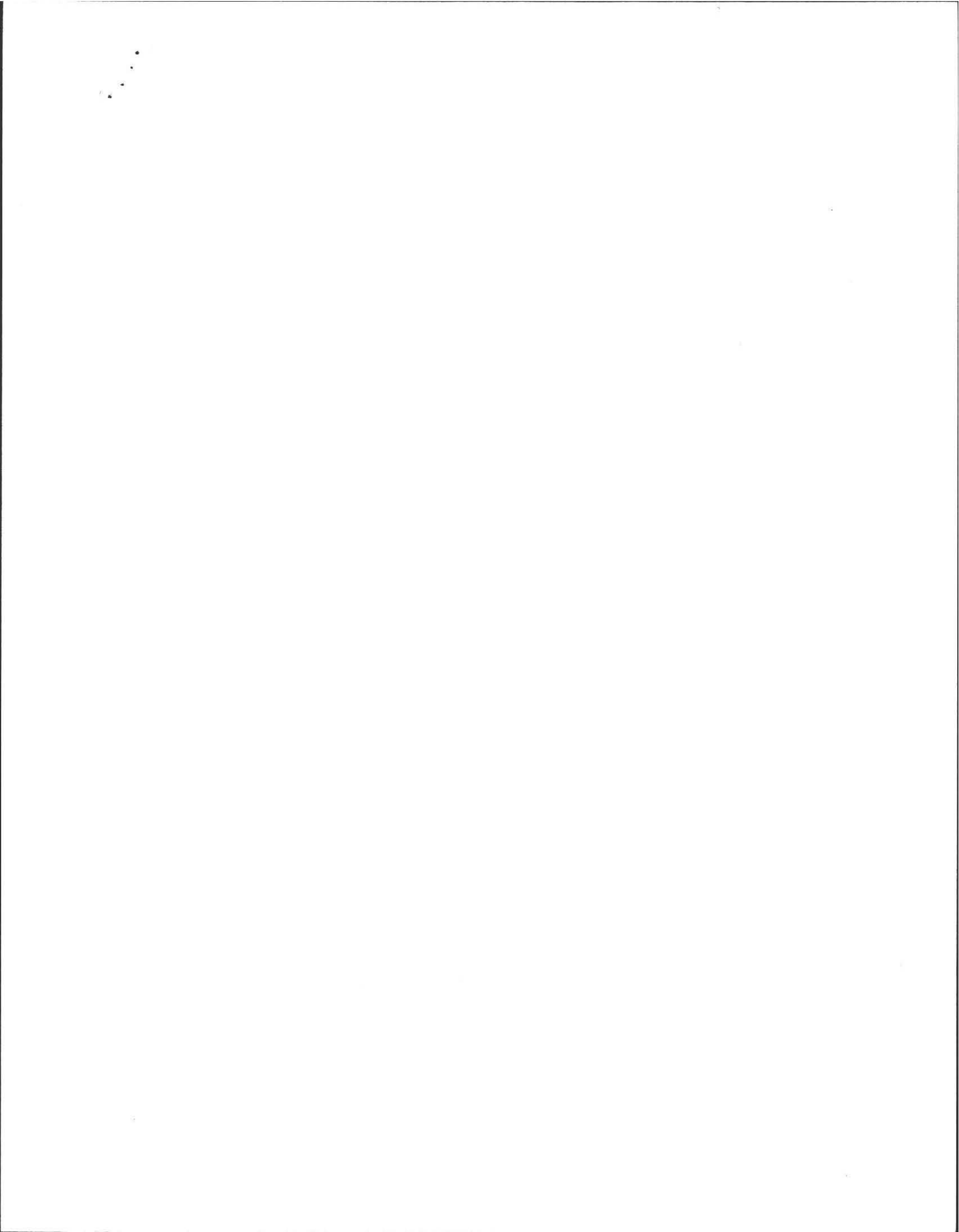
Does at least four feet of naturally occurring pervious material exist in all areas observed throughout the area proposed for the soil absorption system? yes
 If not, what is the depth of naturally occurring pervious material? _____

Certification

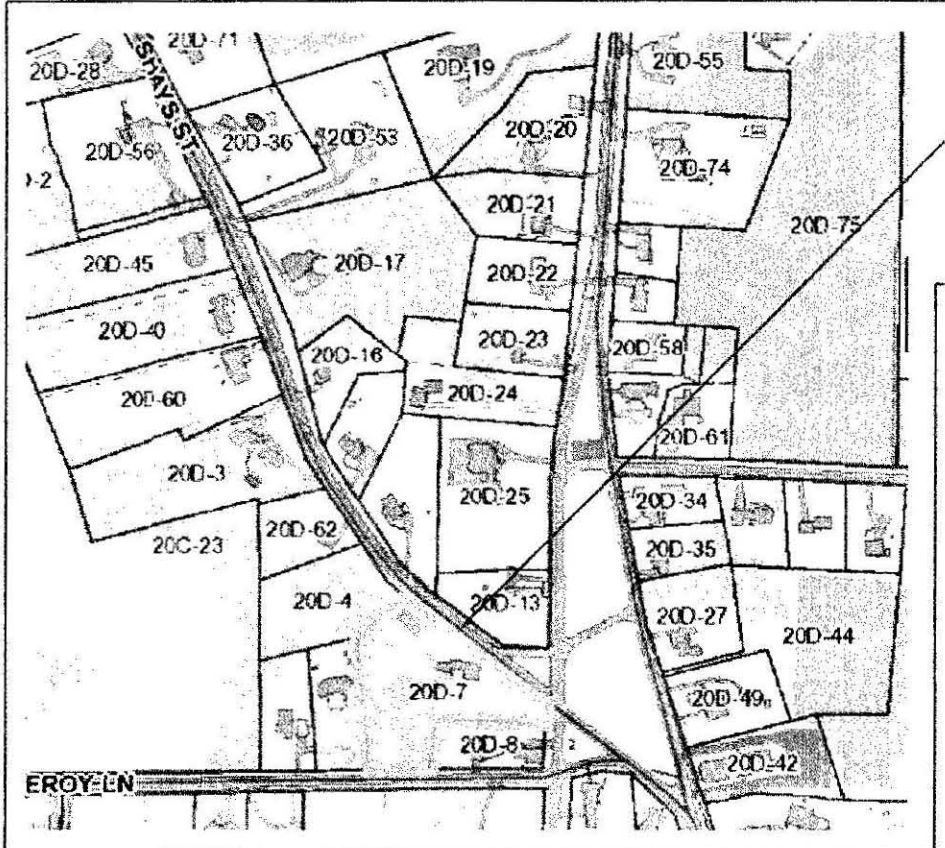
I certify that on 6/1995 (date) I have passed the soil evaluator examination approved by the Department of Environmental Protection and that the above analysis was performed by me consistent with the required training, expertise and experience described in 310 CMR 15.017.

