

Phase II Lot 4 Lot # 4  
321 Union h.

November 29, 2020

Dave Liskany (Countrytyme Land Specialist, Ltd)  
3451 Cincinnati-Zanesville Rd, SW  
Lancaster, OH 43130

Dear Mr. Liskany:

We would like to thank you for requesting our assistance to identify the specific soil properties on your property (**Track #4 Union Pastures**), Chillicothe, in Ross County, Ohio.

Enclosed are the following:

1. Location map
2. Aerial Photo Sketch Map of Site
3. Soil Site Descriptions for the different Soil Areas
4. Soil and Site Evaluation and discussion, for the proposed waste water disposal

The information in this report is basic soils information as found on-site. This does not mean that this site is suitable for an STS, that is up to the Ross County Health Department. If I can be of further assistance, in helping to interpret, clarify or add additional information from my notes, please let me know at 304-372-4809 home or 304-532-4711 cell.

Thanks,



Carlos Cole  
Soil Scientist

Cc: Logan Calhoun, R. S., Director of Environmental Health

## **Soil and Site Evaluation Discussion**

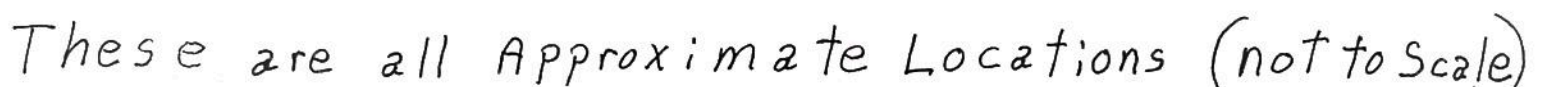
This soil evaluation is for a new STS (sewage treatment system) for a new 3 bedroom home (example that may change) on your property. We mainly evaluated the higher portion of the property near the north end of the property, next to Track #3 in the cropfield for an STS. These soils have developed in glacial till parent material on a knoll type landscape. The higher area of this property on the more sloping area is better drained, with relatively loamy soils. We flagged the proposed leach field area and dug our test pits, basically on a line across the proposed leach field from slightly lower to higher elevation. The outer edge of the proposed leach field is the better drained and more loamy and should be considered the primary part of the leach field.

This proposed filter field area is large and can serve as both the primary and secondary filter field areas. We did not see much of a pattern when comparing the soil site descriptions, however the proposed leach field area is located on the higher part of the landscape where the soils are the driest on the outer edge toward the east. We did not find any bedrock at any of the soil site description locations nor did we find any restrictive layers. The soil layer we marked as Fr-Fi (friable to firm) was friable but firm in place but had a moderate soil structure (the firmness was a result of packed gravel and dry soil). The soil structure was relatively good in these soils. I would locate the primary part of the leach field on the outer edge toward the east and the secondary toward the west or remaining area, however the soils are all similar. The depth to a seasonal high water table varies from a shallower depth of 22 inches (#3 soil) to 29 to 30 inches (#1 soil). These soils are loamy and will allow for water flow throughout the soil profile as shown by the soil site descriptions.

We have shown the location of the proposed STS leach field on the sketch map. We have located a possible new home location. We have marked the proposed filter field area with pink wire flags and white or pink ribbon on the taller vegetation on the boundary corners. The soil description sites are marked with orange wire flags and the number of the description is marked on the flag. The approximate dominion, of the proposed filter field area, is marked on the sketch map. The proposed filter field area is just an indication of the area that can be used, the installer or the health department will determine where the filter lines will be located. The filter field lines would need to be located level on the contour around the slight to gentle slope. These soil descriptions were taken at random to show the soil properties at different areas within the proposed filter field area and the sketch map is not to scale. We gave a house site location (example that may change with new owner) on the sketch map to give you a possible reference point, for this report. A septic tank leach field will probably work at this location but the leach lines will need to be located close to the soil surface.



# Union Pastures-Track #4 Ross County





# Location map





② we used the 12-24" Depth For H. Linear Loading Rate  
used 0-4 % slope site and Soil Evaluation for Sewage Treatment and Dispersal

County: Ross Land Use / Vegetation: Crop Field  
 Township / Sec.: Union Landform: Glacial Till  
 Property Address/Location: S. Union Rd. Position on Landform: knoll  
 Applicant Name: Chillicothe, OH 45601 Percent Slope: 5%  
 Address: Countryside Realty Shape of Slope: Convex  
Att: Dave Lisheny - Land Specialist  
3451 Cincinnati - Zanesville Rd, SW Data:  
 Phone #: 614-429-8152 Evaluation: Carlos Cole  
 Lot #: Union Pastures - Tract #4  
 Test Hole #: 1  
 Latitude/Longitude: N 39° 23.939', W 83° 03.089'  
 Method: L Pit L Auger Probe

Certification Stamp or Certification #: 24835  
 Signature: Carlos Cole  
 Phone #: 304-372-4809 Home  
304-532-4711 cell

Dug to 30" + Augered Remainder

Soil Profile			Estimating Soil Saturation			Estimating Soil Permeability							Infiltration Rate Loading gal./day	Hydraulic Loading Other Soil Features Rate
Horizon	Depth (Inches)	Matrix Color	Redoximorphic Features		Class	Texture		Structure			Consistence			
			Concentrations	Depletions		Approx. % Clay	Approx. % Fragmenta	Grade	Size	Type (shape)				
Ap1	0-4	10YR 4/3	-	-	L	18-21	2% <sup>+</sup>	2-1	F+m	Gr	vfr	.6	3.8	
Ap2	4-8	10YR 4/4	-	-	L	18-21	2-5 <sup>+</sup>	1-2	m	Gr	Fr-vfr	.4	3.5	
BA	8-11	10YR 4/4	+5/4	-	L	24-27	5-10 <sup>+</sup>	2	m	sbh	Fr	.6	3.8	
Bt1	11-18	10YR 5/6	-	-	CL	28-32	5 <sup>+</sup>	2	m	sbh	Fr	.4	2.9	
Bt2	18-29	10YR 5/4	-	-	sicL/CL	31-35	2-5 <sup>+</sup>	1-2	m	sbh	Fr-Fi	.2	2.5	
Bt3	29-37	10YR 5/4	+5/6	10YR 7/2	CL/sicL	28-33	2-5 <sup>+</sup>	1-2	m	sbh	Fr	.2	2.5	
BC	37-44	10YR 5/4	+5/6	10YR 6 1/2 7/2	CL/L	26-29	5-10 <sup>+</sup>	1	m	sbh	Fr	.2	2.5	
2.5 ft. 5' 10" 6' 10" 7' 10" 8' 10" 9' 10" 10' 10" 11' 10" 12' 10" 13' 10" 14' 10" 15' 10" 16' 10" 17' 10" 18' 10" 19' 10" 20' 10" 21' 10" 22' 10" 23' 10" 24' 10" 25' 10" 26' 10" 27' 10" 28' 10" 29' 10" 30' 10" 31' 10" 32' 10" 33' 10" 34' 10" 35' 10" 36' 10" 37' 10" 38' 10" 39' 10" 40' 10" 41' 10" 42' 10" 43' 10" 44' 10" 45' 10" 46' 10" 47' 10" 48' 10" 49' 10" 50' 10" 51' 10" 52' 10" 53' 10" 54' 10" 55' 10" 56' 10" 57' 10" 58' 10" 59' 10" 60' 10" 61' 10" 62' 10" 63' 10" 64' 10" 65' 10" 66' 10" 67' 10" 68' 10" 69' 10" 70' 10" 71' 10" 72' 10" 73' 10" 74' 10" 75' 10" 76' 10" 77' 10" 78' 10" 79' 10" 80' 10" 81' 10" 82' 10" 83' 10" 84' 10" 85' 10" 86' 10" 87' 10" 88' 10" 89' 10" 90' 10" 91' 10" 92' 10" 93' 10" 94' 10" 95' 10" 96' 10" 97' 10" 98' 10" 99' 10" 100' 10"														
Limiting Conditions		Depth to (in.)		Descriptive Notes		Remarks / Risk Factors:								
Perched Seasonal Water Table		29-30												
Apparent Water Table		-												
Highly Permeable Material		-												
Bedrock		none to 44"		stopped by		loose Rock At 44"								
Restrictive Layer		none to 44"		x Rounded Gravel + Auger		Some At 18-29" pickup in clay								

Note : The evaluation should include a complete site plan or site drawing.



② we used the 12-24" Depth For H. Linear Loading Rate  
used 0-4 % slope site and Soil Evaluation for Sewage Treatment and Dispersal

County: Ross Land Use / Vegetation: Crop Field  
 Township / Sec.: Union Landform: Glacial Till  
 Property Address/Location: S. Union Rd. Position on Landform: upper part of haoll  
Chillicothe, OH 45601 Percent Slope: 4%  
 Applicant Name: COUNTRYTyme REALTY Shape of Slope: CONVEX  
 Address: ATT: Dave Lishinsky - Land Specialist  
3451 Cincinnati - Zanesville Rd, SW Ohio  
 Phone #: 614-429-8152 Evaluation: 11-21-20  
 Lot #: Union Pastures - Tract #4  
 Test Hole #: 2  
 Latitude/Longitude: N39°23.932', W83°03.081'  
 Method: L Pit L Auger Probe

