
March 14, 2020

Johnathan Smith (Countrytyme Land Specialist)
3451 Cincinnati-Zanesville Rd, SW
Lancaster, OH 43130

Dear Mr. Smith:

We would like to thank you for requesting our assistance to identify the specific soil properties on your property (**Lot #1, 3770 Woodlane Drive**) (**Parcel # P030380002200**), Nelsonville, in Athens 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 Athens 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: Patrick McGarry, R. S. Athens County Health Department

Soil and Site Evaluation Discussion

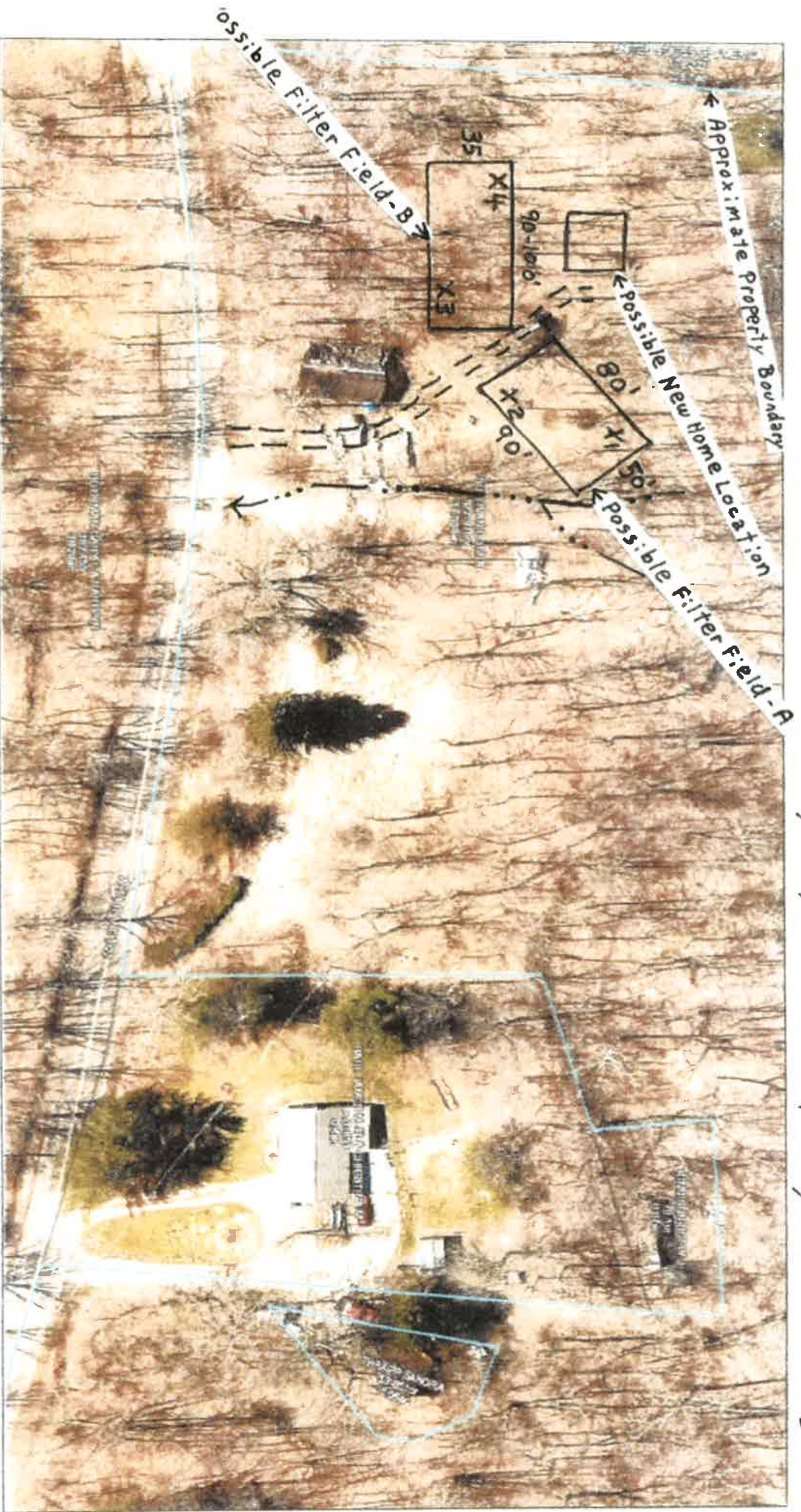
This soil evaluation is for a new STS (sewage treatment system) for a new 2 or 3 bedroom home (example that may change) on your property. On the attached sketch map, we have approximately located, a possible new home site and proposed both the primary and secondary filter field areas for waste water disposal areas. The proposed home site and waste water disposal area for a sewage treatment system are tentative, because the new owners may want the home in another location. The proposed filter field area is located in natural soils and the disturbed soils associated with coal mining are located further upslope or north of the proposed filter field areas. The proposed filter field areas are very different, as we will discuss this further in this report. The new home location was selected at this location to get gravity flow to the proposed filter field areas downslope.

These soils are all similar in the proposed filter field areas and are well represented by the soil site descriptions, in the respective filter field area. The proposed filter field-A soils are better soils for waste water disposal, because they are in general more loamy, better drained, have a little more slope and deeper to any restricting layer, as shown in the soil site descriptions. The proposed filter field-B soils have good soil structure but have more clay, shallower to a restricting layer and the depth to the seasonal water table is closer to the soil surface, especially the #4 soil pit toward the northwest of the filter field area. If the proposed filter field B is used I would install a French or interceptor drain around the part of the filter field that is used for a leach field. The western part of the property seems to be wetter than the eastern part of the property on the lower slopes.