Signature [Signature] Date 10/26/12

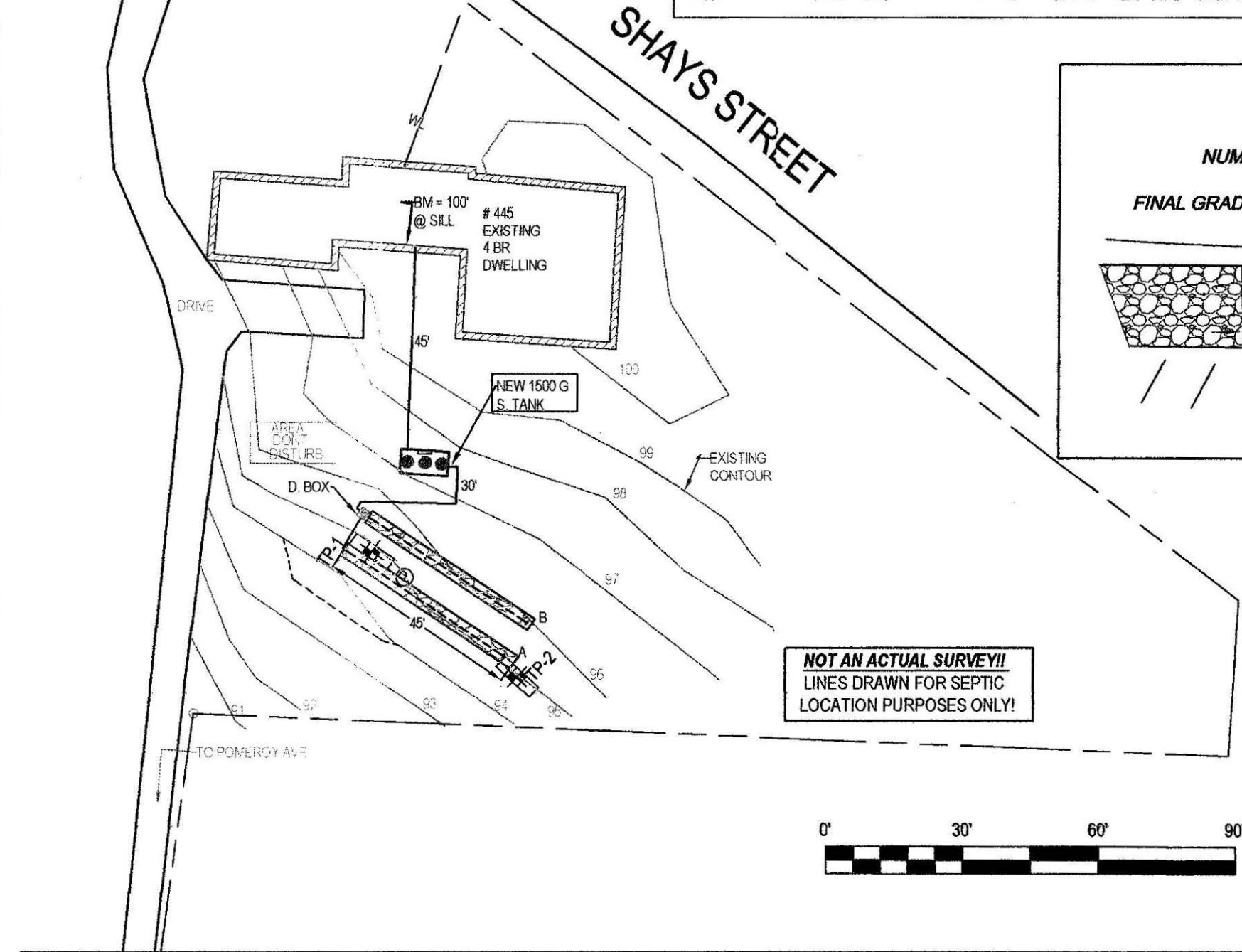
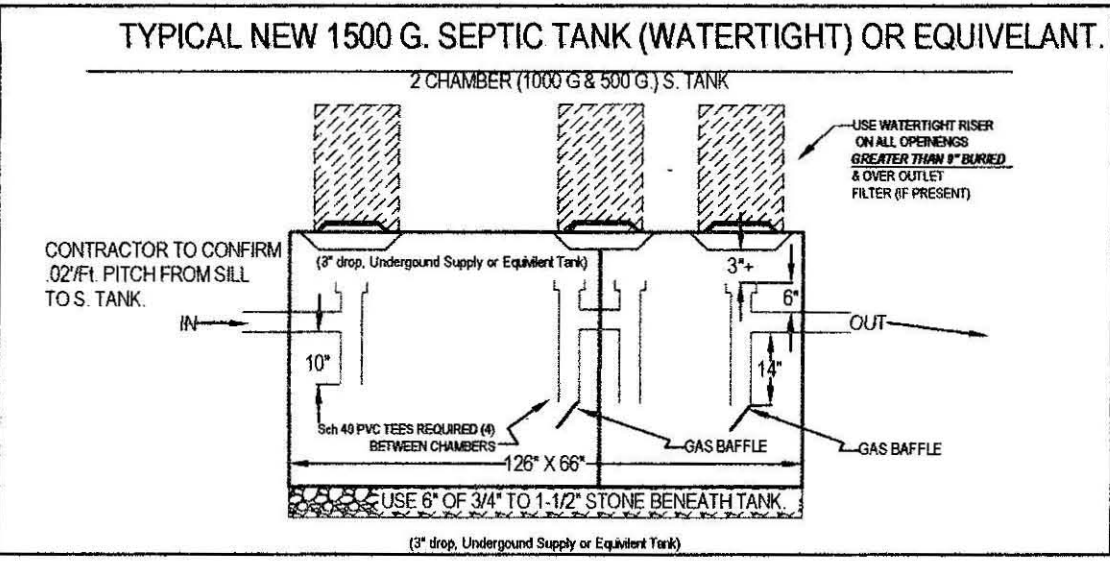
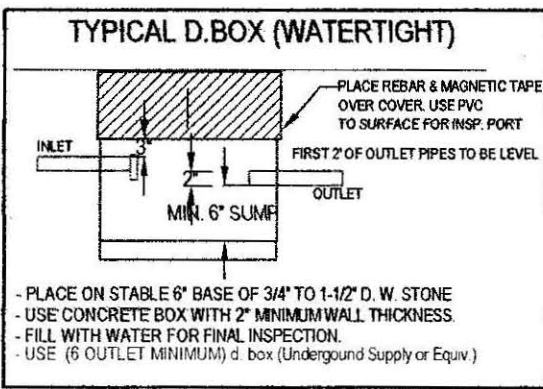
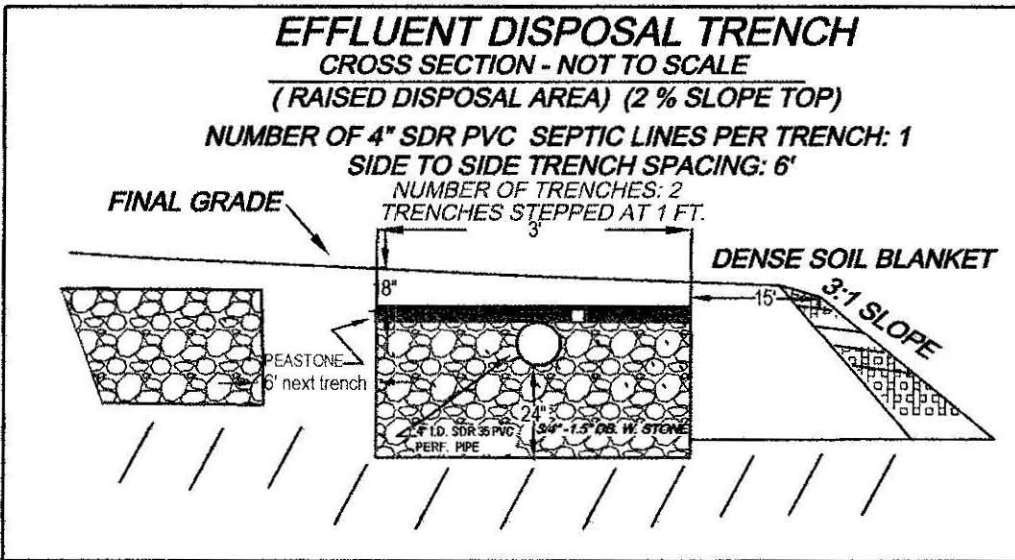
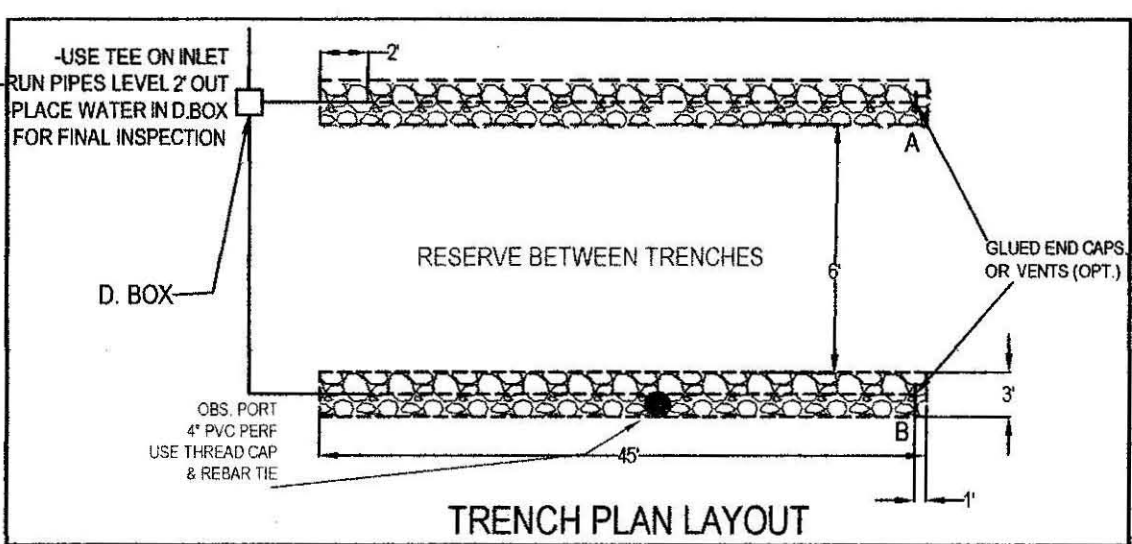




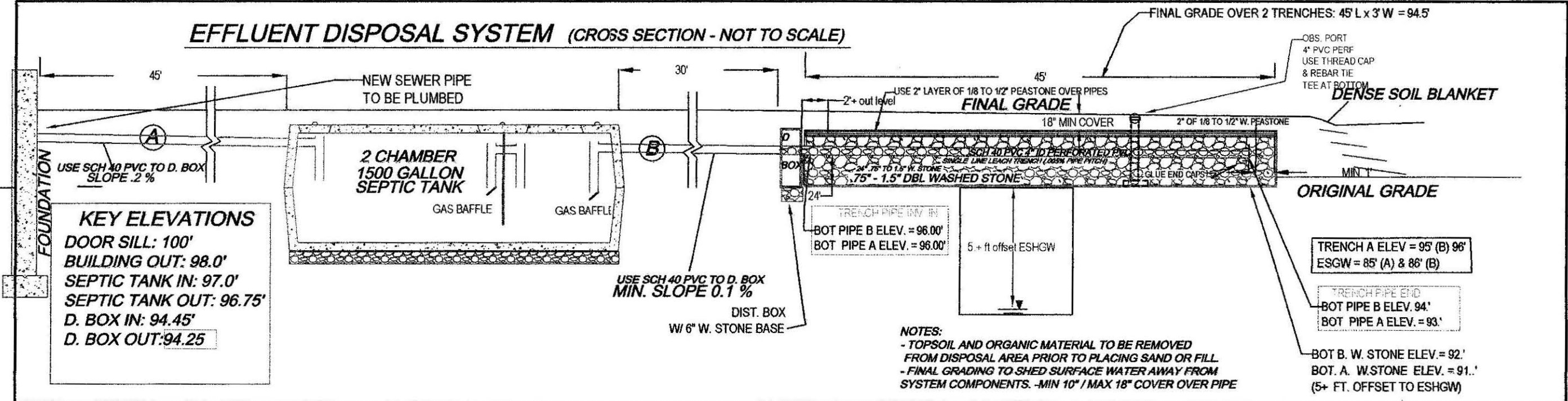
PLOT PLAN
MAP 20d LOT 7
SCALE: 1"=30'
1.95± ac.



SUBJECT SITE LOCATION



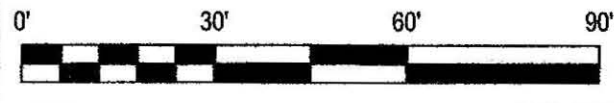
NOT AN ACTUAL SURVEY!!
LINES DRAWN FOR SEPTIC
LOCATION PURPOSES ONLY!



NOTES:
- TOPSOIL AND ORGANIC MATERIAL TO BE REMOVED FROM DISPOSAL AREA PRIOR TO PLACING SAND OR FILL.
- FINAL GRADING TO SHED SURFACE WATER AWAY FROM SYSTEM COMPONENTS. -MIN 10" / MAX 18" COVER OVER PIPE

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.



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

DESIGN NOTES AND CALCULATIONS:

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

-USE TWO TRENCHES: 3' WIDE X 45' LONG WITH 24" OF 3/4" TO 1-1/2" DBL WASHED STONE BELOW INVERT

- BOTTOM AREA: 2 TRENCHES X (3' W X 45' L) = 270 SF.
- SIDE AREA: 2 TRENCHES X (2.0' HT X 45' L) X 2 SIDES = 360 SF
- END AREA: 2 ENDS X (2.0' HT X 3' W) X 2 ENDS = 24 SF.
- TOTAL AREA: 654 SF X .74 GAL/SF = 484 GPD

3. GARBAGE DISPOSAL NOT ALLOWED, TO BE REMOVED****

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

5. NO OTHER WETLANDS WITHIN 100 FEET OF SAS, FILE RDA WITH CONSV. COMM.

6. USE NEW 1,500 GAL 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 ALL PLASTIC RISERS MUST BE SECURED WITH STAINLESS STEEL SCREWS.

8. USE APPROVED (.75"-1 1/2") DBL. WASHED STONE UNDER TANK & D. BOX FOR 6".

- CONFIRM STONE PROPERLY DOUBLE WASHED PRIOR TO PLACEMENT.

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. REQ'D.

13. USE TRENCHES 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 30" MIN. AS NEEDED (INSPECTION REQUIRED).
- CLEAR PAST BASE OF B (MIN. 30") & SCARIFY UNDER TRENCH PRIOR TO TITL 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 PERC: 50"
- PERC RATE = <2 MIN / IN,
- CLASS 1, C. SAND SOIL RATING

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

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

18. BM=100.00 @ (SILL, 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: 10.26.2012	
TP-1: 95'				TP-2			
DEPTH:	HORIZ:	TEXTURE:	COUP (MUNSELL):	MATERIAL:	DEPTH:	HORIZ:	TEXTURE:
0-12"	A	SL	10 YR 3.2	FRIABLE FIBROUS	0-12"	A	SL
12-25"	Bw	LS	10 YR 4.4	F-M SANDY	12-27"	Bw	LS
25-123"	C1	CS	2.5Y 5.3	C. SAND & GRAVEL	27-120"	C1	CS
				15% COBBLES, ROUNDED			
OXIDES: NOT OBSERVED				OXIDES: NOT OBSERVED			
EHWT: --				EHWT: --			
STANDING H2O: NOT OBSERVED				STANDING H2O: NOT OBSERVED			
WEEPING: NOT OBSERVED				WEEPING: NOT OBSERVED			
BEDROCK: 123'+				BEDROCK: 120" - 126'+			

SEPTIC SYSTEM REPAIR PLAN FOR CHARLES FAULKNER
445 SHAYS STREET
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: 10.29.2012
SCALE: 1"=30'

DRAWN BY: ALAN WEISS
REVISED:

DRAWING NUMBER: 112-3992-1026



Commonwealth of Massachusetts
 City/Town of Amherst
Certificate of Compliance
 Form 3

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.

This is to Certify that the following work on an On-Site Sewage Disposal System

- Construction of a new system
- Repair or replacement of an existing system
- Repair or replacement of an existing system component

Has been done in accordance with Title 5 and the Disposal System Construction Permit (DSCP):

13-3 DSCP Number 11/1/2012 DSCP Date
 Charles Fawcner Facility Owner
 445 Shays Street Street Address or Lot #
 Amherst MA 01002
 City/Town State Zip Code

Designer Information:

Alan Weiss, RS, # 933 Name Cold Spring Environmental, Inc. Name of Company
[Signature] Signature 11.27.2012 Date

Installer Information:

Rob Adair Name Adair Septic Name of Company
 Signature 11.27.2012 Date

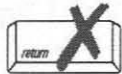
Use of this system is conditioned on compliance with the provisions set forth below:

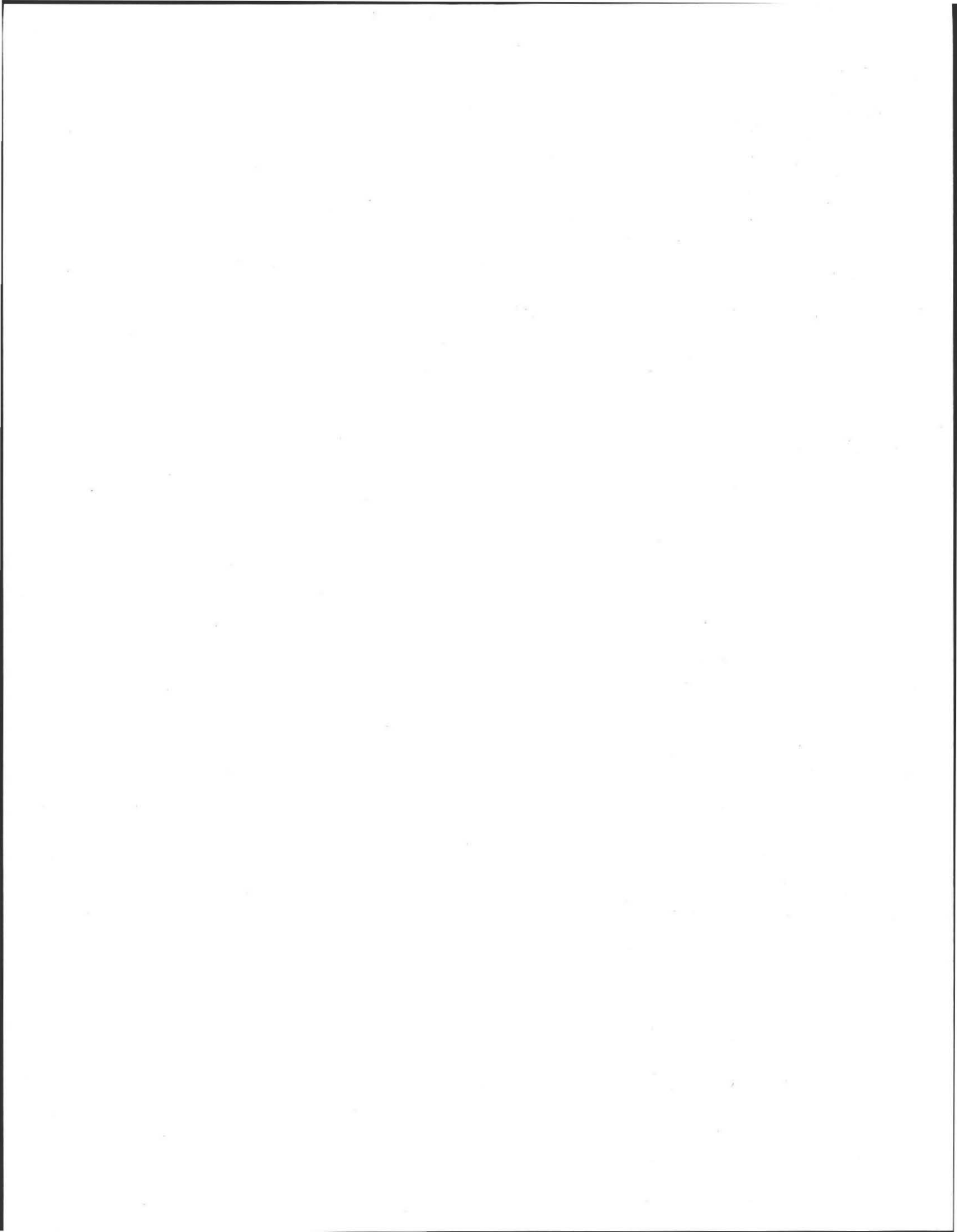
Pump septic tank every 2-3 years.