Certification Stamp or Certification #: 24835  
 Signature: Carlos Cole

Phone #: 304-372-4809 Home  
304-532-4711 cell

Dug to 30" + Augered Remainder

Soil Profile		Estimating Soil Saturation				Estimating Soil Permeability							
		Munsell Color (hue, value, chroma)		Redox/morpho Features		Texture		Structure		Consistence		Infiltration Rate	
		Matrix Color	Concentrations	Depletions	Class								Approx. % Clay
Horizon	Depth (inches)												Load. mg/day/ft <sup>2</sup>
Ap	0-6	10YR 7/4	-	-	L	16-19	5 <sup>+</sup>	2-1	F+m	Gr	vfr	.6	3.8
Bt <sub>1</sub>	6-11	10YR 6/6	+6/4	-	CL	26-30	2-5 <sup>+</sup>	2	m	sbh	fr	.4	2.9
Bt <sub>2</sub>	11-18	10YR 6/4	.6/6 + 6/3	-	CL	28-32	2 <sup>+</sup>	2-1	m	sbh	fr	.4	2.9
Bt <sub>3</sub>	18-26	10YR 5/4	+5/6	-	CL	29-34	2 <sup>+</sup>	1-2	m	sbh	fr	.2	2.5
BC <sub>1</sub>	26-34	10YR 5/6	+5/4	10YR 7/2	CL/L	25-29	2-5	1-2	m	sbh	fr	.2	2.5
BC <sub>2</sub>	34-40+	10YR 5/6	+5/4	10YR 7/2	L/CL	25-28	5-10	1	m	sbh	fr	.4	3.5
C	40+	stopped	b/y Rock		L							-	-
Limiting Conditions		Depth to (in.)		Descriptive Notes		Remarks / Risk Factors							
Perched Seasonal Water Table		2.6											
Apparent Water Table		-											
Highly Permeable Material		-											
Bedrock		None		to 40"									
Restrictive Layer		None		to 40"									

Note: The evaluation should include a complete site plan or site drawing.  
 \* gravel mostly if not all rounded



# ② we used the 12-24" Depth For H. Linear Loading Rate

used 0-4 % slope site and Soil Evaluation for Sewage Treatment and Dispersal

County: Ross Land Use/Vegetation: Crop Field  
 Township / Sec.: Union Landform: Glacial Till  
 Property Address/Location: S. Union Rd. Position on Landform: Lower part of hill but higher than till Downslope  
Chillicothe, OH 45601  
 Applicant Name: COUNTRY Tyme Reality Percent Slope: 4  
 Address: ATT: David Lisheny - Land Specialist Shape of Slope: Convex  
3451 Cincinnati - Zanesville Rd, SW  
 Phone #: 614-422-8152 Evaluation: 11-21-20  
 Lot #: Union Pastures - Tract #4 Signature: Carlos Cole  
 Test Hole #: 3 Certification Stamp or Certification #: 24835  
 Latitude/Longitude: N 39° 23.922', W 83° 03.076' Phone #: 304-372-4809 Home  
 Method: ✓ Pit ✓ Auger Probe Dug to 31" + Augered Remainder 304-532-4711 cell

Soil Profile		Estimating Soil Saturation			Estimating Soil Permeability							Infiltration Rate gal./day/ft <sup>2</sup>	Hydraulic Loading Rate near Soil Surface	
		Munsell Color (hue, value, chroma)	Redoximorphic Features		Class	Texture		Structure			Consistence			
Horizon	Depth (Inches)	Matrix Color	Concentrations	Depletions			Approx. % Clay	Approx. % Fragments	Grade	Size		Type (shape)		
Ap	0-6	10YR 4/3	—	—	L	15-18	5 <sup>+</sup>	2-1	F+m	Gr	vfr	.6	3.8	
BA	6-9	10YR 5/4	+4/4	—	L	24-26	2 <sup>+</sup>	2-1	M	sbh	fr	.6	3.8	
Bt <sub>1</sub>	9-22	10YR 5/6	+6/4 + 7/3	—	CL/sil	28-32	2 <sup>+</sup>	2-1	M	sbh	fr	.4	2.9	
Bt <sub>2</sub>	22-29	10YR 6/4	6/3 + 5/6	Few 6/2 in pore linings	CL	27-30	2 <sup>+</sup>	1-2	M	sbh	fr	.2	2.5	
BC <sub>1</sub>	29-37	10YR 6/4	+5/6	10YR 6/2	L/CL	25-29	5 <sup>+</sup>	1	M	sbh	fr	.4	3.5	
BC <sub>2</sub>	37-42	10YR 6/4	10YR 5/6	10YR 6/2	L	25-28	5-10 <sup>+</sup>	1	M	sbh	fr-Fi	.4	3.5	
C <sub>1</sub>	42-51	10YR 5/4	+5/6	Few 10YR 6/2	L/SL	19-22	5 <sup>+</sup>	—	—	—	fr	—	—	
Remarks / Risk Factors:														
Limiting Conditions		Depth to (in.)			Descriptive Notes									
Perched Seasonal Water Table		22												
Apparent Water Table		—												
Highly Permeable Material		none to 54"			Auger stopped									
Bedrock		none			At 54" - But just large Rock Fragment									
Restrictive Layer		none			some at 37-42"									

Note: The evaluation should include a complete site plan or site drawing.