



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

| | Date | Time | Date | Time |
|--------------------|---------|------|----------|------|
| Observation Hole # | 3-16-22 | 1 | 3-16-22 | 4 |
| Depth of Perc | 38 | | 41" | |
| Start Pre-Soak | 9:23 | | 9:50 | |
| End Pre-Soak | | | | |
| Time at 12" | 9:38 | | 10:05 | |
| Time at 9" | 10:07 | | 10:19 | |
| Time at 6" | 10:50 | | 10:32 | |
| Time (9"-6") | 50 | | 13 | |
| Rate (Min./Inch) | 17 min | | 5 min/in | |

Test Passed:



Test Failed:



Test Passed:



Test Failed:



Test Performed By:

JAMES TETREAU

Board of Health Witness

DENNIS COSTELLO

Comments:



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

| | <u>8-24-2002</u> Date | Time | <u>8-24-2002</u> Date | Time |
|--------------------|--|------|--|------|
| Observation Hole # | 14 | | 19 | |
| Depth of Perc | 48" | | 50" | |
| Start Pre-Soak | 9:38 | | 10:45 | |
| End Pre-Soak | 9:53 | | 11:00 | |
| Time at 12" | 9:53 | | 11:00 | |
| Time at 9" | 10:04 | | 11:39 | |
| Time at 6" | 10:17 | | 12:39 | |
| Time (9"-6") | 13 MINUTES | | 60 MINUTES | |
| Rate (Min./Inch) | 5 MIN/IN | | 20 MIN/IN | |
| | Test Passed: <input checked="" type="checkbox"/> | | Test Passed: <input checked="" type="checkbox"/> | |
| | Test Failed: <input type="checkbox"/> | | Test Failed: <input type="checkbox"/> | |

Test Performed By:

Board of Health Witness

Comments:



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

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)

8-24-2007

Date

Time

Date

Time

16

413"

11:04

11:19

11:19

11:31

11:48

17 MINUTES

6

Test Passed: ☒

Test Failed: ☐

Test Passed: ☐

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

DH'S 1&2
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:

7. Current Water Resource Conditions (USGS):

03/15/21

Month/Day/ Year

Range: ☐ Above Normal

Wetland Type

☒ 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 # 3-16-17 Date 9:30 Time 44° cloudy Weather Latitude Longitude: 210 Slope (%)

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

Description of Location: BEHIND #125

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

3. Distances from: Open Water Body 2140 feet Drainage Way feet Wetlands 2110 feet
Property Line 235 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 Consistence (Moist) | Other |
|------------|---------------------|---------------------|------------------------------------|------------------------|-------|----------------|------------------------------|------------------|----------------|--------------------------|-------|
| | | | | Depth | Color | Percent | Gravel | Cobbles & Stones | | | |
| 0-6" | A _p | SANDY LOAM | 10YR 3/2 | | | | | | | | |
| 6-26" | B | SANDY LOAM | 10YR 8/6 | | | | | | | | |
| 26-46" | C1 | SANDY LOAM | 10YR 7/5 | | | | 20 | 10 | | | |
| 46-76" | C2 | SANDY LOAM | 10YR 7/3 | | | 5% 10YR 2/6 | 20 | 10 | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Additional Notes:

- C SOILS WERE NEARLY LOAMY SAND TEXTURE
- NO RESERUAL



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 3-16-22 9:40 44° 11' 00" N
Hole # Date Time Weather Latitude Longitude

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

Description of Location: BEHIND ABUTTER PALMER

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 | | | Coarse Fragments % by Volume | | Soil Structure | Soil Consistence (Moist) | Other |
|------------|---------------------|---------------------|------------------------------------|------------------------|-------|---------|------------------------------|------------------|----------------|--------------------------|-------|
| | | | | Depth | Color | Percent | Gravel | Cobbles & Stones | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

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 # 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 absorption system?

☒ Yes

☒ No

YES AT #1
NO AT #2

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

Upper boundary:

6'
inches

Lower boundary:

76"
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

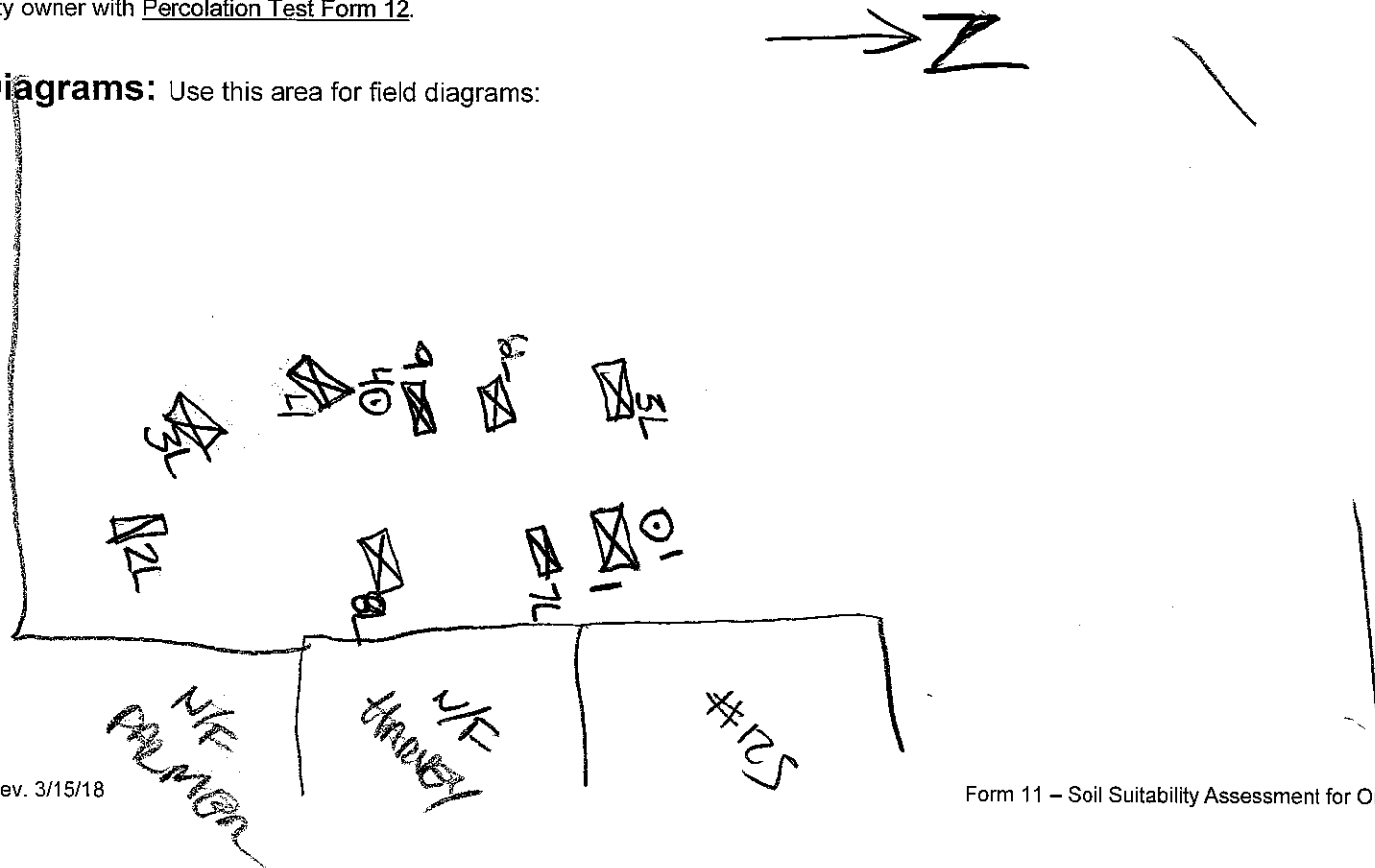
Date

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:





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:

7. Current Water Resource Conditions (USGS):

03/15/21
Month/Day/ Year

Range: ☐ Above Normal

Wetland Type

☒ Normal ☐ Below Normal

8. Other references reviewed:



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

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

Deep Observation Hole Number: 3 Hole # 3-16-22 Date 9.50 Time 44° Weather cloudy Latitude 71° Longitude: 2.10 Slope (%)

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

Description of Location: NW OF DH 2

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: ☒ 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 | | | |
| - | LEDGE | AT 3' | | | | | | | | | |
| - | SOIL TEXTURE | LIKE DH 1 | | | | | | | | | |
| - | REFUSAL | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Additional Notes:



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

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

Deep Observation Hole Number: 4 Hole # 3-16-22 Date 45° cloudy Weather
Latitude Longitude: 210 Slope (%)
1. Land Use: WOODLAND (e.g., woodland, agricultural field, vacant lot, etc.) DECIDUOUS TREES Vegetation SOME STONES Surface Stones (e.g., cobbles, stones, boulders, etc.)

Description of Location: BEHIND HARBOR, SW OF D#1

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

3. Distances from: Open Water Body 7240' feet Drainage Way feet Wetlands 7200' feet
Property Line 2110' 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 _p | SANDY LOAM | 10YR5/2 | | | | | | | | |
| 6-24" | B | SANDY LOAM | 10YR5/2 | | | | | | | | |
| 24-46" | C ₁ | SANDY LOAM | 10YR5/2 | | | | 20 | 10 | | | |
| 46"-78" | C ₂ | SANDY LOAM | 10YR5/2 | | | >5% white | 20 | 10 | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Additional Notes:

— SOIL TEXTURE WAS SANDY LOAM IN SOME AREAS
— NO REFUSIT



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 # <u>3</u> | Obs. Hole # <u>4</u> |
|----------------------|----------------------------|
| <u>N/A</u> inches | <u>NOT OBSERVED</u> inches |
| <u>N/A</u> inches | <u>NOT OBSERVED</u> inches |
| <u>N/A</u> inches | <u>46"</u> 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:

78"
inches

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

Upper boundary:

_____ inches

Lower boundary:

_____ inches



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

F. Certification

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

Signature of Soil Evaluator [Signature]
Typed or Printed Name of Soil Evaluator / License # DANIEL TIRONE 302421
Name of Approving Authority Witness DENNIS COSTELLO

Date 3/16/21
Expiration Date of License May 2021
Approving Authority SOUTHBOROUGH BOD

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 LOG OF DA 182 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:

7. Current Water Resource Conditions (USGS):

03/15/21

Month/Day/ Year

Range: ☐ Above Normal

Wetland Type

☒ 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 Date 3-16-22 Time 10:15 Weather 48° overcast Latitude 42° 10' Longitude 71° 10'

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

Description of Location: WEST OF D#1

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 | | | |
| - | LEDBB | AT | 4 | | | | | | | | |
| | SOIL | VERY | MUCH LIKE D#1 | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Additional Notes:



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

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

Deep Observation Hole Number: 6 Hole # 3-16-22 Date 10:30 Time 48° Weather 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.) _____ Slope (%) _____

Description of Location: ~ 100' WEST OF ROAD

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

| 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 4' | | | | | | | | | | |
| - | SOILS VERY MUCH LIKE DA 1 | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

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 # 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 absorption system?

☐ 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 [Signature]
Typed or Printed Name of Soil Evaluator / License # JAMES TREACER SE 2121
Name of Approving Authority Witness DAVID COSTELLO

Date 3/16/22
Expiration Date of License JUL 2022
Approving Authority SOUTHBOROUGH BOW

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

DH's 788
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:

7. Current Water Resource Conditions (USGS):

03/15/21

Month/Day/ Year

Range: ☐ Above Normal

Wetland Type

☒ Normal

☐ Below Normal

8. Other references reviewed:



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

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

Deep Observation Hole Number: 7 Hole # 3-16-02 Date 10:50 Time 45° cloudy 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: BETWEEN #6 AND HARDEN

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 | | | Coarse Fragments % by Volume | | Soil Structure | Soil Consistence (Moist) | Other |
|---------------|---------------------|---------------------|------------------------------------|------------------------|-------|---------|------------------------------|------------------|----------------|--------------------------|-------|
| | | | | Depth | Color | Percent | Gravel | Cobbles & Stones | | | |
| - LEDGE AT 3' | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Additional Notes:



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

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

Deep Observation Hole Number: 8 3-16-22 11:10 45° cloudy
Hole # Date Time Weather Latitude Longitude

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

Description of Location: 50' OFF HAINES (PROPERTY)

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 | | | Coarse Fragments % by Volume | | Soil Structure | Soil Consistence (Moist) | Other |
|------------|---------------------|---------------------|------------------------------------|------------------------|-------|---------|------------------------------|------------------|----------------|--------------------------|-------|
| | | | | Depth | Color | Percent | Gravel | Cobbles & Stones | | | |
| — | LEDGE | | AT 3' | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

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 # 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)?

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 [Signature]
Typed or Printed Name of Soil Evaluator / License # JAMES BENEAU SE 2421
Name of Approving Authority Witness DENNIS COSTELLO

Date 3/16/22
Expiration Date of License July 2024
Approving Authority SOUTH BORO TOWN BOARD

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:

SEB DH1



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

DA 9
3/16/2008

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:

7. Current Water Resource Conditions (USGS):

03/15/21

Month/Day/ Year

Range: ☐ Above Normal

Wetland Type

☒ Normal

☐ Below Normal

8. Other references reviewed:



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

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

Deep Observation Hole Number: 9

Hole #

Date 3/16/22

Time 11:30

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.)

Slope (%)

Description of Location: WEST OF #8

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

| 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' | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Additional Notes:



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

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

Deep Observation Hole Number: _____

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: ☐ 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 | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

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 # 7
N/A inches
N/A inches
N/A inches
_____ inches

Obs. Hole # _____
_____ 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)?

Upper boundary: _____ inches Lower boundary: _____ inches

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

Upper boundary: _____ inches Lower boundary: _____ inches



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

F. Certification

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

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 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

2. Soil Survey Available? ☒ Yes ☐ No If yes:

Web soil survey
Source

310B

Soil Map Unit 13814
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
(e.g., woodland, agricultural field, vacant lot, etc.)

DECIDUOUS TREES
Vegetation

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

23
Slope (%)

Description of Location:

SW CORNER OF SITE

2. Soil Parent Material:

TIL (P)

UNCERTAIN
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 | 10YR3/6 | | | | | | | | |
| 6-21" | B | SANDY LOAM | 10YR8/6 | | | | | 40 | | | |
| 21-40" | C1 | SANDY LOAM | 10YR7/4 | | | | 25 | 20 | | | |
| 40-61" | C2 | SANDY LOAM | 10YR7/4 | | | 5% 10YR8/6 | 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 8-24-2022 80° SUNNY
 Hole # Date Time Weather Latitude Longitude:
 1. Land Use: WOODLAND DECIDUOUS TREES SOME STONES
 (e.g., woodland, agricultural field, vacant lot, etc.) Vegetation Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%)

Description of Location: S.W. 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 | 10YR 2.3/2 | | | | | | | | |
| 6"-20" | B | SANDY LOAM | 10YR 2.8/6 | | | | | 20 | | | |
| 20"-44" | C1 | SANDY LOAM | 10YR 2.7/2 | | | | 25 | 20 | | | |
| 44"-68" | C2 | SANDY LOAM | 10YR 2.7/1 | | | 5YR 2.8/1 | 25 | 20 | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Additional Notes:

- NO REFUSAL



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

Obs. Hole # 13

~~Not Observed~~ inches

Obs. Hole # 14

~~Not Observed~~ inches

☐ Depth weeping from side of observation hole

~~Not Observed~~ inches

~~Not Observed~~ inches

☒ Depth to soil redoximorphic features (mottles)

40 inches

44 inches

☐ Depth to adjusted seasonal high groundwater (S_h)
(USGS methodology)

_____ 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" 6"
inches

Lower boundary:

61" 68"
inches

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

Upper boundary:

_____ inches

Lower boundary:

_____ inches

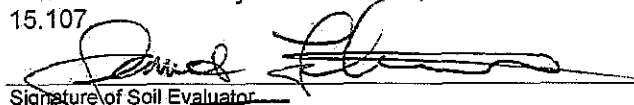


Commonwealth of Massachusetts
City/Town of Southborough

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 LETREMAULT SE2421

Typed or Printed Name of Soil Evaluator / License #

DENNIS COSTELLO

Name of Approving Authority Witness

8-24-2022

Date

JULY 2025

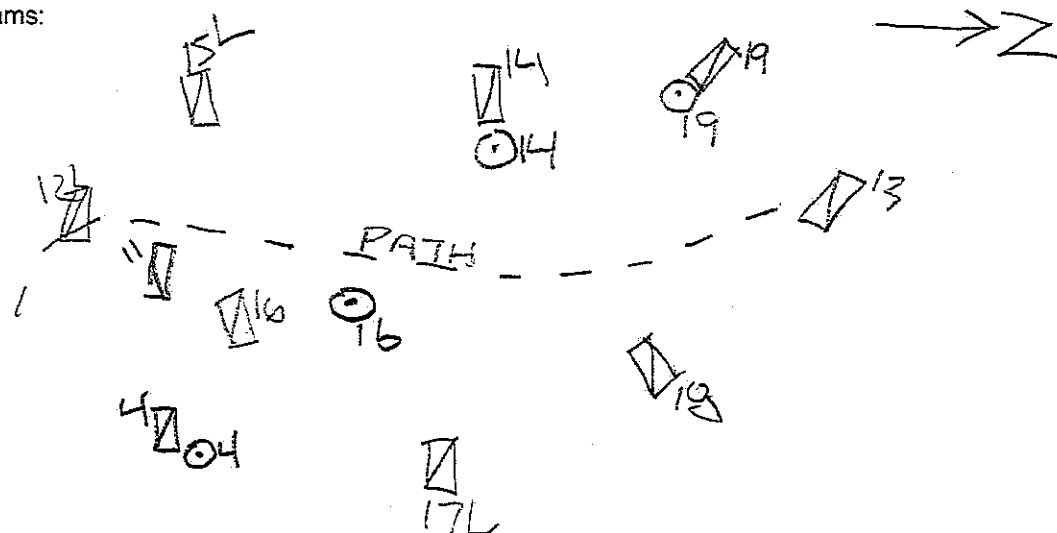
Expiration Date of License

SOUTHBOROUGH BOK

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

5186
028-29-22

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:



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: 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 | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

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: 112

Hole #

Date 8-24-2021

Time

Weather 85° Sunny

Latitude

Longitude:

1. Land Use:

WOODLAND
(e.g., woodland, agricultural field, vacant lot, etc.)

DECIDUOUS TREES
Vegetation

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

25%
Slope (%)

Description of Location:

SW CORNER OF 575
TILL?

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 | | | 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 | 10YR7/6 | | | | | 20 | | | |
| 25-40" | C1 | SANDY LOAM | 10YR7/2 | | | | 25 | 20 | | | |
| 40-78" | C2 | SANDY LOAM | 10YR7/2 | | | 5% 10YR9/1 | 25 | 20 | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Additional Notes:

— NO WEEDING
— NO REFUSAL



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

LESS AT 3'

_____ inches

_____ inches

_____ inches

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:

_____ inches

Lower boundary:

_____ inches

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

Upper boundary:

_____ inches

Lower boundary:

_____ inches

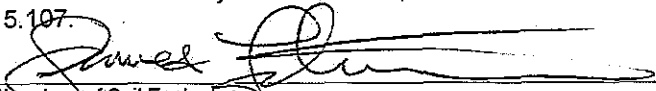


Commonwealth of Massachusetts
City/Town of Southborough

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
JAMES LETREAU 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
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 LOG OF DWS 13 & 14 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 0 178-24208

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:

7. Current Water Resource Conditions (USGS):

08/24/22

Month/Day/ Year

Range: ☐ Above Normal

Wetland Type

☐ 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: 17L

Hole #

Date 8-24-2022

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: ☐ 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 | | | |
| | | | | | | 3 | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

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 # 8-24-1002 Date 85° SUNNY Weather Latitude Longitude: NE
1. Land Use: WOODLAND (e.g., woodland, agricultural field, vacant lot, etc.) DECIDUOUS TREES Vegetation SOME STONES Surface Stones (e.g., cobbles, stones, boulders, etc.) NE Slope(%)

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 Consistence (Moist) | Other |
|------------|---------------------|---------------------|------------------------------------|------------------------|-------|----------------|------------------------------|------------------|----------------|--------------------------|-------|
| | | | | Depth | Color | Percent | Gravel | Cobbles & Stones | | | |
| 0-8" | A | SANDY LOAM | 10YR 3/2 | | | | | | | | |
| 8"-21" | B | SANDY LOAM | 10YR 7/6 | | | | | 20 | | | |
| 21"-40" | C1 | SANDY LOAM | 10YR 7/7 | | | | 25 | 20 | | | |
| 40"-70" | C2 | SANDY LOAM | 10YR 7/7 | | | 5% d. w. m. d. | 25 | 20 | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Additional Notes:

- NO WEEDING
- NO REFUSAL



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

_____ inches

NOT OBSERVED inches

_____ inches

40" 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:

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

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

DENNIS COSTELLO
Name of Approving Authority Witness

8-24-2011
Date

JULY 2005
Expiration Date of License

Southborough BOD
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 LOG FOR DMS 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
048-24-202

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 # 8-24-2026 Date 12:30 Time 85° SUNNY Weather Latitude Longitude: 25 Slope (%)

1. Land Use WOODLAND (e.g., woodland, agricultural field, vacant lot, etc.) DECIDUOUS TREES Vegetation SOME STONES Surface Stones (e.g., cobbles, stones, boulders, etc.)
Description of Location: SW CORNER OF SITE

2. Soil Parent Material: TILL (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 | 10YR 3/2 | | | | | | | | |
| 7"-24" | B | SANDY LOAM | 10YR 3/6 | | | | | 20 | | | |
| 24"-38" | C1 | SANDY LOAM | 10YR 2.7/2 | | | | 20 | 20 | | | |
| 38"-74" | C2 | SANDY LOAM | 12YR 10/2 | | | 5% Mn 2F | 20 | 20 | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Additional Notes:

- NO REFUSAL



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: ☐ 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 | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

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

Obs. Hole # 19

Obs. Hole # _____

Not Observed

_____ inches

☒ Depth weeping from side of observation hole

Not Observed

_____ inches

☒ Depth to soil redoximorphic features (mottles)

38" inches

_____ inches

☐ Depth to adjusted seasonal high groundwater (S_h)
(USGS methodology)

_____ 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:

7"
inches

Lower boundary:

74"
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 E. DEBAULT SE 2421
Typed or Printed Name of Soil Evaluator / License #

DENNIS COSTARO
Name of Approving Authority Witness

8-24-2024
Date

JUNE 2025
Expiration Date of License

SOUTHBOROUGH BOR
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 LOG OF DW'S 13 & 14 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):

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 7-20-2023 11 A.M.
Hole # Date Time Weather Latitude Longitude:
1. Land Use NEXT TO PARKING GRASS NONE
(e.g., woodland, agricultural field, vacant lot, etc.) Vegetation Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%)
Description of Location: ON EAST SIDE OF LOWER PARKING
2. Soil Parent Material: UNCERTAIN UNCERTAIN UNCERTAIN
Landform Position on Landscape (SU, SH, BS, FS, TS)
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 | 10YR2.5/2 | | | | — | — | | | |
| 3"-60" | FILL | | | | | | | | | | |
| 60"-78" | B | SANDY LOAM | 10YR2.7/6 | | | | — | — | | | |
| 78"-126" | C | LOAMY SAND | 10YR2.7/3 | | | | 25 | 10 | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Additional Notes:

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



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: ☐ 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 | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Additional Notes: _____



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

D. Determination of High Groundwater Elevation

1. Method Used:

- | | | |
|--|---|-----------------------------------|
| <input checked="" type="checkbox"/> Depth observed standing water in observation hole | Obs. Hole # <u>20</u> <u>NOT OBSERVED</u> inches | Obs. Hole # _____ _____ inches |
| <input checked="" type="checkbox"/> Depth weeping from side of observation hole | <u>NOT OBSERVED</u> inches | _____ inches |
| <input checked="" type="checkbox"/> Depth to soil redoximorphic features (mottles) | <u>NOT OBSERVED</u> inches | _____ inches |
| <input type="checkbox"/> Depth to adjusted seasonal high groundwater (S_h) (USGS methodology) | _____ 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"
inches

Lower boundary:

126"
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 Tetraault
JAMES TETRAULT

Typed or Printed Name of Soil Evaluator / License #

SE 2421

Date

7-20-2023

Expiration Date of License

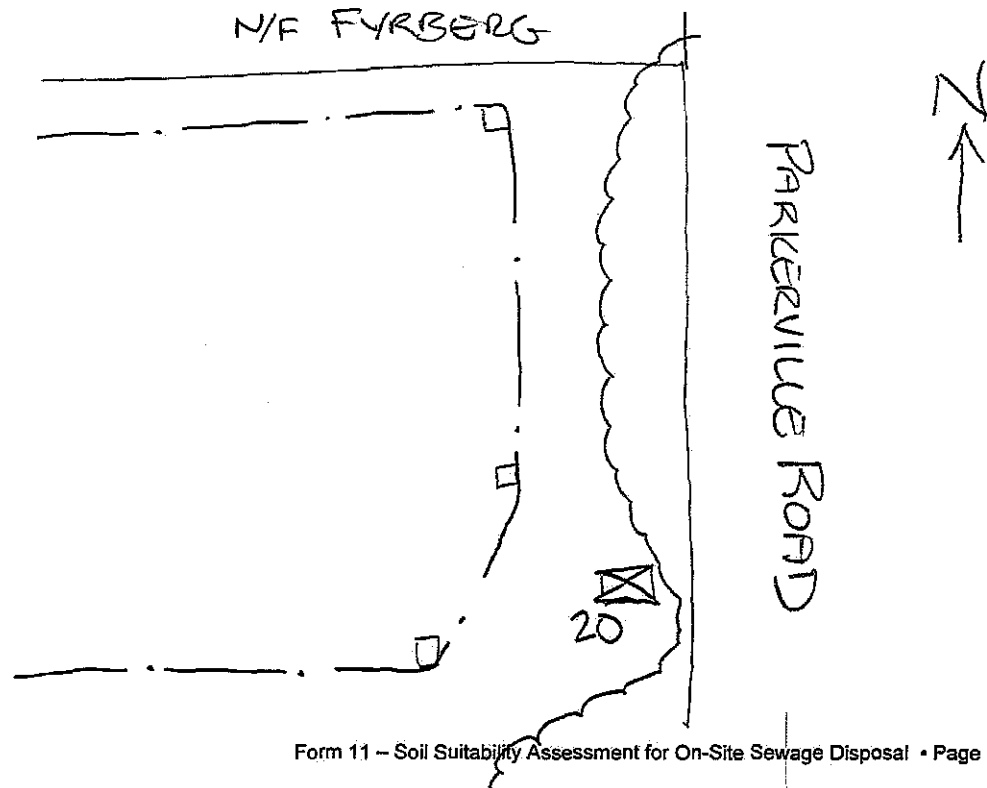
JULY 2025

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:





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

DH 21822
11-13-2023

Woodbridge(near edge of mapped Canton)

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):

11/13/23

Month/Day/ Year

Range: ☐ Above Normal

☒ Normal

☐ Below Normal

8. Other references reviewed:



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

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

Deep Observation Hole Number: 21 Hole # 11-13-23 Date 9:40 Time 33° PTLY CLOUDY Weather 61° Latitude 61° Longitude

1. Land Use WOODLAND (e.g., woodland, agricultural field, vacant lot, etc.) Vegetation SOME STONES Surface Stones (e.g., cobbles, stones, boulders, etc.) Slope (%) 6/10

Description of Location: SOUTH OF EXISTING PARKING

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

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

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 | | | |
| 0-30" | FILL | (MOSTLY SAND) | | | | | | 10 | | | |
| 30"-46" | C1 | LOAMY SAND | 10YR 7/3 | | | | 10 | 25 | | | |
| 46"-88" | C2 | LOAMY SAND | 10YR 7/3 | | | 10YR 7/6 | 10 | 25 | | | |
| | | | | | | 10YR 7/1 | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Additional Notes:

- C1, C2 JUST SLIGHTLY BETTER THAN SANDY LOAM TEXTURE NOT ON THE SAND SIDE OF THE RAISE



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: 22 Hole # 11-13-23 Date 10:00 Time 33° PM Weather Cloudy Latitude 67° Longitude 67°

1. Land Use: WOODLAND (e.g., woodland, agricultural field, vacant lot, etc.) Vegetation SOME STUBS Surface Stones (e.g., cobbles, stones, boulders, etc.) 67° Slope (%)

Description of Location: WEST OF WLFAS BIR

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 Consistence (Moist) | Other |
|------------|---------------------|---------------------|------------------------------------|------------------------|-------|----------|------------------------------|------------------|----------------|--------------------------|-------|
| | | | | Depth | Color | Percent | Gravel | Cobbles & Stones | | | |
| 0-6" | AP | SANDY LOAM | 10YR2/2 | | | | | | | | |
| 6"-30" | B | SANDY LOAM | 10YR2/6 | | | | | | | | |
| 30"-42" | C1 | LOAMY SAND | 10YR2/3 | | | | 10 | 25 | | | |
| 42"-72" | C2 | LOAMY SAND | 10YR2/3 | | | 25% mung | 10 | 25 | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Additional Notes:

— LOAMY SAND TEXTURE (BARELY) IN MULTIPLE HAND TESTS



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 OBS~~ inches

~~NOT OBS~~ inches

66^R inches

_____ inches

Obs. Hole # 22

~~NOT OBS~~ inches

~~NOT OBS~~ inches

42^R 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^R 6^R
inches

Lower boundary:

88^R 72^R
inches

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

Upper boundary:

_____ inches

Lower boundary:

_____ inches

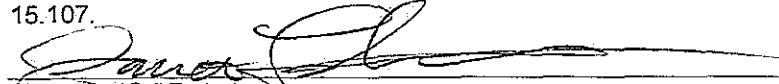


Commonwealth of Massachusetts
City/Town of Southborough

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

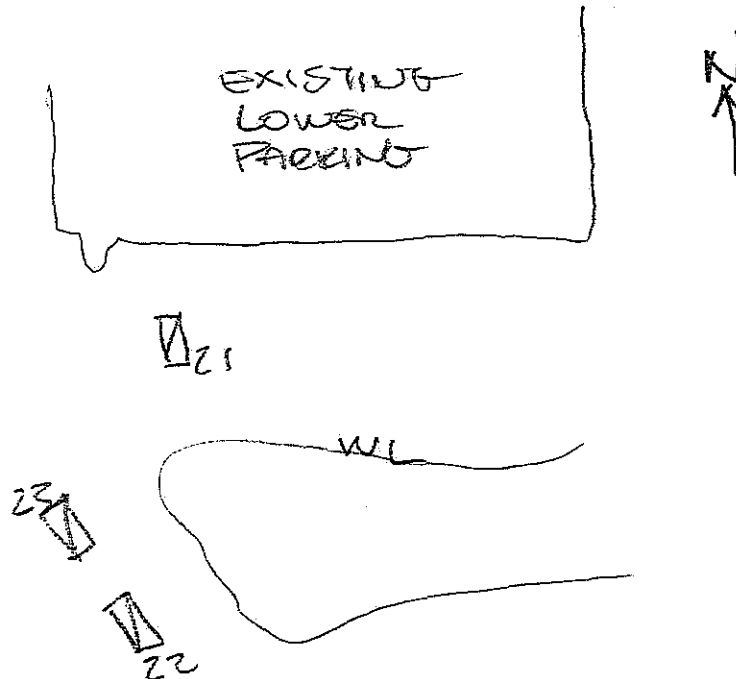
11/13/23
Date
JUN 25
Expiration Date of License

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:





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(near edge of mapped Canton)

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):

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: 23

Hole #

Date

11/13/23

Time

10:10

Weather

33° PTC CLOUDY

Latitude

Longitude:

1. Land Use

WOODLAND
(e.g., woodland, agricultural field, vacant lot, etc.)

DECIDUOUS TREES
Vegetation

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

Slope (%)

Description of Location:

NEAR TOE OF SLOPE BOTH NORTH & SOUTH

2. Soil Parent Material:

TILL

UNCERTAIN
Landform

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

3. Distances from:

Open Water Body

60' feet

Drainage Way

2 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 Consistence (Moist) | Other |
|------------|----------------------|---------------------|------------------------------------|------------------------|-------|----------|------------------------------|------------------|----------------|--------------------------|-------|
| | | | | Depth | Color | Percent | Gravel | Cobbles & Stones | | | |
| 0-6" | Ap | SANDY LOAM | 10YR 2/2 | | | | | | | | |
| 6"-28" | B | SANDY LOAM | 10YR 7/6 | | | | | | | | |
| 28"-40" | C1 | LOAMY SAND | 10YR 7/3 | | | | 10 | 20 | | | |
| 40"-74" | C2 | LOAMY SAND | 10YR 7/3 | | | 75% MUCK | 10 | 20 | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Additional Notes:

VERY SIMILAR TO DH22



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: ☐ 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 | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

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

Obs. Hole # 23

Obs. Hole # _____

NT OBSERVED inches

_____ inches

☒ Depth weeping from side of observation hole

NT OBSERVED inches

_____ inches

☒ Depth to soil redoximorphic features (mottles)

40" inches

_____ inches

☐ Depth to adjusted seasonal high groundwater (S_h)
(USGS methodology)

_____ 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:

_____ 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 LOG FOR OH'S 21 & 22



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(near edge of mapped Canton)

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):

12/3/24

Month/Day/ Year

Range: ☐ Above Normal

☒ Normal

☐ Below Normal

8. Other references reviewed:



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

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

Deep Observation Hole Number: 24

Hole #

Date 12-10-2024

Time 1:45

Weather 33° OVERCAST

Latitude

Longitude

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

Vegetation

Surface Stones (e.g., cobbles, stones, boulders, etc.) A FEW STONES

Slope (%) ~10%

Description of Location: 55 SOUTH OF WL FLAG 25

2. Soil Parent Material: TILL

UNCERTAIN

Landform

UNCERTAIN

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

3. Distances from:

Open Water Body _____ feet

Drainage Way _____ feet

Wetlands SS feet

Property Line SS 79 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 | | | |
| 0-9" | A | SANDY LOAM | 10YR3/2 | | | | | | | | |
| 9-29" | B | SANDY LOAM | 10YR5/4 | | | | | | | | |
| 29-42" | C1 | SANDY LOAM | 10YR7/3 | | | | 15 | 15 | | | |
| 42-60" | C2 | SANDY LOAM | 10YR7/3 | | | 75% | 15 | 15 | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Additional Notes:

— NO REFUSAL

— NOTHING WAS SOMEWAT FRUIT
— SOME AREAS OF THE DR HAD
LOAMY SAND TEXTURES



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: ☐ 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 | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

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 # 24

Obs. Hole # _____

~~NOT OBSERVED~~ inches

_____ 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)?

Upper boundary: _____

Lower boundary: _____

inches

inches

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

Upper boundary: _____

Lower boundary: _____

inches

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 TETREAU SE 2421

Typed or Printed Name of Soil Evaluator / License #

12-10-2024

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:

