Soil Testing

Commonwealth of Massachusetts
City/Town of Acton

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

A. Facility Information

Owner Name: 27 Jackson Drive

Street Address: E3 - 25

City: Acton | State: MA | Zip Code: 01720

Map/Lot #

B. Site Information

1. (Check one) ☐ New Construction ☑ Upgrade ☐ Repair

2. Published Soil Survey Available? ☑ Yes ☐ No If yes: nesoil.com (Year Published) 1:25,000 (Publication Scale) 416B (Soil Map Unit)

   Soil Name | Soil Limitations

3. Surficial Geological Report Available? ☐ Yes ☐ No If yes: (Year Published) (Publication Scale) (Map Unit)

   Narragansett silt loam (Geologic Material) | Landform

4. 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

5. Wetland Area: National Wetland Inventory Map — Map Unit | Name

   Wetlands Conservancy Program Map — Map Unit | Name

6. Current Water Resource Conditions (USGS): Month/Year Range: ☐ Above Normal ☐ Normal ☐ Below Normal

7. Other references reviewed:

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Site Address or Map/Lot Number
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

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

Deep Observation Hole A: 9/19/12 (Date) 8:45 (Time) RAIN/CLOUDY (Weather)

1. Deep Observation Hole Logs
   Deep Hole Number TP-1 Ground Elevation at Surface of Hole _____
   Location (Identify on Plan) _____
2. Land Use: WOODLAND (e.g. woodland, agricultural field, vacant lot, etc.) SOME (Surface Stones) 0-5% (Slope %)
   TREES (Vegetation) _____ (Landform) _____ (Position on landscape (attach sheet))
3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Possible Wet Area >100' feet
   Property Line >150' feet Drinking Water Well _____ feet Other _____
4. Parent Material: GLACIAL TILL 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: 40" (Inches) _____ (elevation)

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal
JACKSON DR
Site Address or Map/Lot Number

Deep Observation Hole A: Deep Hole Number: TP 1

Depth (In.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features (mottles) Depth	Color	Percent	Soil Texture (USDA)	Coarse Fragments % by Volume Gravel	Cobbles & Stones	Soil Structure	Soil Consistence (Moist)	Other
0-6"	A	10YR 3/1	—	—	—	SANDY LOAM	—	—	MASSIVE	FRIABLE	
6"-20"	B	10YR 5/6	—	—	—	SANDY LOAM	2%	—	MASSIVE	FRIABLE	
20"-68"	C	2.5Y 7/3	40"		5%	SANDY LOAM	5%	5%	MASSIVE	FIRM IN PLACE	

Additional Notes REFUSAL @ 68"

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Site Address or Map/Lot Number

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

C. On-Site Review

(minimum of two holes required at every proposed disposal area)

Deep Observation Hole A: 9/19/12 (Date) 9:30 (Time) CLOUDY (Weather)

1. Deep Observation Hole Logs

   Deep Hole Number _____ Ground Elevation at Surface of Hole _____

   Location (Identify on Plan) _____

2. Land Use: WOODLAND (e.g. woodland, agricultural field, vacant lot, etc.) SOME (Surface Stones) 0-5% (Slope (%))

   _____ (Vegetation) _____ (Landform) _____ (Position on landscape (attach sheet))

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Possible Wet Area 200 feet

   Property Line 70 feet Drinking Water Well _____ feet Other _____

4. Parent Material: GLACIAL TILL 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: 42" (Inches) _____ (elevation)

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
JACKSON DR
Site Address or Map/Lot Number

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

Deep Observation Hole A: Deep Hole Number: TP-2

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			
0-6"	A	10YR 3/2	—	—	—	SANDY LOAM	—	—	MASSIVE	FRIABLE	
6"-22"	B	10YR 5/6	—	—	—	SANDY LOAM	20%	—	MASSIVE	FRIABLE	
22"-74"	C	2.5Y 7/3	42"		5%	SANDY LOAM	5%	5%	MASSIVE	FIRM/PLATY	

Additional Notes: TIGHT STONE @ 74"

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Site Address or Map/Lot Number
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

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

Deep Observation Hole A: Date _____ Time _____ Weather _____

1. Deep Observation Hole Logs

   Deep Hole Number _____ 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 _____

4. Parent Material: GLACIAL TILL 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: 92" inches _____ elevation

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Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
TAHOSA DRIVE
Site Address or Map/Lot Number
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

Deep Observation Hole A: Deep Hole Number: TP-3

Depth (In.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0-6"	A	10YR 3/2	—	—	—	LOAMY SAND	—	—	MASSIVE	FRIABLE	
6"-24"	B	10YR 5/6	—	—	—	LOAMY SAND	2%	—	MASSIVE	FRIABLE	
24-80"	C	2.5Y 5/3	42"		5%	LOAMY SAND	5%	5%	MASSIVE	FIRM IN PLACE	

Additional Notes: TIGHT STONES/REFUSAL @ 80"

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

Street Address or Lot # JACKSON DRIVE

City/Town ACTON State MA Zip Code

Contact Person (if different from Owner) Telephone Number

B. Test Results

	Date 9/19/12 Time 10:30	Date Time
Observation Hole #	PT-A	PT-B
Depth of Perc	42"	44"
Start Pre-Soak	10:23	10:20
End Pre-Soak	10:38	10:35
Time at 12"	10:38	10:35
Time at 9"	10:41	10:43
Time at 6"	10:45	10:58
Time (9"-6")	4 MIN	15 MIN.
Rate (Min./Inch)	< 2 MI	5 MI
	Test Passed: ☒ Test Failed: ☐	Test Passed: ☒ Test Failed: ☐

Test Performed By: STAMSKI AND McNARY, INC. (BENJAMIN EWING)

Witnessed By: ACTON BOARD OF HEALTH (SHERYL BALL)

Comments:

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. SEE ATTACHED inches	B. SOIL LOGS 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: SEE ATTACHED inches Lower boundary: SOIL LOGS inches

3 TEST PITS WHERE CONSISTANT AND ADAQUATE FOR UPGRADE CONFIRMED W/ BOH

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.

Benjamin J. — Signature of Soil Evaluator

9/19/12 — Date

SHERYL BALL — Typed or Printed Name of Soil Evaluator / License #

10/24/05 — Date of Soil Evaluator Exam

____ Name of Board of Health Witness

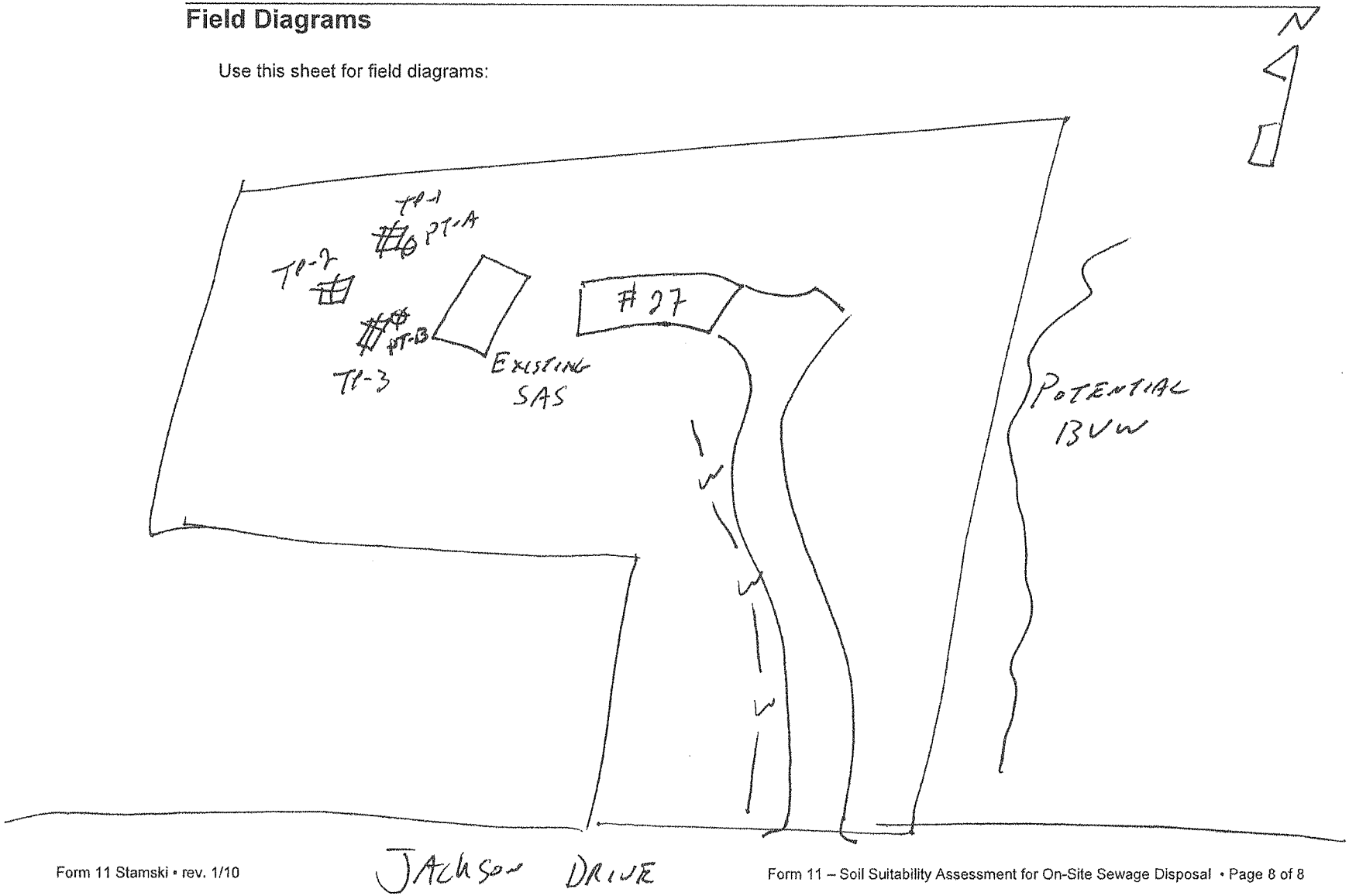
ACTON — Board of Health

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:



Commonwealth of Massachusetts
City/Town of Acton

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

A. Facility Information

Xiaohong Qin
Owner Name

27 Jackson Drive — E3-25
Street Address — Map/Lot #

Acton — MA — 01720
City — State — Zip Code

B. Site Information

1. (Check one) ☑ New Construction ☐ Upgrade ☐ Repair

2. Published Soil Survey Available? ☑ Yes ☐ No — If yes: nesoil.com (Year Published) 1:25,000 (Publication Scale) 416B (Soil Map Unit)
   Narragansett silt loam
   Soil Name — Soil Limitations

3. Surficial Geological Report Available? ☐ Yes ☐ No — If yes: Year Published — Publication Scale — Map Unit
   Geologic Material — Landform

4. 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

5. Wetland Area: National Wetland Inventory Map — Map Unit — Name
   Wetlands Conservancy Program Map — Map Unit — Name

6. Current Water Resource Conditions (USGS): Dec 2012 (Month/Year) — Range: ☐ Above Normal ☑ Normal ☐ Below Normal

7. Other references reviewed:

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Site Address or Map/Lot Number
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

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

Deep Observation Hole A: 12/4/12 (Date) 8:15 (Time) CLOUDY (Weather)

1. Deep Observation Hole Logs

Deep Hole Number _____ Ground Elevation at Surface of Hole _____

Location (Identify on Plan) _____

2. Land Use: WOODLAND (e.g. woodland, agricultural field, vacant lot, etc.) MANY (Surface Stones) 0-5% (Slope %)

TREES (Vegetation) _____ (Landform) SHOULDER (Position on landscape (attach sheet))

3. Distances from: Open Water Body — feet Drainage Way — feet Possible Wet Area 110'+/- feet

Property Line 10'-15' feet Drinking Water Well — feet Other _____

4. Parent Material: TILL 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: 40" (Inches) _____ (elevation)

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

27 JACKSON DR
Site Address or Map/Lot Number

Deep Observation Hole A: Deep Hole Number: TP-12-1

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			
0-4"	A	10YR 3/2	—	—	—	SANDY LOAM	—	—	MASSIVE	FRIABLE	
4"-23"	B	10YR 5/6	—	—	—	SANDY LOAM	2%	—	MASSIVE	FRIABLE	
23"-8'	C	2.5Y 4/3	40"	DISTINCT	5%	SANDY LOAM	2%	10%	MASSIVE	FRIABLE	

Additional Notes REFUSAL @ 8'

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Site Address or Map/Lot Number
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

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

Deep Observation Hole A: 12/4/12 (Date) 9:30 (Time) CLOUDY (Weather)

1. Deep Observation Hole Logs

Deep Hole Number _____ Ground Elevation at Surface of Hole _____

Location (Identify on Plan) _____

2. Land Use: WOODLAND (e.g. woodland, agricultural field, vacant lot, etc.) MANY (Surface Stones) 0-5% (Slope (%))

Vegetation Landform SHOULDER (Position on landscape (attach sheet))

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Possible Wet Area 110'+/- feet

Property Line 710' feet Drinking Water Well — feet Other _____

4. Parent Material: TILL 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: 40" inches _____ elevation

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

27 JACKSON DR
Site Address or Map/Lot Number

Deep Observation Hole A: Deep Hole Number: TP-12-2

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			
0-4"	A	10YR 3/4	—	—	—	SANDY LOAM	—	—	MASSIVE	FRIABLE	
4"-20"	B	10YR 5/6	—	—	—	SANDY LOAM	2%	—	MASSIVE	FRIABLE	
20"-68"	C	2.5Y 4/3	40"	PROMINENT LOW	5%	SANDY LOAM	2%	15%	MASSIVE	FRIABLE	

Additional Notes REFUSAL @ 68"

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Site Address or Map/Lot Number

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

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

Deep Observation Hole A: 12/4/12 (Date) 9:00 (Time) CLOUDY (Weather)

1. Deep Observation Hole Logs

   Deep Hole Number _____ Ground Elevation at Surface of Hole _____

   Location (Identify on Plan) _____

2. Land Use: WOODLAND (e.g. woodland, agricultural field, vacant lot, etc.) MANY (Surface Stones) 0-5 % (Slope (%))

   Vegetation _____ Landform _____ Position on landscape (attach sheet) _____

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Possible Wet Area 2100' feet

   Property Line 7100' feet Drinking Water Well — feet Other _____

4. Parent Material: TILL 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: 42" (inches) _____ (elevation)

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program

27 JACKSON DRIVE
Site Address or Map/Lot Number

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

Deep Observation Hole A: Deep Hole Number: TP-12-3

Depth (In.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0-3"	A	10YR 3/2	—	—	—	SANDY LOAM	—	—	MASSIVE	FRIABLE	
3"-26"	B	10YR 5/6	—	—	—	SANDY LOAM	2%	—	MASSIVE	FRIABLE	
26"-8	C	2.5Y 6/3	42"		5%	SANDY LOAM	2%	10%	MASSIVE	FRIABLE	

Additional Notes REFUSAL @ 8'

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Site Address or Map/Lot Number
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

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

Deep Observation Hole A: 12/4/12 (Date) 9:15 (Time) CLOUDY (Weather)

1. Deep Observation Hole Logs

Deep Hole Number _____ Ground Elevation at Surface of Hole _____

Location (Identify on Plan) _____

2. Land Use: WOODLAND (e.g. woodland, agricultural field, vacant lot, etc.) MANY (Surface Stones) 0-5% (Slope (%))

TREES (Vegetation) _____ (Landform) _____ (Position on landscape (attach sheet))

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Possible Wet Area 200' feet

Property Line 710' feet Drinking Water Well _____ feet Other _____

4. Parent Material: TILL 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: 46" (Inches) _____ (elevation)

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

27 JACKSON DRIVE
Site Address or Map/Lot Number

Deep Observation Hole A: Deep Hole Number: TP-12-4

Depth (In.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0-3"	A	10YR 3/2	—	—	—	SANDY LOAM	—	—	MASSIVE	FRIABLE	
3"-24"	B	10YR 5/6	—	—	—	SANDY LOAM	2%	—	MASSIVE	FRIABLE	
24"-9'	C	2.5Y 4/3	46"	HIGH Low	5%	SANDY LOAM	2%	10%	MASSIVE	FRIABLE	

Additional Notes REFUSAL @ 9'

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Site Address or Map/Lot Number
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

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

Deep Observation Hole A: 12/4/12 (Date) 9:45 (Time) CLOUDY (Weather)

1. Deep Observation Hole Logs

Deep Hole Number _____ Ground Elevation at Surface of Hole _____

Location (Identify on Plan) _____

2. Land Use: WOODLAND (e.g. woodland, agricultural field, vacant lot, etc.) MANY (Surface Stones) 0-5% (Slope (%))

TREES (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 _____

4. Parent Material: TILL 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: 52" (Inches) _____ (elevation)

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
27 JACKSON DRIVE
Site Address or Map/Lot Number
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

Deep Observation Hole A: Deep Hole Number: T1-12-5

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			
0-5"	A	10YR3/3	—	—	—	SANDY LOAM	—	—	MASSIVE	FRIABLE	
5"-24"	B	10YR5/6	—	—	—	SANDY LOAM	2%	—	MASSIVE	FRIABLE	
24"-9'	C	2.5Y6/3	52"	HIGH CHROMA	5%	LOAMY SAND	2%	10%	MASSIVE	FRIABLE	

Additional Notes REFUSAL @ 9'

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Site Address or Map/Lot Number
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

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

Deep Observation Hole A: 12/8/17 (Date) 10:00 (Time) CLOUDY (Weather)

1. Deep Observation Hole Logs

Deep Hole Number _____ Ground Elevation at Surface of Hole _____

Location (Identify on Plan) _____

2. Land Use: WOODLAND (e.g. woodland, agricultural field, vacant lot, etc.) MANY (Surface Stones) 0-5% (Slope (%))

TREES (Vegetation) _____ (Landform) _____ (Position on landscape (attach sheet))

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Possible Wet Area 200' feet

Property Line 210' feet Drinking Water Well _____ feet Other _____

4. Parent Material: TILL 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: 54" inches _____ elevation

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
27 Jackson DR CUT
Site Address or Map/Lot Number
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

Deep Observation Hole A: Deep Hole Number: TP-12-6

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			
0-3"	A	10YR 3/1	—	—	—	SANDY LOAM	—	—	MASSIVE	FRIABLE	
3"-24"	B	10YR 5/6	—	—	—	SANDY LOAM	2%	—	MASSIVE	FRIABLE	
24"-114"	C	2.5Y 7/3	54"	HIGH/LOW	5%	LOAMY SAND	2%	10%	MASSIVE	FRIABLE	

Additional Notes REFUSAL @ 9'6"

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Site Address or Map/Lot Number
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

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

Deep Observation Hole A: 12/4/08 (Date) 10:15 (Time) Cloudy (Weather)

1. Deep Observation Hole Logs

Deep Hole Number _____ Ground Elevation at Surface of Hole _____

Location (Identify on Plan) _____

2. Land Use: Yard (e.g. woodland, agricultural field, vacant lot, etc.) Many (Surface Stones) 0-5% (Slope (%))

Grass/Treeline (Vegetation) _____ (Landform) _____ (Position on landscape (attach sheet))

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Possible Wet Area 200' feet

Property Line 210' feet Drinking Water Well _____ feet Other _____

4. Parent Material: Till 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: 60" (Inches) _____ (elevation)

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
17 Jackson Drive
Site Address or Map/Lot Number
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

Deep Observation Hole A: Deep Hole Number: TP-12-7

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			
0-20"	Fill										
20"-26"	A	10YR 3/2	—	—	—	Sandy Loam	—	—	Massive	Friable	
26"-40"	B	10YR 5/6	—	—	—	Sandy Loam	2%	—	massive	Friable	
40"-9'	C	2.5Y 7/3	6.0"	High Low	5%	Loamy Sand	2%	10%	Massive	Friable	

Additional Notes _____

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Site Address or Map/Lot Number
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

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

Deep Observation Hole A: 12/4/12 (Date) 1012 (Time) Cloudy (Weather)

1. Deep Observation Hole Logs

Deep Hole Number _____ Ground Elevation at Surface of Hole _____

Location (Identify on Plan) _____

2. Land Use: YARD (e.g. woodland, agricultural field, vacant lot, etc.) MANY (Surface Stones) 0-5% (Slope (%))

GRASS / MACHINE (Vegetation) _____ (Landform) _____ (Position on landscape (attach sheet))

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Possible Wet Area 200' feet

Property Line 200' feet Drinking Water Well _____ feet Other _____

4. Parent Material: TILL 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: 58" (Inches) _____ (elevation)

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

27 Jackson Drive
Site Address or Map/Lot Number

Deep Observation Hole A: Deep Hole Number: T1-17-8

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			
0-20"	FILL										
20"-33"	A	10YR 3/2	—	—	—	SANDY LOAM	—	—	MASSIVE	FRIABLE	
33"-39"	B	10YR 5/6	—	—	—	SANDY LOAM	2%	—	MASSIVE	FRIABLE	
39"-96"	C	2.5Y 7/3	58"	HIGH FLOW	5%	LOAMY SAND	2%	10%	MASSIVE	FRIABLE	

Additional Notes REFUSAL @ 96"

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Site Address or Map/Lot Number
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

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

Deep Observation Hole A: 12/4/02 (Date) 11:30 (Time) CLOUDY (Weather)

1. Deep Observation Hole Logs

Deep Hole Number _____ Ground Elevation at Surface of Hole _____

Location (identify on Plan) _____

2. Land Use: WOODLAND (e.g. woodland, agricultural field, vacant lot, etc.) MANY (Surface Stones) 2-10% (Slope (%))

TREES (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 _____

4. Parent Material: TILL 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: 54" (inches) _____ (elevation)

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

27 JACKSON DRIVE
Site Address or Map/Lot Number

Deep Observation Hole A: Deep Hole Number: TP-12-9

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			
0-3"	A	10YR 3/2	—	—	—	SANDY LOAM	—	—	MASSIVE	FRIABLE	
3"-24"	B	10YR 5/6	—	—	—	SANDY LOAM	2%	—	MASSIVE	FRIABLE	
24"-9'	C	2.5Y 7/3	54"	PROM	5%	LOAMY SAND	2%	1%	MASSIVE	FRIABLE	

Additional Notes REFUSAL @ 9'

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Site Address or Map/Lot Number
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

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

Deep Observation Hole A: 12/4/12 (Date) 11:45 (Time) 40107 (Weather)

1. Deep Observation Hole Logs

Deep Hole Number _____ Ground Elevation at Surface of Hole _____

Location (Identify on Plan) _____

2. Land Use: WOODLAND. (e.g. woodland, agricultural field, vacant lot, etc.) MANY (Surface Stones) 2-10% (Slope (%))

TREES (Vegetation) _____ (Landform) _____ (Position on landscape (attach sheet))

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Possible Wet Area 7100' feet

Property Line 210' feet Drinking Water Well — feet Other _____

4. Parent Material: TILL 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: 50" inches _____ elevation

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

27 JACKSON DRIVE
Site Address or Map/Lot Number

Deep Observation Hole A: Deep Hole Number: TP-12-10

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			
0-3"	A	10YR 3/2	—	—	—	SANDY LOAM	—	—	MASSIVE	FRIABLE	
3"-34"	B	10YR 5/6	—	—	—	SANDY LOAM	2%	—	MASSIVE	FRIABLE	
34"-9'	C	2.5Y 7/3	50"	HIGH FLOW	5%	LOAMY SAND	2%	10%	MASSIVE	FRIABLE	

Additional Notes REFUSAL @ 9'

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Site Address or Map/Lot Number

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

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

Deep Observation Hole A: 12/14/12 (Date) 12:00 (Time) CLOUDY (Weather)

1. Deep Observation Hole Logs

   Deep Hole Number _____ Ground Elevation at Surface of Hole _____

   Location (Identify on Plan) _____

2. Land Use: WOODLAND (e.g. woodland, agricultural field, vacant lot, etc.) MANY (Surface Stones) 2-10% (Slope %)

   TREES (Vegetation) _____ (Landform) _____ (Position on landscape (attach sheet))

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Possible Wet Area 7 1/2' feet

   Property Line 7½' feet Drinking Water Well — feet Other _____

4. Parent Material: TILL Unsuitable Materials Present: Yes [X] No [ ]

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

5. Groundwater Observed: Yes [ ] No [X]

   If Yes: Depth Weeping from Pit _____ Depth Standing Water in Hole _____

   Estimated Depth to High Groundwater: 50" (Inches) _____ (elevation)

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
27 JACKSON DR
Site Address or Map/Lot Number
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

Deep Observation Hole A: Deep Hole Number: 11-12-11

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			
0-3"	A	10YR 3/2	—	—	—	SANDY LOAM	—	—	MASSIVE	FRIABLE	
3-22"	B	10YR 5/6	—	—	—	SANDY LOAM	2%	—	MASSIVE	FRIABLE	
22"-72"	C	2.5Y 7/3	50"	HIGH LOW	5%	LOAMY SAND	2%	10%	MASSIVE	FRIABLE	

Additional Notes REFUSAL @ 6'

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Site Address or Map/Lot Number
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

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

Deep Observation Hole A: 12/9/12 (Date) 12:10 (Time) CLOUDY / RAIN (Weather)

1. Deep Observation Hole Logs

Deep Hole Number _____ Ground Elevation at Surface of Hole _____

Location (Identify on Plan) _____

2. Land Use: WOODLAND (e.g. woodland, agricultural field, vacant lot, etc.) MANY (Surface Stones) 2-10% (Slope %)

TREES (Vegetation) _____ (Landform) _____ (Position on landscape (attach sheet))

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Possible Wet Area 200' feet

Property Line 210' feet Drinking Water Well _____ feet Other _____

4. Parent Material: TILL 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: 58" inches _____ elevation

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

27 Jackson Drive
Site Address or Map/Lot Number

Deep Observation Hole A: Deep Hole Number: TP-12-12

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			
0-5"	A	10YR 3/2	—	—	—	SANDY LOAM	—	—	MASSIVE	FRIABLE	
5"-25"	B	10YR 5/6	—	—	—	SANDY LOAM	2%	—	MASSIVE	FRIABLE	
25"-76"	C	2.5Y 7/3	50"	Med Low	5%	LOAMY SAND	2%	10%	MASSIVE	FRIABLE	

Additional Notes REFUSAL @ 76"

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Site Address or Map/Lot Number
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

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

Deep Observation Hole A: 12/19/12 (Date) 1:30 (Time) CLOUDY (Weather)

1. Deep Observation Hole Logs

Deep Hole Number _____ Ground Elevation at Surface of Hole _____

Location (Identify on Plan) _____

2. Land Use: WOODLANDS (e.g. woodland, agricultural field, vacant lot, etc.) | MANY (Surface Stones) | 2-10% (Slope (%))

TREES (Vegetation) | _____ (Landform) | _____ (Position on landscape (attach sheet))

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Possible Wet Area 200' feet

Property Line 212' feet Drinking Water Well — feet Other _____

4. Parent Material: TILL 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: 48" (inches) _____ (elevation)

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

27 Jackson Road
Site Address or Map/Lot Number

Deep Observation Hole A: Deep Hole Number: TP-12-13

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			
0-3"	A	10YR 3/2	—	—	—	SANDY LOAM	—	—	MASSIVE	FRIABLE	
3"-20"	B	10YR 5/6	—	—	—	SANDY LOAM	2%	—	MASSIVE	FRIABLE	
20"-72"	C	2.5Y 7/3	48"	HIGH	5%	LOAMY SAND	2%	15%	MASSIVE	FRIABLE	

Additional Notes REFUSAL @ 72"

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Site Address or Map/Lot Number
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

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

Deep Observation Hole A: 12/4/12 (Date) 1:45 (Time) Cloudy (Weather)

1. Deep Observation Hole Logs

Deep Hole Number _____ Ground Elevation at Surface of Hole _____

Location (identify on Plan) _____

2. Land Use: WOODLAND (e.g. woodland, agricultural field, vacant lot, etc.) MANY (Surface Stones) 2-10% (Slope (%))

Vegetation TREES Landform _____ Position on landscape (attach sheet) _____

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Possible Wet Area >100' feet

Property Line >10' feet Drinking Water Well _____ feet Other _____

4. Parent Material: TILL 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: 42" (Inches) _____ (elevation)

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Site Address or Map/Lot Number
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

Deep Observation Hole A: Deep Hole Number: TP-12-14

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			
0-3"	A	10YR 3/1	—	—	—	SANDY LOAM	—	—	MASSIVE	FRIABLE	
3"-16"	B	10YR 5/6	—	—	—	SANDY LOAM	2%	—	MASSIVE	FRIABLE	
16"-66"	C	2.5Y 7/3	42"	PROM LOW	5%	LOAMY SAND	2%	5%	MASSIVE	FRIABLE	

Additional Notes REFUSAL @ 66"

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Site Address or Map/Lot Number
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

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

Deep Observation Hole A: 12/4/12 (Date) 2:00 (Time) cloudy (Weather)

1. Deep Observation Hole Logs

Deep Hole Number _____ Ground Elevation at Surface of Hole _____

Location (Identify on Plan) _____

2. Land Use: WOODLAND (e.g. woodland, agricultural field, vacant lot, etc.) many (Surface Stones) 2-10% (Slope (%))

_____ (Vegetation) _____ (Landform) _____ (Position on landscape (attach sheet))

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Possible Wet Area 200 feet

Property Line 210 feet Drinking Water Well _____ feet Other _____

4. Parent Material: TILL 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: 42" (Inches) _____ (elevation)

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

77 JACKSON DRIVE
Site Address or Map/Lot Number

Deep Observation Hole A: Deep Hole Number: TP-12-15

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			
0-3"	A	10YR 3/2	—	—	—	SANDY LOAM	—	—	MASSIVE	FRIABLE	
3"-28"	B	10YR 5/6	—	—	—	SANDY LOAM	2%	—	MASSIVE	FRIABLE	
28"-68"	C	2.5Y 7/3	42"	FAINT LOW	5%	LOAMY SAND	2%	5%	MASSIVE	FRIABLE	

Additional Notes REFUSAL @ 68"

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Site Address or Map/Lot Number

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

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

Deep Observation Hole A: 12/4/12 (Date) 2:15 (Time) cloudy (Weather)

1. Deep Observation Hole Logs

   Deep Hole Number _____ Ground Elevation at Surface of Hole _____

   Location (Identify on Plan) _____

2. Land Use: woodland (e.g. woodland, agricultural field, vacant lot, etc.) many (Surface Stones) 2-10% (Slope (%))

   Trees (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 _____

4. Parent Material: till 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: 42" inches _____ elevation

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
27 Jackson Drive
Site Address or Map/Lot Number
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

Deep Observation Hole A: Deep Hole Number: TP-12-16

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			
0-3"	A	10YR 3/2	—	—	—	SANDY LOAM	—	—	MASSIVE	FRIABLE	
3"-18"	B	10YR 5/6	-	—	—	SANDY LOAM	2%	-	MASSIVE	FRIABLE	
18"-68"	C	2.5Y 7/3	42"	HIGH Low	5%	LOAMY SAND	2%	5%	MASSIVE	FRIABLE	

Additional Notes REFUSAL @ 68"

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

27 JACKSON DRIVE
Street Address or Lot #

ACTON | MA | 01720
City/Town | State | Zip Code

Contact Person (if different from Owner) | Telephone Number

B. Test Results

	12/4/12 Date	Time	12/4/12 Date	Time
Observation Hole #	12-A		12-B	
Depth of Perc	47"		44"	
Start Pre-Soak	12:28		12:30	
End Pre-Soak	12:49		12:45	
Time at 12"	12:44		12:45	
Time at 9"	1:22		1:29	
Time at 6"	2:32		2:51	
Time (9"-6")	70 MIN		82 MIN	
Rate (Min./Inch)	24 MPI		28 MPI	
	Test Passed: [X] Test Failed: [ ]		Test Passed: [X] Test Failed: [ ]	

STAMSKI AND MCNARY, INC - BILL HALL
Test Performed By:

- ACTON BOH - EVAN CARLONI
Witnessed By:

Comments:

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

27 JACKSON DRIVE
Street Address or Lot #

ALTON | MA | 01720
City/Town | State | Zip Code

Contact Person (if different from Owner) | Telephone Number

B. Test Results

	12/4/12 Date	Time	12/4/12 Date	Time
Observation Hole #	12-C		12-D	
Depth of Perc	42"		48"	
Start Pre-Soak	12:35		12:37	
End Pre-Soak	12:50		12:52	
Time at 12"	12:50		12:52	
Time at 9"	1:20		1:13	
Time at 6"	2:20		1:47	
Time (9"-6")	60 MIN		34 MIN	
Rate (Min./Inch)	20 MPI		12 MPI	
	Test Passed: ☒ Test Failed: ☐		Test Passed: ☒ Test Failed: ☐	

STAMSKI AND MCNARY, INC - BILL HALL
Test Performed By:

-ACTON BOH EVAN CARLONI
Witnessed By:

Comments:

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

27 JACKSON DRIVE
Street Address or Lot #

ALTON | MA | 01720
City/Town | State | Zip Code

Contact Person (if different from Owner) | Telephone Number

B. Test Results

	Date	Time	Date	Time
	12/4/12	12:35	12/4/12	
Observation Hole #	12-E		12-F	
Depth of Perc	46"		48"	
Start Pre-Soak	12:35		2:42	
End Pre-Soak	12:50		2:57	
Time at 12"	12:50		2:57	
Time at 9"	12:58		3:09	
Time at 6"	1:09		3:29	
Time (9"-6")	11 MIN		20 MIN	
Rate (Min./Inch)	4 MPI		7 MPI	
Test Passed:	☒		☒	
Test Failed:	☐		☐	

STAMSKI AND MCNARY, INC - BILL HALL
Test Performed By:

L-ALTON BOH EVAN CARLONI
Witnessed By:

Comments:

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

27 JACKSON DRIVE
Street Address or Lot #

ACTON | MA | 01720
City/Town | State | Zip Code

Contact Person (if different from Owner) | Telephone Number

B. Test Results

	Date	Time	Date	Time
	12/4/12		12/4/12	
Observation Hole #	12-6		12-H	
Depth of Perc	44"		42"	
Start Pre-Soak	2:52		3:02	
End Pre-Soak	3:07		3:17	
Time at 12"	3:07		3:17	
Time at 9"	3:40		3:41	
Time at 6"	4:28		4:18	
Time (9"-6")	48 MIN		39 MIN	
Rate (Min./Inch)	16 MPI		13 MPI	
	Test Passed: [X] Test Failed: [ ]		Test Passed: [X] Test Failed: [ ]	

STAMSKI AND MCNARY, INC - BILL HALL
Test Performed By:

- ACTON BOH EVAN CARLONI
Witnessed By:

Comments:

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. SEE ATTACHED inches	B. SOIL LOGS 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: SEE ATTACHED inches Lower boundary: SOIL LOGS inches

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.

Benjamin Ewing — Signature of Soil Evaluator

12/4/17 — Date

BENJAMIN EWING SE2985 — Typed or Printed Name of Soil Evaluator / License #

10/24/05 — Date of Soil Evaluator Exam

EVAN CARLONI — Name of Board of Health Witness

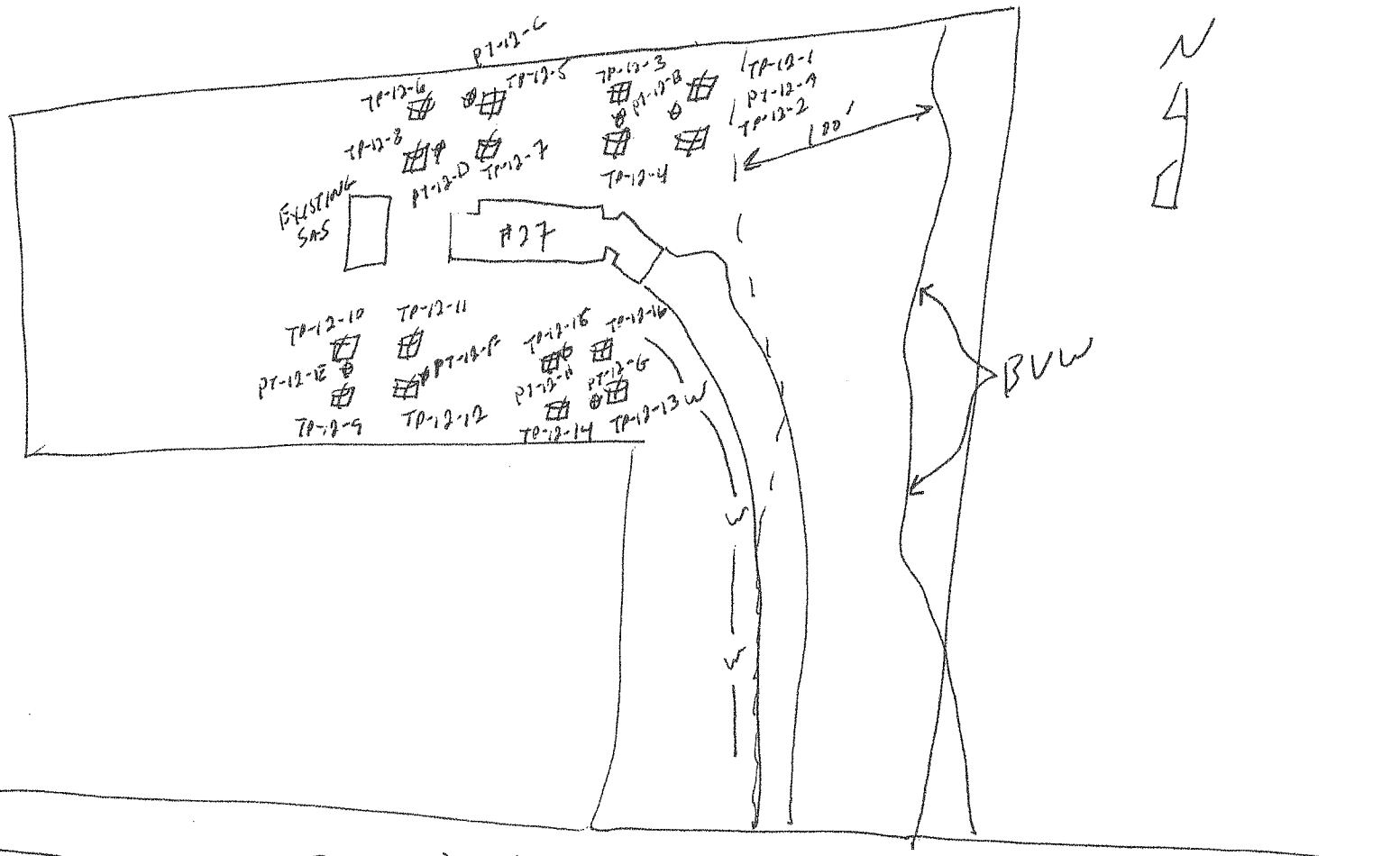
ACTON — Board of Health

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:



Commonwealth of Massachusetts
City/Town of

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

A. Facility Information

Xiaohong Qin
Owner Name

27 Jackson Drive — E3-25
Street Address — Map/Lot #

Acton — MA — 01720
City — State — Zip Code

B. Site Information

1. (Check one) ☑ New Construction ☐ Upgrade ☐ Repair

2. Published Soil Survey Available? ☑ Yes ☐ No — If yes: nesoil.com (Year Published) 1:25,000 (Publication Scale) 416B (Soil Map Unit)
Narragansett Silt Loam
Soil Name — Soil Limitations

3. Surficial Geological Report Available? ☑ Yes ☐ No — If yes: MassGIS (Year Published) (Publication Scale) (Map Unit)
Till and Bedrock
Geologic Material — Landform

4. 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

5. Wetland Area: National Wetland Inventory Map — Map Unit — Name

Wetlands Conservancy Program Map — Map Unit — Name

6. Current Water Resource Conditions (USGS): Dec 2012 (Month/Year) — Range: ☐ Above Normal ☑ Normal ☐ Below Normal

7. Other references reviewed:

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Site Address or Map/Lot Number
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

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

Deep Observation Hole A: 1/3/13 (Date) 11:00 (Time) CLEAR (Weather)

1. Deep Observation Hole Logs

Deep Hole Number _____ Ground Elevation at Surface of Hole _____

Location (Identify on Plan) _____

2. Land Use: YARD (e.g. woodland, agricultural field, vacant lot, etc.) MANY (Surface Stones) 0-5% (Slope (%))

ROSE GRASS/TACES (Vegetation) _____ (Landform) _____ (Position on landscape (attach sheet))

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Possible Wet Area 200' feet

Property Line 210' feet Drinking Water Well — feet Other _____

4. Parent Material: TILL 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: 42" inches _____ elevation

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

27 JACKSON DRIVE (Site Address or Map/Lot Number)

Deep Observation Hole A: Deep Hole Number: TP-13-17

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			
0-10"	A	10YR 3/2	—	—	—	SANDY LOAM	—	—	MASSIVE	FRIABLE	
10"-28"	B	10YR 5/6	—	—	—	SANDY LOAM	2%	—	MASSIVE	FRIABLE	
28"-96"	C	2.5Y 6/3	42"	HIGH LOAM	5%	SANDY LOAM	2%	10%	MASSIVE	FRIABLE	

Additional Notes REFUSAL @ 96"

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Site Address or Map/Lot Number
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

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

Deep Observation Hole A: 1/3/13 (Date) 1:35 (Time) CLEAR (Weather)

1. Deep Observation Hole Logs

Deep Hole Number _____ Ground Elevation at Surface of Hole _____

Location (Identify on Plan) _____

2. Land Use: WOODLAND (e.g. woodland, agricultural field, vacant lot, etc.) many (Surface Stones) 2-10% (Slope (%))

TREES (Vegetation) _____ (Landform) _____ (Position on landscape (attach sheet))

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Possible Wet Area >100' feet

Property Line >10' feet Drinking Water Well _____ feet Other _____

4. Parent Material: TILL 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: 44" inches _____ elevation

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

27 JACKSON DR
Site Address or Map/Lot Number

Deep Observation Hole A: Deep Hole Number: TP-13-18

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	—	—	—	SANDY LOAM	—	—	MASSIVE	FRIABLE	
12"-22"	B	10YR 5/6	—	—	—	SANDY LOAM	2%	—	MASSIVE	FRIABLE	
22"-84"	C	2.5Y 7/3	44"	PRED LOW	5%	LOAMY SAND	2%	5%	MASSIVE	FRIABLE	

Additional Notes REFUSAL @ 84"

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Site Address or Map/Lot Number

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

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

Deep Observation Hole A: 1/3/13 (Date) 11:45 (Time) CLEAR (Weather)

1. Deep Observation Hole Logs

Deep Hole Number _____ Ground Elevation at Surface of Hole _____

Location (Identify on Plan) _____

2. Land Use: WOODLAND (e.g. woodland, agricultural field, vacant lot, etc.) MANY (Surface Stones) 2-10% (Slope %)

TREES (Vegetation) _____ (Landform) _____ (Position on landscape (attach sheet))

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Possible Wet Area >100' feet

Property Line >10' feet Drinking Water Well _____ feet Other _____

4. Parent Material: TILL 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: 50" (Inches) _____ (elevation)

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
27 JACKSON DRIVE (Site Address or Map/Lot Number)

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

Deep Observation Hole A: Deep Hole Number: TP-13-19

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			
0-10"	A	10YR 3/2	—	—	—	SANDY LOAM	—	—	MASSIVE	FRIABLE	
10"-30"	B	10YR 5/6	—	—	—	SANDY LOAM	2%	—	MASSIVE	FRIABLE	
30"-9'	C	2.5Y 7/3	50"	MANY	5%	LOAMY SAND	2%	5%	MASSIVE	FRIABLE	

Additional Notes REFUSAL @ 9'

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Site Address or Map/Lot Number

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

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

Deep Observation Hole A: 1/3/13 (Date) 12:00 (Time) CLEAR (Weather)

1. Deep Observation Hole Logs

   Deep Hole Number _____ Ground Elevation at Surface of Hole _____

   Location (Identify on Plan) _____

2. Land Use: WOODLAND. (e.g. woodland, agricultural field, vacant lot, etc.) MANY (Surface Stones) 2-10% (Slope (%))

   TREES (Vegetation) _____ (Landform) _____ (Position on landscape (attach sheet))

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Possible Wet Area 7100' feet

   Property Line 210' feet Drinking Water Well — feet Other _____

4. Parent Material: FILL 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: 54" inches _____ elevation

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
27 JACKSON DRIVE
Site Address or Map/Lot Number
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

Deep Observation Hole A: Deep Hole Number: TP-13-20

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0-8"	A	10YR 3/2	—	—	—	SANDY LOAM	—	—	MASSIVE	FRIABLE	
8"-32"	B	10YR 5/6	—	—	—	SANDY LOAM	2%	—	MASSIVE	FRIABLE	
32"-91"	C	2.5Y 7/3	54"	HIGH CONT	5%	LOAMY SAND	3%	10%	MASSIVE	FRIABLE	

Additional Notes REFUSAL @ 91

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Site Address or Map/Lot Number
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

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

Deep Observation Hole A: 11/3/10 (Date) 12:15 (Time) CLEAR (Weather)

1. Deep Observation Hole Logs

Deep Hole Number _____ Ground Elevation at Surface of Hole _____

Location (Identify on Plan) _____

2. Land Use: WOODLAND (e.g. woodland, agricultural field, vacant lot, etc.) MANY (Surface Stones) 2-10% (Slope (%))

TREES (Vegetation) _____ (Landform) _____ (Position on landscape (attach sheet))

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Possible Wet Area 70±' feet

Property Line 210' feet Drinking Water Well — feet Other _____

4. Parent Material: TILL 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: 52" (Inches) _____ (elevation)

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

27 JACKSON DRIVE
Site Address or Map/Lot Number

Deep Observation Hole A: Deep Hole Number: TT-13-21

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0-8"	A	10YR 3/2	—	—	—	SANDY LOAM	—	—	MASSIVE	FRIABLE	
8"-30"	B	10YR 5/6	—	—	—	SANDY LOAM	2%	—	MASSIVE	FRIABLE	
30"-8'	C	2.5Y 7/3	52"	HIGH LOW	5%	LOAMY SAND	2%	10%	MASSIVE	FRIABLE	

Additional Notes REFUSAL @ 8'

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Site Address or Map/Lot Number
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

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

Deep Observation Hole A: 1/3/13 (Date) 12:30 (Time) CLEAR (Weather)

1. Deep Observation Hole Logs

Deep Hole Number _____ Ground Elevation at Surface of Hole _____

Location (Identify on Plan) _____

2. Land Use: WOODLAND (e.g. woodland, agricultural field, vacant lot, etc.) MANY (Surface Stones) 2-10% (Slope (%))

TREES (Vegetation) _____ (Landform) _____ (Position on landscape (attach sheet))

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Possible Wet Area 7100' feet

Property Line 710' feet Drinking Water Well — feet Other _____

4. Parent Material: TILL 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: 42" (Inches) _____ (elevation)

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

27 JACKSON DRIVE
Site Address or Map/Lot Number

Deep Observation Hole A: Deep Hole Number: TP-13-22

Depth (In.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features (mottles) Depth	Color	Percent	Soil Texture (USDA)	Coarse Fragments % by Volume Gravel	Cobbles & Stones	Soil Structure	Soil Consistence (Moist)	Other
0-6"	A	10YR 3/2	—	—	—	SANDY LOAM	—	—	MASSIVE	FRIABLE	
6"-24"	B	10YR 5/6	—	—	—	SANDY LOAM	2%	—	MASSIVE	FRIABLE	
24"-74"	C	2.5Y 7/3	42"	PALE YELLOW	5%	LOAMY SAND	2%	10%	MASSIVE	FRIABLE	

Additional Notes REFUSAL @ 74"

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Site Address or Map/Lot Number
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

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

Deep Observation Hole A: 1/3/12 (Date) 1:00 (Time) CLEAR (Weather)

1. Deep Observation Hole Logs

Deep Hole Number _____ Ground Elevation at Surface of Hole _____

Location (Identify on Plan) _____

2. Land Use: WOODLAND. (e.g. woodland, agricultural field, vacant lot, etc.) MANY (Surface Stones) 2-10% (Slope (%))

TREES (Vegetation) _____ (Landform) _____ (Position on landscape (attach sheet))

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Possible Wet Area 200' feet

Property Line 210' feet Drinking Water Well — feet Other _____

4. Parent Material: TILL 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: 42" inches _____ elevation

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
27 JACKSON DRIVE
Site Address or Map/Lot Number
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

Deep Observation Hole A: Deep Hole Number: TP-13-23

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			
0-6"	A	10YR 3/2	—	—	—	SANDY LOAM	—	—	MASSIVE	FRIABLE	
6"-22"	B	10YR 5/6	—	—	—	SANDY LOAM	2%	—	MASSIVE	FRIABLE	
22"-75"	C	2.5Y 7/3	42"	HIGH LOW	5%	LOAMY SAND	2%	10%	MASSIVE	FRIABLE	

Additional Notes REFUSAL @ 75"

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

XIAOHANG QIN
Owner Name

27 JACKSON DRIVE
Street Address or Lot #

ACTON | MA | 01720
City/Town | State | Zip Code

Contact Person (if different from Owner) | Telephone Number

B. Test Results

Date	1/3/13	1/3/13
Time	1:30	1:30
Observation Hole #	PT-13-I	PT-13-J
Depth of Perc	44"	42"
Start Pre-Soak	1:46	1:40
End Pre-Soak	2:00	1:55
Time at 12"	2:00	1:58
Time at 9"	2:16	2:04
Time at 6"	2:42	2:12
Time (9"-6")	26 MIN	8 MIN
Rate (Min./Inch)	9 MI	3 MI
Test Passed:	☒	☒
Test Failed:	☐	☐

STAMSKI AND MCNARY INC (BENJAMIN EWING)
Test Performed By:

ACTON BOARD OF HEALTH (EVAN CARLONI)
Witnessed By:

Comments:

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	XIAOHONG QIN		
Street Address or Lot #	27 JACKSON DRIVE		
City/Town	ACTON	State MA	Zip Code 01720
Contact Person (if different from Owner)		Telephone Number	

B. Test Results

	Date 1/3/12	Time 1:30	Date	Time
Observation Hole #	PT-13-K			
Depth of Perc	44"			
Start Pre-Soak	1:35			
End Pre-Soak	1:50			
Time at 12"	1:56			
Time at 9"	2:23			
Time at 6"	3:02			
Time (9"-6")	39			
Rate (Min./Inch)	13 MI			
	Test Passed: ☒ Test Failed: ☐		Test Passed: ☐ Test Failed: ☐	

Test Performed By: STAMSKI AND McNARY, INC. (BENJAMIN EWING)

Witnessed By: ACTON BOARD OF HEALTH (EVAN CARLONI)

Comments:

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. SEE ATTACHED inches	B. SOIL LOGS 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: SEE ATTACHED inches Lower boundary: SOIL LOGS inches

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: 1/2/13

Typed or Printed Name of Soil Evaluator / License # BENJAMIN EWING SE2985 — Date of Soil Evaluator Exam: 10/24/05

Name of Board of Health Witness: EVAN CARLONI — Board of Health: ACTON

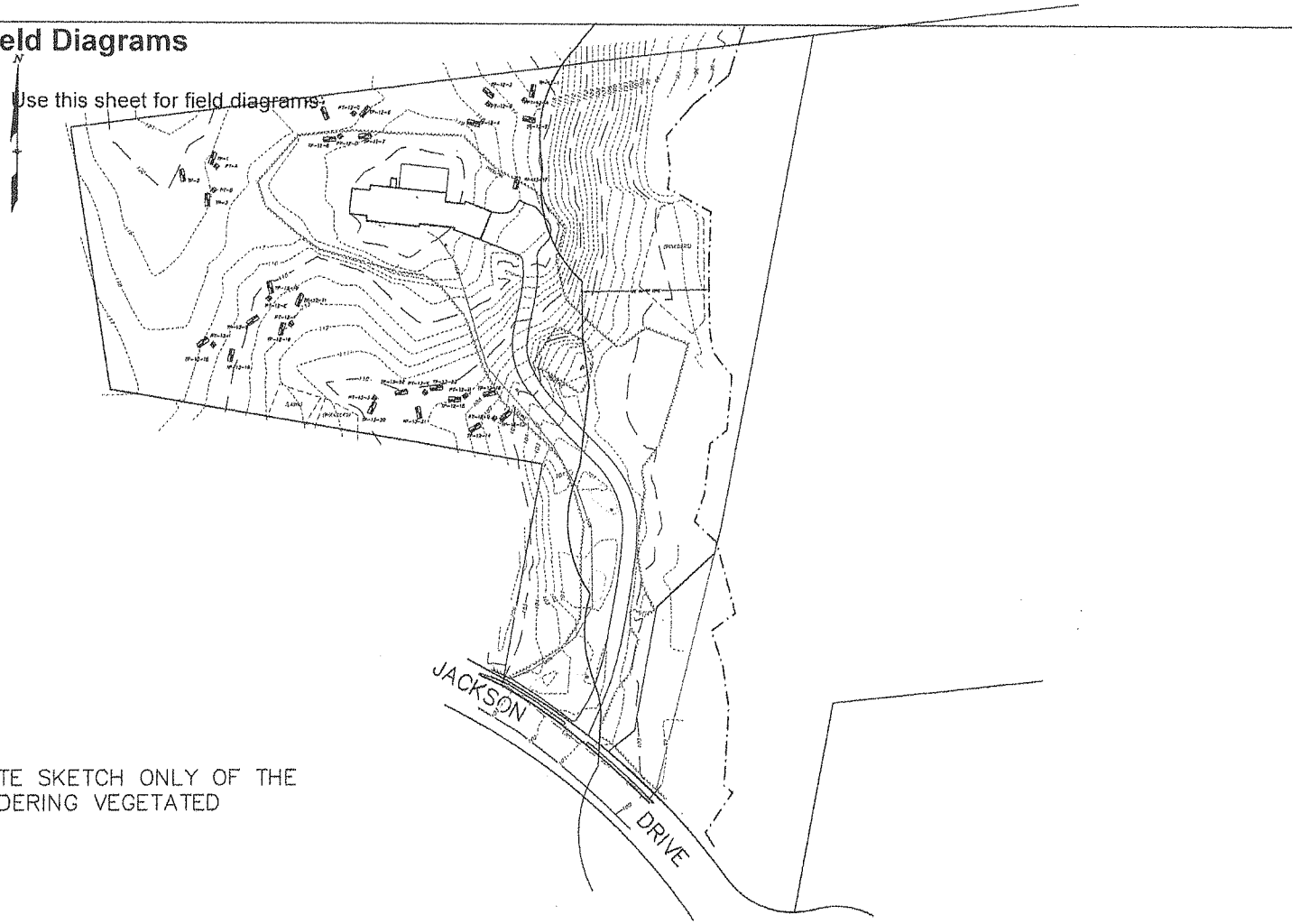
Note: In accordance with 310 CMR 15.018(2) this form must be submitted to the approving authority within 60 days of the date of field testing, and to the designer and the property owner with Percolation Test Form 12.

Commonwealth of Massachusetts
City/Town of

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

Field Diagrams

Use this sheet for field diagrams.



NOTES:

THIS IS AN APPROXIMATE SKETCH ONLY OF THE SOIL TESTING AND BORDERING VEGETATED WETLANDS.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Site Address or Map/Lot Number

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

C. On-Site Review

(minimum of two holes required at every proposed disposal area)

Deep Observation Hole A: 12/4/12 (Date) _____ (Time) CLOUDY (Weather)

1. Deep Observation Hole Logs

   Deep Hole Number _____ Ground Elevation at Surface of Hole _____

   Location (Identify on Plan) _____

2. Land Use: YARD / TREE LINE (e.g. woodland, agricultural field, vacant lot, etc.) FEW (Surface Stones) 5-10% (Slope (%))

   GRASS / SHRUBS (Vegetation) _____ (Landform) _____ (Position on landscape (attach sheet))

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Possible Wet Area 100'-120' feet

   Property Line 710' feet Drinking Water Well — feet Other _____

4. Parent Material: TILL 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

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
27 JACKSON DRIVE
Site Address or Map/Lot Number

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

Deep Observation Hole A: Deep Hole Number: D-1
UNOFFICAL

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			
0-3'	FILL										
3-5'	B										
5'-7'	C										

Additional Notes REFUSAL @ 7'

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Wastewater Permitting Program
Site Address or Map/Lot Number

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

C. On-Site Review

(minimum of two holes required at every proposed disposal area)

Deep Observation Hole A: 12/4/12 (Date) _____ (Time) CLOUDY (Weather)

1. Deep Observation Hole Logs

   Deep Hole Number _____ Ground Elevation at Surface of Hole _____

   Location (Identify on Plan) _____

2. Land Use: YARD / TREE LINE (e.g. woodland, agricultural field, vacant lot, etc.) _____ (Surface Stones) 5-10% (Slope (%))

   GRASS / SHRUBS (Vegetation) _____ (Landform) _____ (Position on landscape (attach sheet))

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Possible Wet Area 105'-120' feet

   Property Line 710' feet Drinking Water Well _____ feet Other _____

4. Parent Material: TILL Unsuitable Materials Present: Yes ☒ No ☐

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

5. Groundwater Observed: Yes ☐ No ☒

   If Yes: Depth Weeping from Pit _____ Depth Standing Water in Hole _____

   Estimated Depth to High Groundwater: _____ inches _____ elevation

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Deep Observation Hole A: Deep Hole Number: D-2 UNOFFICAL

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			
	FILL										
	C										

Additional Notes REFUSAL @ 4'

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

Deep Observation Hole A: 12/4/12 (Date) _____ (Time) CLOUDY (Weather)

1. Deep Observation Hole Logs

Deep Hole Number _____ Ground Elevation at Surface of Hole _____

Location (Identify on Plan) _____

2. Land Use: WOODLAND (e.g. woodland, agricultural field, vacant lot, etc.) FEW (Surface Stones) 2-10% (Slope (%))

TREES (Vegetation) _____ (Landform) _____ (Position on landscape (attach sheet))

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Possible Wet Area 7100' feet

Property Line 10-15' feet Drinking Water Well _____ feet Other _____

4. Parent Material: TILL Unsuitable Materials Present: Yes ☒ No ☐

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

5. Groundwater Observed: Yes ☐ No ☒

If Yes: Depth Weeping from Pit _____ Depth Standing Water in Hole _____

Estimated Depth to High Groundwater: _____ inches _____ elevation

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Deep Observation Hole A: Deep Hole Number: D-3

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

Additional Notes REFUSAL SLOPING 2' TO 3' WEST TO EAST

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

Deep Observation Hole A: 12/4/12 (Date) _____ (Time) CLOUDY (Weather)

1. Deep Observation Hole Logs

Deep Hole Number _____ Ground Elevation at Surface of Hole _____

Location (Identify on Plan) _____

2. Land Use: WOODLAND (e.g. woodland, agricultural field, vacant lot, etc.) FEW (Surface Stones) 2-10% (Slope (%))

TREES (Vegetation) _____ (Landform) _____ (Position on landscape (attach sheet))

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Possible Wet Area 7100' feet

Property Line 10-15' feet Drinking Water Well _____ feet Other _____

4. Parent Material: TILL Unsuitable Materials Present: Yes ☒ No ☐

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

5. Groundwater Observed: Yes ☐ No ☒

If Yes: Depth Weeping from Pit — Depth Standing Water in Hole —

Estimated Depth to High Groundwater: _____ Inches _____ elevation

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Deep Observation Hole A: Deep Hole Number: D-4

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

Additional Notes REFUSAL SLOPING 2'-3' WEST TO EAST

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

Deep Observation Hole A: Date 1/3/13 Time _____ Weather _____

1. Deep Observation Hole Logs

Deep Hole Number _____ Ground Elevation at Surface of Hole _____

Location (Identify on Plan) _____

2. Land Use: OPEN SPACE (e.g. woodland, agricultural field, vacant lot, etc.) Surface Stones: FEW Slope (%): 0-5%

Vegetation: SNOW Landform _____ Position on landscape (attach sheet) _____

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Possible Wet Area 475' feet

Property Line 710' feet Drinking Water Well — feet Other _____

4. Parent Material: TILL 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 8' Depth Standing Water in Hole 9'

Estimated Depth to High Groundwater: _____ inches _____ elevation

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Deep Observation Hole A: Deep Hole Number: D-5

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			
0-6'	DISTURBED SOIL							70%			
6'-10'	NATURAL										

Additional Notes LARGE STONES 0-6'
OBS. PIPE INSTALLED

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

Deep Observation Hole A: 11/3/13 (Date) _____ (Time) _____ (Weather)

1. Deep Observation Hole Logs

Deep Hole Number _____ Ground Elevation at Surface of Hole _____

Location (Identify on Plan) _____

2. Land Use: OPEN AREA (e.g. woodland, agricultural field, vacant lot, etc.) FEW (Surface Stones) 0-5% (Slope (%))

SNOW (Vegetation) _____ (Landform) _____ (Position on landscape (attach sheet))

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Possible Wet Area <75' feet

Property Line _____ feet Drinking Water Well _____ feet Other _____

4. Parent Material: TILL 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 8' Depth Standing Water in Hole 8'

Estimated Depth to High Groundwater: _____ inches _____ elevation

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Deep Observation Hole A: Deep Hole Number: D-6

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			
0-6'	DISTURBED SOIL							70%			
6-10'	NATURAL										

Additional Notes LARGE STONES 0-6'
DIST. PIPE INSTALLED

Drainage Maps