We have shown the location of the proposed septic tank absorption field areas on the sketch map. We have marked the proposed filter field areas with pink wire flags and maybe a pink ribbon on the taller vegetation, if present at the approximated 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 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. We have attached a design worksheet using the #1 soil description (in proposed filter field A) to give you an indication of what we seen on site.



Sketch Map for Country Tyme Property (Tract #1)



These are all Approximate Locations (not to scale)

② we used the 12-24 Depth for H. Linear Loading Rate
used > 100% slope Site and Soil Evaluation for Sewage Treatment and Dispersal

County: Athens Land Use / Vegetation: Small Brush + Few trees
 Township / Sec.: York Landform: colluvial / Alluvial
 Property Address/Location: Near 3770 Woodlane Dr. Position on Landform: Base of slope
 Applicant Name: Nelsonville, OH 45764 Percent Slope: 15%
 Address: Country Lane Realty Slope of Slope: convex
ATT: Johnathan Smith, Land Specialist
3451 Cincinnati-Zanesville Rd, SWDale
 Phone #: Lancaster, OH 43130 Evaluator: Carlos Cole
PH # 614-530-8998
 Lot #: Tract 1
 Test Hole #: 1
 Latitude/Longitude: N 37° 27.995', W 82° 12.644'
 Method: V Pit V Auger Probe
 Dug to 33" Augered Remainder
 Photo #: 304-372-4809-Home
304-532-4711 cell
 Certification Stamp or Certification #: 24835
 Signature: Carlos Cole

Soil Profile	Depth (inches)	Moisture Color (hue, value, chroma)	Estimating Soil Saturation		Texture	Estimating Soil Permeability				Infiltration Loading Rate gal/dia/hr	Hydraulic Linear Loading Rate
			Munsell Color	Redoximorphic Features		Approx. % Clay	Approx. % Fragments	Grain	Size	Type (shrink)	
Ap1	0-3	10YR 3/3			S/L/L	14-16	0-2 ⁺	2-1	F	Gv	Fr
Ap2	3-8	10YR 4/3 + 4/4			L/S/L	16-18	0-2 ⁺	1-2	M	SbH	Fr
BA	8-11	7.5YR 5/4 + 5/6			L	18-20	0-2 ⁺	2-1	M	SbH	Fr
Bt1	11-18	7.5YR 5/4 + 5/6			L	20-23	0-2 ⁺	2-1	M	SbH	Fr
Bt2	18-25	7.5YR 5/4 + 5/6			S/L/S/L	24-26	2-5 ⁺	1-2	M	SbH	Fr
Bt2	25-31	7.5YR 6/4			S/L/S/L	26-29	2 ⁺	1-2	M	SbH	Fr
BC	31-36	7.5YR 6/4			S/L/S/L	26-29	2.5 ⁺	1	M	SbH	Fr
C1	36-45	10YR 5/6 + 7/2			L/S/L	25-27	2.5 ⁺	-	-	-	Fr
CL 45-50+		10YR 5/6			CL-S/L	27-30	5 ⁺	-	-	-	Fr-Fr
Lithology Conditions											
Purified Seasonal Water Table		Depth to (in.)		Descriptive Notes							
Apparent Water Table		-									
Highly Decomposable Material		-									
Bedrock		None									
Restrictive Layer		None									

Note: The evaluation should include a complete site plan or site drawing.
 + Rounded siltstone rock fragments
 * Angular flint rock fragments

March 14, 2020

Johnathan Smith (Countrytyme Land Specialist)
3451 Cincinnati-Zanesville Rd, SW
Lancaster, OH 43130

Dear Mr. Smith:

We would like to thank you for requesting our assistance to identify the specific soil properties on your property **(Lot #2, 3770 Woodlane Drive) (Parcel # P030380002200)**, Nelsonville, in Athens 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 Athens 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: Patrick McGarry, R. S. Athens County Health Department

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. On the attached sketch map, we have located, a possible new home site in the same location as the previous home on this property. We located a large filter field that can serve as both the primary and secondary filter field areas for waste water disposal areas. We also located, what appears to be an old aeration tank with a point source outlet into the adjacent intermittent drainageway. If part of the proposed filter field area is used for waste water disposal, the location would probably require pumping upslope. The upper part of the proposed filter field area has the better soils for a leach field. These are natural soils in the proposed filter field area and the disturbed surface mined soils is located directly upslope. This area was previously used as a home site, so you find intermittent area of cutting and filling on the soil surface.

The soils in the proposed filter field area are all similar soils that have developed from the weathering of siltstone and some shale bedrock and some surface colluvium from this bedrock (parent material), and maybe a little influence from recent man. These soils are all greater than 50 inches to bedrock (soft siltstone). We did not observe any restrictive layers and the highest clay percentage was about 30 percent and the soils were relatively dry. We did note some depletions at depths ranging from 20 to 25 inches, however these were not true depletions, they were mostly associated with the gray parent material siltstone and shale bedrock. The upper side of the proposed filter field is the better area for a leach field, partly because of lesser amount of surface soil disturbance.

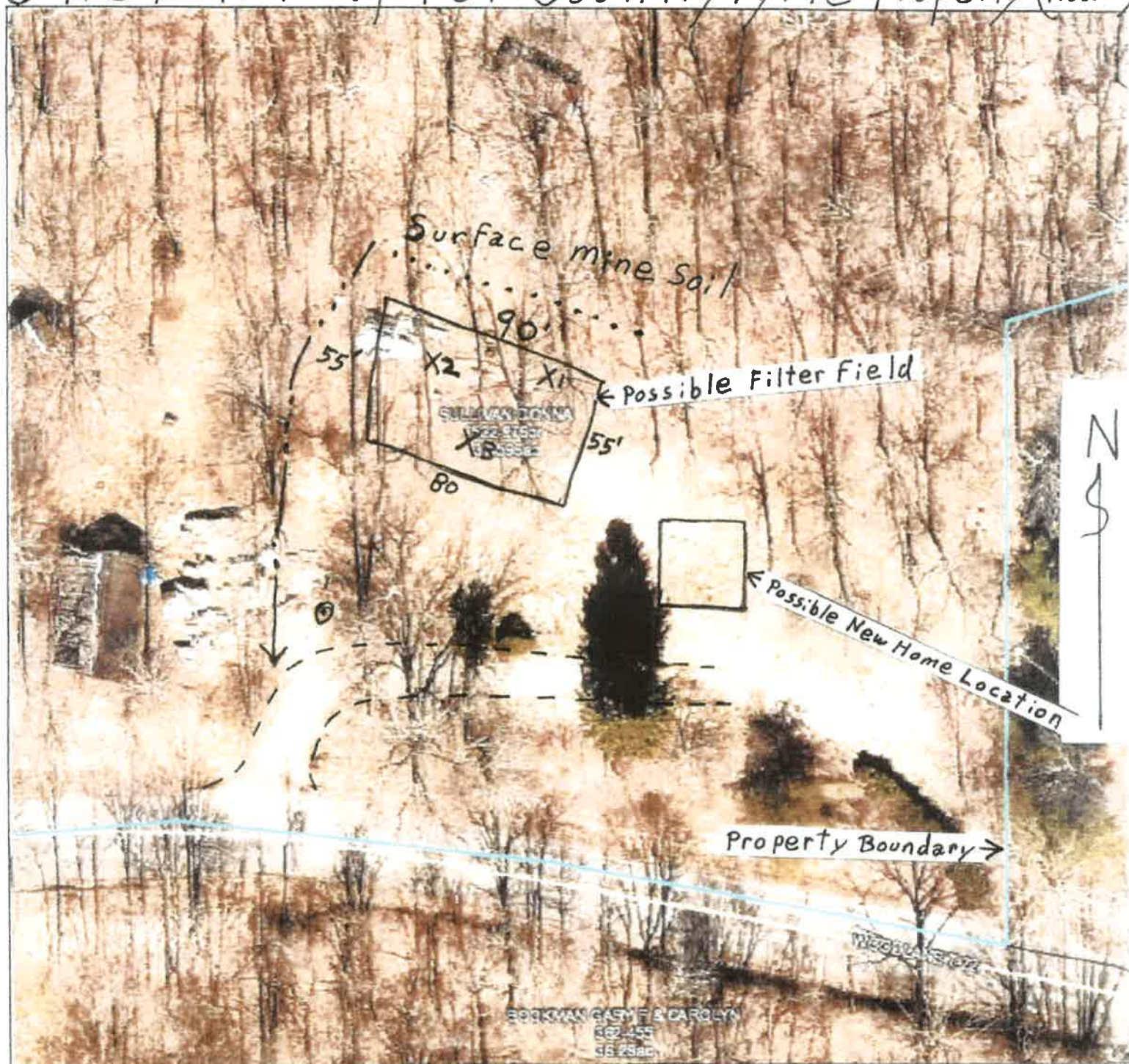
We have shown the location of the proposed septic or aeration tank absorption field area on the sketch map. We have marked the proposed filter field area with pink wire flags and maybe a pink ribbon on the taller vegetation, if present at the approximated boundary corners. The soil description sites 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 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. The house site location is where the previous home was located on the sketch map to give you a possible reference point, for this report. We have attached a design worksheet using the #2 soil description to give you an indication of what we seen on site.

Location Map



Athens County

Sketch Map for Countrytyme Property (Tract 2)



X₁, X₂, X₃ - Soil Site Descriptions

←.....→ Intermittent Drainage way + Direction

⊙ Aerator or Septic Tank

----- Driveway

..... General Divide line between mine soil & Natural soil

These are all Approximate Locations (not to scale)

② we used the 12.24 Depth for H. Linear Loading Rate
used 710% slope Site and Soil Evaluation for Sewage Treatment and Dispersal

County: Athens Land Use / Vegetation: small trees + briars
 Township / Sec.: York Longitude: alluvial / colluvial
 Property Address / Parcel: near 3770 Wood Lane Dr. Padden on Landlows Base of slope
 Applicant Name: Nelsonville, OH 45764 Percent Slope: 10+
 Address: Country Time Realty Slope of Slope: convex
Att: Johnathan Smith, Land Specialist
3451 Cincinnati Zanesville Rd, SW Ohio
 Phone #: Lancaster, OH 43130 Evaluator: Carlos Cole
 Lot #: Track 1 PH # 614-530-8998
 Test Hole #: 2 Certification Stamp or Confirmation #: 24835
 Latitude/Longitude: N39° 27.887' W 82° 12.649' Phone: 304-372-4809 - Home
 Method: L Pin L Auger Probe Dug to + Augered Remainder 304-532-4711 cell

Soil Profile	Depth (feet)	Moisture Color	Estimating Soil Saturation		Texture	Estimating Soil Permeability				Infiltration Loading Rate	Hydraulic Linear Loading Rate
			Redoximorphic Features	Depositions		Approx. % Clay	Approx. % Fragments	Grain Size	Type (shape)		
Horizon					Class						
Ap1	0-5	10YR 4/3	-	-	S:L	14-16	-	2-1	F+m	Gf	Vfr
Ap2	5-9	10YR 4/4	4/3	-	S:L	17-19	-	1-2	m	SbH	Fr
Bt1	9-14	10YR 6/4	+5/4	-	S:L	21-23	-	2-1	m	SbH	Fr
Bt2	14-19	10YR 6/4	17.5YR 5/4	-	S:L	23-26	-	1-2	m	SbH	Fr
Bt3	19-27	7.5YR 6/4	-	7.5YR 7/2	S:L	26-28	0-2	1-2	m	SbH	Fr
Bc	27-33	7.5YR 5/6	+6/4	7.5YR 7/1	S:L	25-28	0-2	1	m	SbH	Fr
C1	33-41	7.5YR 5/6	6/6	7.5YR 7/1	CL	29-31	0-2	-	-	-	Fr-Fi
C2	41-45	10YR 6/6	-	10YR 7/1	CL	21-29	0-2	-	-	-	Fi-Fr
C3 45-50+ 10YR 5/4 5/8 6/1 2/1 (202) 2/1 24-26 10-20											
Limiting Conditions Depth to (in.) Description Notes Remarks / Risk Factors											
Packed Surface Water Table			19								
Apparent Water Table			-								
Eligible Permeable Material			-								
Bedrock			none								
Restrictive Layer			41-45"								

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

② we used the 12-24 Depth for H. Linear Loading Rate
used > 10% slope Site and Soil Evaluation for Sewage Treatment and Dispersal

Lot 2

County: Athens Land Use / Vegetation: small woody veg, grass scattered trees
 Township / Sec.: York Location: upland
 Property Address/Location: Near 3770 Woodlane Dr. Position on Landform: side - Base of slope
 Applicant Name: Nelsonville, OH 45764 Percent Slope: 15
 Address: Country Time Realty Shape of Slope: convex
Att: Johnathan Smith, Land Specialist
 Phone #: 3451 Cincinnati, Zanesville Rd, SW Ohio
 Lot #: Lancaster, OH 43130 Evaluator: Carlos Cole
 Test Hole #: 1 Phone: 304-372-4809 - Home
 Method: W PII Auger Probe Dug to 32" + Augered Remainder
 Latitude/Longitude: N 39° 27.884' W 82° 12.608'
 Certification Stamp or Certification #: 24835
 Signature: Carlos Cole

Soil Profile	Depth (feet)	Moisture Color	Estimating Soil Saturation		Texture	Representing Soil Porosity		Structure	Consistency	Infiltration Loading Rate	Hydraulic Linear Loading Rate
			Reduction Factors	Depletion	Approx. % Clay	Approx. % Fragment	Grit	Size	Type (shape)		
Ap	0-4	10YR 4/3	-	-	L	10-13	2-5	1-2	F	Gr	VF
B _h	4-8	7.5YR 5/6	44/4	-	S/L	18-20	2	1-2	M	SbH	FC
B _{t1}	8-15	7.5YR 6/6	-	-	S/L/S/L	27-29	0-2	2-1	M	SbH	Fr
B _{t2}	15-20	7.5YR 6/6	-	-	S/L	29-32	0-2	2-1	F+M	SbH	Fr
B _{t3}	20-24	7.5YR 6/6	5YR 6/6	10YR 7/2	S/L/S/L	27-29	10-15	1-2	F+M	SbH	Fr
BC	24-27	7.5YR 6/6	5YR 6/6	10YR 6/2	S/L	28-31	5	1	F+M	SbH	Fr-FI
B _{c/c}	27-32	7.5YR 6/4	-	10YR 7/2	S/L/S/L	26-29	10-15	1	F+M	SbH	Fr
C ₁	32-45	mixed 10YR 5/6	6/2 15/4 5/3	S/L	24-28	15-20	-	-	-	-	Fr
C ₂ 45-50 mixed 2.5Y 5/2 5/3 7.5YR 6/6 10YR 5/4 S/L 24-28 clay 20-40% Fragments											
Limiting Conditions Depth to (ft.) Descriptive Notes Remarks / Risk Factors											
Peched Seasonal Water Table	20	20	Many of these gyps	Are from Rock Fragments							
Apparent Water Table	-	-	-								
Highly Permeable Mineral	-	-	-								
Bedrock	-	-	-								
Restrictive Layer	-	-	-								

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

x sandstone Rock Fragments
x siltstone Rock Fragments

no moisture - no water

March 15, 2020

Johnathan Smith (Countrytyme Land Specialist)
3451 Cincinnati-Zanesville Rd, SW
Lancaster, OH 43130

Dear Mr. Smith:

We would like to thank you for requesting our assistance to identify the specific soil properties on your property (**Lot #3 & 4, 3770 Woodlane Drive**) (**Parcel # P030380002200**), Nelsonville, in Athens 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 Athens 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: Patrick McGarry, R. S. Athens County Health Department

Soil and Site Evaluation Discussion

This soil evaluation is for a new STS (sewage treatment system) for a new 2 bedroom home (example that may change) on your property. On the attached sketch map, we have approximately located, a possible new home site and proposed both the primary and secondary filter field areas for waste water disposal areas. The proposed home site and waste water disposal area for a sewage treatment system are tentative, because the new owners may want the home in another location, however this property is limited in house site locations or leach field locations. We have proposed filter field areas at a small natural soil area near Woodlane drive on the front of the property. The other, or secondary filter field area is on a surface mine strip bench, upslope and north of the possible home site. The secondary filter field area would probably require pumping the waste water to the leach field location, unless the home location is moved closer to the filter field area. The surface mine bench is disturbed soil and broken rock fragments from the mining of coal. The surface mine area has some large trees and appears to be 60 to 80+ years old. The surface mine soil is developing soil structure noted by the roots throughout the soil profile, however we did note a lot of rock fragments in the soil.

The soils in the primary filter field area (soil site description #1 & #2) are similar and have developed from soft siltstone bedrock parent material. These are silty soils that are mostly deep however we hit a rock and stopped the auger at a depth of 39 at the #1 soil pit (I do not think this is bedrock). The grays/depletions that indicate a seasonal water table were observed at depths of 24 and 21 inches, however this is not a good indication of a water table in these soils, because the parent material is gray siltstone/shale. These #1 & #2 soil profiles were dry. The surface mine soils, are disturbed soils that are relatively old and they are developing structure that allow water movement. The only problem I see with the surface mine soils is the high percentage of rock fragments in the upper portion of the soil profile.

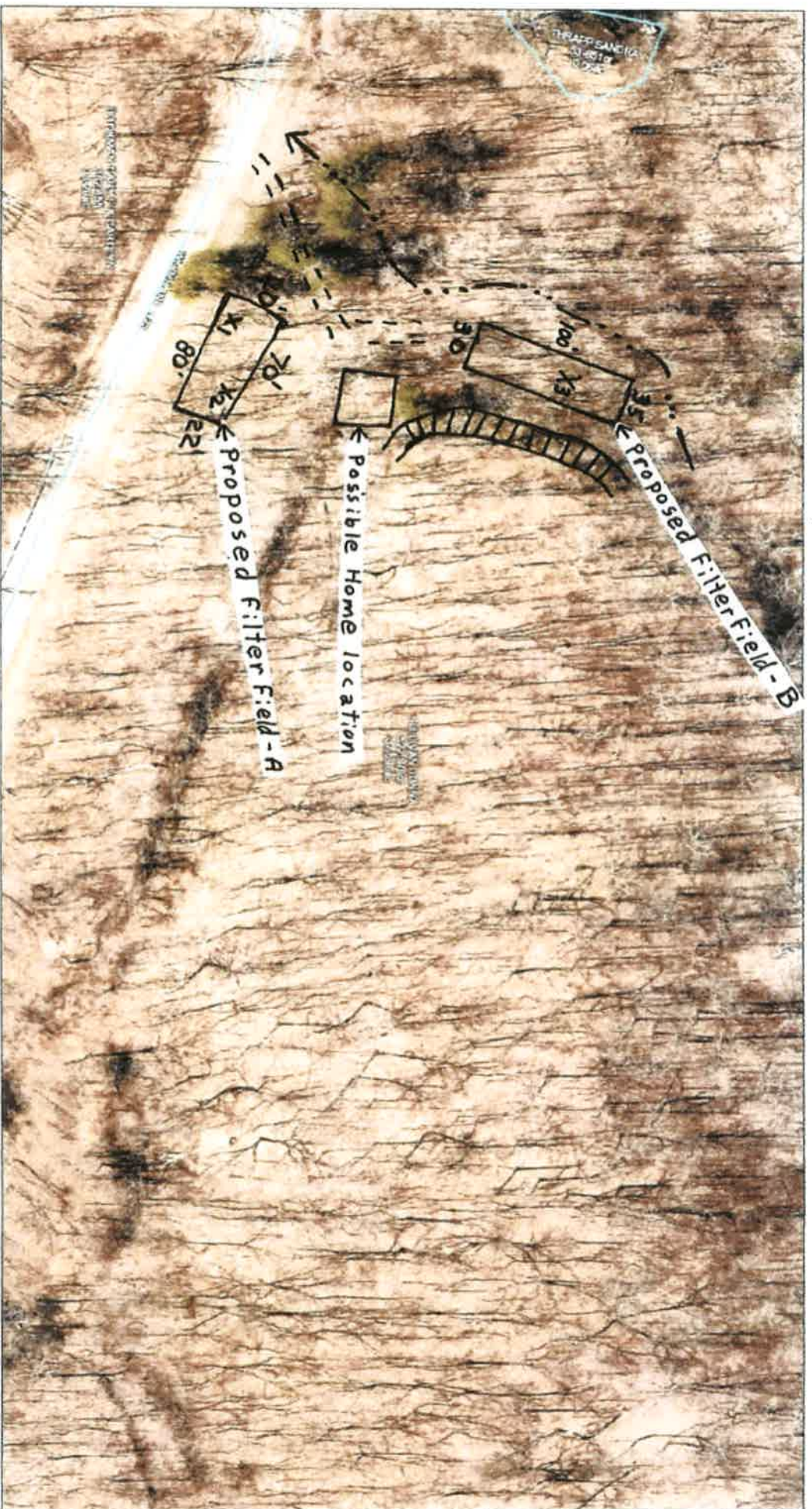
We have shown the location of the proposed septic or aeration tank absorption field areas on the sketch map. We have marked the proposed filter field areas with pink wire flags and maybe a pink ribbon on the taller vegetation, if present at the approximated boundary corners. The soil description sites 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 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. We have attached a design worksheet using the #1 soil description in the proposed primary filter field to give you an indication of what we seen on site.

Location Map



N

Sketch Map for Countrytyme Property (Trach 3+4)



X_1, X_2, X_3 - Soil Site Descriptions

----- Intermittent Drainage way or swale in landscape for surface water Drainage

----- Possible Driveway location

Highwall upslope of Surface mine Bench

These are all Approximate Locations (not to Scale)

② we used the 12-24 Depth for H. Linear Loading Rate
Used 710% slope Site and Soil Evaluation for Sewage Treatment and Dispersal

Truck #344

County: Athens

Township / Sec: York

Property Address/Location: near 3770 Woodlane Dr. Position on Land: near 3770 Woodlane Dr.

Applicant Name: Nelsonville, OH 45764

Address: Country Time Realty

Phone #: 3451 Cincinnati Zanesville Rd, SWDWC

Lot #: 344

Phone #: Lancaster, OH 43136 PH# 614-530-8998

Test Hole #: 2

Latitude/Longitude: N 39° 27.843', W 82° 12.501'

Method: LPI Auger Probe

Dug to 30" + Augered Remainder

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

Land Use / Vegetation: small + few large trees
Landform: upland (natural) Down slope of surface mined Area

Percent Slope: 20% convex

Shape of Slope: convex

3-13-20

Evaluator: Carlos Cole

Signature: Carlos Cole

Certification Stamp or Certification #: 24835

Soil Profile		Estimating Soil Saturation			Estimating Soil Permeability							Infiltration Loading Rate		Hydraulic Linear Loading Rate	
		Munsell Color (hue, value, chroma)			Redoximorphic Features		Texture		Structure						
Horizon	Depth (inches)	Matrix Color	Concentrations	Dispersions	Clays	Approx. % Clay	Approx. % Fracturing	Grains	Size	Type (shape)	Consistency				
A ₁	0-5	10YR 4/3	4/4	-	L/SiL	15-17	0-2+	1-2	F+m	G ^r	V Fr				
B _A	5-10	10YR 5/4	4/4	-	L/SiL	18-20	0-2+	1-2	F+m	G ^r	Fr				
B ₁	10-18	7.5YR 6/6	-	-	SiL	24-27	5+	2	m	Sb ^h	Fr				
B ₂	18-24	7.5YR 6/6	4/4	-	SiL	23-25	5-10	2-1	m	Sb ^h	Fr				
BC ₁	24-28	10YR 7.5/8	6/4	7.5YR 7/2 6/6	SiL	22-25	10-15	1-2	m	Sb ^h	Fr				
BC ₂	28-34	7.5YR 6/4	4/6	7.5YR 7/2	SiL	23-26	15-20	1	m	Sb ^h	Fr				
C ₁	34-41	7.5YR 6/8	-	7.5YR 6/2	SiL	27-30	5+	-	-	-	Fr-F ₁				
C ₂	41-47	10YR 6/6	costs of 10YR 3/2 (ca2)	10YR 7/1	SiL/SiC	32-36	2-5+	-	-	-	Fr-F ₁				
C ₃	47-51	2-5Y 6/1	7.5YR 6/6 + 6/8	SiC	28-31	5-10	-	-	-	-	Fr-F ₁				
Lithologic Conditions		Depth in (in.)		Descriptive Notes		Remotely / Risk Factors									
Perched Seasonal Water Table		24		partly Rock		Fracture									
Apparent Water Table		-													
Highly Penetrable Material		-													
Bedrock		51"		Probably close to pickup in clay, silt		Bedrock									
Restrictive Layer		41-47				Bedrock									

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

(2) we used the 12-44 LPPN for 11.4 m³/hr Loading Rate used 710% slope Site and Soil Evaluation for Sewage Treatment and Dispersal

$$L_0 + 3 + 4$$

County: Athens
Township / Sec.: York

Land Use / Vegetation: Trees small + few large

Township / Sec.:

near 3770 Woodlane Dr

Landform:

1. Landform:

Nelsonville, OH 45764

Application Name:

Country type Reality

Slope of Slopes

15-20

Address:

Att: Johathan Smith, Land Spec

3451 Cincinnati Zanesville Rd. SW Dalton

Phone #:

Lancaster OH 43136
 # 614-632-
 Evaluator

1.0171

Trach 3+4 PH-81 230-0992

Ted Holo #1

1

Latitude/Longitude: N 39° 27.840, W 82° 12.511

Method:

✓ Alger ✓ Proble

Dug to 32" + Augered Remainder

Phone

304-372-4809-Home

Significance

Carl G.

Certification Slamp or Cert Medium 77

24835

Soil Profile		Estimating Soil Saturation				Estimating Soil Permeability						
Horizon	Depth (inches)	Matrix Color	Redoximorphic Features		Class	Texture		Structure				Infiltration Loading Rate Other Soil Features
			Concentrations	Depletions		Approx. % Clay	Approx. % Fragments	Grade	Size	Type (clumps)	Consistence	
Ap	0-6	10YR 4/4 + 5/4	-	-	silt/L	15-17	2-5 ⁺	1-2	Ftm	Gr	Fr	4
Bw ₁	6-15	7.5YR 6/6	-	-	L	22-25	5-10 ⁺	2-1	m	sbh	Fr	6
Bw ₂	15-21	10YR 6/6	7.5YR 6/6		silt/L	24-27	5-10 ⁺	2-1	m	sbh	Fr	6
BC ₁	21-28	7.5YR 6/4	7.5YR 5/3	Dark Coils 7.5YR 3/2	silt/silt	26-28	2-5 ⁺	1	m	sbh	Fr	4
BC ₂	28-34	7.5YR 6/6		10YR 7/2 + 7/1	silt/silt	26-29	10-20 ⁺	1	m	sbh	Fr	2.2
C ₁	34-39	7.5YR 6/6	4/4 7.5YR 6/6	10YR 7/2, 1	silt	28-34	10-20 ⁺	-	-	-	Fr-F!	
C ₂	39"	H: t Rock with Auger				Probably not			Bedrock			
Landing Conditions		Depth to (in.)	Descriptive Notes		Remarks / Risk Factors:							
Perched Seasonal Water Table		3.	Gr2/3 At 28"		Greys are probably from bedrock some moisture but no water							
Apparent Water Table		-										
Highly Permeable Material		-										
Bedrock		39" H: t Rock probably not none but a little firmer	with Auger		Bedrock At 34 to 39"							

Note: The evaluation should include a complete file plan or file drawing

+ siltstone fragments

② we used the 12-24 Depth for H. Linear Loading Rate
 used 10% slope Site and Soil Evaluation for Sewage Treatment and Dispersal

County: Athens Land Use / Vegetation: Brush
 Township / Soc: York Landform: Alluvial Terrace
 Property Address/Location: Near 3770 Woodlane Dr. Position on Landform: Alluvial Terrace
Nelsonville, OH 45764 Percent Slope: 10%
 Applicant Name: Country Time Realty Shape of Slope: CONVEX
 Address: Att: Johnathan Smith, Land Specialist 3-6-20
3451 Cincinnati Zanesville Rd, SW corner
Lancaster, OH 43130 Evaluation: Carlos Cole
 Phone #: 614-530-8998

#3. Test Hole #: 3 Certification Stamp or Certification #: 24835
 Latitude/Longitude: _____ Signature: Carlos Cole
 Method: PH Auger Probe Dug to 32" + Augered Remainder Phone #: 304-372-4809 - Home
304-532-4711 cell

Soil Profile	Depth (inches)	Matrix Color	Testifying Soil Saturation		Clas	Texture			Estimating Soil Permeability			Infiltration Loading Rate gal/d2/ft2	Hydraulic Linear Loading Rate
			Concentrations	Depletions		Approx. % Clay	Approx. % Fragments	Grade	Size	Type (shells)	Consistence		
Horizon													
Ap ₀	0-5	7.5YR 4/3	-	-	S:1/L	14-16	-	2-1	F	Gr	VFr	.6	3.0
B ₀ /Ap ₂	5-10	7.5YR 4/4	-	-	S:1/L	15-18	-	2-1	M	SbH + Gr	Fr	.5	2.5
Bt ₁	10-14	7.5YR 5/4	-	-	S:1	18-25	-	2-1	M	SbH	Fr	.6	3.0
Bt ₂	14-19	7.5YR 6/4	-	-	S:1/L / S:1	26-29	-	2-1	M	SbH	Fr	.4	2.5
Bt ₃	19-25	7.5YR 6/6	-	-	S:1	29-31	-	2-1	M	SbH	Fr	.4	2.5
Bt ₄	25-30	7.5YR 6/6 + 6/4	-	-	S:1	27-29	-	1-2	M	SbH	Fr	.2	1.5
BC	30-35	10YR 6/6 + 5/6	-	-	S:1	30-34	-	1	MtC	SbH	Fr-Fr?	.2	1.5
C 35-45		7.5YR 5/6	-	-	S:1 +	34-38 +	-	-	-	-	-	-	-
Limiting Condition		Depth to (in.)	Descriptive Notes										
Purified Seasonal Water Table		25	Remarks / Risk Factors										
Apparent Water Table		-											
Slightly Permeable Material		-											
Bedrock		none to 45"											
Restrictive Layer		35											

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

March 15, 2020

Johnathan Smith (Countrytyme Land Specialist)
3451 Cincinnati-Zanesville Rd, SW
Lancaster, OH 43130

Dear Mr. Smith:

We would like to thank you for requesting our assistance to identify the specific soil properties on your property (**Lot #5, 3770 Woodlane Drive**) (Parcel # **P030380002200**), Nelsonville, in Athens 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 Athens 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: Patrick McGarry, R. S. Athens County Health Department

Soil and Site Evaluation Discussion

This soil evaluation is for a new STS (sewage treatment system) for a new 2 bedroom home (example that may change) on your property. On the attached sketch map, we have approximately located, a possible new home site and proposed a large filter field area to serve as both the primary and secondary filter field areas. The proposed home site and waste water disposal area for a sewage treatment system are tentative, because the new owners may want the home in another location, however this property is limited in house site locations or leach field locations. The only other option for a home site and leach field for a STS would to construct a driveway to the ridge. The proposed filter field area is located on the bench just of Woodlane drive on the front of the property. The upper part of the proposed filter field area looks natural but the lower part of the filter field has some disturbed soils created during the strip mining process. The soil disturbance from the mining process occurred approximately 60 to 80+ years ago and has started to develop properties of a natural undisturbed soil.

The soils throughout the proposed filter field area have develop from the siltstone bedrock, similar to the surface mine highwall overburden exposed bedrock. The #1 soil site description is a little more loamy and this soil pit shows more soil disturbance (a result of coal mining). The upper soil (soil site description #3) shows more clay in the subsoil and is a more natural, undisturbed soil. The #2 soil site description has disturbed soil horizons in the upper portion of the soil that over lays the natural soil horizons and siltstone, parent material. I would probably locate the filter field on the lower side of the proposed area between the #2 and lower side of the filter field and then below the lower filter line, install a French drain to drain any excess water from the site.

We have shown the location of the proposed septic or aeration tank absorption field area on the sketch map. We have marked the proposed filter field area with pink wire flags and maybe a pink ribbon on the taller vegetation, if present at the approximated 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 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. We have attached a design worksheet using the #1 soil description in the proposed filter field to give you an indication of what we seen on site.

Sketch Map for Countrytyme Property (Tract #5)



These are all Approximate Locations (not to Scale)

Location Map



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

used >100% slope Site and Soil Evaluation for Sewage Treatment and Dispersal

Track #5

County: Athens

Land Use: Vegetation: mostly small trees, few large

This pit looks Natural

Township / Sec: York

Property Address/Location: near 3170 Woodlane Dr.