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

EDMUND SMITH, ASST. SANITARIAN, AMHERST HEALTH DEPT. Approving Authority
[Signature] Signature 11/29/2012 Date

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





PROJECT NO.: 13-3

CITY/TOWN: AUMHERST

APPLICANT: ALAN WEISS (DESIGNER) FOR CHARLES FAWKNER (OWNER)

ADDRESS: 445 SHAYS STREET

DESIGN FLOW: 484 gpd gpd

REVIEWED BY: Ed Smith

DATE: 11/1/2012

PERC/SOIL EVAL: Fri. 11/26 @ 10:30 am

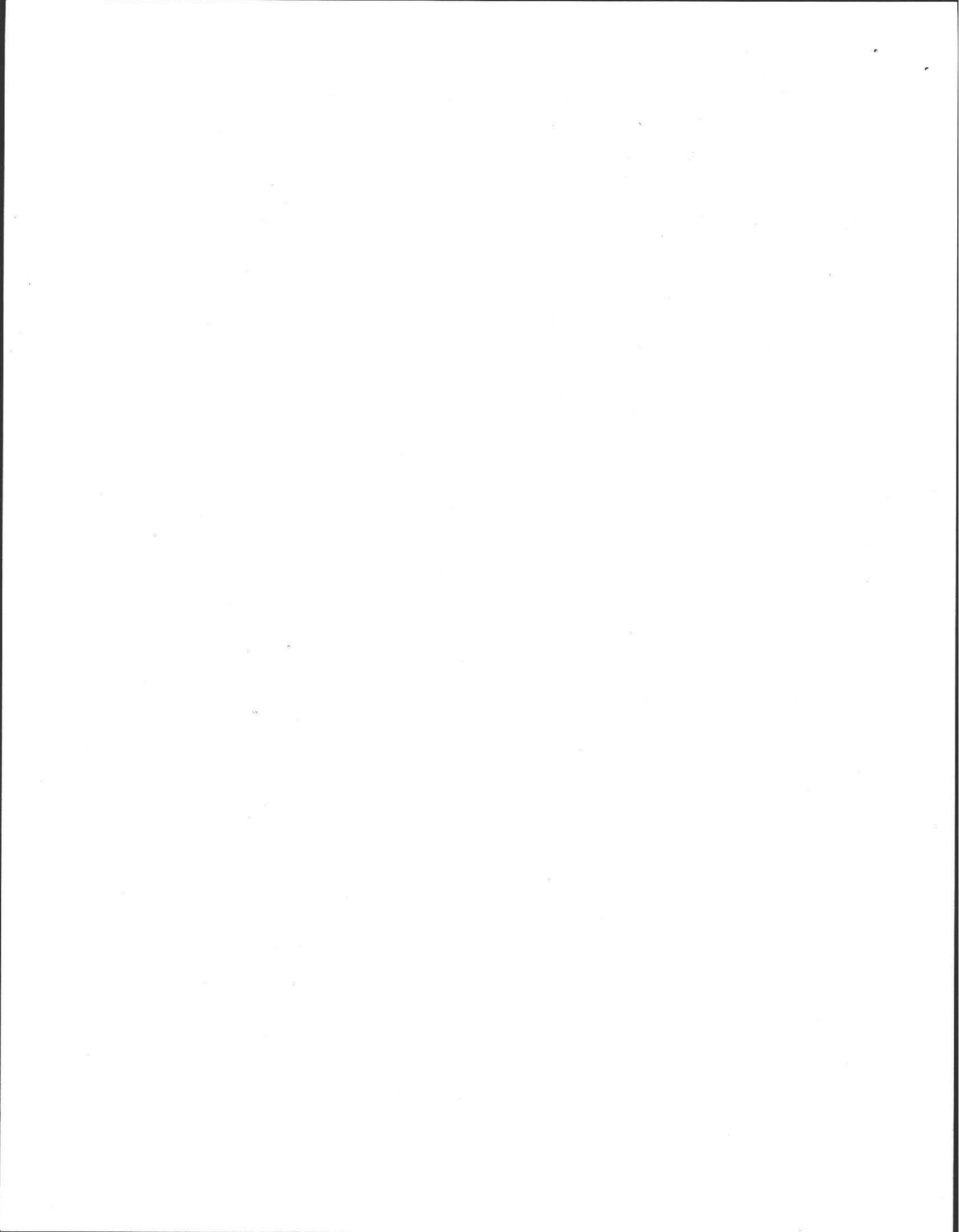
APPROVED Ed Smith

N/A OK NO

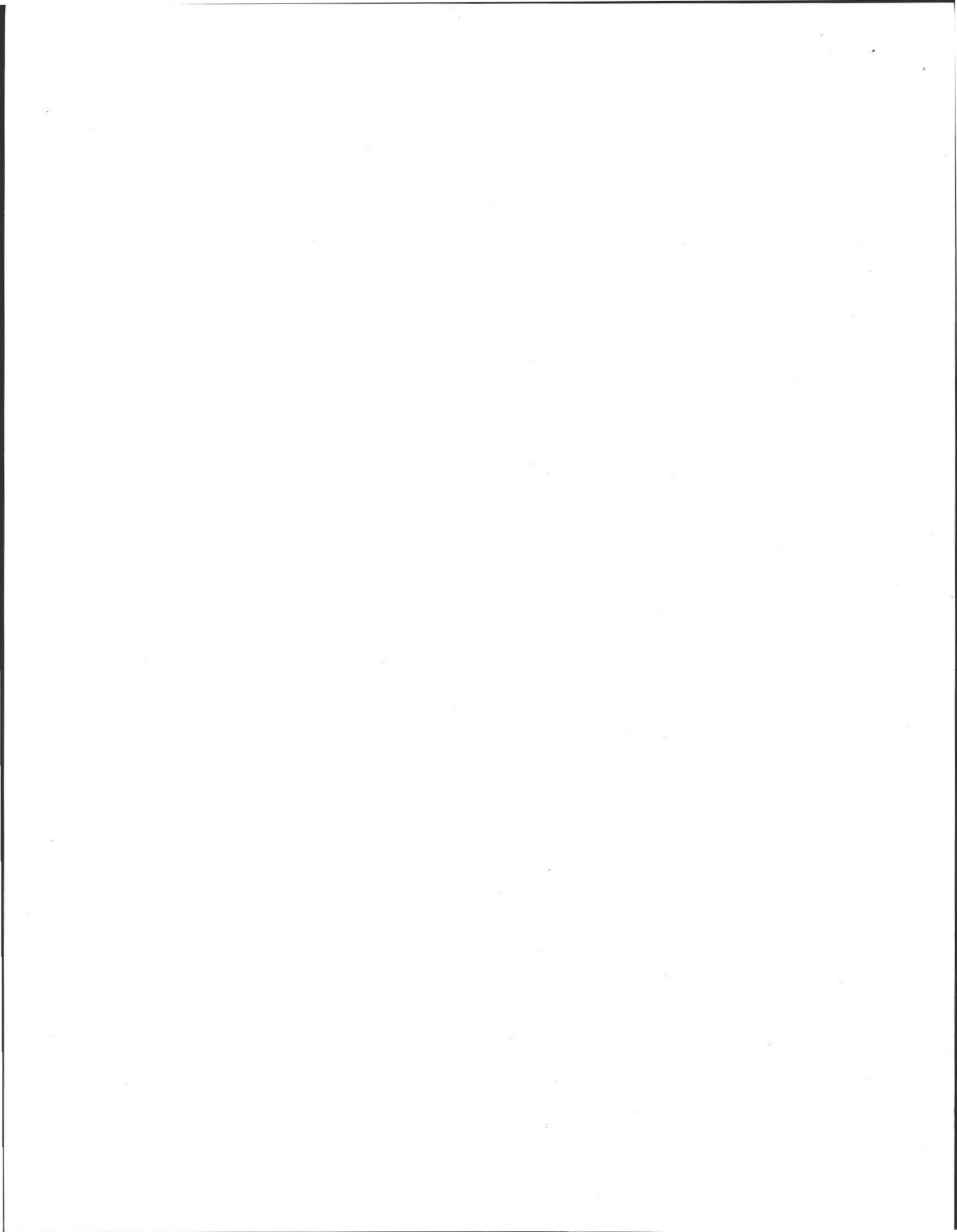
GENERAL

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 15.220(4)(t)]		✓	
Plan proper scale? (1"=40' for plot plans, 1"= 20' or fewer for components) [310 CMR 15.220(4)]		1"=30' ✓	
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)]		484 ✓ 440 GPD 484	
daily flow		1500 1500	
septic tank capacity (required and provided)		654 SF = 484 ✓	
soil absorption system (required and provided)		NOT ALLOWED - TO BE REMOVED	*
whether system designed for garbage grinder		✓	
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]		CLASS 1 174 ✓	
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)]		✓	

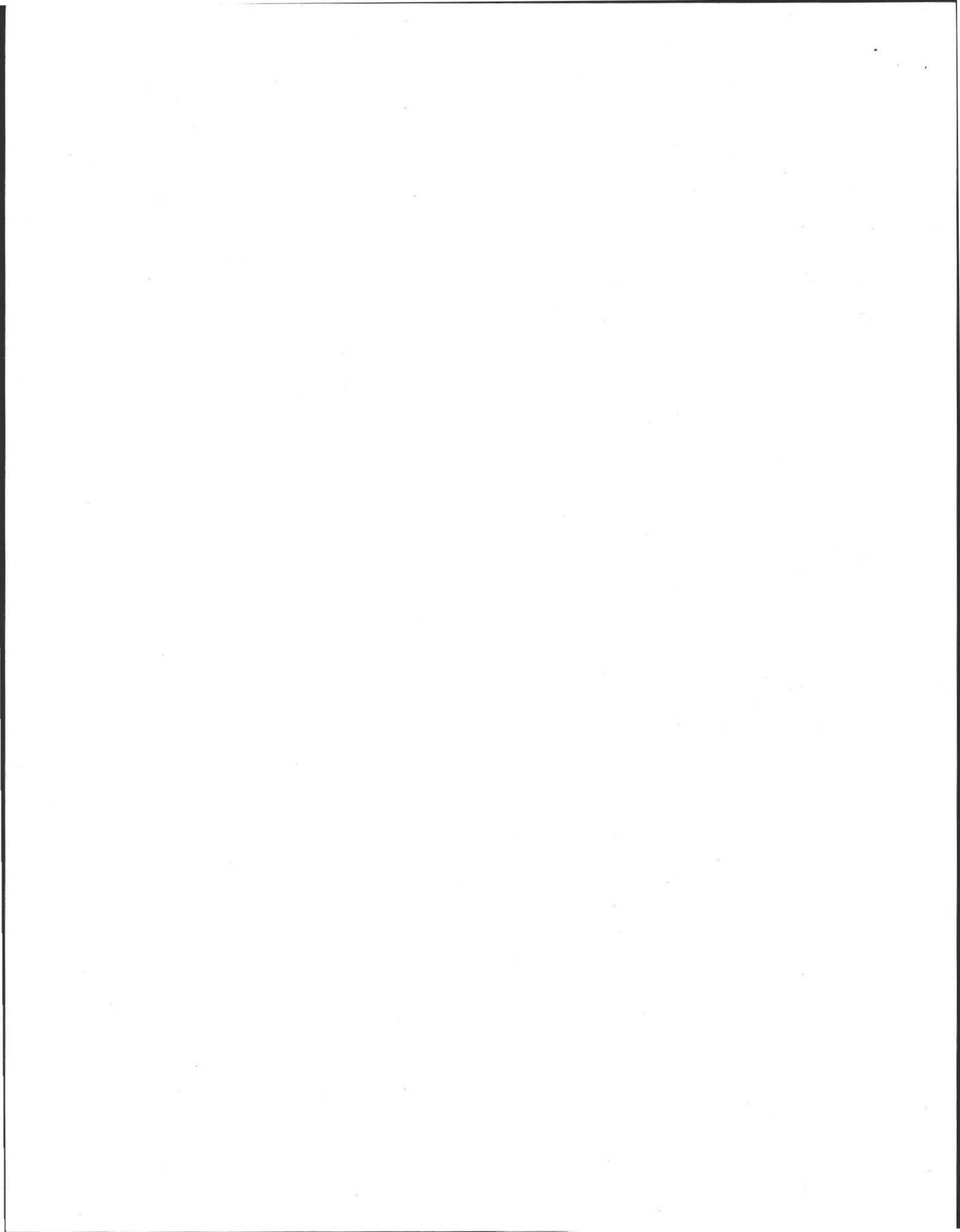
← 2 min / 1.200



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)]		NA	
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)		✓	
SEPTIC TANK			
	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)]		✓		
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)]		✓		
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)]		NA		
H-20 Where appropriate? [310 CMR 15.226(3)]		✓		
Setbacks from resources [310 CMR 15.211]				
Multi-Compartment Tanks				
Required when other than single-family dwelling or flow > 1000 gpd [310 CMR 15.223(1)(b)]		NA 2comp		
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)]		✓		
BUILDING SEWER AND OTHER PIPING				
	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)		NA		
Slope of sewer line not less than 0.01 (1/8"/ft) 0.02 preferable [310 CMR 15.222(6)]		✓		
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)		NA		
Endcaps or vent manifold specified?		✓ w/ manhole		
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)		✓		
DISTRIBUTION BOX				



7-954

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)]		NA		
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)]		✓		

PUMP CHAMBERS

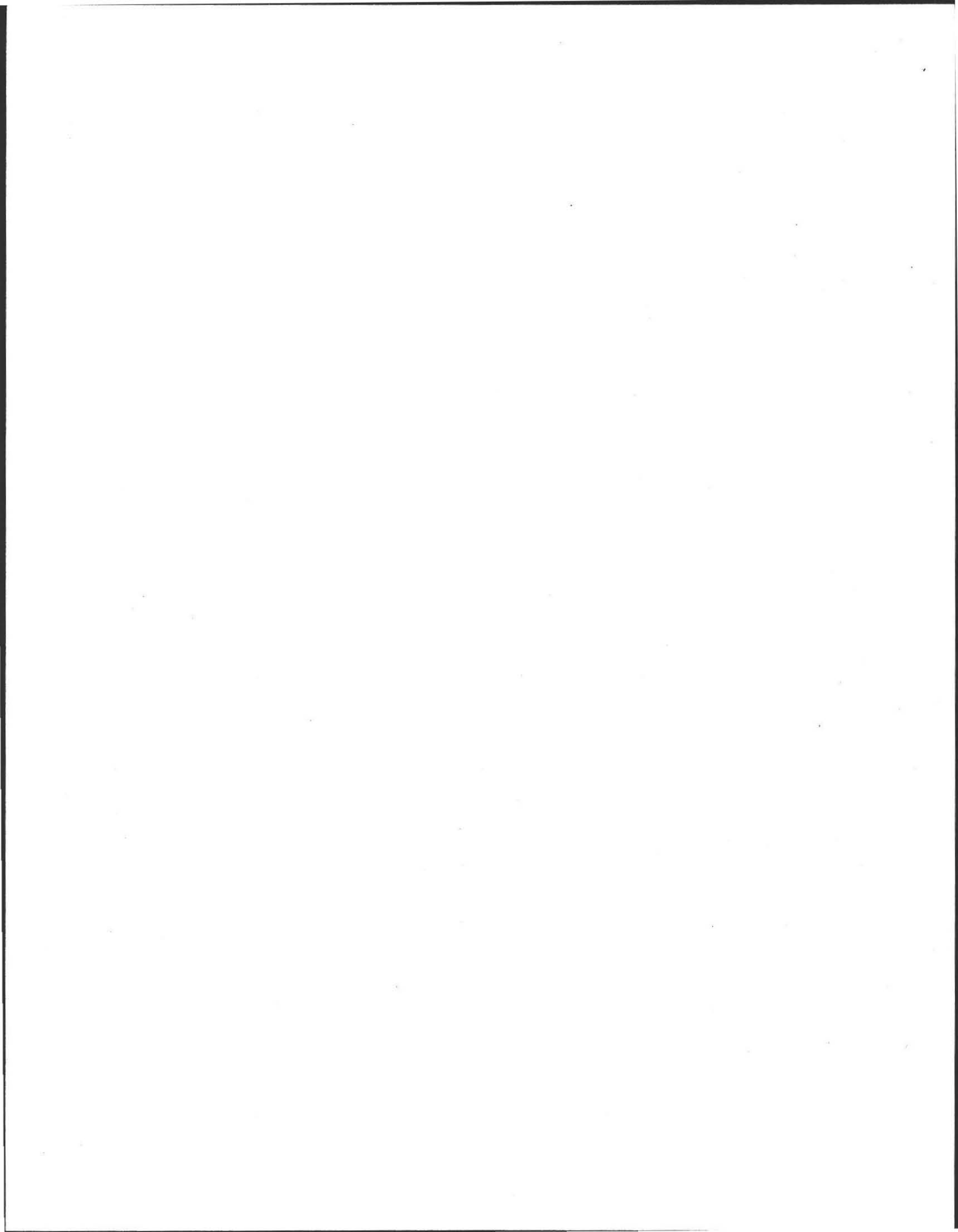
Capacity (emergency storage above working=design flow)? [310 CMR 231(2)]		NA		
Proper setbacks [310 CMR 15.211 (same as septic tanks)]		↓		
Watertight 20-in minium access manhole at least 20" MUST BE TO GRADE [310 CMR 15.231(5)]				
Service components accessible (not too deep with piping, disconnects 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)]				

SOIL ABSORPTION SYSTEMS (SAS) GENERAL 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]		VENTS OPT.		
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]		✓		

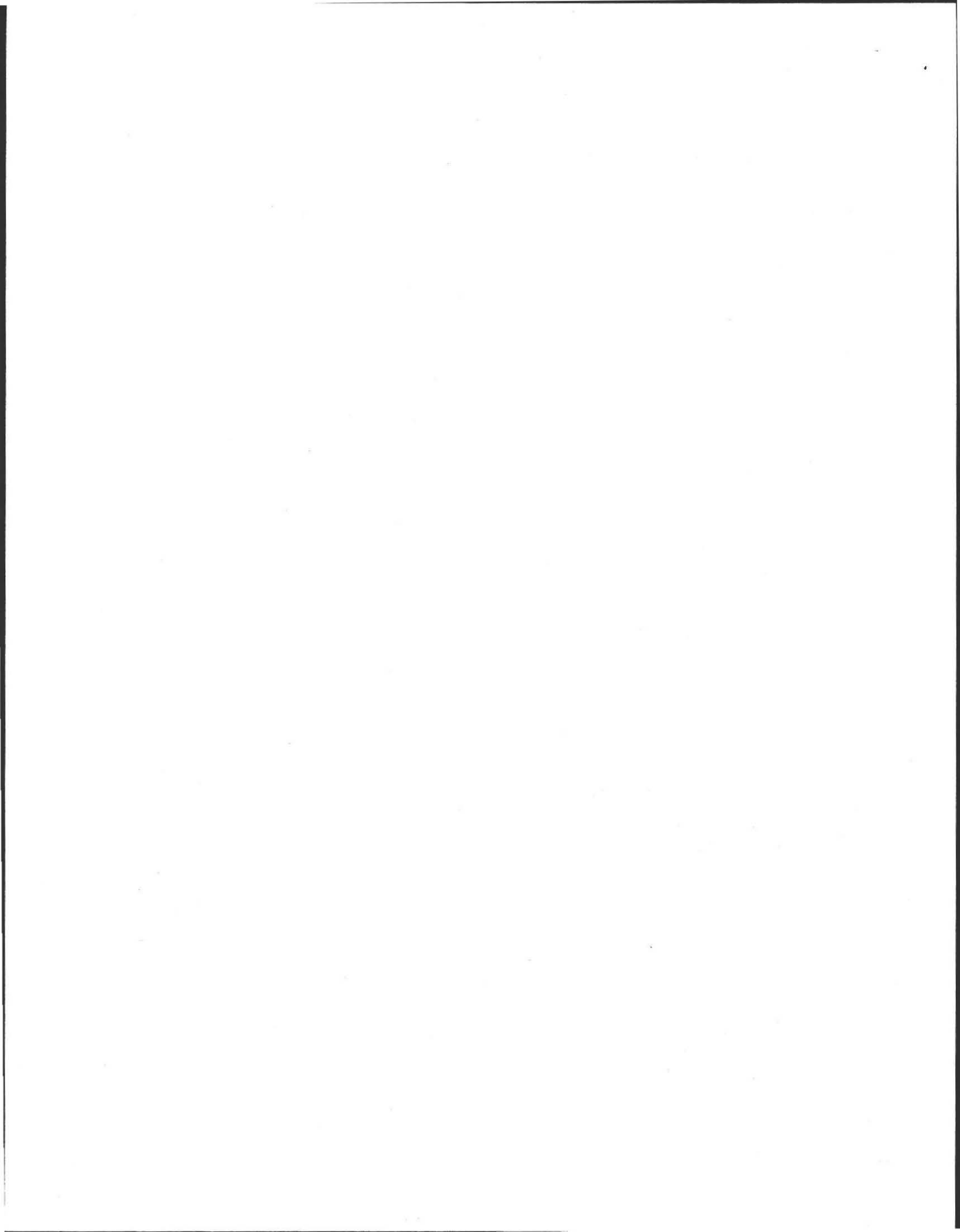
GALLERIES, PITS, CHAMBERS 310 CMR 15.253

Chambers and Gal. in trench configuration supplied with inlet every 20 ft. [310 CMR 15.253(6)]		NA		
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)]		NA		
2' sidewall credit maximum [310 CMR 15.253(1)(a)]		↓		
In bed configuration, inlet every 40 sq. ft. [310 CMR 15.253(6)]		↓		
TRENCHES 310 CMR 15.251				
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)]		OK		
Situated along contours [310 CMR 15.251(2)]		✓		
Breakout OK? [310 CMR 15.211(1)[4] and Guidance Document]		✓		
BED SAS (Maximum size of bed or field 5000 gpd)				
minimum 2 distribution lines [310 CMR 15.252(2)(a)]		NA		
Maximum separation between lines 6' [310 CM 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)]		↓		
DID THE PLAN INVOLVE				
	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)]	✓	✓		
Construction in fill - Did the plan specify that the fill shall meet the specification of 310 CMR 15.255(3)?				
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)]	✓			

OK RESERVE NOT NECESSARY FOR REPAIR



Gravelless System [I/A Approval Letters]

Check DEP Approval letters for credits and design conditions

✓

If used with pressure dosing do not allow pressure discharge to scour soil interface

✓

Alternative Septic System [I/A Approval Letters]

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?

↓

Variations

Are the variations 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]

↓

Nitrogen Sensitive Areas

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)]

✓

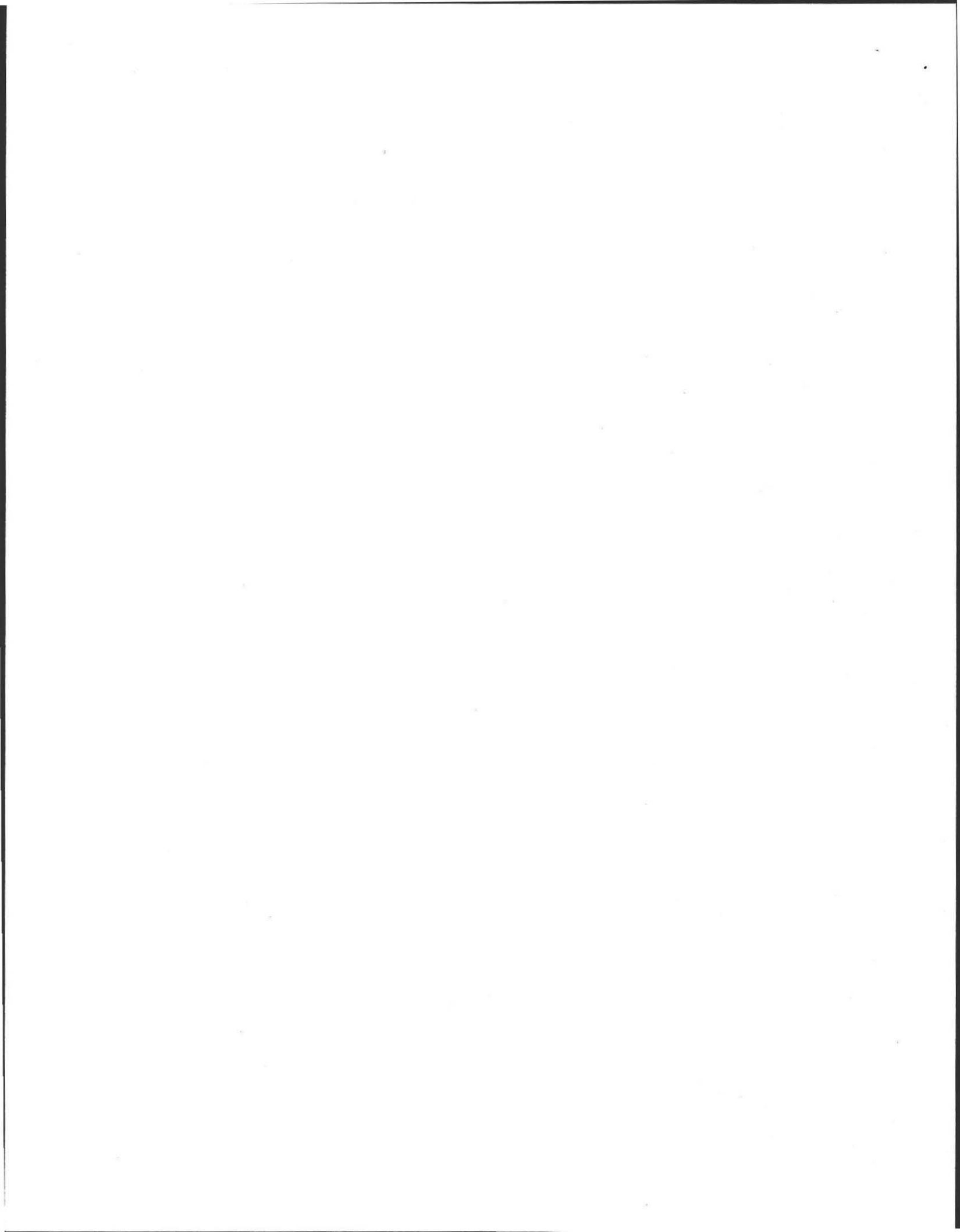
Miscellaneous

Pumping to septic tank ? [310 CMR 15.229]

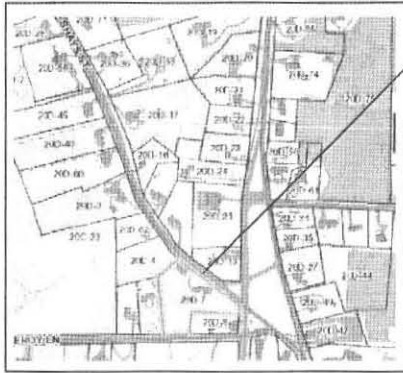
✓

Shared System [310 CMR 15.290]

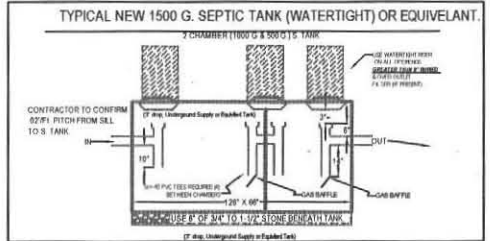
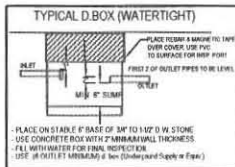
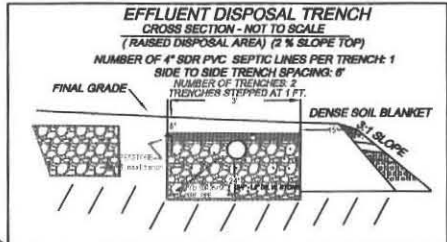
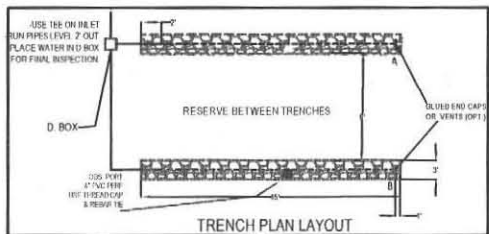
✓



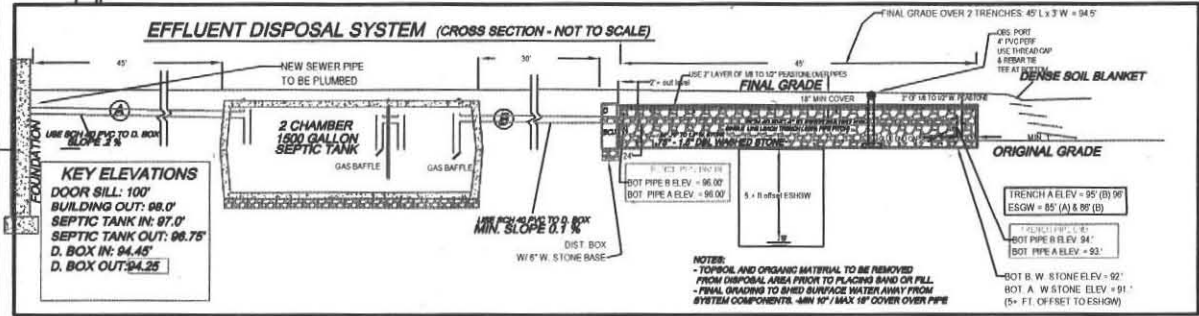
PLOT PLAN
MAP 200 LOT 7
SCALE: 1"=30'
1.95± ac.



SUBJECT SITE LOCATION



EFFLUENT DISPOSAL SYSTEM (CROSS SECTION - NOT TO SCALE)



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.

- DESIGN NOTES AND CALCULATIONS:**
- 1.) 4 (BEDROOM HOME) = 440 GPD. REQUIRED.
 - Use TWO TRENCHES: 3' WIDE X 45' LONG WITH 24" OF 3/4" TO 1 1/2" DBL WASHED STONE BELOW INVERT.
 - BOTTOM AREA: 2 TRENCHES X (3' W X 45' L) = 270 SF.
 - SIDE AREA: 2 TRENCHES X (2' 0" HT X 45' L X 2 SIDES) = 360 SF.
 - END AREA: 2 ENDS X (2' 0" HT X 3' W X 2 ENDS) = 24 SF.
 - TOTAL AREA: 654 SF X .74 GAL/SF = 484 GPD.
 3. GARBAGE DISPOSAL NOT ALLOWED, TO BE REMOVED****
 4. NO OTHER PRIVATE WELLS WITHIN 150 FEET OF SAS, FILE RDA WITH CONSV. COMM.
 5. NO OTHER WEILANDS WITHIN 100 FEET OF SAS, FILE RDA WITH CONSV. COMM.
 6. USE NEW 1,500 GAL. 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. ALL PLASTIC RISERS MUST BE SECURED WITH STAINLESS STEEL SCREWS.
 8. USE APPROVED (75'-1 1/2") DBL WASHED STONE UNDER TANK & D. BOX FOR 6".
 - CONFIRM STONE PROPERLY DOUBLE WASHED PRIOR TO PLACEMENT.
 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 RISP. REQ'D.
 12. USE TRENCHES DUE TO TOPOGRAPHY AND SPACE OF LOT WITH RESPECT TO LOCATION AND ELEVATION OF RESIDENCE (310 GMR 15.240)
 13. USE 2% MIN. SLOPE OVER SAS.
 - CLEAR TOP AND SUB TO 30" MIN. AS NEEDED (INSPECTION REQUIRED).
 - CLEAR PAST BASE OF B (MIN. 30") & SCARIFY UNDER TRENCH PRIOR TO TITLE V SAND /STONE PLACEMENT.
 - EXCAVATE EXISTING LOAM, SUB AND ANY EXISTING DEBRIS, DIRTY FILL OR PRIOR SYSTEM F PRESENT.
 15. SOIL EVALUATION BY A WEISS, RS. (E. SMITH, BOH AGENT).
 - DEPTH OF PERC: 50"
 - PERC RATE = <2 MIN/IN.
 - CLASS 1, C. SAND) SOIL RATINGS
 16. NO TREES WITHIN 10 FT. OF NEW LEACH AREA.
 17. ENGINEER & TOWN TO INSPECT SUBGRADE, TOWN AND ENGINEER INSPECT AT FINAL.
 18. DM-100 00 @ (SILL, 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 GROUND/WATER 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: 95'				SOIL EVALUATOR: A WEISS, RS				DATE OF EVALUATION: 10.28.2012	
DEPTH	HORIZ	TEXTURE	COMMENTS	DEPTH	HORIZ	TEXTURE	COMMENTS		
0-12"	A	SL	10 YR 3.2 FIBROUS	0-12"	A	SL	10 YR 3.2 FIBROUS		
12-25"	Bw	LS	10 YR 4.4 F-14 SANDY	12-27"	Bw	LS	10 YR 4.4 F-14 SANDY		
25-125"	C1	CS	2.5Y 5.3 S&A & GRAVEL 15% COBBLES, ROUNDED	27-127"	C1	CS	2.5Y 5.3 S&A & GRAVEL 15% COBBLES		
OXIDES: NOT OBSERVED				OXIDES: NOT OBSERVED					
EHWT: NOT OBSERVED				EHWT: NOT OBSERVED					
STANDING H2O: NOT OBSERVED				STANDING H2O: NOT OBSERVED					
WEEPING: NOT OBSERVED				WEEPING: NOT OBSERVED					
BEDROCK: 125'+				BEDROCK: 125'-128'+					

SEPTIC SYSTEM REPAIR PLAN FOR CHARLES FAULKNER
445 SHAYS STREET
AMHERST MA

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

PLAND. NO. (913) 323-5957
P.L. NO. (913) 323-9916
DATE: 10.29.2012
SCALE: 1"=30'

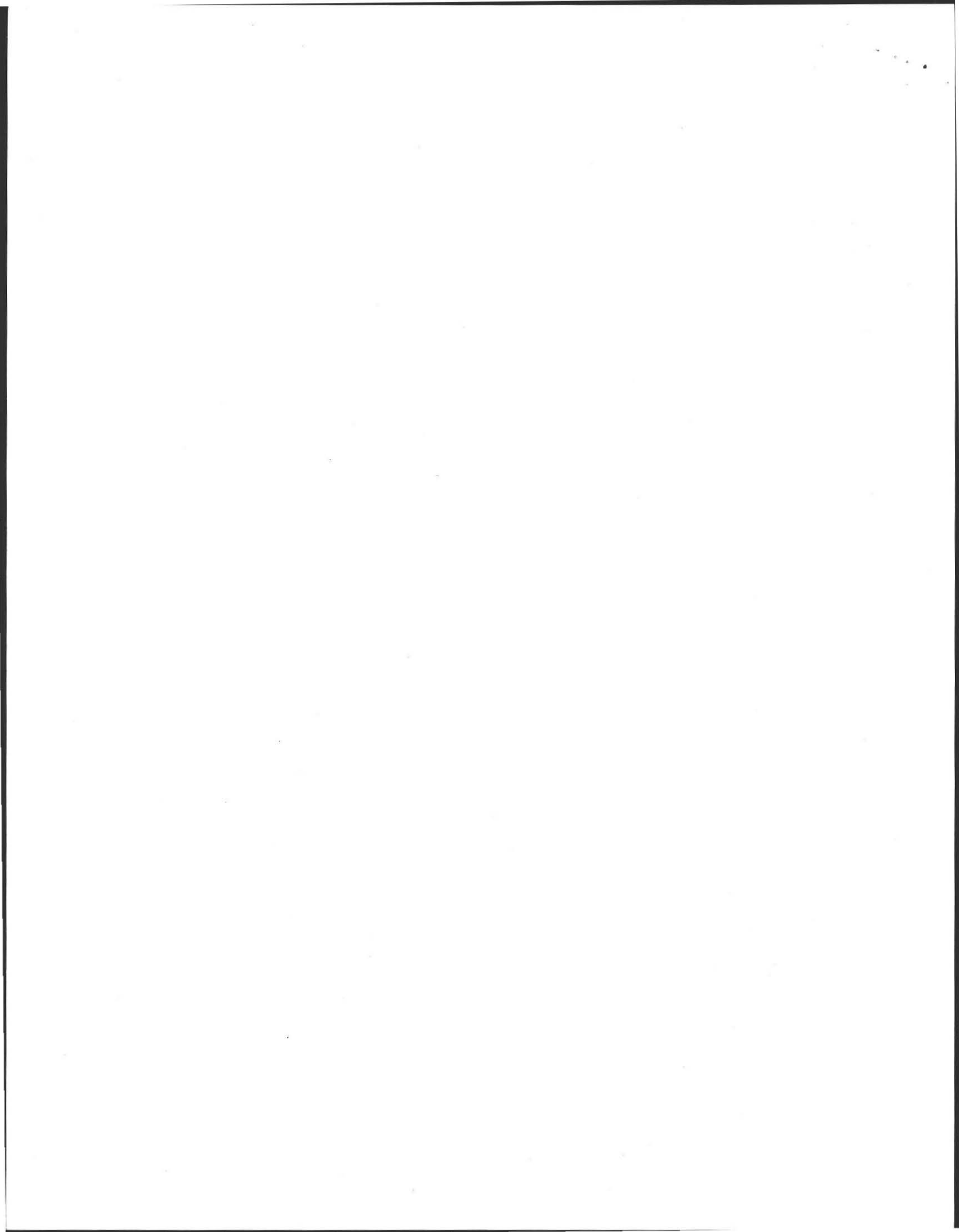
DESIGNED BY: ALAN WEISS
DRAWN BY: ALAN WEISS
REVISIONS:

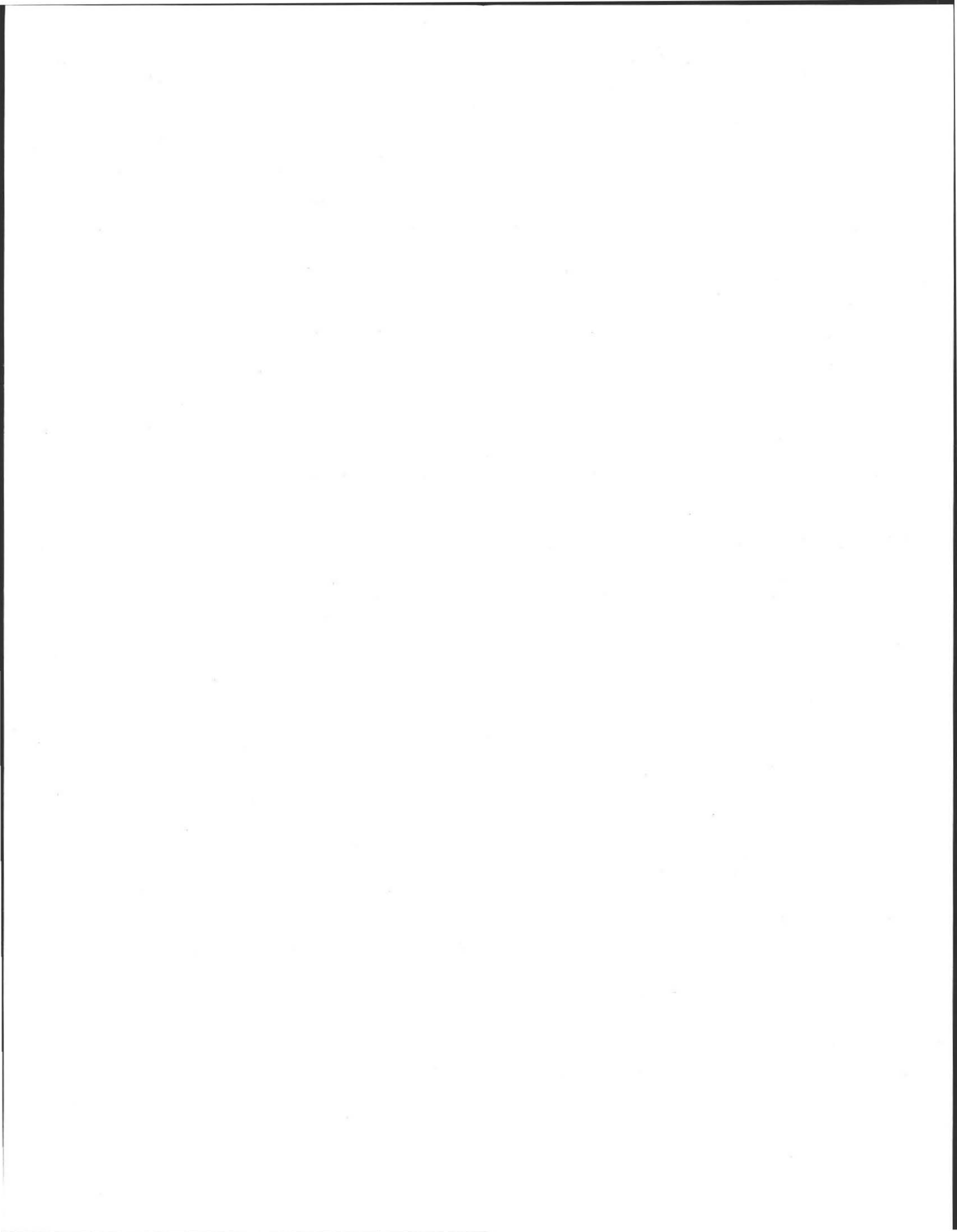
PROJECT NO.: 112-3992-1026
DRAWING NUMBER: 112-3992-1026

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.









Commonwealth of Massachusetts

City/Town of

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

OLD ADDRESS 1 SPRUCE HILL NORTHBOROUGH MA 01532

email: CFawcner@gnail.com
Invoice

A. Facility Information

Owner Name: FAWCNER
 Street Address: SWAYS ST
 City: AMHERST MA State: MA
 Zip Code: 508 393-5542
 508 865 3852
 Charles Fawcner ← USE THIS ADDRESS
 5 ASHTON LANE MILLBURY, MA 01527
 Map/Lot #

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)

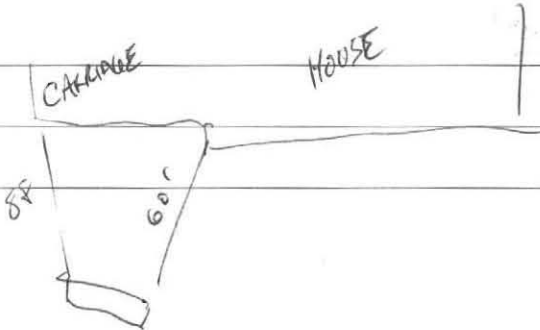
Deep Observation Hole Number: _____

Very fibrous, rooty
no restrictive

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	A	10YR 3/2				FSL				FR. HBL ₂	
12-25	B	10YR 4/4		NO OXIDES		CS F-M SANDY		15%			
123"	C	2.5Y 5/3				CS COARSE SANDY GRAVEL		15%			
0-12	A										
12-27	B							15%			
120	C					COARSE STB		15%			

Additional Notes:

OUTWASH GRAVEL



Could not hold soak



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: _____ **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: _____

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			

Additional Notes:



Commonwealth of Massachusetts

City/Town of

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

D. Determination of High Groundwater Elevation

1. Method Used:

Depth observed standing water in observation hole

A. _____
inches

B. _____
inches

Depth weeping from side of observation hole

A. _____
inches

B. _____
inches

Depth to soil redoximorphic features (mottles)

A. _____
inches

B. _____
inches

Groundwater adjustment (USGS methodology)

A. _____
inches

B. _____
inches

2.

Index Well Number _____

Reading Date _____

Index Well Level _____

Adjustment Factor _____

Adjusted Groundwater Level _____

E. Depth of Pervious Material

1. Depth of Naturally Occurring Pervious Material

a. 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 No

b. If yes, at what depth was it observed?

Upper boundary: _____
inches

Lower boundary: _____
inches



Commonwealth of Massachusetts

City/Town of

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

F. Certification

I certify that I am currently approved by the Department of Environmental Protection pursuant to 310 CMR 15.017 to conduct soil evaluations and that the above analysis has been performed by me consistent with the required training, expertise and experience described in 310 CMR 15.017. I further certify that the results of my soil evaluation, as indicated in the attached Soil Evaluation Form, are accurate and in accordance with 310 CMR 15.100 through 15.107.

Signature of Soil Evaluator

Date

Typed or Printed Name of Soil Evaluator / License #

Date of Soil Evaluator Exam

Name of Board of Health Witness

Board of Health

Note: In accordance with 310 CMR 15.018(2) this form must be submitted to the approving authority within 60 days of the date of field testing, and to the designer and the property owner with Percolation Test Form 12.



Commonwealth of Massachusetts
City/Town of

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

Field Diagrams

Use this sheet for field diagrams: