

Commonwealth of Massachusetts
City/Town of LYNNFIELD
Form 11 - Soil Suitability Assessment

A. Facility Information

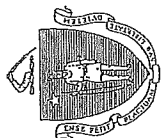
Owner Name AUDREY HICKMAN
 Street Address 271 MAIN ST.
 City LYNNFIELD State MA
 Map/Lot # 01940
 Zip Code 01940

B. Site Information

- (Check one) New Construction Upgrade Repair
- Soil Survey Available? Yes No
 If yes: NRCS Source 254B Soil Map Unit
- Soil Name MARIMAC FSI
 Geologic/Parent Material GLACIOFLUVIAL DEPOSITS
 If yes: Yes No
 Year Published/Source _____ Publication Scale _____ Map Unit _____
- Flood Rate Insurance Map
 Above the 500-year flood boundary? Yes No
 If Yes, continue to #5.
- Within a velocity zone? Yes No
- Within a Mapped Wetland Area? Yes No
- Current Water Resource Conditions (USGS): _____
 Month/Year _____
- Other references reviewed: _____

Soil Limitations GROUND MORaine
 Landform _____
 If yes: _____
 Year Published/Source _____ Publication Scale _____ Map Unit _____

Within the 100-year flood boundary? Yes No
 MassGIS Wetland Data Layer: _____
 Range: Above Normal Normal Below Normal
 Wetland Type _____





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F.

G. Soil Evaluator 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

Gordon Rogerson

SE2074

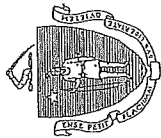
Typed or Printed Name of Soil Evaluator / License #

2-23-21

Date

June 30, 2022

Expiration Date of License



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C. On-Site Review (continued)

Deep Observation Hole Number: SWA-1 Date: 2-23-21 Time: _____ Weather: Mostly Sunny 45°

- Location 271 MAIN ST
 Ground Elevation at Surface of Hole: _____ feet
 Latitude/Longitude: _____ / _____
- Land Use FIELD
 (e.g., woodland, agricultural field, vacant lot, etc.)
GRASS Vegetation
GROUND MORAINE Landform
 Surface Stones (e.g., cobbles, stones, boulders, etc.) _____ Slope (%) 1
 Distances from: Open Water Body 7100 feet
 Property Line 30 feet
 Drainage Way _____ feet
 Drinking Water Well _____ feet
 Position on Landscape (SU, SH, BS, FS) FS
 Wetlands _____ feet
 Other _____ feet
- Parent Material: Overwash
 Unsuitable Materials Present: Yes No

- If Yes: Disturbed Soil Fill Material Impervious Layer(s) Weathered/Fractured Rock Bedrock
 Groundwater Observed: Yes No
 Estimated Depth to High Groundwater: 55 inches
 Depth Weeping from Pit: 68 feet
 Depth Standing Water in Hole: _____ feet



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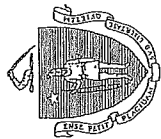
C. On-Site Review (continued)

Deep Observation Hole Number: SWA-1

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features		Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color		Gravel	Cobbles & Stones			
0-30	A	10YR 7/3			fsl	0	0%	gr	mfr	
30-42	Bw	2.5Y 5/4			sl	0	0%	m	mfr	
42-84	C	10YR 4/4	55"	10YR 6/6	gr ls	25	5%	sg	mfr	

Additional Notes:

SWA



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C. On-Site Review (continued)

Deep Observation Hole Number: SWPZ Date: 2-23-21 Time: _____
Weather: Misty Sunny 45°

1. Location 271 MAIN ST Latitude/Longitude: _____

Ground Elevation at Surface of Hole: _____ feet

2. Land Use FIELD Surface Stones (e.g., cobbles, stones, boulders, etc.) _____ Slope (%) _____
(e.g., woodland, agricultural field, vacant lot, etc.)

Vegetation GRASS Landform GROUND MORAINES Position on Landscape (SU, SH, BS, FS, Wetlands) _____ feet

3. Distances from: Open Water Body 2100 feet Drainage Way _____ feet

Property Line 60 feet Drinking Water Well _____ feet

4. Parent Material: OUTWASH Unsuitable Materials Present: Yes No

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

5. Groundwater Observed: Yes No If yes: 72 Depth Weeping from Pit _____ Depth Standing Water in Hole _____

Estimated Depth to High Groundwater: 60 inches elevation _____



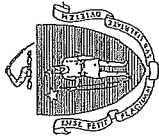
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 City/Town of CYANVILLE
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C. On-Site Review (continued)

Deep Observation Hole Number: SWA-2

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color- Moist (Munsell)	Redoximorphic Features			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
D-24	A	10YR 3/3				fsl	0	0%	gr	mfr	
24-40	Bw	10YR 5/6				sl	0	0%	m	mfr	
40-63	C1	2.5Y 5/6	60"	10YR 6/8		ls	10	0%	sg	mfr	
63-84	C2	2.5Y 4/4				gucS	30	5%	sg	muc	

Additional Notes:



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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 (Sh) (USGS methodology)

Obs. Hole #	<u>SWA 1</u>	Obs. Hole #	<u>SWA-2</u>
inches	<u>68</u>	inches	<u>72</u>
inches	<u>68</u>	inches	<u>72</u>
inches	<u>55</u>	inches	<u>60</u>
inches	_____	inches	_____

Index Well Number _____ Reading Date _____

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

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

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

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

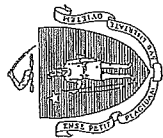
Yes No

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

Upper boundary: _____ inches
 Lower boundary: _____ inches

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

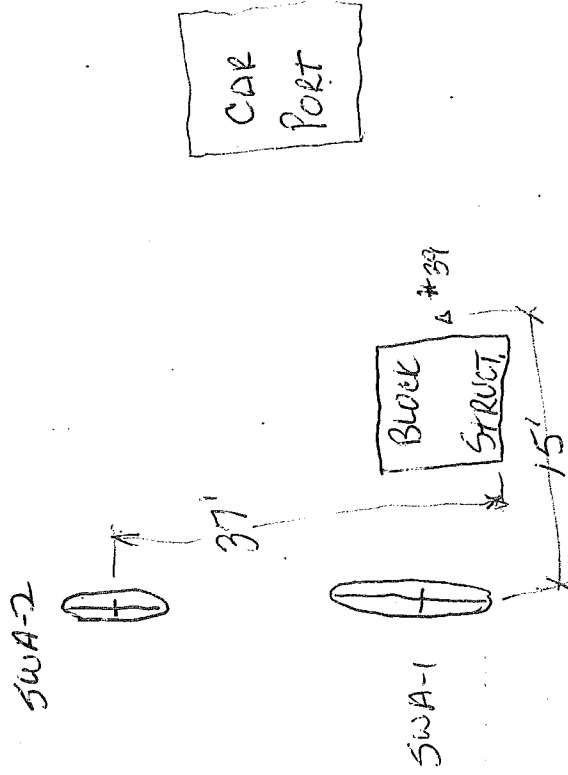
Upper boundary: _____ inches
 Lower boundary: _____ inches



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Field Diagrams

Use this sheet for field diagrams:



MAIX ST