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July 29, 2021
Updated August 12, 2021
Updated September 14, 2021
Updated January 20, 2022

To: Attn.: Mr. Mark Oram, Agent
Sherborn Board of Health
Town Hall
19 Washington Street
Sherborn, MA 01770

Re: Soil Evaluation, 55 and 65 Farm Road (Lots 2, 3, 4, 5, 6)

Dear Mr. Oram and Board Members,

On April 20 and 21, 2021, three (3) potential septic soil absorption system areas were tested for feasibility under the Title 5 and Sherborn Board Health Regulations: two areas are located at the current address 55 Farm Road, and one at current 65 Farm Road. 55 Farm Road contains a land area of 8.23 acres (358,713 SF) with an existing single-family-family house and some minor forest wetland along the western border. 65 Farm Road contains a land area of 8.42 acres (366,775 SF) improved with horse stable, barns, and fenced grazing area, and an isolated wetland associated with a man-dug pond located in the southeast portion. The two combined contains about 16 acres of land. The land featured as ground moraine, hill side, ridge, and valley flat. The NRCS soil mapped in the testing area: Area #1 (55 Farm Rd) and Area #3 (65 Farm Road) consists of Canton (HSG B) soil in the southern part of the parcels, and Hollis-Rock outcrop-Charlton complex in the central area. Our onsite soil evaluation confirmed that the soil in the southern area (testing Area 1 and Area 3) is consistent with Canton soil as loamy sand. The soil in the central broad valley (Area #2) is more like Charlton soil as loamy sand, which is surrounded by Hollis-Rock outcrop.

As a design the above soil testing was updated with a full new lot (Lot 5) and supplementary testing for Lots 3 (DHTP 3-1), and Lot 4 (DHTP 4-1, deep, DHTP 4-2, deep and perc) on November 9 and November 10, 2022. The new test pits had groundwater monitored on November 24, 2021. This report is updated with these new soil and groundwater data and adjustment analysis.

Area #1 and Area #3 are situated in the same geological and soil area as show on the soil map and confirmed in the field.

As minimum, each area will require three test pits: one deep hole soil evaluation and two (2) percolation (deep and shallow). In addition, given large area we tested, we also added more test pits in each area to make sure that we have a thorough and comprehensive evaluation of each area with consistent soil condition per 310 CMR15.104 at your recommendation. As a result, each area had at least four test pits and two percolation tests done. See Table 1 for a summary.

All soil evaluation and percolation testing were conducted at the referenced property witnessed by Mr. Oram. These tests were conducted to collect soil and percolation data for designing new septic systems for potential residential house development in compliance with 310 CMR15.00 and Sherborn Bylaw to meet all groundwater, percolation, and setback requirements.

The soil testing holes were in three large areas as depicted above in lower slope and valley bottom of ground moraine with sandy till surficial geological setting in mild side slope. The parent materials are coarse-loamy lodgment till with gravely loamy sand soil in local area due to micro geological process. Our soil evaluation confirmed the soil condition in the tested areas: Area #1 87 ft by 168 ft; Area #2 : 100 ft by 97 ft; Area 3: 118 ft by 96 ft. See attached USGS locus map, NRCS soil map, surficial geology map, and surveyed soil testing location plan for reference. The soil evaluation results are summarized in Table 1 and updated in Table 3a. The detailed soil evaluations are presented in DEP forms 11 and 12 as attached. The soil in these areas belongs to soil texture Class I with percolation rate 3 to 11 mpi per 310 CMR 15.243.

Table 1. Sumary of Soil Evaluation and GW Monitoring data

Test Pit	Soil Type	Total depth, inches	Perc. Rate, mpi	Approx. GS elev, ft	Top of pipe elev., ft	Water depth below GS, ft			
						Outstanding pipe, in	4/23/2021	4/27/2021	Note
55 Farm Road - Area 1, Front									
DHTP 55-2	Till/LS	218	6	210.20	211.7	18	16.33	16.42	well/log
DHTP 55-3	Till/LS	240	3	214.75	217.5	33	21.92	21.92	well/log
DHTP 55-4	Till/LS	216	-	213.77	215.6	22	17.83	17.75	well
DHTP 55-5	Till/LS	180	-	202.33	204	20	9.17	9.67	well
DHTP 55-5A	Till/LS	132	-	201.67	203	16	7.83	8.17	well
DHTP 55-5B	Till/LS	132	-	197.60	199.6	24	4.50	4.92	well
DHTP 55-5C	Till/LS	144	11	203.77	205.1	16	9.92	10.17	well/log
55 Farm Road - Area 2, Back									
DHTP 55-10	Till/LS	135	-	196.92	200	37	11.25	11.25	well/log
DHTP 55-10An	Till/LS	174	-	192.10	194.1	24	13.00	13.00	well/log
DHTP 55-11	Till/LS	192	4	201.00	203	24	15.42	15.58	Well/log
DHTP 55-11An	Till/LS	216	3	193.92	197.5	43	15.42	16.25	well/log
DHTP-55-11B	Till/LS	120	DH						log
65 Farm Road - Area 3, Front									
DHTP 65-10	Till/LS	144	-	215.87	217.7	22	9.67	9.83	
DHTP 65-10A	Till/LS	132	4	220.60	222.6	24	10.00	10.50	Well/log
DHTP 65-10B (Ex)	Till/LS	156	-	215.90	216.4	6	10.75	11.08	well
DHTP 65-10C	Till/LS	156	7	217.53	219.7	26	12.50	12.58	well/log
DHTP 65-10D (3-1)	Till/LS	168	2	212.90	213.4	6	14.00	14.00	well/log
DHTP 65-10E(No P)	Till/LS	96	-	No Pipe					log

Test Pit	**Soil Texture**	**Total depth, inches**	**Perc. Rate, mpi**	**Approx. GS elev, ft**	**Top of pipe elev., ft**	**Water depth below GS, ft**			**Note**
						Outstanding pipe, in	**11/24/2021**	**4/27/2021**	
55 Farm Road - Lot 5 (Back)									
DHTP 5-1	Till/LS	174	-	195.04	196.62	19	12.92		well/log
DHTP 5-2	Till/LS	209.88	5	200.77	203.02	27	15.24		well/log
DHTP 5-3	Till/LS	199.92	3	198.04	198.79	9	15.91		well/log
Lot 4									
DHTP 4-1	Till/LS	158.64		222.86	227.03	50.00	10.00		well/log
DHTP 4-2	Till/LS	183.84	5.00	217.92	220.92	36.00	11.50		well/log
DHTP 65-10A	Till/LS	132.00	4.00	220.60	222.60	24.00	11.11	10.50	well/log
House of Lot 3									
SL-TP4 (house)	Till/LS	126	-	221.41	221.91	6	10.00		well/log

Note: Test pits 55-2, 55-3, 55-4, 55-10, 55-10An, 55-11, 55-11An, 65-10D, 4-1, 5-1, 5-2, and 5-3 were found dry and did not reflect the true water table rather for reference.

Seven (7) monitoring wells were installed in Area #1; Six (6) monitoring wells (used 4 as two are shallower repetition) in Area #2; and five (5) monitoring wells including one existing old well in Area #3. The groundwater was measured on April 23 and 27, 2021 to apply groundwater correction using Frimpter method according to the Sherborn BOH. Based on the geology setting and available USGS groundwater monitoring data, we found USGS monitoring well WINCHENDON (XNW) 13 works as the best reference: it is in till slope

setting and has continuous record of groundwater monitoring data. Groundwater annual range is similar to the required 10 ft. The corrected groundwater depths are summarized in Table 2 and detailed calculation sheet is attached for reference. Along the way, we also monitored the groundwater table changes to make sure the readings were consistent and representative to the site condition. The monitoring data was presented in Table 2a. Given deep groundwater condition at some wells, the wells were measured dry, which caused some correction inconsistence in the two dates. In general, April 23, 2021 had higher groundwater table and shall be used. The difference between the two days after correction in well with groundwater is within couple of inches. See Table 3 for summary of the corrected groundwater depth and attached Frimpter analysis sheets for details. All test pits except for 55-5B all meet soil and groundwater requirements per 310CMR15.00 and Sherborn Board of Health Bylaw. Test pit 55-5B will not be used for design. **It is our professional opinion that the Frimpter method corrected high groundwater were consistent with the monitoring data and site condition and should be used for design.**

Table 2. Summary of groundwater adjustment calculations

Date	Reference USGS well	OWC, ft	Owr, ft	Owmax, ft	correction, ft	Note
4/23/2021	Winchendon (XNW) 13	3.47	10.82	1.86	-1.49	Water table trend are consistent between reference well and onsite wells.
4/27/2021	Winchendon (XNW) 13	3.84	10.82	1.86	-1.83	
11/24/2021	Winchendon (XNW) 13	4.43	10.82	1.86	-2.38	

Table 3a. Sumary of Soil Evaluation and GW Monitoring data

Test Pit	Soil Texture	Total depth, inches	Perc. Rate, mpi	Approx. GS elev, ft	Top of pipe elev., ft	Water depth below GS, ft			Corrected Water depth below GS, ft		Corrected water table for design, ft
						Outstanding pipe, in	11/24/2021	4/27/2021	11/24/2021	4/27/2021	
55 Farm Road - Lot 5 (Back)											
DHTP 5-1	Till/LS	174	-	195.04	196.62	19	12.92		**10.54**		184.50
DHTP 5-2	Till/LS	209.88	5	200.77	203.02	27	15.24		**12.86**		187.91
DHTP 5-3	Till/LS	199.92	3	198.04	198.79	9	15.91		**13.53**		184.51
Lot 4											
DHTP 4-1	Till/LS	158.64		222.86	227.03	50.00	10.00		**7.62**		215.24
DHTP 4-2	Till/LS	183.84	5.00	217.92	220.92	36.00	11.50		**9.12**		208.80
DHTP 65-10A	Till/LS	132.00	4.00	220.60	222.60	24.00	11.11	10.50	**8.73**	8.67	211.93
SL-TP4 (house)	Till/LS	126	-	221.41	221.91	6	10.00		**7.62**		213.79
Test Pit	**Soil Texture**	**Total depth, inches**	**Perc. Rate, mpi**	**Approx. GS elev, ft**	**Top of pipe elev., ft**	**Water depth below GS, ft**			**Corrected Water depth below GS, ft**		**Corrected water table for design, ft**
						Outstanding pipe, in	**4/23/2021**	**4/27/2021**	**4/23/2021**	**4/27/2021**	
55 Farm Road - Area 2, Back (Lot 6)											
DHTP 55-10	Till/LS	135.00	-	**196.92**	200.00	37.00	11.25	11.25	9.76	**9.42**	187.50
DHTP 55-10An	Till/LS	174.00	-	**192.10**	194.10	24.00	13.00	13.00	11.51	**11.17**	180.93
DHTP 55-11	Till/LS	192.00	4.00	**201.00**	203.00	24.00	15.42	15.58	13.93	**13.75**	187.25
DHTP 55-11An	Till/LS	216.00	3.00	**193.92**	197.50	43.00	15.42	16.25	13.93	**14.42**	179.50
Lot 3											
DHTP 65-10C	Till/LS	156.00	7.00	**217.53**	219.70	26.00	12.50	12.58	11.01	**10.75**	206.78
DHTP 65-10D (3-1)	Till/LS	168.00	2.00	**212.90**	213.40	6.00	14.00	14.00	12.51	**12.17**	200.73
DHTP 55-4	Till/LS	216	-	**213.77**	215.6	22	17.83	17.75	16.35	**15.92**	197.85
SL-TP4 (house)	Till/LS	126	-	**221.41**	221.91	6					

Notes: 1 See USGS Frimpter method for high groundwater correction analsysis sheet for details.
2. Test pits 55-2, 55-3, 55-4, 55-10, 55-10An, 55-11, 55-11An, 65-10D, 4-1, 5-1, 5-2, and 5-3 were found dry and did not reflect the true water table rather for reference.

Land Subdivision and SAS Conceptual Plan

As we descripted above, the subject properties combined has over 16 acres of land, with the above soil evaluation results, we subdivided the combined land into six residential lots including the existing house lot:

five single-family-house lots and one open space subdivision lot. The area breakdown and design flow are presented in Table 4. See the conceptual plan for location reference. As we can see in the table, five of the six lots have adequate soil data for design except for Lot 5. The proposed SAS for Lots 2,3,4, and 6 are all located within the evaluated three Areas that meet the SAS soil and groundwater requirements. SAS for Lot 5 will will need further soil evaluation and was completed in November 2021. Additional soil evaluation and percolation tests were conducted in Lot 3 and 4 SAS areas in November 2021 to meet the full requirements of Title 5 and Sherborn BOH regulations.

Table 4. Lot Sewer Design Flow Analysis

Lot	Lot Area(s.f.)	Nitrogen limited flow per 310 CMR15.214, gpd	Proposed Design flow, gpd	Design Test pits*	Design perc rate, mpi	Note
Lot 1 (Ex.)	67,569	743	550	no change	20	4 brm, 1977
Lot 2	50,036	550	550	***55-5C***, ***55-5A***, ***55-3***, 55-5, 55-2	11	5 brm
Lot 3	50,128	551	550	***65-10C, 55-4,*** **65-10D *(perc 3-1)***	7	5 brm
Lot 4	50,065	551	550	***65-10A***,65-10E, 65-10, 65-10B, **4-1, 4-2**	7	5 brm
Lot 5	60,320	664	550	**5-1, 5-2, 5-3**	5	5 brm
Lot 6 (open space lot)	448,952	4938	TBD	***55-10,55-10An,55-11,55-11An, 55-11B***	4	flow TBD
	Note: * bold italic pits are located in the design SAS area.					

In summary, CLAWE conducted a thorough hydrogeological review of the site and onsite deep hole soil evaluation for the referenced properties according to 310CMR 15.00 and Sherborn Board of Health regulation. Based on our onsite evaluation and analysis, the tested areas meet the require soil and groundwater conditions for siting a new onsite wastewater disposal system – SAS. The design and sizing of the SAS shall be done according to the tested results. All new single-family house lot will be designed for 5-bedroom system. The open space subdivision lot will be further studied to determine the design flow need for design.

If you have any questions regarding this evaluation and design issues, please feel free to contact us.

Sincerely,

Creative Land & Water Engineering, LLC
by

Desheng Wang, Ph.D., P.E.
Civil Engineer and Hydrogeologist
SE 2545

Cc: Bob Murchison

Creative Land & Water Engineering, LLC
Environmental Science and Engineering Service
P.O. Box 584, Southborough, MA 01772
Tel: (508)281-1694 Email: deshengw@yahoo.com

Subject: Estimate Hi-WT by USGS (Frimpter) Method
Location: 55 Farm Road, Sherborn, MA
By: DSW **Chkd:** **Job No.:** J269-10
Date: 27-Apr-21 **Date:** **Sheet:** 1

Formulation

Sc-Sh/OWc-OWmax = Sr /OWr
Sh = Sc - Sr/OWr(OWc - OWmax)
in which, Sc = measured depth to water at the site;
Sh = estimated depth to probable high water level at the site;
OWc = measured depth to water in the observation well;
OWmax = depth to recorded maximum water table at the observation well;
Sr = range of water where the site is located;
OWr = recorded upper limit of annual range of water level at the observation well.

Input Report **USGS observation well:** WINCHENDON (XNW) 13

Date	MW	Soil Type	Sc	Sr	OWc	OWmax	OWr	Ground Elev.	Reference Well used
4/23/2021			ft	ft	ft	ft	ft	ft	
	55-2	Till/LS	16.33	10	3.47	1.86	10.82	210.20	WINCHENDON (XNW) 13
	55-3	Till/LS	21.92	10	3.47	1.86	10.82	214.75	WINCHENDON (XNW) 13
	55-4	Till/LS	17.83	10	3.47	1.86	10.82	213.77	WINCHENDON (XNW) 13
	55-5	Till/LS	9.17	10	3.47	1.86	10.82	202.33	WINCHENDON (XNW) 13
	55-5A	Till/LS	7.83	10	3.47	1.86	10.82	201.67	WINCHENDON (XNW) 13
	55--5B	Till/LS	4.50	10	3.47	1.86	10.82	197.60	WINCHENDON (XNW) 13
	55-5C	Till/LS	9.92	10	3.47	1.86	10.82	203.77	WINCHENDON (XNW) 13

assumed and to be surveyed

Output Report

Date	MW	Depth to HW, Sh, ft	Correction, ft	High Water Table Elev. (ft)
4/23/2021	55-2	14.85	1.49	195.35
	55-3	20.43	1.49	**194.32**
	55-4	16.35	1.49	197.42
	55-5	7.68	1.49	194.65
	55-5A	6.35	1.49	195.32
	55--5B	3.01	1.49	194.59
	55-5C	8.43	1.49	**195.34**
	0			
	0			

Notes:
1. Groundwater level in XNW 13 Winchendon was measured on 4/23/2021.
2. Onsite ground water was meaured with Mr. Mark Oram on 4/23/2021 by Desheng Wang
3. Ten (10) ft of water level range for till slope (Sr) as required by Mr. Mark Oram.
4. Test pits 55-2, 55-3, 55-4, 55-10, 55-10An, 55-11, 55-11An, and 65-10D were found dry and did not reflect the true water table rather for reference.

Creative Land & Water Engineering, LLC
Environmental Science and Engineering Service
P.O. Box 584, Southborough, MA 01772
Tel: (508)281-1694 Email: desheng@yahoo.com

Subject: Estimate Hi-WT by USGS (Frimpter) Method
55(2) and 65 Farm Road
Sherborn, MA
Location:
By: DSW **Date:** 27-Apr-21
Chkd: **Date:**
Job No.: J269-10 **Sheet:** 1

Formulation

Sc-Sh/OWc-OWmax = Sr /OWr
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OWc = measured depth to water in the observation well;
OWmax = depth to recorded maximum water table at the observation well;
Sr = range of water where the site is located;
OWr = recorded upper limit of annual range of water level at the observation well.

Input Report **USGS observation well:** WINCHENDON (XNW) 13

Date	MW	Soil Type	Sc	Sr	OWc	OWmax	OWr	Ground Elev.	Reference Well used
4/23/2021			ft	ft	ft	ft	ft	ft	
	55-10	Till/LS	11.25	10	3.47	1.86	10.82	196.92	WINCHENDON (XNW) 13
55 Farm Rd,	55-10An	Till/LS	13.00	10	3.47	1.86	10.82	192.10	WINCHENDON (XNW) 13
Area #2	55-11	Till/LS	15.42	10	3.47	1.86	10.82	201.00	WINCHENDON (XNW) 13
	55-11An	Till/LS	15.42	10	3.47	1.86	10.82	193.92	WINCHENDON (XNW) 13
	65-10	Till/LS	9.67	10	3.47	1.86	10.82	100.00	WINCHENDON (XNW) 13
	65-10A	Till/LS	10.00	10	3.47	1.86	10.82	100.00	WINCHENDON (XNW) 13
65 Farm Rd	65-10B	Till/LS	10.75	10	3.47	1.86	10.82	100.00	WINCHENDON (XNW) 13
	66-10C	Till/LS	12.50	10	3.47	1.86	10.82	100.00	WINCHENDON (XNW) 13
	66-10D	Till/LS	14.00	10	3.47	1.86	10.82	100.00	WINCHENDON (XNW) 13

Output Report

Date	MW	Depth to HW, Sh, ft	Correction, ft	High Water Table Elev. (ft) assumed
4/23/2021	55-10	9.76	1.49	187.15
	55-10An	11.51	1.49	**180.59**
55 Farm Rd,	55-11	13.93	1.49	187.07
Area #2	55-11An	13.93	1.49	179.99
	65-10	8.18	1.49	91.82
	65-10A	8.51	1.49	91.49
65 Farm Rd	65-10B	9.26	1.49	**90.74**
	66-10C	11.01	1.49	**88.99**
	66-10D	12.51	1.49	87.49

Notes:
1. Groundwater level in XNW 13 Winchendon was measured on 4/23/2021.
2. Onsite ground water was meaured with Mr. Mark Oram on 4/23/2021 by Desheng Wang
3. Ten (10) ft of water level range for till slope (Sr) as required by Mr. Mark Oram.
4. Test pits 55-2, 55-3, 55-4, 55-10, 55-10An, 55-11, 55-11An, and 65-10D were found dry and did not reflect the true water table rather for reference.

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Environmental Science and Engineering Service
P.O. Box 584, Southborough, MA 01772
Tel: (508)281-1694 Email: desheng@yahoo.com

Subject: Estimate Hi-WT by USGS (Frimpter) Method
55 Farm Road **By:** DSW **Date:** 27-Apr-21
Sherborn, MA **Chkd:** **Date:**
Location: **Job No.:** J269-10 **Sheet:** 1

Formulation

Sc-Sh/OWc-OWmax = Sr /OWr
Sh = Sc - Sr/OWr(OWc - OWmax)

in which, Sc = measured depth to water at the site;
Sh = estimated depth to probable high water level at the site;
OWc = measured depth to water in the observation well;
OWmax = depth to recorded maximum water table at the observation well;
Sr = range of water where the site is located;
OWr = recorded upper limit of annual range of water level at the observation well.

Input Report **USGS observation well:** WINCHENDON (XNW) 13

Date	MW	Soil Type	Sc	Sr	OWc	OWmax	OWr	Ground Elev.	Reference Well used
4/27/2021			ft	ft	ft	ft	ft	ft	
	55-2	Till/LS	16.42	10	3.84	1.86	10.82	210.20	WINCHENDON (XNW) 13
	55-3	Till/LS	21.92	10	3.84	1.86	10.82	214.75	WINCHENDON (XNW) 13
	55-4	Till/LS	17.75	10	3.84	1.86	10.82	213.77	WINCHENDON (XNW) 13
	55-5	Till/LS	9.67	10	3.84	1.86	10.82	202.33	WINCHENDON (XNW) 13
	55-5A	Till/LS	8.17	10	3.84	1.86	10.82	201.67	WINCHENDON (XNW) 13
	55--5B	Till/LS	4.92	10	3.84	1.86	10.82	197.60	WINCHENDON (XNW) 13
	55-5C	Till/LS	10.17	10	3.84	1.86	10.82	203.77	WINCHENDON (XNW) 13

assumed and to be surveyed

Output Report

Date	MW	Depth to HW, Sh, ft	Correction, ft	High Water Table Elev. (ft)
4/27/2021	55-2	14.59	1.83	195.61
	55-3	20.09	1.83	**194.66**
	55-4	15.92	1.83	197.85
	55-5	7.84	1.83	194.50
	55-5A	6.34	1.83	195.33
	55--5B	3.09	1.83	194.51
	55-5C	8.34	1.83	**195.43**
	0			
	0			

Notes:
1. Groundwater level in XNW 13 Winchendon was measured on 4/23/2021.
2. Onsite ground water was meaured with Mr. Mark Oram on 4/23/2021 by Desheng Wang
3. Ten (10) ft of water level range for till slope (Sr) as required by Mr. Mark Oram.
4. Test pits 55-2, 55-3, 55-4, 55-10, 55-10An, 55-11, 55-11An, and 65-10D were found dry and did not reflect the true water table rather for reference.

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Environmental Science and Engineering Service
P.O. Box 584, Southborough, MA 01772
Tel: (508)281-1694 Email: desheng@yahoo.com

Subject: Estimate Hi-WT by USGS (Frimpter) Method
Location: 55(2) and 65 Farm Road, Sherborn, MA
By: DSW **Chkd:** **Job No.:** J269-10
Date: 23-Apr-21 **Date:** **Sheet:** 1

Formulation

Sc-Sh/OWc-OWmax = Sr /OWr
Sh = Sc - Sr/OWr(OWc - OWmax)

in which, Sc = measured depth to water at the site;
Sh = estimated depth to probable high water level at the site;
OWc = measured depth to water in the observation well;
OWmax = depth to recorded maximum water table at the observation well;
Sr = range of water where the site is located;
OWr = recorded upper limit of annual range of water level at the observation well.

Input Report **USGS observation well:** WINCHENDON (XNW) 13

Date/Address	MW	Soil Type	Sc	Sr	OWc	OWmax	OWr	Ground Elev.	Reference Well used
4/27/2021			ft	ft	ft	ft	ft	ft	
55 Farm Rd	55-10	Till/LS	11.25	10	3.84	1.86	10.82	196.92	WINCHENDON (XNW) 13
	55-10An	Till/LS	13.00	10	3.84	1.86	10.82	192.10	WINCHENDON (XNW) 13
	55-11	Till/LS	15.58	10	3.84	1.86	10.82	201.00	WINCHENDON (XNW) 13
	55-11An	Till/LS	16.25	10	3.84	1.86	10.82	193.92	WINCHENDON (XNW) 13
65 Farm Rd	65-10	Till/LS	9.83	10	3.84	1.86	10.82	215.87	WINCHENDON (XNW) 13
	65-10A	Till/LS	10.50	10	3.84	1.86	10.82	220.60	WINCHENDON (XNW) 13
	65-10B	Till/LS	11.08	10	3.84	1.86	10.82	215.90	WINCHENDON (XNW) 13
	66-10C	Till/LS	12.58	10	3.84	1.86	10.82	217.53	WINCHENDON (XNW) 13
	66-10D	Till/LS	14.00	10	3.84	1.86	10.82	212.90	WINCHENDON (XNW) 13

Output Report

Date	MW	Depth to HW, Sh, ft	Correction, ft	assumed High Water Table Elev. (ft)
4/27/2021	55-10	9.42	1.83	187.50
	55-10An	11.17	1.83	**180.93**
55 Farm Rd	55-11	13.75	1.83	187.25
	55-11An	14.42	1.83	179.50
	65-10	8.00	1.83	207.86
	65-10A	8.67	1.83	211.93
65 Farm Rd	65-10B	9.25	1.83	**206.65**
	66-10C	10.75	1.83	**206.78**
	66-10D	12.17	1.83	200.73

Notes:
1. Groundwater level in XNW 13 Winchendon was measured on 4/23/2021.
2. Onsite ground water was meaured with Mr. Mark Oram on 4/23/2021 by Desheng Wang
3. Ten (10) ft of water level range for till slope (Sr) as required by Mr. Mark Oram.
4. Test pits 55-2, 55-3, 55-4, 55-10, 55-10An, 55-11, 55-11An, and 65-10D were found dry and did not reflect the true water table rather for reference.

Creative Land & Water Engineering, LLC
Environmental Science and Engineering Service
P.O. Box 584, Southborough, MA 01772
Tel: (508)281-1694 Email: desheng@yahoo.com

Subject: Estimate Hi-WT by USGS (Frimpter) Method
Location: 55(2) and 65 Farm Road, Sherborn, MA
By: DSW **Chkd:** **Job No.:** J269-10 **Date:** 29-Nov-21 **Date:** **Sheet:** 1

Formulation

Sc-Sh/OWc-OWmax = Sr /OWr
Sh = Sc - Sr/OWr(OWc - OWmax)
in which, Sc = measured depth to water at the site;
Sh = estimated depth to probable high water level at the site;
OWc = measured depth to water in the observation well;
OWmax = depth to recorded maximum water table at the observation well;
Sr = range of water where the site is located;
OWr = recorded upper limit of annual range of water level at the observation well.

Input Report **USGS observation well:** WINCHENDON (XNW) 13

Date	MW	Soil Type	Sc	Sr	OWc	OWmax	OWr	Ground Elev.	Reference Well used
11/24/2021			ft	ft	ft	ft	ft	ft	
Lot5	DHTP 5-1	Till/LS	**12.92**	10	4.43	1.86	10.82	195.04	WINCHENDON (XNW) 13
	DHTP 5-2	Till/LS	**15.24**	10	4.43	1.86	10.82	200.77	WINCHENDON (XNW) 13
	DHTP 5-3	Till/LS	**15.91**	10	4.43	1.86	10.82	198.04	WINCHENDON (XNW) 13
									WINCHENDON (XNW) 13
Lot 4	DHTP 4-1	Till/LS	10.00	10	4.43	1.86	10.82	222.86	WINCHENDON (XNW) 13
	DHTP 4-2	Till/LS	**11.50**	10	4.43	1.86	10.82	217.92	WINCHENDON (XNW) 13
	DHTP 65-10A	Till/LS	**11.11**	10	4.43	1.86	10.82	220.60	WINCHENDON (XNW) 13
		Till/LS							WINCHENDON (XNW) 13
Lot 3 House	SL-TP4 (house)	Till/LS	10.00	10	4.43	1.86	10.82	221.41 assumed	WINCHENDON (XNW) 13

Output Report

Date	MW	Depth to HW, Sh, ft	Correction, ft	High Water Table Elev. (ft)	
11/24/2021	DHTP 5-1	10.54	2.38	184.50	
	DHTP 5-2	12.86	2.38	**187.91**	
	DHTP 5-3	13.53	2.38	184.51	
Lot5	0				
Lot 4	DHTP 4-1	7.62	2.38	**215.24**	dry use other pit for GW
	DHTP 4-2	9.12	2.38	**208.80**	
	DHTP 65-10A	8.73	2.38	**211.87**	
	0				
Lot 3 House	SL-TP4 (house)	7.62	2.38	213.79	dry

Notes:
1. Groundwater level in XNW 13 Winchendon was measured on 11/24/2021.
2. Onsite ground water was meaured with Mr. Mark Oram on 11/24/2021 by Desheng Wang
3. Ten (10) ft of water level range for till slope (Sr) as required by Mr. Mark Oram.
4. Test pits 4-1, 5-1, 5-2, 5-3, and SL-TP4 were found dry and did not reflect the true water table rather for reference.

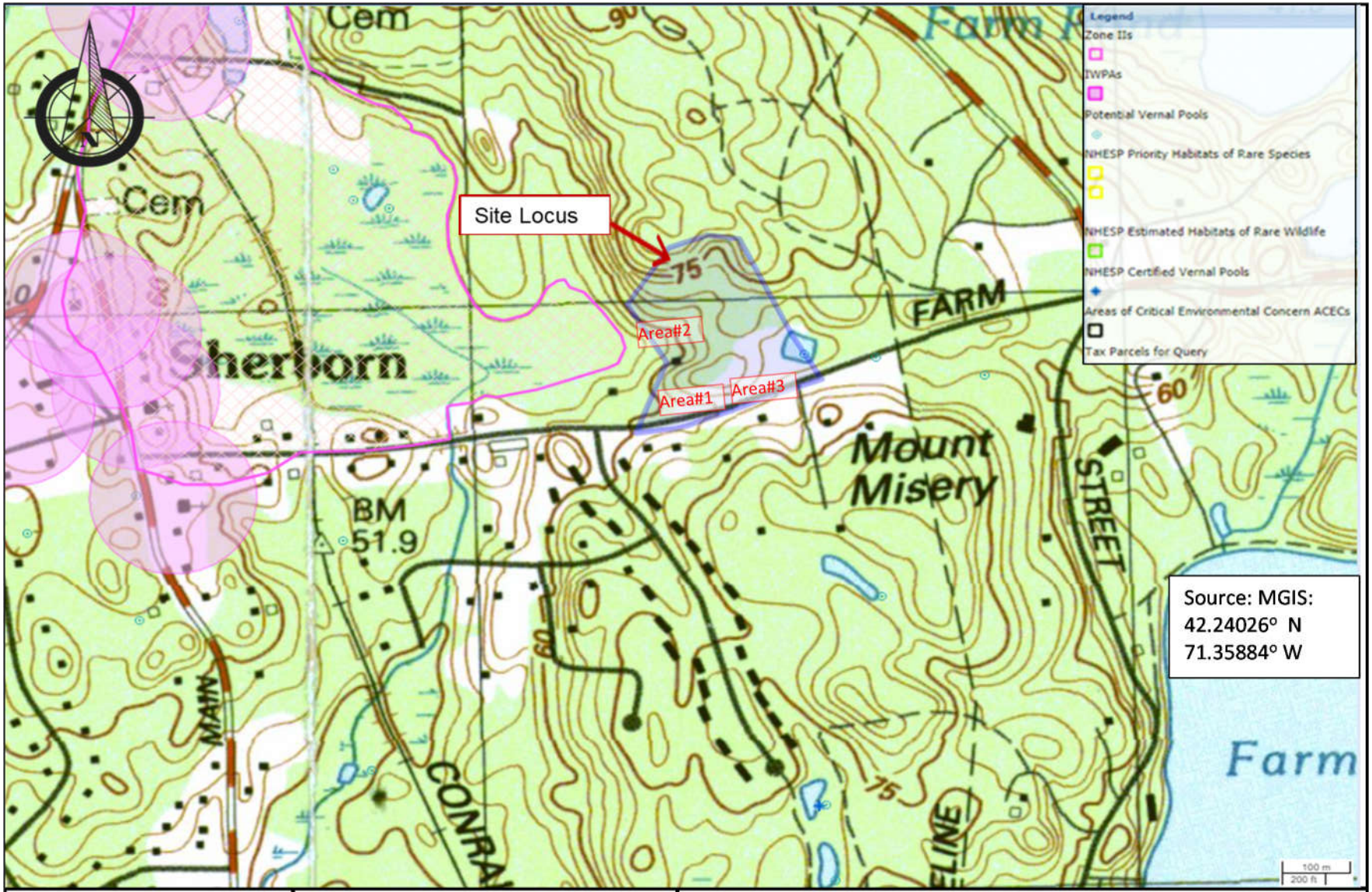
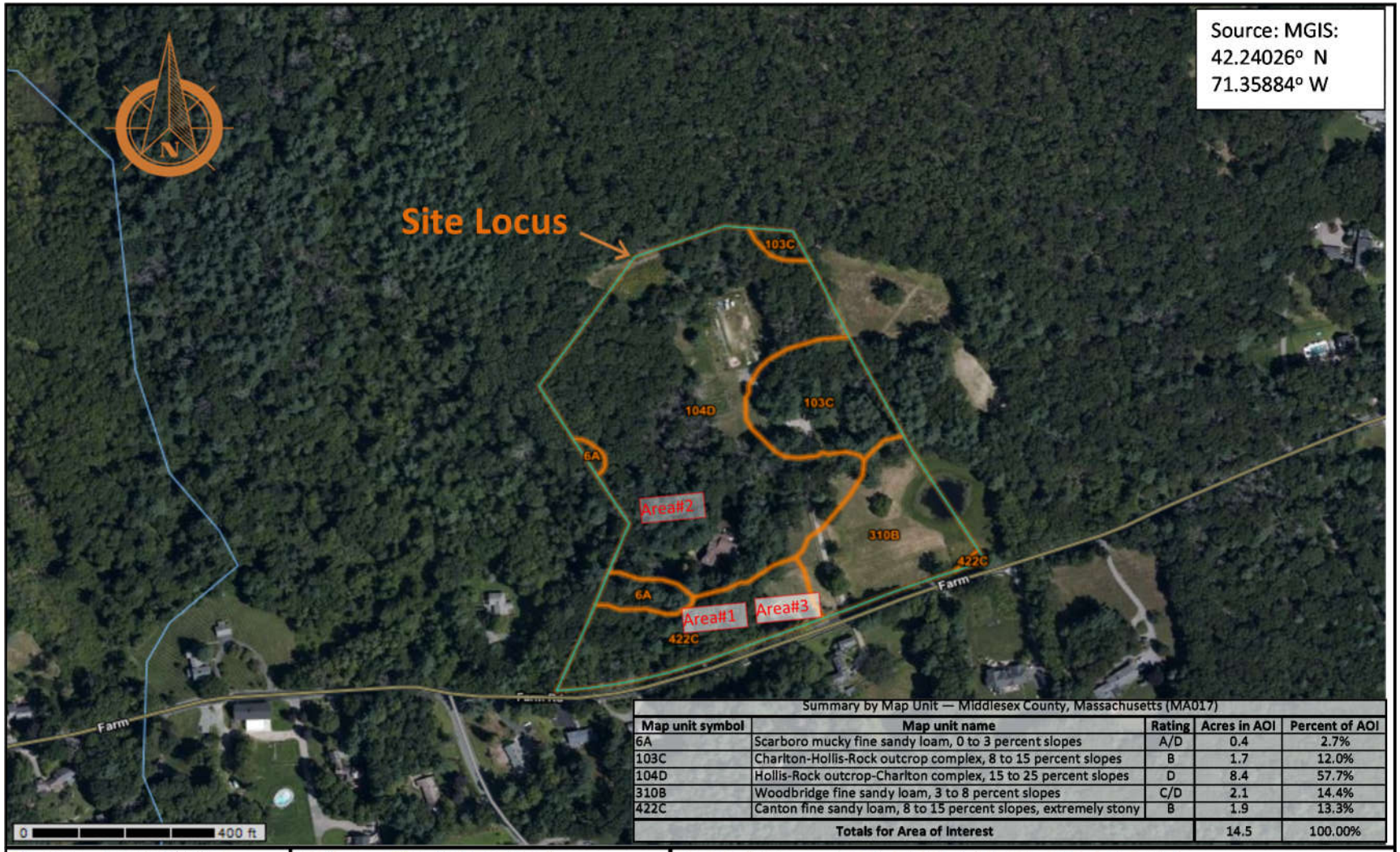


Figure 1: USGS Locus Map	Project: 55 & 65 Farm Road Sherborn - Massachusetts	Prepared by: Creative Land & Water Engineering, LLC Environmenal Scientists and Engineers P.O.Box 584 - Southborough - MA - 01772 774-454-0266 http://claweng.com



Summary by Map Unit — Middlesex County, Massachusetts (MA017)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
6A	Scarboro mucky fine sandy loam, 0 to 3 percent slopes	A/D	0.4	2.7%
103C	Charlton-Hollis-Rock outcrop complex, 8 to 15 percent slopes	B	1.7	12.0%
104D	Hollis-Rock outcrop-Charlton complex, 15 to 25 percent slopes	D	8.4	57.7%
310B	Woodbridge fine sandy loam, 3 to 8 percent slopes	C/D	2.1	14.4%
422C	Canton fine sandy loam, 8 to 15 percent slopes, extremely stony	B	1.9	13.3%
Totals for Area of Interest			14.5	100.00%

Figure 2: NRCS Soil Map	Project: 55 & 65 Farm Road Sherborn - Massachusetts	Prepared by: Creative Land & Water Engineering, LLC Environmenal Scientists and Engineers P.O.Box 584 - Southborough - MA - 01772 774-454-0266 http://claweng.com

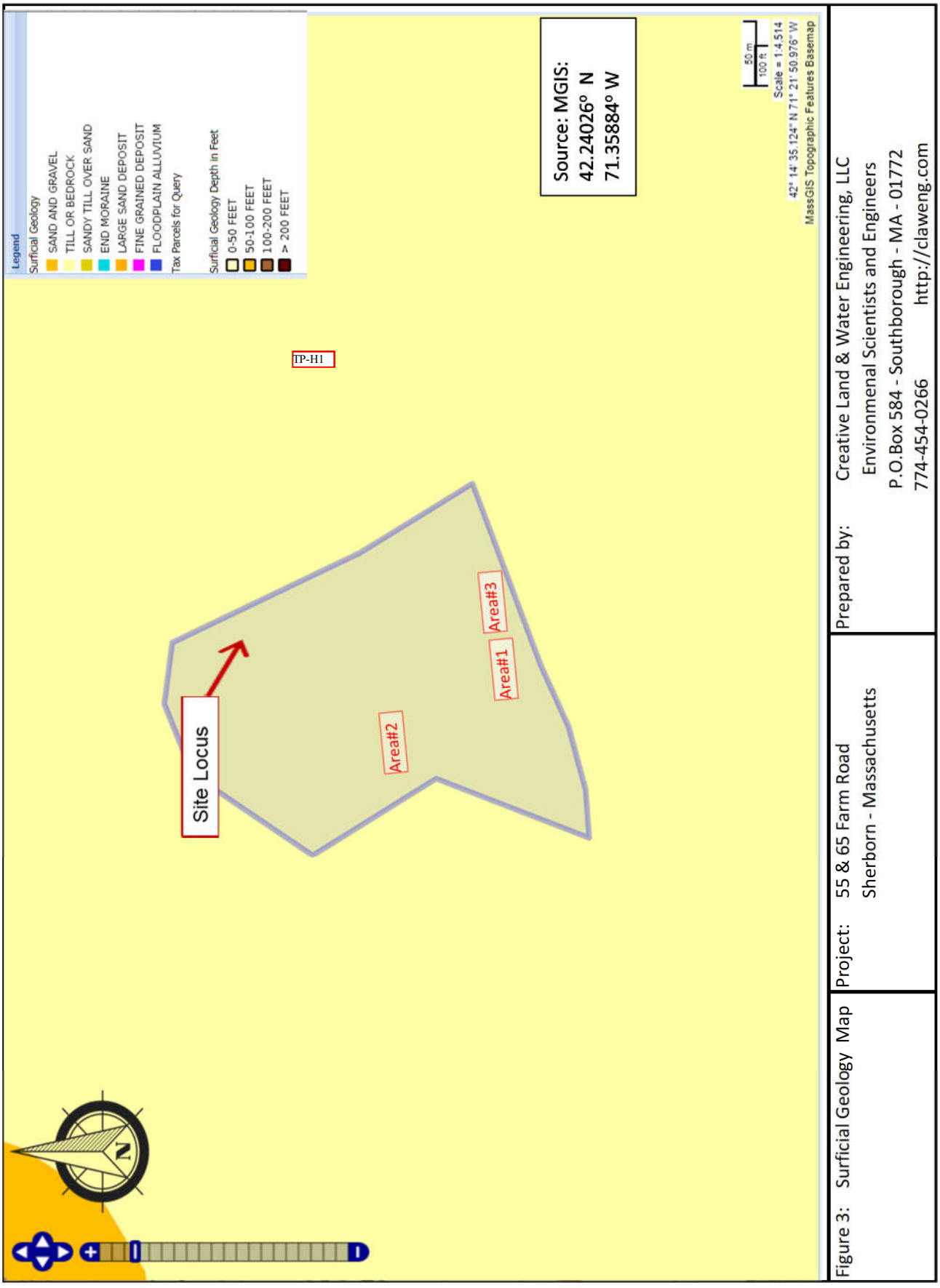


Figure 4. Surveyed soil test pit locations with conceptual lot layout(see full size plan)

Commonwealth of Massachusetts
City/Town of Sherborn

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

A. Facility Information

Trinity Farm, LLC.
Owner Name

65 Farm Road (Area #3)
Street Address

Assessors Map 11, Lot 60A
Map/Lot #

Sherborn
City

MA
State

01770
Zip Code

B. Site Information

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

2. Soil Survey Available? ☒ Yes ☐ No If yes: Web Soil Survey (Source) 422C (Soil Map Unit)

Canton Fine Sandy Loam
Soil Name

Soil Limitations

Coarse-loamy over sandy melt-out till
Soil Parent material

Moraine
Landform

3. Surficial Geological Report Available? ☒ Yes ☐ No If yes: USGS - 2018 (Year Published/Source) 3402 (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): 4/23/2021 (Month/Day/ Year) Range: ☐ Above Normal ☒ Normal ☐ Below Normal

8. Other references reviewed:

Commonwealth of Massachusetts
City/Town of Sherborn

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: DHTP-65-10A (Hole #) | 04/20/2021 (Date) | 3:47 pm (Time) | 50°F, Sunny (Weather) | 42.23961° N (Latitude) | 71.35791° W (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: Coarse-loamy over sandy melt-out till | Moraine (Landform) | SS (Position on Landscape (SU, SH, BS, FS, TS))

3. Distances from: Open Water Body 200+ feet | Drainage Way -- feet | Wetlands 200+ feet
Property Line 75+ feet | Drinking Water Well 175+ 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: 144 Depth Weeping from Pit | 147.6 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			
0-24	Ap	S.L.	10 YR 2/1							Friable	
24-30	B	S.L.	10 YR 5/6							Friable	
30-150	C	M.L.S.	2.5 Y 6/4							Friable	
150+	Cr	Ledge									

Additional Notes: SU = summit; SH=Slope of hill; BS=base slope; FS=foot slope; TS=toe slope; HS = head slope; NS = nose slope; SS = side slope

Commonwealth of Massachusetts
City/Town of Sherborn

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: DHTP-65-10C (Hole #) | 04/21/21 (Date) | 10:20 am (Time) | 54°F, M.Sunny (Weather) | 42.23961° N (Latitude) | 71.35791° W (Longitude:)

1. Land Use: Open field (e.g., woodland, agricultural field, vacant lot, etc.) | Hay (Vegetation) | (Surface Stones (e.g., cobbles, stones, boulders, etc.)) | 5 (Slope (%))

Description of Location: See plan

2. Soil Parent Material: Coarse-loamy over sandy melt-out till | moraine (Landform) | BS (Position on Landscape (SU, SH, BS, FS, TS))

3. Distances from: Open Water Body 200+ feet | Drainage Way -- feet | Wetlands 200+ feet
Property Line 5+ feet | Drinking Water Well 150+ 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: 0 Depth Weeping from Pit | 0 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			
0-4	A	S.L.	10 YR 32							Friable	
4-24	B	S.L.	2.5 Y 6/6							Friable	
24-168	C	L.S.	2.5 Y 6/4							Friable	

Additional Notes:
SU = summit; SH=Slope of hill; BS=base slope; FS=foot slope; TS=toe slope; HS = head slope; NS = nose slope; SS = side slope

Commonwealth of Massachusetts
City/Town of Sherborn

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: DHTP-65-10D (Hole #) | 04/21/21 (Date) | 11:00 PM (Time) | 54°F, M. Sunny (Weather) | 42.23961° N (Latitude) | 71.35791° W (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: Coarse-loamy over sandy melt-out till | Moraine (Landform) | BS (Position on Landscape (SU, SH, BS, FS, TS))

3. Distances from: Open Water Body 200+ feet | Drainage Way --- feet | Wetlands 200+ feet
Property Line 2+ feet | Drinking Water Well 150+ 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: 168 Depth Weeping from Pit | 168 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			
0-4	A	S.L.	10 YR 3/2							Friable	
4-24	B	S.L.	10 YR 6/6							Friable	
24-168	C	L.S.	2.5 Y 5/4							Dense	

Additional Notes:
SU = summit; SH=Slope of hill; BS=base slope; FS=foot slope; TS=toe slope; HS = head slope; NS = nose slope; SS = side slope

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

Deep Observation Hole Number: DHTP-65-10E (Hole #) | 04/21/21 (Date) | 11:00 am (Time) | 54°F, M.Sunny (Weather) | 42.23961° N (Latitude) | 71.35791° W (Longitude:)

1. Land Use: Open field (e.g., woodland, agricultural field, vacant lot, etc.) | Hay (Vegetation) | (Surface Stones (e.g., cobbles, stones, boulders, etc.)) | 5 (Slope (%))

Description of Location: See plan, to verify soil consistence only, no pipe installed

2. Soil Parent Material: Coarse-loamy over sandy melt-out till | moraine (Landform) | BS (Position on Landscape (SU, SH, BS, FS, TS))

3. Distances from: Open Water Body 200+ feet | Drainage Way -- feet | Wetlands 200+ feet | Property Line 5+ feet | Drinking Water Well 150+ 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: 0 Depth Weeping from Pit | 0 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			
0-10	A	S.L.	10 YR 3/2							Friable	
10-21	B	S.L.	2.5 Y 6/6							Friable	
21-96	C	L.S.	2.5 Y 6/4							Friable	
96+	Cr	refusal									

Additional Notes:
SU = summit; SH=Slope of hill; BS=base slope; FS=foot slope; TS=toe slope; HS = head slope; NS = nose slope; SS = side slope

D. Determination of High Groundwater Elevation

1. Method Used:

	Obs. Hole # DHTP-65-10A	Obs. Hole # DHTP-65-10C	Obs. Hole # DHTP-65-10D
☒ Depth observed standing water in observation hole	147.6 inches	none inches	168 inches
☒ Depth weeping from side of observation hole	144 inches	none inches	168 inches
☒ Depth to soil redoximorphic features (mottles)	none inches	none inches	none inches
☒ Depth to adjusted seasonal high groundwater (S_h) (USGS methodology)	8.51 ft	11.01 ft	12.51

Index Well Number

4/23/2021
Reading Date

$S_h = S_c – [S_r \times (OW_c – OW_{max})/OW_r]$ See separate calculation sheet see analysis sheet for details

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)?

DHTP-65-10A	Upper boundary:	30 inches	Lower boundary:	150 inches
DHTP-65-10C	Upper boundary:	24 inches	Lower boundary:	168 inches
DHTP-65-10D	Upper boundary:	24 inches	Lower boundary:	168 inches

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

Upper boundary: - inches Lower boundary: - inches

F. Certification

I certify that I am currently approved by the Department of Environmental Protection pursuant to 310 CMR 15.017 to conduct soil evaluations and that the above analysis has been performed by me consistent with the required training, expertise and experience described in 310 CMR 15.017. I further certify that the results of

Commonwealth of Massachusetts
City/Town of Sherborn

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

A. Facility Information

Fenix Partners Farm Road, LLC.
Owner Name

55 Farm Road (Area #1)
Street Address

Assessors Map 11, Lot 60
Map/Lot #

Sherborn
City

MA
State

01770
Zip Code

B. Site Information

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

2. Soil Survey Available? ☒ Yes ☐ No If yes: Web Soil Survey (Source) 422C (Soil Map Unit)

Canton Fine Sandy Loam
Soil Name

Soil Limitations

Coarse-loamy over sandy melt-out till
Soil Parent material

Moraine
Landform

3. Surficial Geological Report Available? ☒ Yes ☐ No If yes: USGS - 2018 (Year Published/Source) 3402 (Map Unit)

till
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): 4/20/2021 (Month/Day/ Year) Range: ☐ Above Normal ☒ Normal ☐ Below Normal

8. Other references reviewed:

Commonwealth of Massachusetts
City/Town of Sherborn

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: DHTP-55-2 (Hole #) | 04/20/2021 (Date) | 2:43 pm (Time) | 50°F, Sunny (Weather) | 42.23941° N (Latitude) | 71.35876° W (Longitude)

1. Land Use: woods (e.g., woodland, agricultural field, vacant lot, etc.) | pine (Vegetation) | no (Surface Stones (e.g., cobbles, stones, boulders, etc.)) | 15 (Slope (%))

Description of Location: _____

2. Soil Parent Material: Coarse-loamy over sandy melt-out till | moraine (Landform) | _____ (Position on Landscape (SU, SH, BS, FS, TS))

3. Distances from: Open Water Body 200+ feet | Drainage Way --- feet | Wetlands 140+ feet
Property Line 125+ feet | Drinking Water Well 200+ 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: 204'' Depth Weeping from Pit | 206.4'' 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
				De	Color	Percent	Gravel	Cobbles & Stones			
0-4	A	S.L.	10 YR 3/2							Friable	
4-24	B	S.L.	2.5 Y 6/6							Friable	
24-216	C	L.S.-S.L.	2.5 Y 6/4							Dense	

Additional Notes: SU = summit; SH=Slope of hill; BS=base slope; FS=foot slope; TS=toe slope; HS = head slope; NS = nose slope; SS = side slope

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

Deep Observation Hole Number: DHTP-55-3 (Hole #) | 04/20/21 (Date) | 10:45 am | 50°F, Sunny (Weather) | 42.23941° N (Latitude) | 71.35876° W (Longitude:

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

Description of Location: Mid-slope

2. Soil Parent Material: Coarse-loamy over sandy melt-out till | moraine (Landform) | (Position on Landscape (SU, SH, BS, FS, TS)

3. Distances from: Open Water Body 200+ feet | Drainage Way ---- feet | Wetlands 250+ feet
Property Line 65+ feet | Drinking Water Well 150+ 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: None Depth Weeping from Pit | None 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			
0-4	A	S.L.	10 YR 3/2							Friable	
4-24	B	S.L.	10 YR 5/6							Friable	
24 - 240	C	L.S.	2.5 Y 6/6							Friable	Gravel, Boulders

Additional Notes:
SU = summit; SH=Slope of hill; BS=base slope; FS=foot slope; TS=toe slope; HS = head slope; NS = nose slope; SS = side slope

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

Deep Observation Hole Number: DHTP-55-5C (Hole #) | 04/20/21 (Date) | 1:05 PM | 50°F, Sunny (Weather) | 42.23941° N (Latitude) | 71.35876° W (Longitude:

1. Land Use: _____ (e.g., woodland, agricultural field, vacant lot, etc.) | Oaks, pine, maple (Vegetation) | _____ (Surface Stones (e.g., cobbles, stones, boulders, etc.)) | 5 (Slope (%))

Description of Location:

2. Soil Parent Material: Coarse-loamy over sandy melt-out till | Moraine valley (Landform) | BS (Position on Landscape (SU, SH, BS, FS, TS))

3. Distances from: Open Water Body 200+ feet | Drainage Way --- feet | Wetlands 200+ feet | Property Line 50+ feet | Drinking Water Well 200+ 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: 132" Depth Weeping from Pit | 132" 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			
0-10	Ap	S.L.	10 YR 2/1							Friable	
10-24	Bw	S.L.	2.5 Y 5/6							Friable	
24-144	C	L.S.	2.5 Y 5/4	78"						Friable	84" localized weep from drain

Additional Notes:
SU = summit; SH=Slope of hill; BS=base slope; FS=foot slope; TS=toe slope; HS = head slope; NS = nose slope; SS = side slope

D. Determination of High Groundwater Elevation

1. Method Used:

	Obs. Hole # DHTP-55-2	Obs. Hole # DHTP-55-3	Obs. Hole # DHTP-55-5C
☒ Depth observed standing water in observation hole	206.4 inches	none inches	132 inches
☒ Depth weeping from side of observation hole	204 inches	none inches	132 inches
☒ Depth to soil redoximorphic features (mottles)	0 inches	none inches	78" inches
☒ Depth to adjusted seasonal high groundwater (S_h) (USGS methodology)	14.85 ft	20.43 ft	8.43 ft

Index Well Number

4/23/2021
Reading Date

$S_h = S_c – [S_r \times (OW_c – OW_{max})/OW_r]$ See separate calculation sheet see separate analysis sheet in report

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)? DHTP-55-2	Upper boundary:	24 inches	Lower boundary:	216 inches
DHTP-55-3	Upper boundary:	24 inches	Lower boundary:	240 inches
DHTP-55-5C	Upper boundary:	24 inches	Lower boundary:	144 inches
c. If no, at what depth was impervious material observed?	Upper boundary:	- inches	Lower boundary:	- inches

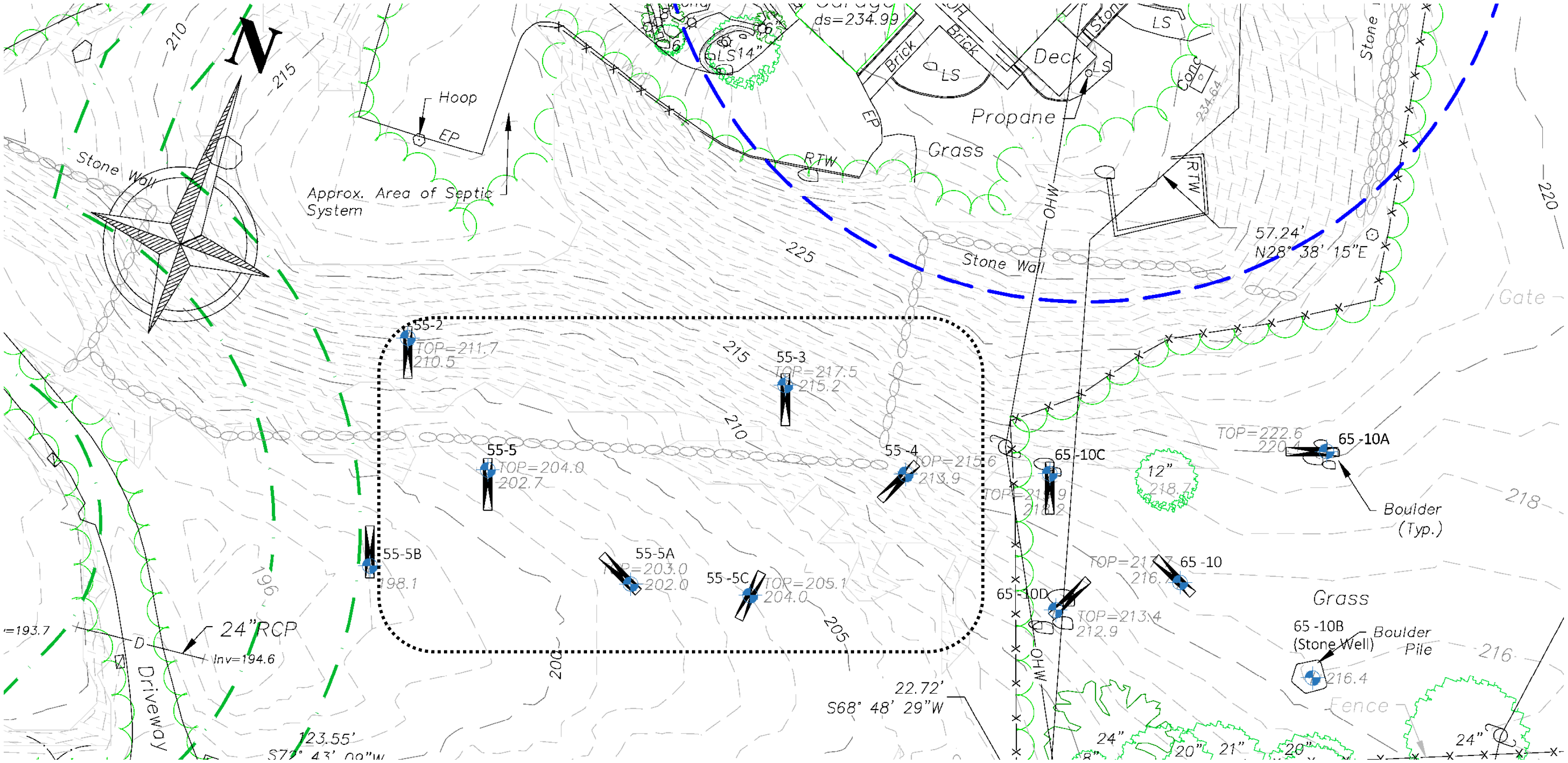
F. Certification

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

Signature of Soil Evaluator	7/28/2021 Date
Desheng Wang/ SE2545 Typed or Printed Name of Soil Evaluator / License #	6/30/2022 Expiration Date of License
Mark Oram Name of Approving Authority Witness	Sherborn Board of Health Approving Authority

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

Field Diagrams: Use this area for field diagrams: See Soil testing plan for details


Approx. Area of Septic System
55-2
TOP=211.7
210.5
55-3
TOP=217.5
215.2
55-4
55-5
TOP=204.0
202.7
55-5A
202.0
55-5B
198.1
55-5C
TOP=205.1
204.0
65-10A
TOP=222.6
65-10C
65-10
65-10D
TOP=213.4
212.9
65-10B
(Stone Well)
216.4
Boulder (Typ.)
Boulder Pile
Grass
Propane
Deck
Stone Wall
24" RCP
Inv=194.6
Driveway
Hoop
57.24'
N28° 38' 15"E
22.72'
S68° 48' 29"W
123.55'
Gate
Fence

Commonwealth of Massachusetts
City/Town of Sherborn
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.

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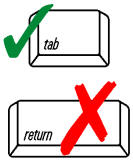

A. Site Information

Fenix Partners Farm Road, LLC.
Owner Name

55 Farm Road (AREA #1)
Street Address or Lot #

Sherborn	MA	01770
City/Town	State	Zip Code

Desheng Wang	(774) 454-0266
Contact Person (if different from Owner)	Telephone Number

B. Test Results

	04/20/2021 (Date)	2:43 PM (Time)	04/20/2021 (Date)	10:45 AM (Time)
Observation Hole #	DHTP-55-2		DHTP-55-3	
Depth of Perc	54"		60"	
Start Pre-Soak	2:43 PM		10:45 AM	
End Pre-Soak	2:58 PM		11:00 AM	
Time at 12”	2:58 PM		11:04 AM	
Time at 9”	3:12 PM		11:09:55 AM	
Time at 6”	3:28 PM		11:16:20 AM	
Time (9”-6”)	16 Min.		6:25 Min.	
Rate (Min./Inch)	6		3	
	Test Passed: ☒ Test Failed: ☐		Test Passed: ☒ Test Failed: ☐	

Desheng Wang
Test Performed By:

Mark Oram
Board of Health Witness

Comments:

Commonwealth of Massachusetts
City/Town of Sherborn

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.

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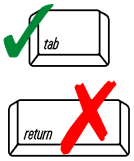


A. Site Information

Fenix Partners Farm Road, LLC.
Owner Name

55 Farm Road (AREA #1)
Street Address or Lot #

Sherborn	MA	01770
City/Town	State	Zip Code

Desheng Wang	(774) 454-0266
Contact Person (if different from Owner)	Telephone Number

B. Test Results

	Date	Time	Date	Time
Observation Hole #	DHTP 55-5C			
Depth of Perc	63”			
Start Pre-Soak	1:05 pm			
End Pre-Soak	1:20 pm			
Time at 12”	1:20 pm			
Time at 9”	1:47 pm			
Time at 6”	2:19 pm			
Time (9”-6”)	32 min			
Rate (Min./Inch)	11			
	Test Passed: ☒ Test Failed: ☐		Test Passed: ☐ Test Failed: ☐	

Desheng Wang
Test Performed By:

Mark Oram
Board of Health Witness

Comments:

Commonwealth of Massachusetts
City/Town of Sherborn

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

A. Facility Information

Fenix Partners Farm Road, LLC.
Owner Name

55 Farm Road (Area #2)
Street Address

Assessors Map 11, Lot 60
Map/Lot #

Sherborn
City

MA
State

01770
Zip Code

B. Site Information

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

2. Soil Survey Available? ☒ Yes ☐ No If yes: Web Soil Survey (Source) 104D (Charlton part) (Soil Map Unit)

Hollis-Rock outcrop-Charlton complex
Soil Name

Soil Limitations

Friable, shallow loamy basal till
Soil Parent material

Hills
Landform

3. Surficial Geological Report Available? ☒ Yes ☐ No If yes: USGS - 2018 (Year Published/Source) 3402 (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): 4/23/2021 (Month/Day/ Year) Range: ☐ Above Normal ☒ Normal ☐ Below Normal

8. Other references reviewed:

Commonwealth of Massachusetts
City/Town of Sherborn

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: DHTP-55-10AN (Hole #) | 04/21/2021 (Date) | 3:00 PM (Time) | 54°F, Mostly Sunny (Weather) | 42.24028° N (Latitude) | 71.35899° W (Longitude:)

1. Land Use: Woodland (e.g., woodland, agricultural field, vacant lot, etc.) | Pine forest (Vegetation) | Boulders on surface (Surface Stones (e.g., cobbles, stones, boulders, etc.)) | 3-10% (Slope (%))

Description of Location: _____

2. Soil Parent Material: Friable, shallow loamy basal till | Moraine valley slope (Landform) | TS (Position on Landscape (SU, SH, BS, FS, TS))

3. Distances from: Open Water Body 200+ feet | Drainage Way --- feet | Wetlands 125+ feet | Property Line 125+ feet | Drinking Water Well 200+ 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: 168" Depth Weeping from Pit | 168" 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	S.L.	10 YR 3/2	N/A						Friable	
6-30	B	S.L.	2.5 Y 6/6	N/A						Friable	
30-174	C	L.S.-S.L.	2.5 Y 6/4	N/A						Fri-Dense	
174	Cr	ledge									

Additional Notes: SU = summit; SH=Slope of hill; BS=base slope; FS=foot slope; TS=toe slope; HS = head slope; NS = nose slope; SS = side slope

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

Deep Observation Hole Number: DHTP-55-10 (Hole #) | 04/21/21 (Date) | 2:05 PM (Time) | 54°F, M. Sunny (Weather) | 42.24028° N (Latitude) | 71.35899° W (Longitude:)

1. Land Use: Woodland (e.g., woodland, agricultural field, vacant lot, etc.) | Vegetation | Surface Stones (e.g., cobbles, stones, boulders, etc.) | 10 (Slope (%))

Description of Location: See plan

2. Soil Parent Material: Friable, shallow loamy basal till | Moraine valley (Landform) | BS (Position on Landscape (SU, SH, BS, FS, TS))

3. Distances from: Open Water Body 200+ feet | Drainage Way -- feet | Wetlands 200+ feet | Property Line 125+ feet | Drinking Water Well 125+ 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: 0 Depth Weeping from Pit | 0 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	S.L.	10 YR 3/2	N/A						Friable	
6-30	B	S.L.	2.5 Y 6/6	N/A						Friable	
30-135	C	L.S.	2.5 Y 5/4	N/A						Dense-Fri	
135	Cr	refusal									

Additional Notes:
SU = summit; SH=Slope of hill; BS=base slope; FS=foot slope; TS=toe slope; HS = head slope; NS = nose slope; SS = side slope

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

Deep Observation Hole Number: DHTP-55-11 (Hole #) | 04/21/21 (Date) | 1:05 PM (Time) | 54°F, M. Sunny (Weather) | 42.24028° N (Latitude) | 71.35899° W (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: See plan

2. Soil Parent Material: Friable, shallow loamy basal till | Moraine valley (Landform) | SS (Position on Landscape (SU, SH, BS, FS, TS))

3. Distances from: Open Water Body 200+ feet | Drainage Way -- feet | Wetlands 200+ feet
Property Line 125+ feet | Drinking Water Well 125+ 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: 0 Depth Weeping from Pit | 0 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			
0-4	A	S.L.	10 YR 3/2							Friable	
4-30	B	S.L.	10 YR 6/6							Friable	
30-192	C	L.S.-S.L.	2.5 Y 5/4							Dense-Fri	

Additional Notes:
SU = summit; SH=Slope of hill; BS=base slope; FS=foot slope; TS=toe slope; HS = head slope; NS = nose slope; SS = side slope

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

Deep Observation Hole Number: DHTP-55-11AN (Hole #) | 04/21/21 (Date) | 1:49 PM (Time) | 54°F, M. Sunny (Weather) | 42.24028° N (Latitude) | 71.35899° W (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:

2. Soil Parent Material: Friable, shallow loamy basil till | Moraine (Landform) | ss (Position on Landscape (SU, SH, BS, FS, TS))

3. Distances from: Open Water Body 200+ feet | Drainage Way -- feet | Wetlands 140+ feet
Property Line 175+ feet | Drinking Water Well 175+ 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: 204 Depth Weeping from Pit | 204 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			
0-4	A	S.L.	10 YR 3/2							Friable	
4-32	B	S.L.	2.5 Y 6/6							Friable	
32-216	C	L.S.	2.5 Y 5/4							Friable	

Additional Notes:
SU = summit; SH=Slope of hill; BS=base slope; FS=foot slope; TS=toe slope; HS = head slope; NS = nose slope; SS = side slope

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

Deep Observation Hole Number: DHTP-55-11BHole # | 04/21/21 Date | 2:35 PM Time | 54°F, M. Sunny Weather | 42.24028° N Latitude | 71.35899° W Longitude:

1. Land Use: Woodland (e.g., woodland, agricultural field, vacant lot, etc.) | Pine, oak Vegetation | Surface Stones (e.g., cobbles, stones, boulders, etc.) | 5 Slope (%)

Description of Location: See plan, check soil consistence in the area

2. Soil Parent Material: Friable, shallow loamy basal till | Moraine valley Landform | BS Position on Landscape (SU, SH, BS, FS, TS)

3. Distances from: Open Water Body 200+ feet | Drainage Way -- feet | Wetlands 200+ feet
Property Line 125+ feet | Drinking Water Well 125+ 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: 0 Depth Weeping from Pit | 0 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	S.L.	10 YR 3/2	N/A						Friable	
6-30	B	S.L.	2.5 Y 6/6	N/A						Friable	
30-120+	C	L.S.	2.5 Y 5/4	N/A						Dense-Fri	

Additional Notes:
SU = summit; SH=Slope of hill; BS=base slope; FS=foot slope; TS=toe slope; HS = head slope; NS = nose slope; SS = side slope

D. Determination of High Groundwater Elevation

1. Method Used:

	Obs. Hole # DHTP-55-10	Obs. Hole # DHTP-55-10AN	Obs. Hole # DHTP-55-11	Obs. Hole # DHTP-55-11AN
☒ Depth observed standing water in observation hole	135 inches	168 inches	dry inches	204 inches
☒ Depth weeping from side of observation hole	135 inches dry	168 inches	dry inches	204 inches
☒ Depth to soil redoximorphic features (mottles)	N/A inches	N/A inches	N/A inches	N/A inches
☒ Depth to adjusted seasonal high groundwater (S_h) (USGS methodology)	9.76 ft	11.51 ft	13.93 ft dry	13.93 ft

Index Well Number

4/23/2021
Reading Date

$S_h = S_c – [S_r \times (OW_c – OW_{max})/OW_r]$ See separate calculation sheet See USGS Frimpter method analysis sheet for details

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)?

DHTP-55-10AN	Upper boundary:	30 inches	Lower boundary:	174 inches
DHTP-55-11	Upper boundary:	30 inches	Lower boundary:	192 inches
DHTP-55-11AN	Upper boundary:	32 inches	Lower boundary:	216 inches

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

	Upper boundary:	- inches	Lower boundary:	- inches

F. Certification

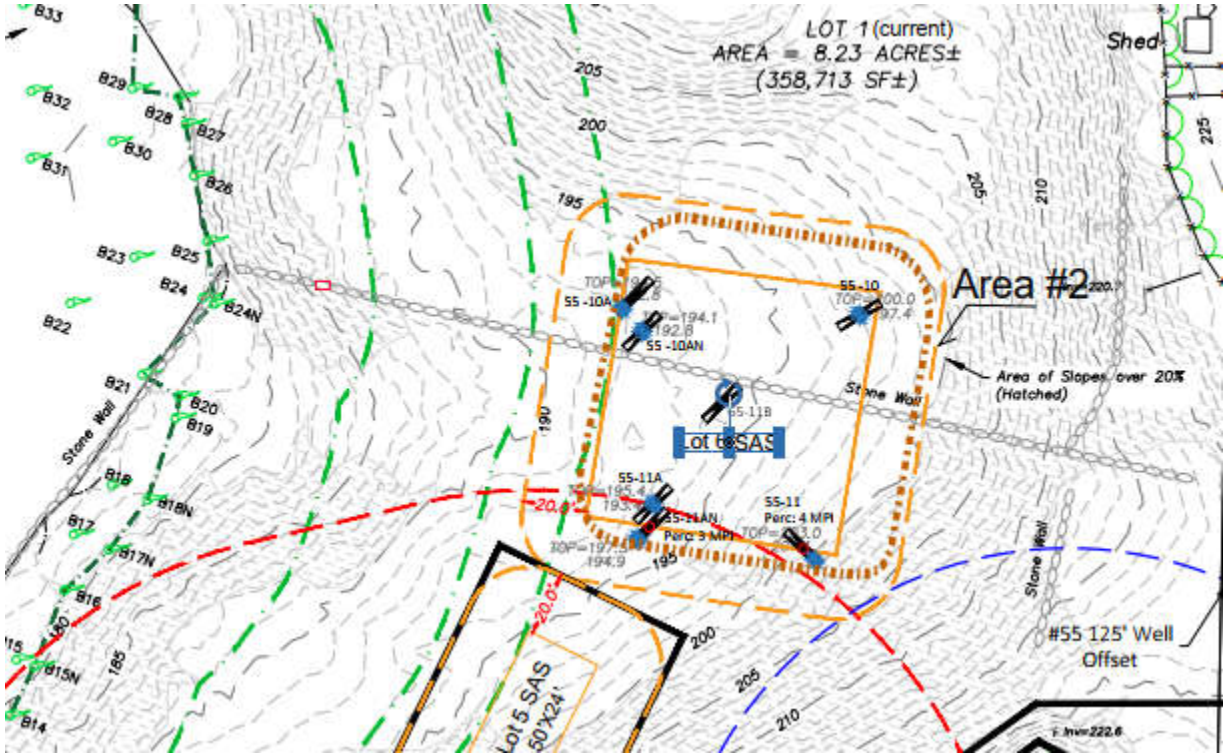
I certify that I am currently approved by the Department of Environmental Protection pursuant to 310 CMR 15.017 to conduct soil evaluations and that the above analysis has been performed by me consistent with the required training, expertise and experience described in 310 CMR 15.017. I further certify that the results of

my soil evaluation, as indicated in the attached Soil Evaluation Form, are accurate and in accordance with 310 CMR 15.100 through 15.107.

Signature of Soil Evaluator	7/28/2021 Date
Desheng Wang/ SE2545 Typed or Printed Name of Soil Evaluator / License #	6/30/2022 Expiration Date of License
Mark Oram Name of Approving Authority Witness	Sherborn Board of Health Approving Authority

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

Field Diagrams: Use this area for field diagrams: See Soil testing plan for details



Commonwealth of Massachusetts
City/Town of Sherborn
Percolation Test
Form 12

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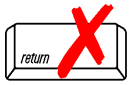


A. Site Information

Fenix Partners Farm Road, LLC.
Owner Name

55 Farm Road (Area #2)
Street Address or Lot #

Sherborn	MA	01770
City/Town	State	Zip Code

Desheng Wang	(774) 454-0266
Contact Person (if different from Owner)	Telephone Number

B. Test Results

	04/21/2021 Date	1:05 PM Time	04/21/2021 Date	1:49 PM Time
Observation Hole #	DHTP-55-11		DHTP-55-11AN	
Depth of Perc	54"		54"	
Start Pre-Soak	1:05 PM		1:49 PM	
End Pre-Soak	1:20 PM		2:04 PM	
Time at 12”	1:20 PM		2:04 PM	
Time at 9”	1:30 PM		2:12 PM	
Time at 6”	1:42 PM		2:21 PM	
Time (9”-6”)	12 Min.		9 Min.	
Rate (Min./Inch)	4		3	
	Test Passed: ☒ Test Failed: ☐		Test Passed: ☒ Test Failed: ☐	

Desheng Wang
Test Performed By:

Mark Oram
Board of Health Witness

Comments:

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

7/28/2021
Date

Desheng Wang/ SE2545
Typed or Printed Name of Soil Evaluator / License #

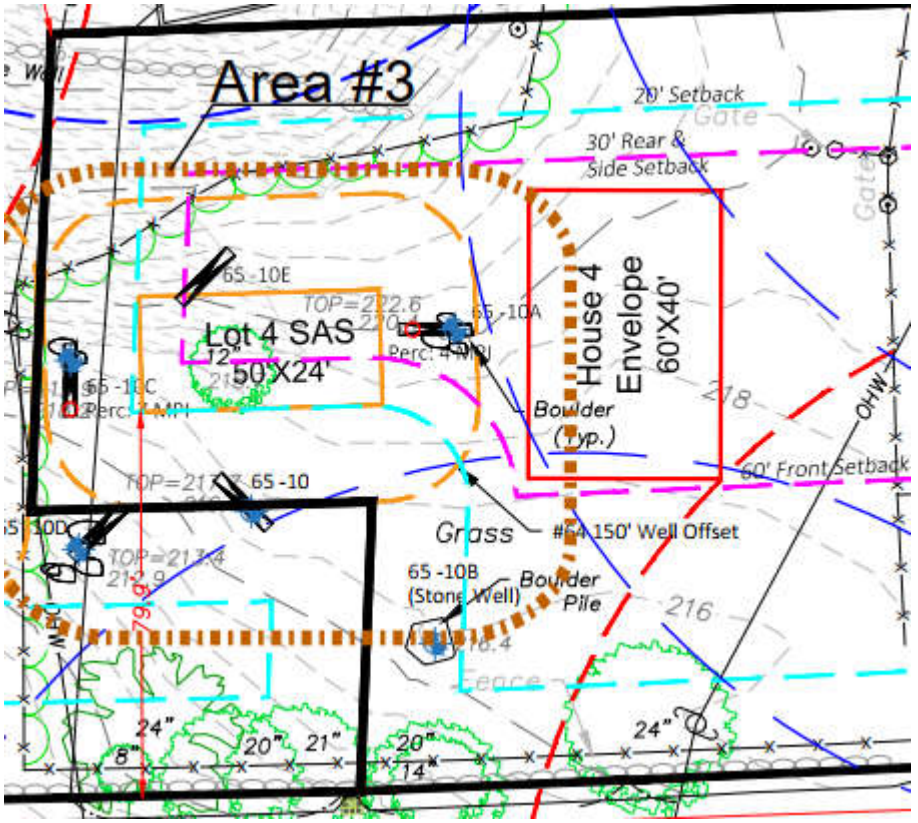
6/30/2022
Expiration Date of License

Mark Oram
Name of Approving Authority Witness

Sherborn Board of Health
Approving Authority

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

Field Diagrams: Use this area for field diagrams: See Soil testing plan for details



Commonwealth of Massachusetts
City/Town of Sherborn
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.

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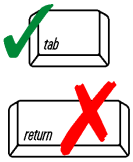


A. Site Information

Fenix Partners Farm Road, LLC.
Owner Name

65 Farm Road (AREA #3)
Street Address or Lot #

Sherborn	MA	01770
City/Town	State	Zip Code

Desheng Wang	(774) 454-0266
Contact Person (if different from Owner)	Telephone Number

B. Test Results

	04/20/2021 Date	3:47 PM Time	04/21/2021 Date	10:20 AM Time
Observation Hole #	DHTP-65-10A		DHTP-65-10C	
Depth of Perc	60"		50"	
Start Pre-Soak	3:47 PM		10:20 AM	
End Pre-Soak	4:02 PM		10:35 AM	
Time at 12”	4:02 PM		10:35 AM	
Time at 9”	4:08 PM		10:50 AM	
Time at 6”	4:19 PM		11:09 AM	
Time (9”-6”)	11 Min.		19 Min.	
Rate (Min./Inch)	4		7	
	Test Passed: ☒ Test Failed: ☐		Test Passed: ☒ Test Failed: ☐	

Desheng Wang
Test Performed By:

Mark Oram
Board of Health Witness

Comments:

Commonwealth of Massachusetts
City/Town of Sherborn

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

A. Facility Information

Fenix Partners Farm Road, LLC
Owner Name

55 Farm Road (Lot 3)
Street Address

Assessors Map 11, Lot 60
Map/Lot #

Sherborn
City

MA
State

01770
Zip Code

B. Site Information

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

2. Soil Survey Available? ☒ Yes ☐ No If yes: Web Soil Survey (Source) 422C (Soil Map Unit)

Canton Fine Sandy Loam
Soil Name

Soil Limitations

Coarse-loamy over sandy melt-out till
Soil Parent material

Moraine
Landform

3. Surficial Geological Report Available? ☒ Yes ☐ No If yes: USGS - 2018 (Year Published/Source) 3402 (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): 4/23/2021 (Month/Day/ Year) Range: ☐ Above Normal ☒ Normal ☐ Below Normal

8. Other references reviewed:

Commonwealth of Massachusetts
City/Town of Sherborn

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: DHTP-65-10C (Hole #) | 04/21/21 (Date) | 10:20 am (Time) | 54°F, M.Sunny (Weather) | 42.23961° N (Latitude) | 71.35791° W (Longitude:)

1. Land Use: Open field (e.g., woodland, agricultural field, vacant lot, etc.) | Hay (Vegetation) | (Surface Stones (e.g., cobbles, stones, boulders, etc.)) | 5 (Slope (%))

Description of Location: See plan

2. Soil Parent Material: Coarse-loamy over sandy melt-out till | moraine (Landform) | BS (Position on Landscape (SU, SH, BS, FS, TS))

3. Distances from: Open Water Body 200+ feet | Drainage Way -- feet | Wetlands 200+ feet
Property Line 5+ feet | Drinking Water Well 150+ 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: 0 Depth Weeping from Pit | 0 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			
0-4	A	S.L.	10 YR 3/2							Friable	
4-24	B	S.L.	2.5 Y 6/6							Friable	
24-168	C	L.S.	2.5 Y 6/4							Friable	

Additional Notes:
SU = summit; SH=Slope of hill; BS=base slope; FS=foot slope; TS=toe slope; HS = head slope; NS = nose slope; SS = side slope

Commonwealth of Massachusetts
City/Town of Sherborn

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: DHTP-65-10D (Hole #) | 04/21/21 (Date) | 11:00 PM (Time) | 54°F, M. Sunny (Weather) | 42.23961° N (Latitude) | 71.35791° W (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: Coarse-loamy over sandy melt-out till | Moraine (Landform) | BS (Position on Landscape (SU, SH, BS, FS, TS))

3. Distances from: Open Water Body 200+ feet | Drainage Way --- feet | Wetlands 200+ feet
Property Line 2+ feet | Drinking Water Well 150+ 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: 168 Depth Weeping from Pit | 168 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	S.L.	10 YR 3/2							Friable	
6-24	B	S.L.	10 YR 6/6							Friable	
24-168	C	L.S.	2.5 Y 5/4							Dense	

Additional Notes:
SU = summit; SH=Slope of hill; BS=base slope; FS=foot slope; TS=toe slope; HS = head slope; NS = nose slope; SS = side slope

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

Deep Observation Hole Number: DHTP-55-4 (Hole #) | 03/25/21 (Date) | 10:00 am (Time) | 50°F, Sunny (Weather) | 42.23941° N (Latitude) | 71.35876° W (Longitude:

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

Description of Location: Mid slope.

2. Soil Parent Material: Coarse-loamy over sandy melt-out till | moraine (Landform) | (Position on Landscape (SU, SH, BS, FS, TS)

3. Distances from: Open Water Body 200+ feet | Drainage Way -- feet | Wetlands 200+ feet
Property Line 20+ feet | Drinking Water Well 150+ 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: none Depth Weeping from Pit | none 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	S.L.	10 YR 3/2							Friable	
6-24	Bw	S.L.	2.5 Y 6/6							Friable	
24-216	C	S.L.	2.5 Y 6/4							Rocky	EHGW @ 15'+

Additional Notes:
SU = summit; SH=Slope of hill; BS=base slope; FS=foot slope; TS=toe slope; HS = head slope; NS = nose slope; SS = side slope

D. Determination of High Groundwater Elevation

1. Method Used:

	Obs. Hole # DHTP-65-10C	Obs. Hole # DHTP-65-10D	Obs. Hole # DHTP-55-4
☒ Depth observed standing water in observation hole	none inches	168 inches	none inches
☒ Depth weeping from side of observation hole	none inches	168 inches	none inches
☒ Depth to soil redoximorphic features (mottles)	none inches	none inches	none inches
☒ Depth to adjusted seasonal high groundwater (S_h) (USGS methodology)	10.75 ft	12.17 ft	15.62 ft

Index Well Number: 4/27/2021,11/24/2021 (Reading Date)

$S_h = S_c – [S_r \times (OW_c – OW_{max})/OW_r]$ See separate calculation sheet SEE ANALYSIS SHEET FOR DETAILS

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)?

DHTP-65-10C	Upper boundary:	24 inches	Lower boundary:	168 inches
DHTP-65-10D	Upper boundary:	24 inches	Lower boundary:	168 inches
DHTP-55-4	Upper boundary:	24 inches	Lower boundary:	216 inches

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

	Upper boundary:	- inches	Lower boundary:	- inches

F. Certification

I certify that I am currently approved by the Department of Environmental Protection pursuant to 310 CMR 15.017 to conduct soil evaluations and that the above analysis has been performed by me consistent with the required training, expertise and experience described in 310 CMR 15.017. I further certify that the results of

my soil evaluation, as indicated in the attached Soil Evaluation Form, are accurate and in accordance with 310 CMR 15.100 through 15.107.

Signature of Soil Evaluator

12/21/2021
Date

Desheng Wang/ SE2545
Typed or Printed Name of Soil Evaluator / License #

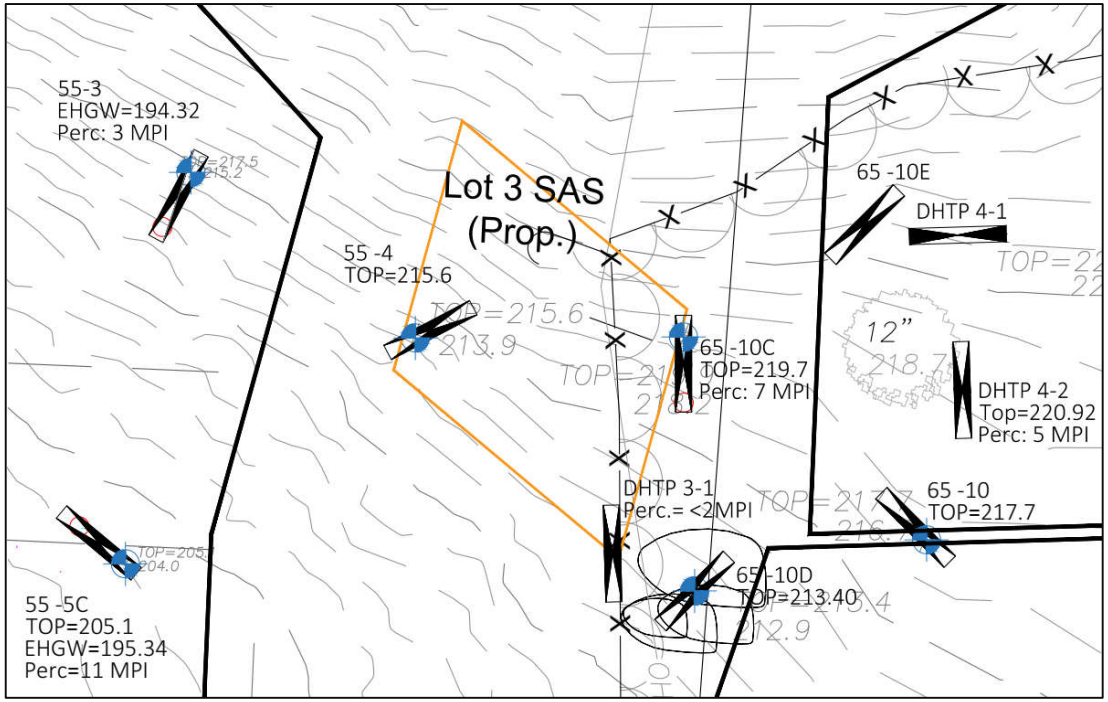
6/30/2022
Expiration Date of License

Mark Oram
Name of Approving Authority Witness

Sherborn Board of Health
Approving Authority

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

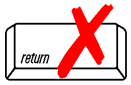
Field Diagrams: Use this area for field diagrams: See Soil testing plan for details



Commonwealth of Massachusetts
City/Town of Sherborn
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

Fenix Partners Farm Road, LLC.
Owner Name

55 Farm Road (Lot 3)
Street Address or Lot #

Sherborn	MA	01770
City/Town	State	Zip Code

Desheng Wang	(774) 454-0266
Contact Person (if different from Owner)	Telephone Number

B. Test Results

	04/21/2021 Date	10:20 AM Time	11/21/2021 Date	9:57 AM Time
Observation Hole #	DHTP-65-10C		DHTP-65-10D	
Depth of Perc	50"'		54"	
Start Pre-Soak	10:20 AM		9:57 AM	
End Pre-Soak	10:35 AM		10:05am	
Time at 12"	10:35 AM		-	
Time at 9"	10:50 AM		-	
Time at 6"	11:09 AM		-	
Time (9"-6")	19 Min.		-	
Rate (Min./Inch)	7		<2	
	Test Passed: ☒ Test Failed: ☐		Test Passed: ☒ Test Failed: ☐	

Desheng Wang
Test Performed By:

Mark Oram
Board of Health Witness

Comments:

DHTP-65-10D: More than 24 gallons added during pre-soak

Commonwealth of Massachusetts
City/Town of Sherborn

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

A. Facility Information

Trinity Farm, LLC.
Owner Name

65 Farm Road (Lot 4)
Street Address

Assessors Map 11, Lot 60A
Map/Lot #

Sherborn
City

MA
State

01770
Zip Code

B. Site Information

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

2. Soil Survey Available? ☒ Yes ☐ No If yes: Web Soil Survey (Source) 422C (Soil Map Unit)

Canton Fine Sandy Loam
Soil Name

Soil Limitations

Coarse-loamy over sandy melt-out till
Soil Parent material

Moraine
Landform

3. Surficial Geological Report Available? ☒ Yes ☐ No If yes: USGS - 2018 (Year Published/Source) 3402 (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): 11/24/2021 (Month/Day/ Year) Range: ☐ Above Normal ☒ Normal ☐ Below Normal

8. Other references reviewed:

Commonwealth of Massachusetts
City/Town of Sherborn

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: DHTP 4-1 (Hole #) | 11/09/2021 (Date) | 10:00 am (Time) | 60s°F, M. Sunny (Weather) | 42.23961° N (Latitude) | 71.35800° W (Longitude)

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

Description of Location: _____

2. Soil Parent Material: Coarse-loamy over sandy melt-out till | Moraine (Landform) | SS (Position on Landscape (SU, SH, BS, FS, TS))

3. Distances from: Open Water Body 200+ feet | Drainage Way -- feet | Wetlands 200+ feet
Property Line 75+ feet | Drinking Water Well 175+ 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: none Depth Weeping from Pit | none 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			
0-12	Ap	S.L.	10 YR 3/2							Friable	
12-36	B	S.L. - L.S.	2.5 Y 6/6							Friable	
36-120	C	S.L. - L.S.	2.5 Y 6/4							Fri-Dense	

Additional Notes: SU = summit; SH=Slope of hill; BS=base slope; FS=foot slope; TS=toe slope; HS = head slope; NS = nose slope; SS = side slope

Commonwealth of Massachusetts
City/Town of Sherborn

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: DHTP 4-2 (Hole #) | 11/09/2021 (Date) | 12:30 pm (Time) | 60s°F, M. Sunny (Weather) | 42.23961° N (Latitude) | 71.35800° W (Longitude:)

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

Description of Location: _____

2. Soil Parent Material: Coarse-loamy over sandy melt-out till | Moraine (Landform) | SS (Position on Landscape (SU, SH, BS, FS, TS))

3. Distances from: Open Water Body 200+ feet | Drainage Way -- feet | Wetlands 200+ feet
Property Line 75+ feet | Drinking Water Well 175+ 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: 144 Depth Weeping from Pit | 144 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			
0-12	A	S.L.	10 YR 3/2							Friable	
12-36	B	S.L. - L.S.	2.5 Y 6/6							Friable	
36-144	C	S.L. - L.S.	2.5 Y 6/4							Dense, Stony	
144+	Cr	Frac. Ledge									

Additional Notes: SU = summit; SH=Slope of hill; BS=base slope; FS=foot slope; TS=toe slope; HS = head slope; NS = nose slope; SS = side slope

Commonwealth of Massachusetts
City/Town of Sherborn

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: DHTP-65-10A (Hole #) | 04/20/2021 (Date) | 3:47 pm (Time) | 50°F, Sunny (Weather) | 42.23961° N (Latitude) | 71.35800° W (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: Coarse-loamy over sandy melt-out till | Moraine (Landform) | SS (Position on Landscape (SU, SH, BS, FS, TS))

3. Distances from: Open Water Body 200+ feet | Drainage Way -- feet | Wetlands 200+ feet
   Property Line 75+ feet | Drinking Water Well 175+ 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: 144 Depth Weeping from Pit | 147.6 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			
0-24	Ap	S.L.	10 YR 2/1							Friable	
24-30	B	S.L.	10 YR 5/6							Friable	
30-150	C	M.L.S.	2.5 Y 6/4							Friable	
150+	Cr	Ledge									

Additional Notes: SU = summit; SH=Slope of hill; BS=base slope; FS=foot slope; TS=toe slope; HS = head slope; NS = nose slope; SS = side slope

D. Determination of High Groundwater Elevation

1. Method Used:

	Obs. Hole # DHTP 4-1	Obs. Hole # DHTP 4-2	Obs. Hole # DHTP-65-10A
☒ Depth observed standing water in observation hole	none inches	144 inches	147.6 inches
☒ Depth weeping from side of observation hole	none inches	144 inches	144 inches
☒ Depth to soil redoximorphic features (mottles)	none inches	none inches	none inches
☒ Depth to adjusted seasonal high groundwater (S_h) (USGS methodology)	7.62 ft dry use wet hole	9.12 ft	8.73

Index Well Number

11/24/21
Reading Date

$S_h = S_c – [S_r \times (OW_c – OW_{max})/OW_r]$ See separate calculation sheet see analysis sheet for details

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)?

DHTP-65-10A	Upper boundary:	36 inches	Lower boundary:	120 inches
DHTP-65-10C	Upper boundary:	36 inches	Lower boundary:	144 inches
DHTP-65-10D	Upper boundary:	30 inches	Lower boundary:	150 inches

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

	Upper boundary:	- inches	Lower boundary:	- inches

F. Certification

I certify that I am currently approved by the Department of Environmental Protection pursuant to 310 CMR 15.017 to conduct soil evaluations and that the above analysis has been performed by me consistent with the required training, expertise and experience described in 310 CMR 15.017. I further certify that the results of

my soil evaluation, as indicated in the attached Soil Evaluation Form, are accurate and in accordance with 310 CMR 15.100 through 15.107.

Signature of Soil Evaluator

12/21/2021
Date

Desheng Wang/ SE2545
Typed or Printed Name of Soil Evaluator / License #

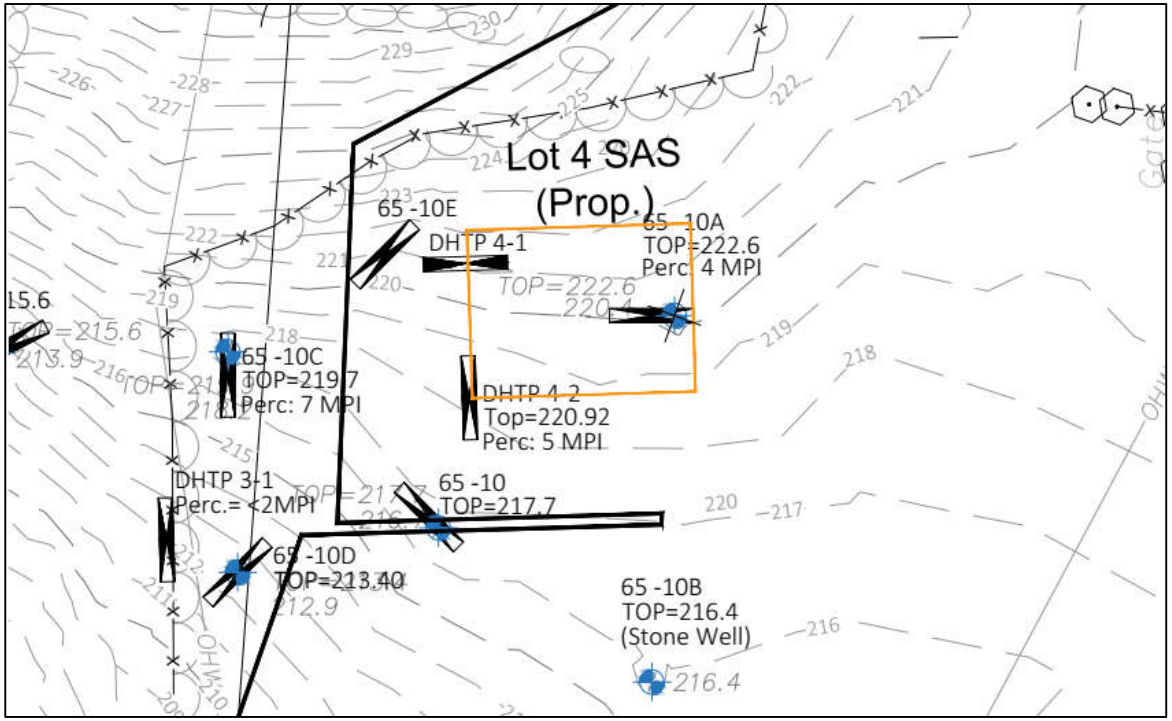
6/30/2022
Expiration Date of License

Mark Oram
Name of Approving Authority Witness

Sherborn Board of Health
Approving Authority

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

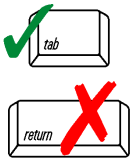
Field Diagrams: Use this area for field diagrams: See Soil testing plan for details



Commonwealth of Massachusetts
City/Town of Sherborn
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

Fenix Partners Farm Road, LLC.
Owner Name

65 Farm Road (Lot 4)
Street Address or Lot #

Sherborn	MA	01770
City/Town	State	Zip Code

Desheng Wang	(774) 454-0266
Contact Person (if different from Owner)	Telephone Number

B. Test Results

	11/09/2021 Date	12:14 PM Time	04/20/2021 Date	3:47 PM Time
Observation Hole #	DHTP 4-2		DHTP 65-10A	
Depth of Perc	54"		60"	
Start Pre-Soak	12:14 PM		3:47 PM	
End Pre-Soak	12:29 PM		4:02 PM	
Time at 12”	12:29 PM		4:02 PM	
Time at 9”	12:37 PM		4:08 PM	
Time at 6”	12:51 PM		4:19 PM	
Time (9”-6”)	14 Min.		11 Min.	
Rate (Min./Inch)	5		4	
	Test Passed: ☒ Test Failed: ☐		Test Passed: ☒ Test Failed: ☐	

Desheng Wang
Test Performed By:

Mark Oram
Board of Health Witness

Comments:

Commonwealth of Massachusetts
City/Town of Sherborn

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

A. Facility Information

Trinity Farm, LLC.
Owner Name

55 Farm Road (Lot 5)
Street Address

Assessors Map 11, Lot 60
Map/Lot #

Sherborn
City

MA
State

01770
Zip Code

B. Site Information

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

2. Soil Survey Available? ☒ Yes ☐ No If yes: Web Soil Survey (Source) 422C (Soil Map Unit)

Hollis-Rock outcrop-Charlton complex
Soil Name

Soil Limitations

Coarse-loamy over sandy melt-out till
Soil Parent material

Moraine
Landform

3. Surficial Geological Report Available? ☒ Yes ☐ No If yes: USGS - 2018 (Year Published/Source) 3402 (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): 11/24/2021 (Month/Day/ Year) Range: ☐ Above Normal ☒ Normal ☐ Below Normal

8. Other references reviewed:

Commonwealth of Massachusetts
City/Town of Sherborn

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: DHTP 5-1 (Hole #) | 11/10/2021 (Date) | 12:00 PM (Time) | 60s°F, Cloudy (Weather) | 42.24002° N (Latitude) | 71.35913° W (Longitude)

1. Land Use: Woods (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: Coarse-loamy over sandy melt-out till | Moraine (Landform) | SS (Position on Landscape (SU, SH, BS, FS, TS))

3. Distances from: Open Water Body 125+ feet | Drainage Way -- feet | Wetlands 125+ feet | Property Line 20+ feet | Drinking Water Well 150+ 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: none Depth Weeping from Pit | none 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	S.L.	10 YR 3/2							Friable	
9 – 36	B	S.L.	2.5 Y 6/6							Friable. Bldrs	
36 – 168+	C	Co.M.L.S.	2.5 Y 5/4							Dense. 20% Stones	

Additional Notes: SU = summit; SH=Slope of hill; BS=base slope; FS=foot slope; TS=toe slope; HS = head slope; NS = nose slope; SS = side slope

Commonwealth of Massachusetts
City/Town of Sherborn

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: DHTP 5-2 (Hole #) | 11/09/2021 (Date) | 3:25 pm (Time) | 60s°F, M. Sunny (Weather) | 42.24002° N (Latitude) | 71.35913° W (Longitude)

1. Land Use: Woods (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: Coarse-loamy over sandy melt-out till | Moraine (Landform) | SS (Position on Landscape (SU, SH, BS, FS, TS))

3. Distances from: Open Water Body 125+ feet | Drainage Way -- feet | Wetlands 125+ feet | Property Line 20+ feet | Drinking Water Well 150+ 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: none Depth Weeping from Pit | none 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 – 4	A	S.L.	10 YR 3/2							Friable	
4 – 30	B	S.L.	2.5 Y 6/6							Friable	
30 -180+	C	Co.L.S.	2.5 Y 5/4							Fri-Loose	

Additional Notes: SU = summit; SH=Slope of hill; BS=base slope; FS=foot slope; TS=toe slope; HS = head slope; NS = nose slope; SS = side slope

Commonwealth of Massachusetts
City/Town of Sherborn

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: DHTP 5-3 (Hole #) | 11/10/2021 (Date) | 11:04 pm (Time) | 60s°F, Cloudy (Weather) | 42.24002° N (Latitude) | 71.35913° W (Longitude)

1. Land Use: Woods (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: Coarse-loamy over sandy melt-out till | Moraine (Landform) | SS (Position on Landscape (SU, SH, BS, FS, TS))

3. Distances from: Open Water Body 125+ feet | Drainage Way -- feet | Wetland
Property Line 20+ feet | Drinking Water Well 150+ feet | Other

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

5. Groundwater Observed: ☐ Yes ☒ No If yes: none Depth Weeping from Pit | none 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 – 4	A	S.L.	10 YR 3/2							Friable	
4 – 30	B	S.L.	2.5 Y 6/6							Fri. L. Boulders	
30 – 54	C1	M.S.	2.5 Y 6/4							Loose	
54-180+	C2	Co.M.L.S.	2.5 Y 5/4							Dense. 20% Stones	

Additional Notes: SU = summit; SH=Slope of hill; BS=base slope; FS=foot slope; TS=toe slope; HS = head slope; NS = nose slope; SS = side slope

D. Determination of High Groundwater Elevation

1. Method Used:	Obs. Hole # DHTP 5-1	Obs. Hole # DHTP 5-2	Obs. Hole # DHTP 5-3
☒ Depth observed standing water in observation hole	none inches	144 inches	144 inches
☒ Depth weeping from side of observation hole	none inches	144 inches	144 inches
☒ Depth to soil redoximorphic features (mottles)	none inches	none inches	none inches
☒ Depth to adjusted seasonal high groundwater (S_h) (USGS methodology)	10.54 ft	12.86 ft	13.53 ft

Index Well Number _____ 11/24/21 Reading Date

$S_h = S_c – [S_r \times (OW_c – OW_{max})/OW_r]$ See separate calculation sheet see analysis sheet for details

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)?

DHTP 55-1	Upper boundary:	36 Inches	Lower boundary:	168 Inches
DHTP 55-2	Upper boundary:	30 Inches	Lower boundary:	180 Inches
DHTP 55-3	Upper boundary:	30 Inches	Lower boundary:	180 Inches

c. If no, at what depth was impervious material observed? Upper boundary: Inches Lower boundary: Inches

F. Certification

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

Signature of Soil Evaluator

12/21/2021
Date

Desheng Wang/ SE2545
Typed or Printed Name of Soil Evaluator / License #

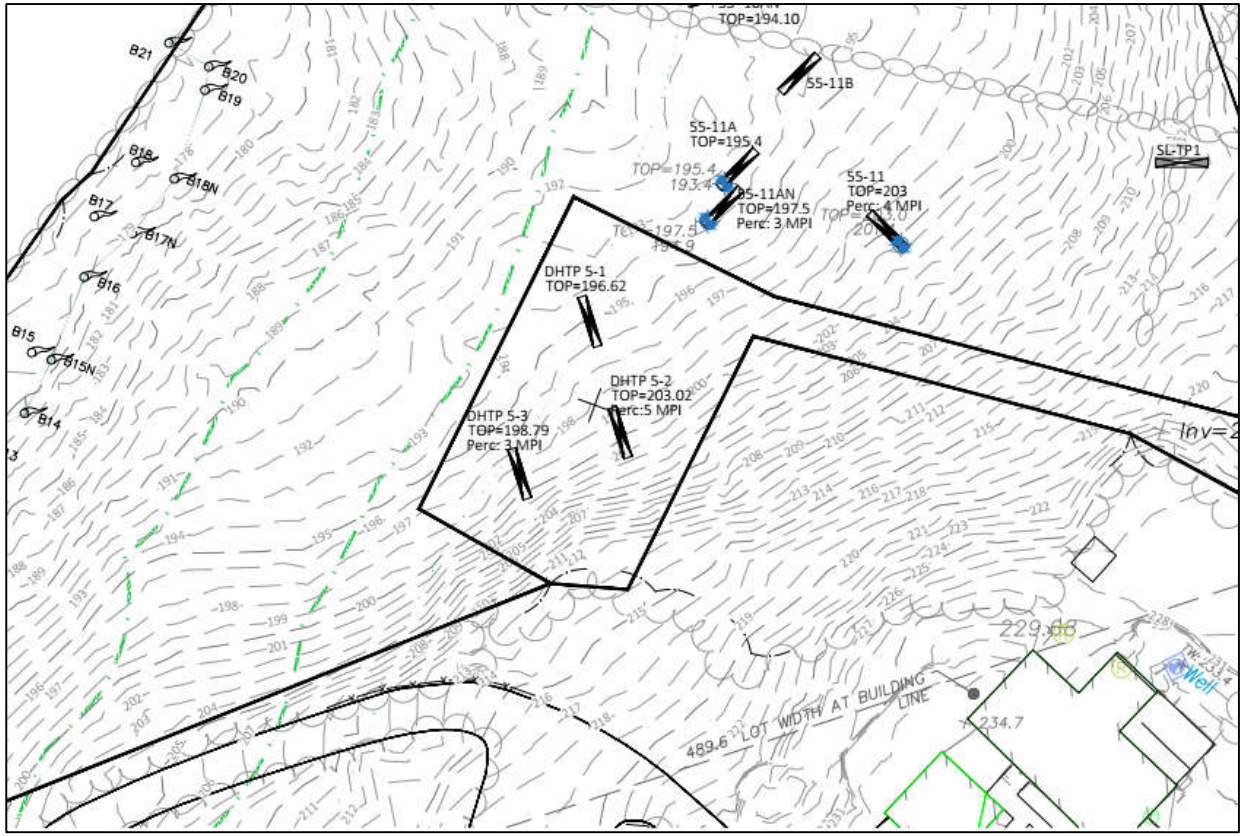
6/30/2022
Expiration Date of License

Mark Oram
Name of Approving Authority Witness

Sherborn Board of Health
Approving Authority

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

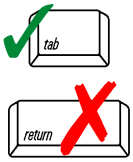
Field Diagrams: Use this area for field diagrams: See Soil testing plan for details



Commonwealth of Massachusetts
City/Town of Sherborn
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

Fenix Partners Farm Road, LLC.
Owner Name

55 Farm Road (Lot 5)
Street Address or Lot #

Sherborn	MA	01770
City/Town	State	Zip Code

Desheng Wang	(774) 454-0266
Contact Person (if different from Owner)	Telephone Number

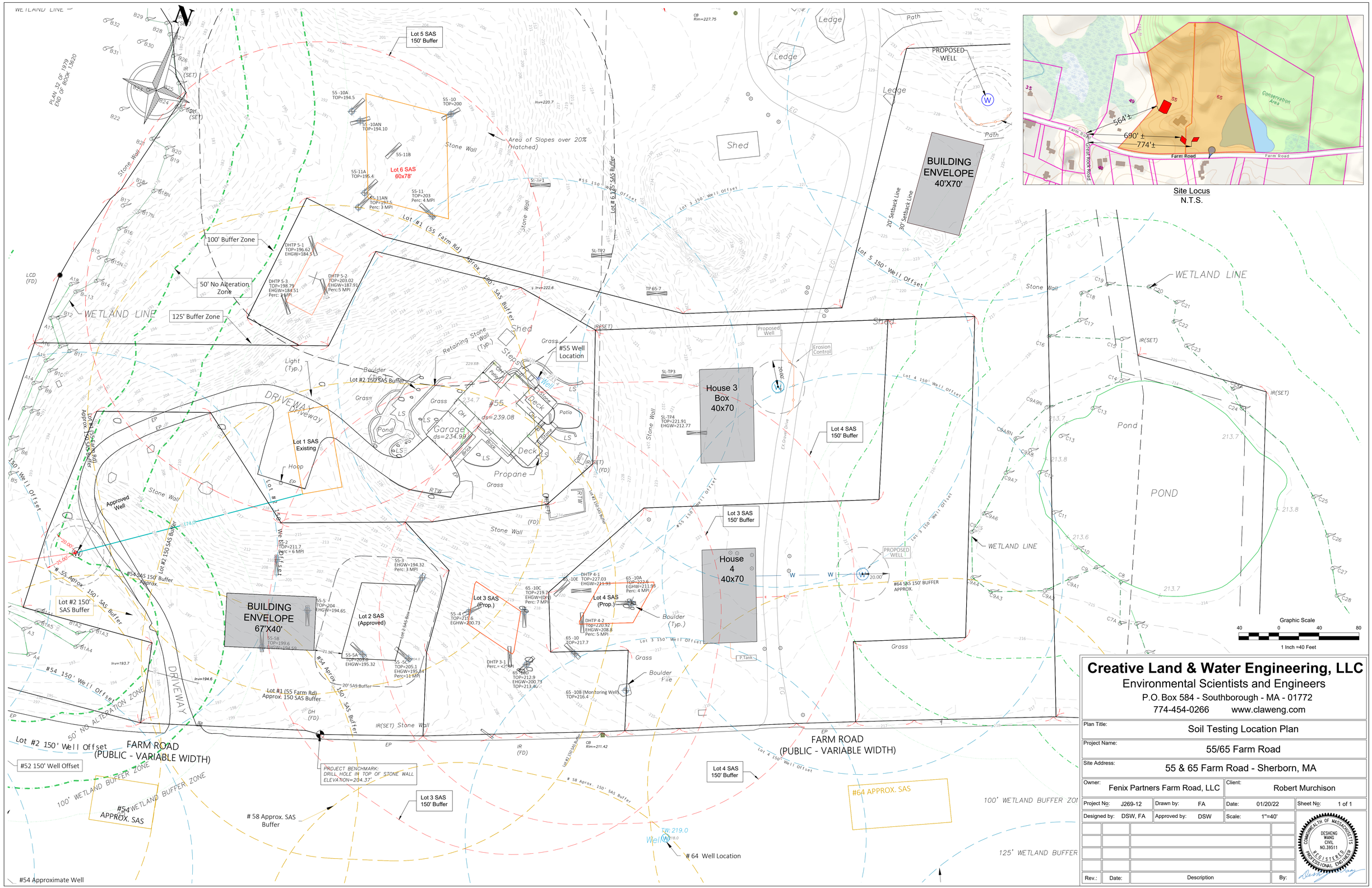
B. Test Results

	11/09/2021 Date	3:25 PM Time	11/10/2021 Date	11:04 PM Time
Observation Hole #	DHTP 5-2		DHTP 5-3	
Depth of Perc	64"		60"	
Start Pre-Soak	3:25 PM		11:04 AM	
End Pre-Soak	3:40 PM		11:04 AM	
Time at 12”	3:40 PM @ 10"		11:20 AM	
Time at 9”	3:44 PM		11:28 AM	
Time at 6”	3:59 PM		11:35 AM	
Time (9”-6”)	15 Min.		7 Min.	
Rate (Min./Inch)	5		3	
	Test Passed: ☒ Test Failed: ☐		Test Passed: ☒ Test Failed: ☐	

Desheng Wang
Test Performed By:

Mark Oram
Board of Health Witness

Comments:



Site Locus
N.T.S.

Creative Land & Water Engineering, LLC

Environmental Scientists and Engineers
P.O. Box 584 - Southborough - MA - 01772
774-454-0266 www.claweng.com

Plan Title:	Soil Testing Location Plan
Project Name:	55/65 Farm Road
Site Address:	55 & 65 Farm Road - Sherborn, MA
Owner:	Fenix Partners Farm Road, LLC
Client:	Robert Murchison
Project No: J269-12	Drawn by: FA
Date: 01/20/22	Sheet No: 1 of 1
Designed by: DSW, FA	Approved by: DSW
Scale: 1"=40'	

Rev.:	Date:	Description	By:

COMMONWEALTH OF MASSACHUSETTS
DESHENG WANG
CIVIL
NO.39511
REGISTERED PROFESSIONAL ENGINEER