



Commonwealth of Massachusetts
City/Town of Southborough
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**

FD 250 Turnpike, LLC

Owner Name

250 Turnpike Road

Street Address or Lot #

Southborough

City/Town

MA

State

01772

Zip Code

(508)281-7546

Telephone Number

Contact Person (if different from Owner)

B. Test Results

3-16-06

Date

Time

3-16-06

Date

Time

Observation Hole #

1

38

4

41

Depth of Perc

9'23

9'60

Start Pre-Soak

9:38

10:05

End Pre-Soak

10:07

10:19

Time at 12"

10:50

10:32

Time at 9"

50

13

Time at 6"

17 min

5 min/12

Time (9"-6")

Test Passed:

Test Failed:

Test Passed:

Test Failed:

Test Performed By:

JAMES TETREAULT
DENNIS COSTELO

Board of Health Witness

Comments:



Commonwealth of Massachusetts
City/Town of Southborough
Percolation Test
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**A. Site Information**

FD 250 Turnpike, LLC

Owner Name:

250 Turnpike Road

Street Address or Lot #

Southborough

City/Town

MA

State

01772

Zip Code

(508)281-7546

Telephone Number

Contact Person (if different from Owner)

B. Test Results

8-24-2022

Date 14 Time

48"

8-24-2022

Date 19 Time

50"

Observation Hole #

Depth of Perc

Start Pre-Soak

End Pre-Soak

Time at 12"

Time at 9"

Time at 6"

Time (9"-6")

Rate (Min./Inch)

9:38

9:53

9:53

10:04

10:17

13 MINUTES

5 MIN/IN

11:00

10:45

11:00

11:39

12:39

60 MINUTES

20 MIN/IN

Test Passed:

Test Failed:

Test Passed:

Test Failed:

Test Performed By:

Board of Health Witness

Comments:



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key.

**A. Site Information**

FD 250 Turnpike, LLC

Owner Name

250 Turnpike Road

Street Address or Lot #

Southborough

City/Town

MA

State

01772

Zip Code

(508)281-7546

Telephone Number

Contact Person (if different from Owner)

B. Test Results

8-24-2002

Date

Time

Date

Time

Observation Hole #

16

Depth of Perc

43

Start Pre-Soak

11:04

End Pre-Soak

11:19

Time at 12"

11:19

Time at 9"

11:31

Time at 6"

11:48

Time (9"-6")

17 MINUTES

Rate (Min./Inch)

6

Test Passed: Test Passed: Test Failed: Test Failed:

Test Performed By:

Board of Health Witness:

Comments:



Commonwealth of Massachusetts
City/Town of Southborough

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

A. Facility Information

FD 250 Turnpike, LLC

Owner Name

250 Turnpike Road

Street Address

Southborough

City

MA

State

27/002A

Map/Lot #

01772

Zip Code

B. Site Information

1. (Check one) New Construction Upgrade Repair

2. Soil Survey Available? Yes No If yes:

Web soil survey

Source

310B

Soil Map Unit

DHS182
3-16-22

Woodbridge

Soil Name

severe

Soil Limitations

Till

Soil Parent material

uncertain

Landform

3. Surficial Geological Report Available? Yes No

If yes:

Year Published/Source

Map Unit

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:

Wetland Type

7. Current Water Resource Conditions (USGS):

03/15/21

Month/Day/ Year

Range: Above Normal

Normal

Below Normal

8. Other references reviewed:



Commonwealth of Massachusetts
City/Town of Southborough

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: 1 Hole # 3-16-67 Date 9.30 Time 44° CLOUDY Weather Latitude _____

1. Land Use WOODLAND (e.g., woodland, agricultural field, vacant lot, etc.) Vegetation DECIDUOUS TREES Surface Stones (e.g., cobbles, stones, boulders, etc.) SOILS Longitude: ≈10
Description of Location: BEHIND #125 Slope (%): ≈10

2. Soil Parent Material: TILL Landform UNCERTAIN Position on Landscape (SU, SH, BS, FS, TS) UNCERTAIN

3. Distances from: Open Water Body ≈140 feet Drainage Way feet Wetlands ≈110 feet
Property Line ≈35 feet Drinking Water Well N/A 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 Consistency (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-6"	A _p	SANDY LOAM	10-12 3/2								
6-26"	B	SANDY LOAM	10-12 8/6								
26-46"	C ₁	SANDY LOAM	10-12 7/5				20	10			
46-76"	C ₂	SANDY LOAM	10-12 7/3		5'3	10-20%	20	10			

Additional Notes:

- C SOILS WERE NEARLY LOAMY SAND TEXTURE

- NO RECDR



**Commonwealth of Massachusetts
City/Town of Southborough**

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: 2 Hole #: 2 Date: 3-16-22 Time: 9:40 Weather: 44° clear Latitude: _____ Longitude: _____

1. Land Use:	<u>Woodland</u> (e.g., woodland, agricultural field, vacant lot, etc.)	Vegetation	Surface Stones (e.g., cobbles, stones, boulders, etc.)	Slope (%)		
Description of Location: <u>BEHIND ABUTTER PALMER</u>						
2. Soil Parent Material:	Landform		Position on Landscape (SU, SH, BS, FS, TS)			
3. Distances from:	Open Water Body	feet	Drainage Way	feet	Wetlands	feet
	Property Line	feet	Drinking Water Well	feet	Other	feet
4. Unsuitable Materials Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		If Yes:	<input type="checkbox"/> Disturbed Soil <input type="checkbox"/> Fill Material <input type="checkbox"/> Weathered/Fractured Rock	<input checked="" type="checkbox"/> Bedrock	
5. Groundwater Observed:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes:	Depth Weeping from Pit	Depth Standing Water in Hole	

Soil Log

Additional Notes:



Commonwealth of Massachusetts
City/Town of Southborough

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 # 1

NOT OBSERVED inches

NOT OBSERVED inches

46" inches

 inches

Obs. Hole # 2

N/A inches

N/A inches

N/A 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: 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 system? YES AT #1 Yes No NO AT #2 absorption

b. If yes, at what depth was it observed (exclude A and O Horizons)?

c. If no, at what depth was impervious material observed?

Upper boundary:

6"
inches

Lower boundary:

76"
inches

Upper boundary:

inches

Lower boundary:

inches



Commonwealth of Massachusetts
City/Town of Southborough

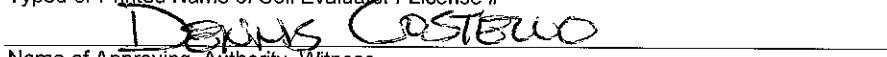
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

F. Certification

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

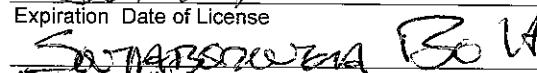

Signature of Soil Evaluator


James T. Trenor SB2421
Typed or Printed Name of Soil Evaluator/ License #


Dennis Costello
Name of Approving Authority Witness

3/16/22
Date

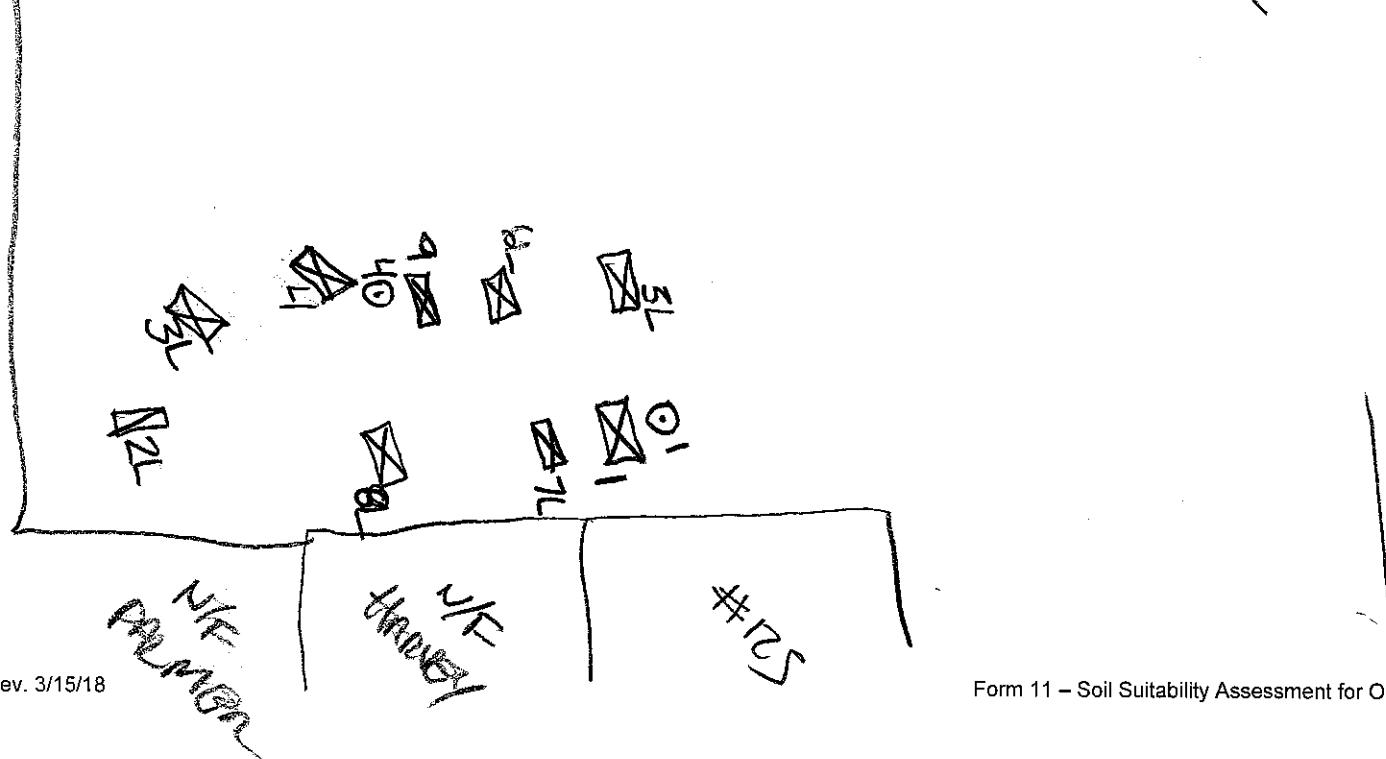
1/1/2025
Expiration Date of License


Southborough BoA
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.

→ Z ✓

Field Diagrams: Use this area for field diagrams:





Commonwealth of Massachusetts
City/Town of Southborough

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

A. Facility Information

FD 250 Turnpike, LLC

Owner Name

250 Turnpike Road

Street Address

Southborough

City

MA

State

27/002A

Map/Lot #

01772

Zip Code

B. Site Information

1. (Check one) New Construction Upgrade Repair

2. Soil Survey Available? Yes No If yes:

Web soil survey

Source

310B

Soil Map Unit

Woodbridge

Soil Name

severe

Soil Limitations

Till

Soil Parent material

uncertain

Landform

3. Surficial Geological Report Available? Yes No

If yes:

Year Published/Source

Map Unit

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:

Wetland Type

7. Current Water Resource Conditions (USGS):

03/15/21

Month/Day/ Year

Range: Above Normal

Normal

Below Normal

8. Other references reviewed:

DHS384
3-16-22



Commonwealth of Massachusetts
City/Town of Southborough

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:	3	Hole #	3-16-22	Date	9.50	Time	44°	Weather	Cloudy	Latitude		Longitude:	210	Slope (%)
1. Land Use	WOODED	Vegetation	DECIDUOUS TREES	Surface Stones	SOME									
Description of Location: ↑														
2. Soil Parent Material:	NW OF DH 2			Landform	Position on Landscape (SU, SH, BS, FS, TS)									
3. Distances from:	Open Water Body	feet	Drainage Way	feet	Wetlands	feet								
	Property Line	feet	Drinking Water Well	feet	Other	feet								
4. Unsuitable Materials Present:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	If Yes:	<input type="checkbox"/> Disturbed Soil	<input type="checkbox"/> Fill Material	<input type="checkbox"/> Weathered/Fractured Rock	<input checked="" type="checkbox"/> Bedrock							
5. Groundwater Observed:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> 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	Cobbles & Stones			
—	LEDGE AT 3'										
—	SOIL TEXTURE LIKE DH 1										
—	REFUSAL										

Additional Notes:



Commonwealth of Massachusetts
City/Town of Southborough

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: 4 Hole # 3-16-22 Date Time Weather 45° cloudy Latitude _____ Longitude _____

1. Land Use: WOODLAND (e.g., woodland, agricultural field, vacant lot, etc.) Vegetation DECIDUOUS TREES Surface Stones (e.g., cobbles, stones, boulders, etc.) SOME STONES Slope (%) ≈ 10

Description of Location: BEHIND HOMES, SN OF DT 1

2. Soil Parent Material: TILL Landform UNCERTAIN Position on Landscape (SU, SH, BS, FS, TS) UNCERTAIN

3. Distances from: Open Water Body >240' feet Drainage Way _____ feet Wetlands 7200' feet

Property Line 210' feet Drinking Water Well _____ 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	Cobbles & Stones			
0-6"	Ap	SANDY LOAM	10/10/3								
6-24"	B	SANDY LOAM	10/4/18/1								
24-46"	C1	SANDY LOAM	10/4/17/1				20	10			
46-78"	C2	SANDY LOAM	10/4/17/1	>5%	WET	20	10				

Additional Notes:

- SOIL TEXTURE WAS SANDY LOAM IN SOME AREAS
- NO REFUGES



Commonwealth of Massachusetts
City/Town of Southborough

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 #	3	Obs. Hole #	4
N/A inches	NOT OBSERVED inches	N/A inches	NOT OBSERVED inches
N/A inches	46 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: _____ 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 *NOT 4'*

b. If yes, at what depth was it observed (exclude A and O Horizons)?

c. If no, at what depth was impervious material observed?

Upper boundary:	6 inches	Lower boundary:	78 inches
Upper boundary:		Lower boundary:	



Commonwealth of Massachusetts
City/Town of Southborough

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

F. Certification

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

Signature of Soil Evaluator

James T. Gidour 302421

Typed or Printed Name of Soil Evaluator / License #

Name of Approving Authority Witness

Date

Expiration Date of License

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:



Commonwealth of Massachusetts
City/Town of Southborough

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

A. Facility Information

FD 250 Turnpike, LLC

Owner Name

250 Turnpike Road

Street Address

Southborough

City

MA

State

27/002A

Map/Lot #

01772

Zip Code

B. Site Information

1. (Check one) New Construction Upgrade Repair

DA 5 & 6
3/16/22

2. Soil Survey Available? Yes No If yes:

Web soil survey

Source

310B

Soil Map Unit

Woodbridge

Soil Name

severe

Soil Limitations

Till

Soil Parent material

uncertain

Landform

3. Surficial Geological Report Available? Yes No If yes:

Year Published/Source

Map Unit

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:

Wetland Type

7. Current Water Resource Conditions (USGS): 03/15/21 Range: Above Normal

Month/Day/ Year

Normal

Below Normal

8. Other references reviewed:



Commonwealth of Massachusetts
City/Town of Southborough

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: 5 Hole #: 5-16-22 Date: 10/15 Time: 45° Weather: overcast Latitude: _____
Longitude: _____ Slope (%): 10

1. Land Use (e.g., woodland, agricultural field, vacant lot, etc.) Wooded Vegetation: DECIDUOUS TREES Surface Stones (e.g., cobbles, stones, boulders, etc.) some

Description of Location: West of DT 1

2. Soil Parent Material: TIL Landform: _____ Position on Landscape (SU, SH, BS, FS, TS) _____

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Wetlands _____ feet
Property Line _____ feet Drinking Water Well _____ 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	Cobbles & Stones			
-	LEADER AT 4										
			SOIL VERY MUCH like DT 1								

Additional Notes:



**Commonwealth of Massachusetts
City/Town of Southborough**

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: 6 Hole # 3-160210:30 Date 45° sunny Time Weather Latitude _____ Longitude: _____

1. Land Use: WOODLAND (e.g., woodland, agricultural field, vacant lot, etc.) DECIDUOUS TREES Vegetation Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%)

Description of Location: ~100' west of Aarup

2. Soil Parent Material: _____ Landform _____ Position on Landscape (SUL, SH, BS, ES, TS) _____

3. Distances from: Open Water Body feet Drainage Way feet Wetlands feet

Open Water Body _____ feet Drainage Way _____ feet Wetlands _____ feet
Property Line _____ feet Drinking Water Well _____ feet Other _____ feet

4. Unsuitable
Materials

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

Additional Notes:



Commonwealth of Massachusetts
City/Town of Southborough

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 # 5

N/A inches

N/A inches

N/A inches

 inches

Obs. Hole # 6

N/A inches

N/A inches

N/A 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: 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 system? soil absorption

Yes No

b. If yes, at what depth was it observed (exclude A and O Horizons)?

Upper boundary: inches Lower boundary: inches

c. If no, at what depth was impervious material observed?

Upper boundary: inches Lower boundary: inches



Commonwealth of Massachusetts
City/Town of Southborough

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

F. Certification

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


Signature of Soil Evaluator

Typed or Printed Name of Soil Evaluator / License #

Name of Approving Authority Witness

Date

Expiration Date of License

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 DA182 FOR SKETCH



Commonwealth of Massachusetts
City/Town of Southborough

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

A. Facility Information

FD 250 Turnpike, LLC

Owner Name

250 Turnpike Road

Street Address

Southborough

City

MA

State

27/002A

Map/Lot #

01772

Zip Code

B. Site Information

1. (Check one) New Construction Upgrade Repair

2. Soil Survey Available? Yes No If yes:

Web soil survey

Source

310B

Soil Map Unit

Woodbridge

Soil Name

severe

Soil Limitations

Till

Soil Parent material

uncertain

Landform

3. Surficial Geological Report Available? Yes No

If yes:

Year Published/Source

Map Unit

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:

Wetland Type

7. Current Water Resource Conditions (USGS):

03/15/21

Month/Day/ Year

Range: Above Normal

Normal

Below Normal

8. Other references reviewed:

DHS 788
3-16-22



Commonwealth of Massachusetts
City/Town of Southborough

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: 1 Hole #: 3-1b-72 Date: 10:50 Time: 5/27 Weather: 45° cloudy Latitude: _____ Longitude: _____

1. Land Use (e.g., woodland, agricultural field, vacant lot, etc.)

Description of Location: **BETWEEN #6 AND HARBOUR**

Digitized by srujanika@gmail.com

2. Soil Parent Material: _____

Landform	Position on Landscape (SU, SH, BS, FS, TS)
----------	--

3. Distances from: Open Water Body feet Drainage Way feet Wetlands feet

Property Line _____ feet Drinking Water Well _____ feet Waterline _____ feet Other _____ feet

Property Line _____ feet Drinking Water Well _____ 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:

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

Soil Log

Soil Log

Additional Notes:



Commonwealth of Massachusetts
City/Town of Southborough

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: 8 Hole # 3-16-22 Date 11:10 Time 45° clear Weather Latitude _____ Longitude _____

1. Land Use: WOODLAND (e.g., woodland, agricultural field, vacant lot, etc.) Vegetation DECIDUOUS TREES Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%) _____
Description of Location: 50' OFF HILLSIDE (PROPOSED)

2. Soil Parent Material: _____ Landform _____ Position on Landscape (SU, SH, BS, FS, TS) _____

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Wetlands _____ feet
Property Line _____ feet Drinking Water Well _____ 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			Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent			
<u>LEDGES AT 3'</u>									

Additional Notes:



Commonwealth of Massachusetts
City/Town of Southborough

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 # 7

N/A inches

N/A inches

N/A inches

 inches

Obs. Hole # 8

N/A inches

N/A inches

N/A 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: 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)?

c. If no, at what depth was impervious material observed?

Upper boundary: inches Lower boundary: inches

Upper boundary: inches Lower boundary: inches



Commonwealth of Massachusetts
City/Town of Southborough

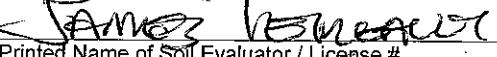
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

F. Certification

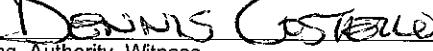
I certify that I am currently approved by the Department of Environmental Protection pursuant to 310 CMR 15.017 to conduct soil evaluations and that the above analysis has been performed by me consistent with the required training, expertise and experience described in 310 CMR 15.017. I further certify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



Signature of Soil Evaluator

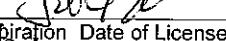
Typed or Printed Name of Soil Evaluator / License #



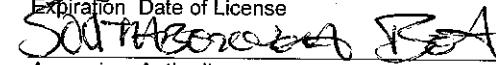
Name of Approving Authority Witness



Date



Expiration Date of License



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:





Commonwealth of Massachusetts
City/Town of Southborough

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

A. Facility Information

FD 250 Turnpike, LLC

Owner Name

250 Turnpike Road

Street Address

Southborough

City

MA

State

27/002A

Map/Lot #

01772

Zip Code

B. Site Information

1. (Check one) New Construction Upgrade Repair

2. Soil Survey Available? Yes No If yes:

Web soil survey

Source

310B

Soil Map Unit

Woodbridge

Soil Name

severe

Soil Limitations

Till

Soil Parent material

uncertain

Landform

3. Surficial Geological Report Available? Yes No

If yes:

Year Published/Source

Map Unit

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:

Wetland Type

7. Current Water Resource Conditions (USGS):

03/15/21

Month/Day/ Year

Range: Above Normal

Normal

Below Normal

8. Other references reviewed:

DA 9
3/16/2018



**Commonwealth of Massachusetts
City/Town of Southborough**

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: 9 Hole # 3/16/22 Date 11:30 Time 45° clear Weather Latitude Longitude: Land Use Woodland DETERMINATE TRAIL

1. Land Use (e.g., woodland, agricultural field, vacant lot, etc.) Woodland Agricultural Field Vegetation Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%)

Description of Location: 1000' off #3

3. Soil Parent Material:

2. Soil Parent Material: _____ Landform: _____ Position on Landscapes (CL, CH, RS, EC, TC): _____

3. Distances from: Open Water Body (ft) Landform Position on Landscape (SU, SH, BS, FS, TS)

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Wetlands _____ feet

Property Line _____ feet Drinking Water Well _____ 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: No Yes

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

Soil Log

Soil Log

Additional Notes:



**Commonwealth of Massachusetts
City/Town of Southborough**

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:

Hole # Date Time Weather Latitude Longitude:

1. Land Use: (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: _____	Landform	Position on Landscape (SU, SH, BS, FS, TS)	
3. Distances from: Open Water Body _____ feet	Drainage Way _____ feet	Wetlands _____ feet	
Property Line _____ feet	Drinking Water Well _____ feet	Other _____ feet	
4. Unsuitable Materials Present: <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes: <input type="checkbox"/> Disturbed Soil <input type="checkbox"/> Fill Material <input type="checkbox"/> Weathered/Fractured Rock <input type="checkbox"/> Bedrock			
5. Groundwater Observed: <input type="checkbox"/> Yes <input type="checkbox"/> No		If yes: _____ Depth Weeping from Pit	Depth Standing Water in Hole

Soil Log

Additional Notes:



Commonwealth of Massachusetts
City/Town of Southborough

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 # 9

N/A inches

Obs. Hole # _____

_____ inches

N/A inches

_____ inches

N/A inches

_____ inches

_____ 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: _____ 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)?

c. If no, at what depth was impervious material observed?

Upper boundary: _____ inches Lower boundary: _____ inches

Upper boundary: _____ inches Lower boundary: _____ inches



Commonwealth of Massachusetts
City/Town of Southborough

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

F. Certification

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

Signature of Soil Evaluator

JAMES COSTELOW 507421

Typed or Printed Name of Soil Evaluator / License #

DENNIS COSTELOW

Name of Approving Authority Witness

3/10/22

Date

3/10/22

Expiration Date of License

Soil Surveyor Rock

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 DA 1



Commonwealth of Massachusetts
City/Town of Southborough

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

A. Facility Information

FD 250 Turnpike, LLC

Owner Name

250 Turnpike Road

Street Address

Southborough

City

MA

State

27/002A

Map/Lot #

01772

Zip Code

B. Site Information

1. (Check one) New Construction Upgrade Repair

138145

2. Soil Survey Available? Yes No If yes:

Web soil survey

Source

310B

Soil Map Unit

ON 8-24-2022

Woodbridge

Soil Name

severe

Soil Limitations

Till

Soil Parent material

uncertain

Landform

3. Surficial Geological Report Available? Yes No

If yes:

Year Published/Source

Map Unit

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:

Wetland Type

7. Current Water Resource Conditions (USGS): 08/24/22

Month/Day/ Year

Range: Above Normal

Normal

Below Normal

8. Other references reviewed:



Commonwealth of Massachusetts
City/Town of Southborough

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:	13	Hole #	Date	8-24-2021	Time	11:22	Weather	80° SUNNY	Latitude		Longitude:
1. Land Use	WOODLAND	Vegetation	DECIDUOUS TREES	Surface Stones (e.g., cobbles, stones, boulders, etc.)			SOME STONES			Slope (%)	
Description of Location:	SW CORNER OF SITE										
2. Soil Parent Material:	TIL (P)	Landform	UNCENTRAL	Position on Landscape (SU, SH, BS, FS, TS)							
3. Distances from:	Open Water Body	feet	Drainage Way	feet	Wetlands	feet					
	Property Line	feet	Drinking Water Well	feet	Other	feet					
4. Unsuitable Materials Present:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If Yes:	<input type="checkbox"/> Disturbed Soil	<input type="checkbox"/> Fill Material	<input type="checkbox"/> Weathered/Fractured Rock	<input type="checkbox"/> Bedrock				
5. Groundwater Observed:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> 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	Cobbles & Stones			
0-6"	A	SANDY LOAM	10YR3/6								
6-7"	B	SANDY LOAM	10YR8/6								
7"-10"	C1	SANDY LOAM	10YR7/6				25	20			
10-21"	C2	SANDY LOAM	10YR7/6			5% 1/2" & 1/4"	25	20			

Additional Notes:

- NO REFUSAL



Commonwealth of Massachusetts
City/Town of Southborough

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: 14 Hole # 8-24-2022 Date 80° SUNNY Time Weather Latitude Longitude:

1. Land Use: WOODLAND (e.g., woodland, agricultural field, vacant lot, etc.) Vegetation DECIDUOUS TREES Surface Stones (e.g., cobbles, stones, boulders, etc.) SOME STONES Slope (%): 2%

Description of Location: IN CORNER OF SITE

2. Soil Parent Material: TILL (?) Landform Position on Landscape (SU, SH, BS, FS, TS)

3. Distances from: Open Water Body feet Drainage Way feet Wetlands feet
Property Line feet Drinking Water Well 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	Cobbles & Stones			
0-6"	A	SANDY LOAM	10YR23/2								
6-12"	B	SANDY LOAM	10YR28/6						20		
12-18"	C1	SANDY LOAM	10YR27/2				25	20			
18-24"	C2	SANDY LOAM	10YR27/6	38	10YR28/2	25	20				

Additional Notes:

- NO REFUSAL



Commonwealth of Massachusetts
City/Town of Southborough

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 # 13

Not Observed inches

Obs. Hole # 14

Not Observed inches

40 inches

44 inches

 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: 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:

61 ¹/₂ inches

Lower boundary:

61 ¹/₂ ¹/₂ inches

c. If no, at what depth was impervious material observed?

Upper boundary:

 inches

Lower boundary:

 inches



Commonwealth of Massachusetts
City/Town of Southborough

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

F. Certification

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

Signature of Soil Evaluator

James Leterreault SE 2421

Typed or Printed Name of Soil Evaluator / License #

DENNIS COSTELLO

Name of Approving Authority Witness

8-24-2022

Date

JULY 2025

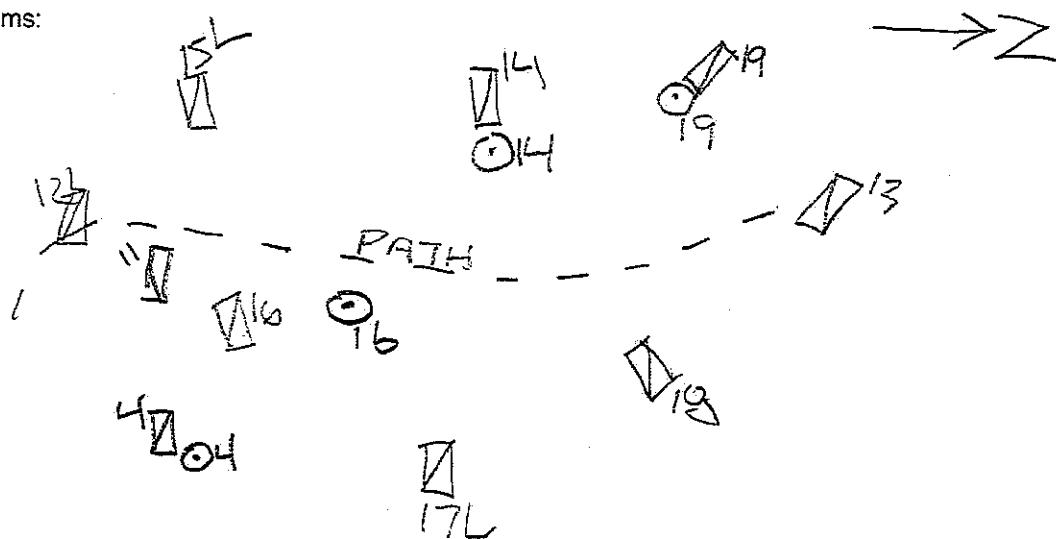
Expiration Date of License

SOUTHBOROUGH BLD

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:





Commonwealth of Massachusetts
City/Town of Southborough

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

A. Facility Information

FD 250 Turnpike, LLC

Owner Name

250 Turnpike Road

Street Address

Southborough

City

MA

State

27/002A

Map/Lot #

01772

Zip Code

B. Site Information

1. (Check one) New Construction Upgrade Repair

2. Soil Survey Available? Yes No

If yes:

Web soil survey
Source

310B
Soil Map Unit

58b
08-29-22

Woodbridge

Soil Name

severe

Soil Limitations

Till

Soil Parent material

uncertain

Landform

3. Surficial Geological Report Available? Yes No

If yes:

Year Published/Source

Map Unit

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:

Wetland Type

7. Current Water Resource Conditions (USGS): 08/24/22

Month/Day/ Year

Range: Above Normal

Normal

Below Normal

8. Other references reviewed:



**Commonwealth of Massachusetts
& City/Town of Southborough**

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: 15 Hole # _____ Date _____ Time _____ Weather _____ Latitude _____ Longitude _____

1. Land Use (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: _____

Figure 10. Position of the 1000 randomly generated trees on the landscape (SC, SH, BS, PS, TS).

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Wetlands _____ feet

Property Line _____ feet Drinking Water Well _____ 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

Additional Notes:



Commonwealth of Massachusetts
City/Town of Southborough

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: 11 Hole # 8-24-2021 Date 85° SUNNY Time Weather Latitude Longitude:

1. Land Use: WOODLAND Vegetation DECIDUOUS TREES Surface Stones (e.g., cobbles, stones, boulders, etc.) SOME STONES Slope (%) 25.57

Description of Location: SW CORNER OF SITE

2. Soil Parent Material: TIL Landform Position on Landscape (SU, SH, BS, FS, TS)

3. Distances from: Open Water Body feet Drainage Way feet Wetlands feet
Property Line feet Drinking Water Well 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	Cobbles & Stones			
0-5"	A	SANDY LOAM	10YR3/2								
5-25"	B	SANDY LOAM	10YR7/2						20		
25-40"	C1	SANDY LOAM	10YR7/2				25	20			
40-70"	C2	SANDY LOAM	10YR7/2	5-10	WHEAT	10	25	20			

Additional Notes:

— NO WEEPPING
— NO REFUSAL



Commonwealth of Massachusetts
City/Town of Southborough

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 # 15

_____ inches

VER 30 AT 3

Obs. Hole # 16

~~NOT OBSERVED~~ _____ inches

~~NOT OBSERVED~~ _____ inches

40 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: _____ 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: 5 inches Lower boundary: 78 inches

c. If no, at what depth was impervious material observed?

Upper boundary: inches Lower boundary: inches



Commonwealth of Massachusetts
City/Town of Southborough

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

F. Certification

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

Signature of Soil Evaluator

James TETREAULT SE 2421

Typed or Printed Name of Soil Evaluator / License #

DENNIS COSTELLO

Name of Approving Authority Witness

Date

Expiration Date of License

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:



Commonwealth of Massachusetts
City/Town of Southborough

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

A. Facility Information

FD 250 Turnpike, LLC

Owner Name

250 Turnpike Road

Street Address

Southborough

City

MA

State

27/002A

Map/Lot #

01772

Zip Code

B. Site Information

1. (Check one) New Construction Upgrade Repair

2. Soil Survey Available? Yes No If yes:

Web soil survey

Source

310B

Soil Map Unit 0 128-24-208

PLB/KS

Woodbridge

Soil Name

Till

Soil Parent material

3. Surficial Geological Report Available? Yes No

If yes:

Year Published/Source

Map Unit

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:

Wetland Type

7. Current Water Resource Conditions (USGS):

08/24/22

Month/Day/ Year

Range: Above Normal

Normal Below Normal

8. Other references reviewed:



**Commonwealth of Massachusetts
City/Town of Southborough**

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: 7L Date 8-24-2022 Time _____

1. Land Use (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:	Landform	Position on Landscape (SU, SH, BS, FS, TS)	
3. Distances from:	Open Water Body _____ feet	Drainage Way _____ feet	Wetlands _____ feet
	Property Line _____ feet	Drinking Water Well _____ feet	Other _____ feet
4. Unsuitable Materials Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No		
	If Yes: <input type="checkbox"/> Disturbed Soil <input type="checkbox"/> Fill Material <input type="checkbox"/> Weathered/Fractured Rock <input type="checkbox"/> Bedrock		
5. Groundwater Observed:	<input type="checkbox"/> Yes <input type="checkbox"/> No		
	If yes: _____ Depth Weeping from Pit		
	Depth Standing Water in Hole		

Soil Log

Additional Notes:



Commonwealth of Massachusetts
City/Town of Southborough

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: 18 Hole # 8-24-2022 Date 85° SUNNY Time Weather Latitude _____ Longitude _____

1. Land Use: WOODLAND (e.g., woodland, agricultural field, vacant lot, etc.) Vegetation DECIDUOUS TREES Surface Stones (e.g., cobbles, stones, boulders, etc.) SOME STONES Slope (%) 15

Description of Location: SW OF SITE

2. Soil Parent Material: TILL(?) Landform Position on Landscape (SU, SH, BS, FS, TS)

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Wetlands _____ feet
Property Line _____ feet Drinking Water Well _____ 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 Consistency (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-8"	A	SANDY LOAM	10YR 4/3/1								
8-25"	E	SANDY LOAM	10YR 7/6						20		
21-40"	C5	SANDY LOAM	10YR 2/7/2				25	20			
40-70"	C7	SANDY LOAM	10YR 7/6				5 to 10 mm	25	20		

Additional Notes:

- NO WEPPING

- NO REFLUX



Commonwealth of Massachusetts
City/Town of Southborough

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 # 17

_____ inches

Obs. Hole # 18

~~NOT OBSERVED~~ inches

~~NOT OBSERVED~~ inches

40 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: _____ 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: 8 inches Lower boundary: 62 inches

c. If no, at what depth was impervious material observed?

Upper boundary: _____ inches Lower boundary: _____ inches

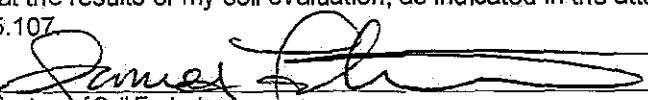


Commonwealth of Massachusetts
City/Town of Southborough

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

F. Certification

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

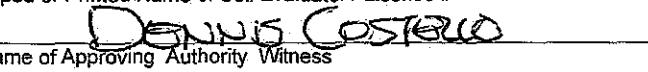

Signature of Soil Evaluator

8-24-2021

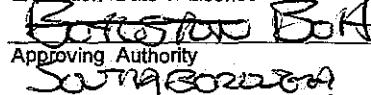

JAMES TETDRAFT SE 2421
Typed or Printed Name of Soil Evaluator / License #

Date

July 2025


DENNIS COSTRICO
Name of Approving Authority Witness

Expiration Date of License


BOSTON BOF
SMA 6022624
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 SKETCH IN LOE FOR DAS 13 & 14



Commonwealth of Massachusetts
City/Town of Southborough

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

A. Facility Information

FD 250 Turnpike, LLC

Owner Name

250 Turnpike Road

Street Address

Southborough

City

MA
State

27/002A

Map/Lot #

01772

Zip Code

B. Site Information

1. (Check one) New Construction Upgrade Repair

2. Soil Survey Available? Yes No If yes:

Web soil survey

Source

310B

Soil Map Unit

DH19

SN874-2022

Woodbridge

Soil Name

severe

Soil Limitations

Till

Soil Parent material

uncertain

Landform

3. Surficial Geological Report Available? Yes No

If yes:

Year Published/Source

Map Unit

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:

Wetland Type

7. Current Water Resource Conditions (USGS): 08/24/22

Month/Day/ Year

Range: Above Normal

Normal

Below Normal

8. Other references reviewed:



Commonwealth of Massachusetts
City/Town of Southborough

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: 19
Hole #

Date 8-24-2026 Time 12:30

Weather 35° SUNNY

Latitude

Longitude:

1. Land Use Woodland (e.g., woodland, agricultural field, vacant lot, etc.)

Vegetation DECIDUOUS TREES

Surface Stones (e.g., cobbles, stones, boulders, etc.) Some stones

Slope (%)

Description of Location: SW CORNER OF SITE

2. Soil Parent Material: TIL (P)

Landform UNCERTAIN

Position on Landscape (SU, SH, BS, FS, TS)

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Wetlands _____ feet

Property Line _____ feet Drinking Water Well _____ 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	Cobbles & Stones			
0-7	A	SANDY LOAM	10YR3/2								
7-14	B	SANDY LOAM	10YR5/6						20		
14-38	C1	SANDY LOAM	10Y27/2				20	20			
38-74	C2	SANDY LOAM	10Y10/2				54 mm sp.	20	20		

Additional Notes:

- NO REFUSAL



**Commonwealth of Massachusetts
City/Town of Southborough**

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: _____ **Hole #** _____ **Date** _____ **Time** _____ **Weather** _____ **Latitude** _____ **Longitude:** _____

1. Land Use: (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: _____	Landform	Position on Landscape (SU, SH, BS, FS, TS)	
3. Distances from: Open Water Body _____ feet	Drainage Way _____ feet	Wetlands _____ feet	
Property Line _____ feet	Drinking Water Well _____ feet	Other _____ feet	
4. Unsuitable Materials Present: <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes: <input type="checkbox"/> Disturbed Soil <input type="checkbox"/> Fill Material <input type="checkbox"/> Weathered/Fractured Rock <input type="checkbox"/> Bedrock			
5. Groundwater Observed: <input type="checkbox"/> Yes <input type="checkbox"/> No		If yes: _____ Depth Weeping from Pit	_____ Depth Standing Water in Hole

Soil Log

Additional Notes:



Commonwealth of Massachusetts
City/Town of Southborough

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 # 19

Not Obs. 20 inches

Obs. Hole # _____

_____ inches

Not Obs. 20 inches

_____ inches

38 inches

_____ inches

_____ 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: _____ 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)?

c. If no, at what depth was impervious material observed?

Upper boundary: 7 ^{1/2} inches Lower boundary: 74 ^{1/2} inches

Upper boundary: _____
inches

Lower boundary: _____
inches

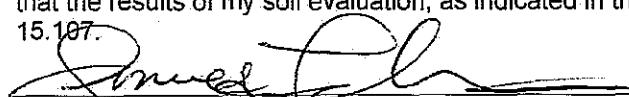


Commonwealth of Massachusetts
City/Town of Southborough

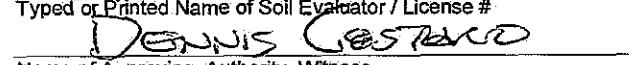
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

F. Certification

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


Signature of Soil Evaluator


JAMES T. GESTRARO
Typed or Printed Name of Soil Evaluator / License #

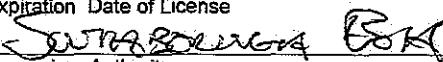

DENNIS GESTRARO
Name of Approving Authority Witness

8-24-2025

Date

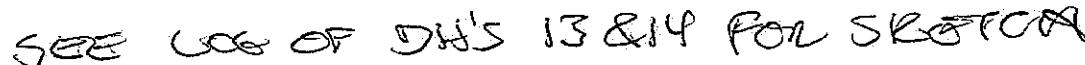
JUNE 2025

Expiration Date of License


SOUTHBOROUGH BOARD OF HEALTH
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:





Commonwealth of Massachusetts
City/Town of Southborough

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

A. Facility Information

FD 250 Turnpike, LLC

Owner Name

250 Turnpike Road

Street Address

Southborough

City

MA

State

27/002A

Map/Lot #

01772

Zip Code

B. Site Information

7-20-2023

DH2O

1. (Check one) New Construction Upgrade Repair

2. Soil Survey Available? Yes No

If yes:

Web soil survey

Source

310B

Soil Map Unit

Woodbridge

Soil Name

severe

Soil Limitations

Till

Soil Parent material

uncertain

Landform

3. Surficial Geological Report Available? Yes No

If yes:

Year Published/Source

Map Unit

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:

Wetland Type

7. Current Water Resource Conditions (USGS): 07/20/22

Month/Day/ Year

Range: Above Normal

Normal

Below Normal

8. Other references reviewed:



Commonwealth of Massachusetts
City/Town of Southborough

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: 20

Hole #

7-20-2023 11 A.M.

Date

Time

Weather

Latitude

Longitude:

1. Land Use NEXT TO PARKING (e.g., woodland, agricultural field, vacant lot, etc.) Vegetation GRASS Surface Stones (e.g., cobbles, stones, boulders, etc.) None Slope (%)

Description of Location: ON EAST SIDE OF LOWER PARKING

2. Soil Parent Material: UNCERTAIN Landform UNCERTAIN Position on Landscape (SU, SH, BS, FS, TS) UNCERTAIN

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Wetlands ~100 feet

Property Line 15-20' feet Drinking Water Well _____ 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	Cobbles & Stones			
0-3"	NEW A	SANDY LOAM	10YR3/2				-	-			
3"-6"	FILL										
60"-78"	B	SANDY LOAM	10YR7/6				-	-			
78"-126"	C	LOAMY SAND	10YR7/3				25	10			

Additional Notes:

- NO SIGNIFICANT MOTTLING
- SOME TEXTURE TEST CAME OUT AS "SAND"
- NO WEEPING



**Commonwealth of Massachusetts
City/Town of Southborough**

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:

Hole # Date Time Weather Latitude Longitude

1. Land Use: (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: _____	Landform	Position on Landscape (SU, SH, BS, FS, TS)	
3. Distances from: Open Water Body _____ feet	Drainage Way _____ feet	Wetlands _____ feet	
Property Line _____ feet	Drinking Water Well _____ feet	Other _____ feet	
4. Unsuitable Materials Present: <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes: <input type="checkbox"/> Disturbed Soil <input type="checkbox"/> Fill Material <input type="checkbox"/> Weathered/Fractured Rock <input type="checkbox"/> Bedrock			
5. Groundwater Observed: <input type="checkbox"/> Yes <input type="checkbox"/> No If yes: _____ Depth Weeping from Pit _____ Depth Standing Water in Hole			

Soil Log

Additional Notes:



Commonwealth of Massachusetts
City/Town of Southborough

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 # 20

Obs. Hole # _____

NOT OBSERVED inches

_____ inches

NOT OBSERVED inches

_____ inches

NOT OBSERVED 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: _____ 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: 60 "

Lower boundary: 126 "

c. If no, at what depth was impervious material observed?

Upper boundary: _____
inches

Lower boundary: _____
inches



Commonwealth of Massachusetts
City/Town of Southborough

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

F. Certification

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Signature of Soil Evaluator

Typed or Printed Name of Soil Evaluator / License #

SE 2421

7-20-2023

Date

JULY 2025

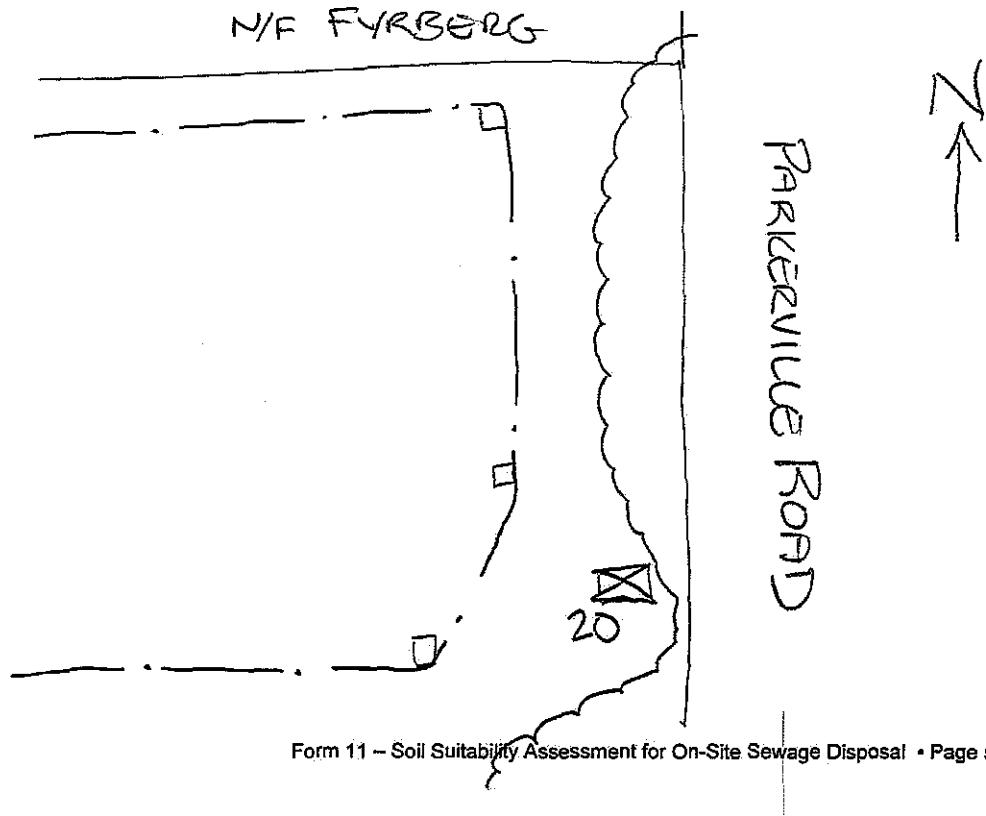
Expiration Date of License

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:





Commonwealth of Massachusetts
City/Town of Southborough

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

A. Facility Information

FD 250 Turnpike, LLC
Owner Name
250 Turnpike Road
Street Address
Southborough _____ MA _____
City Zip Code
27/002A
Map/Lot #
01772
Zip Code

B. Site Information

1. (Check one) New Construction Upgrade Repair DH 21 & 22
11-13-2023

2. Soil Survey Available? Yes No If yes: Web soil survey
Source 310B
Soil Map Unit

Woodbridge(near edge of mapped Canton)
Soil Name: severe
Till
Soil Parent material: uncertain
Landform

3. Surficial Geological Report Available? Yes No If yes: Year Published/Source Map Unit

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: Wetland Type

7. Current Water Resource Conditions (USGS): 11/13/23 Month/Day/ Year Range: Above Normal Normal Below Normal

8. Other references reviewed: _____



Commonwealth of Massachusetts
City/Town of Southborough

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: 21 Hole # 11-13-23 Date 9:40 Time 33° PTLY CLOUDY Weather Latitude Longitude
 1. Land Use WOODLAND Vegetation Some STONES Surface Stones (e.g., cobbles, stones, boulders, etc.)
 Description of Location: SOUTH OF EXISTING PARKING

2. Soil Parent Material: TILL UNCERTAIN UNCERTAIN
 Landform Position on Landscape (SU, SH, BS, FS, TS)
 3. Distances from: Open Water Body 120 feet Drainage Way ✓ feet Wetlands 50 feet
 Property Line 15' feet Drinking Water Well ✓ 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

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistency (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-30"	Fill	(moist) SAND						10			
30-60"	C1	Loamy SAND	10R 2/3				10	25			
60-80"	C2	Loamy SAND	10R 2/3				10/25 2/5 10/11	10 25			

Additional Notes:

- C1, C2 JUST SLIGHTLY BEYOND THE
SAND LOAM TEXTURE NOT ON THE SAND
SIDE OF THE RAVINE



Commonwealth of Massachusetts
City/Town of Southborough

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: 27 Hole #: 11-13-27 Date: 10-00 Time: 33° PTX Cloudy Weather: Latitude: Longitude:

1. Land Use: WOODLAND (e.g., woodland, agricultural field, vacant lot, etc.) Vegetation: Some Stubs Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%): 6%

Description of Location: West of WLFAG B16R

2. Soil Parent Material: TILL Landform: UNCERTAIN Position on Landscape (SU, SH, BS, FS, TS): UNCERTAIN

3. Distances from: Open Water Body ~55 feet Drainage Way — feet Wetlands 35 feet
Property Line 70' feet Drinking Water Well — 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 Consistency (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-6"	A _P	SAVY LOAM	10YR3/2								
6-30"	B	SAVY LOAM	10YR8/6								
30-42"	C ₁	LOAMY SAND	10YR7/3				10	25			
42-72"	C ₂	Loamy Sand	10YR2/7				25% wet	10	25		

Additional Notes:

— LOAMY SAND TEXTURE (BARELY) IN MULTIPLE
HAND TESTS



Commonwealth of Massachusetts
City/Town of Southborough

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 # 21

NOT 055 inches

Obs. Hole # 22

NOT 055 inches

NOT 035 inches

NOT 035 inches

66 inches

42 inches

 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: 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: 30" 6"
inches Lower boundary: 88" 72"
inches

c. If no, at what depth was impervious material observed?

Upper boundary: "
inches Lower boundary: "
inches



Commonwealth of Massachusetts
City/Town of Southborough

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

F. Certification

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

Signature of Soil Evaluator

JAMES T. TREACY

SG 2421

Typed or Printed Name of Soil Evaluator / License #

11/13/23

Date

JUN 75

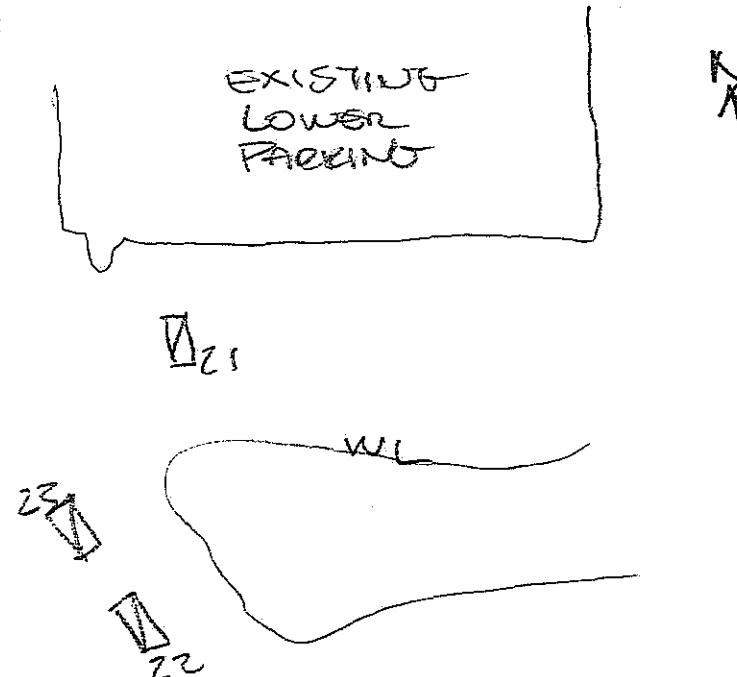
Expiration Date of License

Name of Approving Authority Witness

Approving Authority

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Field Diagrams: Use this area for field diagrams:





Commonwealth of Massachusetts
City/Town of Southborough

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

A. Facility Information

FD 250 Turnpike, LLC

Owner Name

250 Turnpike Road

Street Address

Southborough

City

MA

27/002A

Map/Lot #

01772

Zip Code

B. Site Information

1. (Check one) New Construction Upgrade Repair

2. Soil Survey Available? Yes No If yes:

Web soil survey

Source

310B

Soil Map Unit

OH 23
11/13/2023

Woodbridge(near edge of mapped Canton)

Soil Name

severe

Soil Limitations

Till

uncertain

Soil Parent material

Landform

3. Surficial Geological Report Available? Yes No

If yes:

Year Published/Source

Map Unit

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:

Wetland Type

7. Current Water Resource Conditions (USGS): 11/13/23 Range: Above Normal Normal Below Normal

Month/Day/ Year

8. Other references reviewed:



Commonwealth of Massachusetts
City/Town of Southborough

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: 23 Hole # 11/13/23 Date 10:10 Time Weather 33° PT. CLOUDY Latitude _____ Longitude _____

1. Land Use WOODLAND Vegetation DECIDUOUS TREES Surface Stones (e.g., cobbles, stones, boulders, etc.) SOME STONES Slope (%) _____

Description of Location: NEAR TOE OF SLOPE BOTH NORTH & SOUTH

2. Soil Parent Material: TILL Landform UNCERTAIN Position on Landscape (SU, SH, BS, FS, TS) UNCERTAIN

3. Distances from: Open Water Body 60' feet Drainage Way _____ feet Wetlands 40 feet
Property Line 80' feet Drinking Water Well _____ 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 Consistency (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-6"	A _p	SANDY LOAM	10/4R27/2								
6"-28"	B	SANDY LOAM	10/4R27/6								
28"-40"	C ₁	LOAMY SAND	10/4R27/3				10	20			
40"-74"	C ₂	LOAMY SAND	10/4R27/3				>5%	10	20		

Additional Notes:

VERY SIMILAR TO DH22



Commonwealth of Massachusetts
City/Town of Southborough

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:

Hole # Date Time Weather Latitude Longitude:

1. Land Use: (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:	Landform	Position on Landscape (SU, SH, BS, FS, TS)	
3. Distances from:	Open Water Body _____ feet	Drainage Way _____ feet	Wetlands _____ feet
	Property Line _____ feet	Drinking Water Well _____ feet	Other _____ feet
4. Unsuitable Materials Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No		
	If Yes: <input type="checkbox"/> Disturbed Soil <input type="checkbox"/> Fill Material <input type="checkbox"/> Weathered/Fractured Rock <input type="checkbox"/> Bedrock		
5. Groundwater Observed:	<input type="checkbox"/> Yes <input type="checkbox"/> No		
	If yes: _____ Depth Weeping from Pit _____ Depth Standing Water in Hole		

Soil Loc

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 # 23

NOT OBSERVED inches

40' inches

Obs. Hole # _____

_____ inches

_____ 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: _____ 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: 6 inches

Lower boundary: 74 inches

c. If no, at what depth was impervious material observed?

Upper boundary: 6 inches

Lower boundary: 74 inches

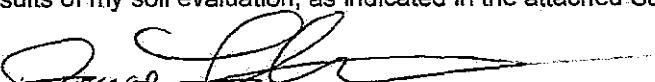


Commonwealth of Massachusetts
City/Town of Southborough

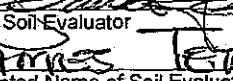
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

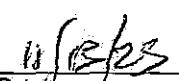
F. Certification

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


Signature of Soil-Evaluator

James T. Treadwell S02421
Typed or Printed Name of Soil Evaluator / License #


Date


July 25
Expiration Date of License

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:





Commonwealth of Massachusetts
City/Town of Southborough

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

A. Facility Information

FD 250 Turnpike, LLC

Owner Name

250 Turnpike Road

Street Address

Southborough

MA

City

27/002A

Map/Lot #

01772

Zip Code

B. Site Information

1. (Check one) New Construction Upgrade Repair

2. Soil Survey Available? Yes No

If yes:

Web soil survey

Source

310B

Soil Map Unit

Woodbridge(near edge of mapped Canton)

Soil Name

Till

Soil Parent material

severe

Soil Limitations

uncertain

Landform

3. Surficial Geological Report Available? Yes No

If yes:

Year Published/Source

Map Unit

Description of Geologic Map Unit:

4. Flood Rate Insurance Map Within a regulatory floodway? Yes No

5. Within a velocity zone? Yes No

If yes, MassGIS Wetland Data Layer:

6. Within a Mapped Wetland Area? Yes No

Wetland Type

7. Current Water Resource Conditions (USGS):

12/3/24
Month/Day/ Year

Range: Above Normal

Normal

Below Normal

8. Other references reviewed:

DH 24
12-10-24



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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: 24 Hole # 12-10-2024 Date 11:45 Time 33° OVERCAST Weather Latitude A FEW SHADS Surface Stones (e.g., cobbles, stones, boulders, etc.) Longitude ~10% Slope (%)

1. Land Use (e.g., woodland, agricultural field, vacant lot, etc.) WOODLAND Vegetation

Description of Location: 55' SOUTH OF W.L. FLAG 25

2. Soil Parent Material: TILL Landform UNCERTAIN Position on Landscape (SU, SH, BS, FS, TS) UNCERTAIN

3. Distances from: Open Water Body 55' feet Drainage Way — feet Wetlands 55 feet
Property Line 55' feet Drinking Water Well — 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 Consistency (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-9"	A	SANDY LOAM	10YR3/2								
9-29"	B	SANDY LOAM	10YR8/4								
29-49"	C1	SANDY LOAM	10YR7/3				15	15			
42-60"	C2	SANDY LOAM	10YR7/3			>5% (10YR7/2)	15	15			

Additional Notes:

— NO REFUSAL

— MOTTLING WAS SOMEWHAT FAINT
— SOME AREAS OF THE DR. HAD
LOAMY SAND TEXTURE



**Commonwealth of Massachusetts
+ City/Town of Southborough**

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:

Hole # Date Time Weather Latitude Longitude:

1. Land Use: (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: _____ Landform: _____ Position on Landscape (SU, SH, BS, ES, TS): _____

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Wetlands _____ feet
Property Line _____ feet Drinking Water Well _____ 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

Additional Notes:



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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 # 24

~~NOT OBSERVED~~ inches

Obs. Hole # _____

_____ inches

~~NOT OBSERVED~~ inches

_____ inches

42 inches

_____ inches

_____ 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: _____ 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)?

c. If no, at what depth was impervious material observed?

Upper boundary: _____ inches Lower boundary: _____ inches

Upper boundary: _____ inches Lower boundary: _____ inches

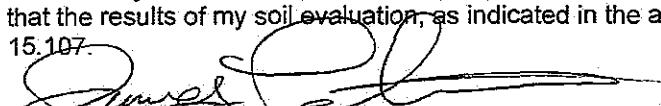


Commonwealth of Massachusetts
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Signature of Soil Evaluator

JAMES TEREAULT SE 2421
Typed or Printed Name of Soil Evaluator / License #

Name of Approving Authority Witness

12-10-2024
Date

JULY 2025
Expiration Date of License

Approving Authority

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Field Diagrams: Use this area for field diagrams:

