

#27570 \$253⁰⁰



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RECEIVED

JUN 10 2021
Town of Ashland
Board of Health

June 9, 2021

Ashland Board of Health
Town Hall – 2nd Floor
101 Main Street
Ashland, MA 01721

Re: Variance Requests for Septic System Repair
40 Cross Street, Ashland

Dear Board:

Please accept this letter as official notification of the owner's request for the following variance from Chapter 303: Sewage Disposal Systems of the Ashland Regulations and Title V:

A.) Ashland Board of Health Regulations:

- 1.) Section 303-11: Leaching Area: Provisions for a garbage disposal unit included in all calculations, whether such a garbage disposal unit is installed. A design to satisfy a 50% increase in size is not feasible due to topography in turn requiring the need for a pump, well buffers and the abundance of ledge outcrop. A garbage grinder is prohibited by the design. An effluent filter is provided as compensation for this variance.
- 2.) Section 303-14: Distance between trenches and pits: there shall be a minimum distance of 10 feet (wall to wall) between trenches. Eljen GSF B43 modules in a trench configuration have been approved by the MADEP to be spaced (6) six feet from edge of C-33 sand to edge of C-33 sand.

B.) MA DEP Local Upgrade Approval:

- 1.) Section 310 CMR 15.284: To allow the soil absorption system to be installed 2.9-feet above the seasonal high groundwater for soils with percolation rates greater than 2-mpi using an Eljen GSF system. Per DEP's "Remedial Use Approval"; last revised September 19, 2018. DEP approval is not required.



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C.) Any other Ashland or State Regulation inadvertently overlooked.

If you have any questions or require any supplemental information, please contact me at 508-308-1924.

Sincerely,

Eric I. Dickinson, R.S.



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

A. Facility Information

Jack Farrell
 Owner Name
 40 Cross Street
 Street Address
 Ashland
 City
 MA
 State
 01721
 Zip Code
 Map#7 / Lot #134
 Map/Lot #

B. Site Information

- New Construction Upgrade Repair
 Soil Survey Available? Yes No If yes:
- Narragansett Silt Loam, 3-8 percent slopes Deep water table
 Soil Name Soil Limitations
 Loose Sandy Glaciofluvial Deposits Ground Moraines
 Soil Parent material Landform
 3. Surficial Geological Report Available? Yes No If yes: 1974 Year Published/Source Qt Map Unit
Till (Wisconsin) - Light to greenish gray non-stratified and poorly sorted heterogeneous mixture of boulders, cobbles, pebbles, sand and silt.
 Description of Geologic Map Unit:
4. Flood Rate Insurance Map Within a regulatory floodway? Yes No
 5. Within a velocity zone? Yes No
 6. Within a Mapped Wetland Area? Yes No If yes, MassGIS Wetland Data Layer:
7. Current Water Resource Conditions (USGS): 06/2021 Range: Above Normal Normal Below Normal
 Month/Day/ Year Wetland Type
8. Other references reviewed:



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

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

Deep Observation Hole Number: **TP#1** 4/13/21 8:00 am 48 - cloudy 42.256790 -71.502210
 Hole # Date Time Weather Latitude Longitude

1. Land Use Existing Developed Single-Family Lot Lawn Boulders Common/Ledge Outcrop
 (e.g., woodland, agricultural field, vacant lot, etc.) Vegetation Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%)

Description of Location:

2. Soil Parent Material: Loose Sandy Glaciofluvial Deposits Ground Moraine Backslope
 Landform Position on Landscape (SU, SH, BS, FS, TS)

3. Distances from: Open Water Body 300 feet Drainage Way 300 feet Wetlands 250 feet
 Property Line 20 feet Drinking Water Well 100 feet Other _____ feet

4. Unsuitable Materials Present: Yes No Disturbed Soil Fill Material Weathered/Fractured Rock Bedrock

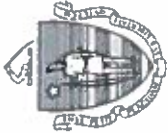
5. Groundwater Observed: Yes No If yes: _____ Depth Weeping from Pit _____ Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features		Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel			
8-0	Ap	Sandy Loam	10YR3/2					Granular	Very Friable	
8-60	Bw	Loamy Sand	10YR4/6					Blocky	Friable	Boulders Common
60-64	C1	Silt Loam	5Y4/4					Massive	Firm	Roots to 64"
64-106	C2	Loamy Sand	2.5Y5/3			30	10	Massive	Friable	No water, Boulders Common
106+	Cr									Boulders

Additional Notes:

No water or redoximorphic feature observed in the test pit - consistent with NRCS mapping (416B Narragansett).



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

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

Deep Observation Hole Number: **IP#2** Hole # 4/8/21 Date 8:00 am Time 48-cloudy Weather 42.256790 Latitude -71.502210 Longitude:

1. Land Use: Existing Developed Single-Family Lot Lawn Vegetation Boulders Common/Ledge Outcrop Surface Stones (e.g., cobbles, stones, boulders, etc.) 3+/- Slope (%) _____

Description of Location: _____

2. Soil Parent Material: Loose Sandy Glaciofluvial Deposits _____ Ground Moraine _____ Backslope _____
Position on Landscape (SU, SH, BS, FS, TS) _____

3. Distances from: Open Water Body 300 feet _____ Drainage Way 300 feet _____ Wetlands 250 feet _____
Property Line 45 feet _____ Drinking Water Well 132 feet _____ Other _____ feet _____

4. Unsuitable Materials Present: Yes No If Yes: Disturbed Soil Fill Material Weathered/Fractured Rock Bedrock
5. Groundwater Observed: Yes No If yes: _____ Depth Weeping from Pit _____ Depth Standing Water in Hole _____

Soil Log

Depth (In)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features		Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel			
0-32	Fill									Bricks, Sand, Misc. (wavy layer)
32-36	Ap	Sandy Loam	10YR3/3					Granular	Very Friable	
36-48	Bw	Sandy Loam	10YR4/6					Blocky	Friable	Boulders Common
48-60	C1	Silt Loam	5Y5/2					Massive	Firm	
60-120	C2	Loamy Sand	2.5Y5/3	84	7.5YR5/3	20	20	Massive	Friable	No water, boulders common, roots to 84"

Additional Notes: _____



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

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

Deep Observation Hole Number: **IP#3** Hole # 4/8/21 Date 8:00 am Time 48-cloudy Weather 42.256790 Latitude -71.502210 Longitude: 3+/- Slope (%)

1. Land Use: Existing Developed Single-Family Lot Lawn Vegetation Boulders Common/Ledge Outcrop Surface Stones (e.g., cobbles, stones, boulders, etc.) 3+/- Slope (%)

Description of Location:

2. Soil Parent Material: Loose Sandy Glaciofluvial Deposits Ground Moraine Backslope Position on Landscape (SU, SH, BS, FS, TS)

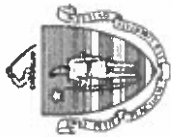
3. Distances from: Open Water Body 300 feet Drainage Way 300 feet Wetlands 250 feet
Property Line 22 feet Drinking Water Well 121 feet Other feet

4. Unsuitable Materials Present: Yes No If Yes: Disturbed Soil Fill Material Weathered/Fractured Rock Bedrock
5. Groundwater Observed: Yes No If yes: Depth Weeping from Pit Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features		Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel			
0-12	Ap	Sandy Loam	10YR3/2					Granular	Very Friable	
12-32	Bw	Loamy Sand	10YR4/6					Blocky	Friable	Boulders throughout
32-40	C1	Silt Loam	5Y5/2					Massive	Firm	
40-120	C2	Loamy Sand	2.5Y5/3			20	15	Massive	Friable	No water observed, boulders common

Additional Notes:



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
- Depth weeping from side of observation hole
- Depth to soil redoximorphic features (mottles)
- Depth to adjusted seasonal high groundwater (S_h) (USGS methodology)

Obs. Hole # _____ inches
 _____ inches
 _____ inches
 _____ inches

Obs. Hole # TP-2
 _____ inches
 _____ inches
84 inches
 _____ inches

Index Well Number _____ Reading Date _____

$$S_h = S_c - [S_r \times (OW_c - OW_{max}) / OW_r]$$

Obs. Hole/Well# _____ S_c _____ S_r _____ OW_c _____ OW_{max} _____ OW_r _____ S_h _____

2. Estimated Depth to High Groundwater: 84 inches

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 (exclude A and O Horizons)?
 Upper boundary: 32 inches Lower boundary: 120 inches
- c. If no, at what depth was impervious material observed?
 Upper boundary: _____ inches Lower boundary: _____ inches



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.

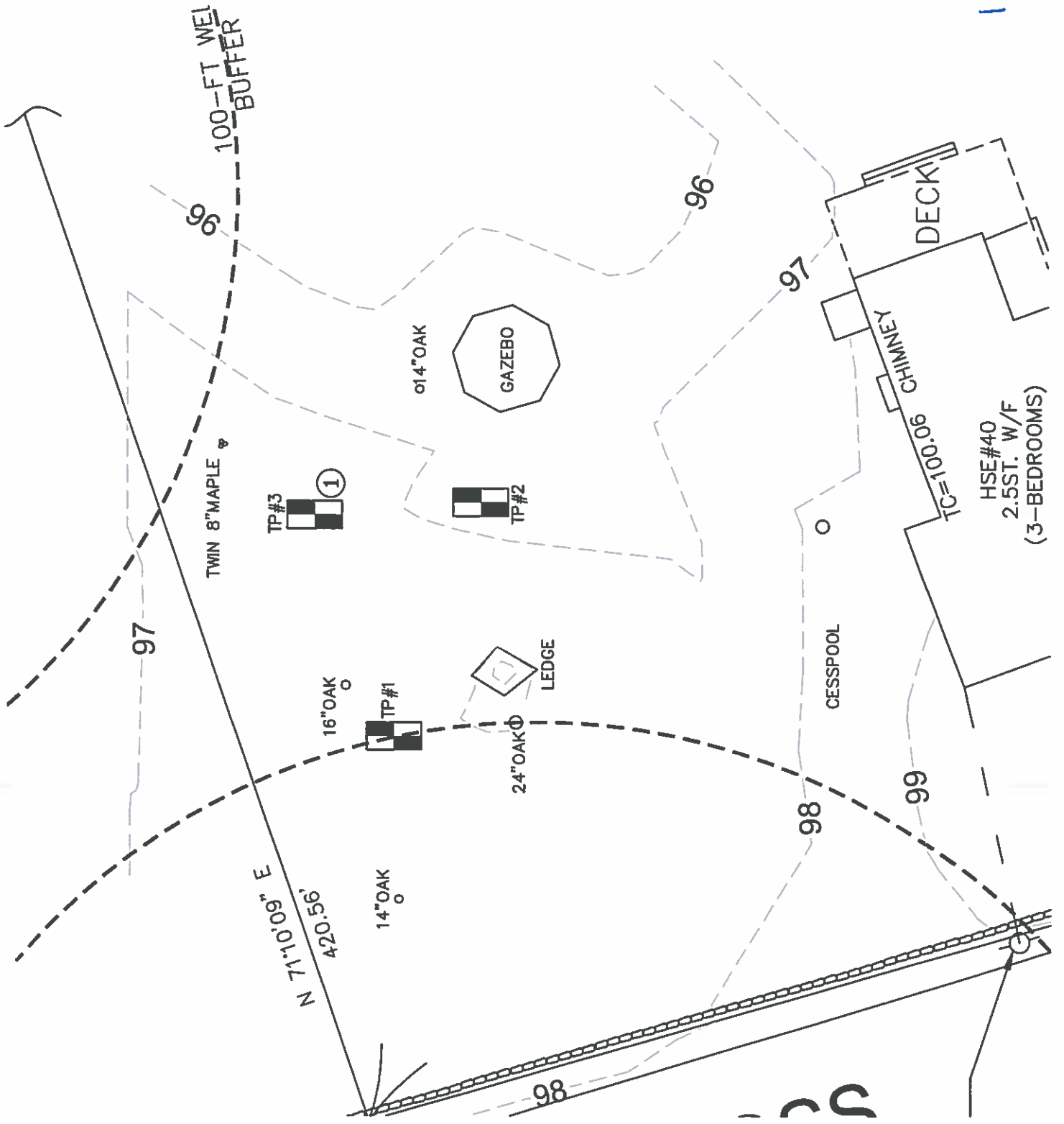
6/9/2021

Signature of Soil Evaluator	Date
Eric I. Dickinson, R.S. (SE#13621)	June 30, 2022
Typed or Printed Name of Soil Evaluator / License #	Expiration Date of License
Tom Ryder, P.E. - Agent	Ashland Board of Health
Name of Approving Authority Witness	Approving Authority

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](#).

Field Diagrams: Use this area for field diagrams: (SEE ATTACHED)

1" = 20 FT



CROSS STREET



Commonwealth of Massachusetts
 City/Town of Ashland
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

Jack Farrell
 Owner Name
 40 Cross Street
 Street Address or Lot #
 Ashland MA 01721
 City/Town State Zip Code
 Eric Dickinson, R.S.
 Contact Person (if different from Owner) 508-308-1924 Telephone Number

B. Test Results

	3/12/21 Date	11:30 am Time	Date	Time
Observation Hole #	P-1 (TP#3(C2-Layer))			
Depth of Perc	54"-72"			
Start Pre-Soak	11:47 am			
End Pre-Soak	12:02 pm			
Time at 12"	12:02 pm			
Time at 9"	1:24 pm			
Time at 6"	3:22 pm			
Time (9"-6")	118 minutes			
Rate (Min./Inch)	40 mpi			
	Test Passed:	<input checked="" type="checkbox"/>	Test Passed:	<input type="checkbox"/>
	Test Failed:	<input type="checkbox"/>	Test Failed:	<input type="checkbox"/>

Eric I. Dickinson, R.S. (SE#13621)
 Test Performed By:
 Tom Ryder, P.E. - Ashland Board of Health Agent
 Board of Health Witness

Comments:

\$253.00



Commonwealth of Massachusetts
City/Town of Ashland

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

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Town of Ashland
Board of Health

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:

Jack Farrell
Name
40 Cross Street
Street Address
Ashland
City/Town
MA
State
01721
Zip Code

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

Name
Street Address
City/Town
State
508-962-1968
Telephone Number
Zip Code

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

Residential Institutional Commercial School

4. Describe Facility:

Existing 9-room, 3-bedroom, single-family dwelling

5. Type of Existing System:

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

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

Cesspool



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:	Unknown
	gpd
Design flow of proposed upgraded system	330
	gpd
Design flow of facility:	330 (MA DEP Approved Alternative - Eljens)
	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:

Complete System - Septic Tank, Distribution Box and Soil Absorption System

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	1.1
	ft.
Percolation rate	40
	min./inch
Depth to groundwater	2.9
	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):

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:

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:

Tom Ryder, PE

Evaluator's Name (type or print)

Signature

April 13, 2021

Date of evaluation

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:

Lot constraints due to boulders/ledge and well buffers

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

MA DEP Alternative Technology - Eljen GSF B43 Modules is proposed



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.

C. Explanation (continued)

3. A shared system is not feasible:

N/A

4. Connection to a public sewer is not feasible:

N/A

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

Application for Disposal System Construction Permit

Complete plans and specifications

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).

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."

Facility Owner's Signature

Jack Farrell

Print Name

Eric Dickinson, RS (CIVILized Solutions)

Name of Preparer

29 Church Street

Preparer's address

01746

State/ZIP Code

Date

6/10/21

June 9, 2021

Date

Holliston

City/Town

508-308-1924

Telephone