Position on Landform: upland - colluvial

Base of slope

Applicant Name: Countrywide Realty

Address: 441 Johnathan Smith, Land Specialist

3451 Cincinnati-Zonesville Rd, SW Ohio

Percent Slope: 15%

Shade of Slope: convex

#3

Phone #: Lancaster, OH 43130

LA #3

PH 614-530-8998

Evaluator: Carlos Cole

3-13-20

Latitude/Longitude: N 39° 27.827' W 82° 12.453'

Method: L Pit Auger Probe

Dug to 34" Augered Remainder

Thru: 304-372-4809 - Home 304-532-4711 cell

Signature: Carlos Cole

Certification Stamp or Certification #: 24035

Soil Profile		Bedrocking Soil Saturation				Bedrocking Soil Permeability								
		Munsell Color (hue, value, chroma)		Redoximorphic Features		Texture			Structure			Infiltration Loading Rate gal./da./ft.	Hydraulic Linear Loading Rate	
Horizon	Depth (inches)	Matrix Color	Concentrations	Depletions	Clamp	Approx. % Clay	Approx. % Fragments	Grade	Size	Type (dunyo)	Consistency			
Ap1	0-3	10YR 3/3 +	4/3	-	S/L / L	13-15	-	2-1	F	G ^r	V Fr	1.6	3.5	
Ap2	3-8	10YR 4/4	-	-	L	14-16	2-5 +	2-1	F + m	G ^r	V Fr - Fr	1.6	4.4	
Bt1	8-12	10YR 4/4 +	5/4 + 6/6	-	L	18-21	5 +	1-2	m	Sbt	Fr	1.2	4.1	
Bt1	12-21	10YR 6/6	-	-	S/L	26-29	5 + +	1-2	m	Sbt	Fr	1.2	2.9	
Bc1	21-28	10YR 7/2	6/6	10YR 7/2	S/L	26-29	5 + +	1-2	m	Sbt	Fr	1.2	2.7	
Bc2	28-32	10YR 7/2	6/6	10YR 7/2	S/L	27-29	-	1	m	Sbt	Fr	1.2	2.4	
C1	32-36	5YR 6/6	6/6	10YR 6/2	S/L / S/L	29-32	-	-	-	-	Fr-Fr			
C2	36-45	5YR 6/6	6/6	10YR 6/2	S/L / S/L	32-37	-	-	-	-	Fr-Fr			
Landing Conditions														
Depth to (in)		Description		Bedrock / Rock Fragments		Bedrock / Rock Fragments		Bedrock / Rock Fragments		Bedrock / Rock Fragments		Bedrock / Rock Fragments		
45-55		Soft siltstone		2.5' 5/3 + 6/3		2.5' 5/3 + 6/3		2.5' 5/3 + 6/3		2.5' 5/3 + 6/3		2.5' 5/3 + 6/3		
Depth to (in)		Description		Bedrock / Rock Fragments		Bedrock / Rock Fragments		Bedrock / Rock Fragments		Bedrock / Rock Fragments		Bedrock / Rock Fragments		
-		partly from rock colors		partly from rock colors		partly from rock colors		partly from rock colors		partly from rock colors		partly from rock colors		
Apparent Water Table		-		-		-		-		-		-		
Highly Permeable Material		-		-		-		-		-		-		
Bedrock		-		-		-		-		-		-		
Restrictive Layer		45-55"		Soft siltstone		36-45"		Soft siltstone		-		-		

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

x sandstone and/or siltstone fragments

② we used the 12-24" Depth for H. Linear Loading Rate
 used >10% slope Site and Soil Evaluation for Sewage Treatment and Dispersal

Track #5

Athens

Land Use / Vegetation: Trees

County: York

Landform: Upland surface mine soils

Township / Sec: Near 3770 Wood Lane Dr.

Position on Landform: Bench

Property Address/Location: Nelsonville, OH 45764

Percent Slope: 15

Applicant Name: Country Time Realty

Shape of Slope: convex

Address: Att: Johnathan Smith, Land Specialist

3-12-20

Phone #: 3451 Cincinnati Zanesville Rd, SWD

Evaluation: Carlos Cole

Lot #: 5

Signature: Carlos Cole

Trak Hole #: #2

Certification Stamp or Certification #: 24835

Latitude/longitude: N 39° 27.822' W 82° 12.447'

Method: L Pit Auger Probe

Dug to 30" Augered Remainder

Threat: 304-372-4809 - Home
 304-532-4711 cell

Soil Profile		Estimating Soil Saturation				Estimating Soil Permeability							Infiltration	
Horizon	Depth (inches)	Moisture Color	Redoximorphic Features		Clays	Texture		Structure				Competitiveness	Infiltration Loading Rate	Hydraulic Linear Loading Rate
			Concentrations	Depletions		Approx. % Clay	Approx. % Fragments	Grade	Size	Type (mapus)				
Ap	0-5	10YR 3/2			L	13-15	2-5*	2-1	F	Gr	✓Fr	1.5		
B4	5-8	10YR 5/4	10YR 6/6	+4/3	S/L	25-28	5-10+	1	F+m	SbH	Fr			
BC1	8-13	10YR 6/4	+6/6		L - CL	24-28	10-15	1	M	SbH	Fr			
BC2	13-19	10YR 6/3	.6/6 .7/1	+2/2 (Co2)	L - CL	23-29	10-15*	1	M	SbH	Fr			
BC3	19-26	10YR 6/2	+6/6 +2/2	coal pieces	S/L	20-24	5-10*	1	M	SbH	Fr			
2 C1	26-32	10YR 5/6	+6/2		S/L	27-29	5**	-	-	-	Fr-F1			
2 C2	32-36	7.5YR 6/6			S/L	29-35	-	-	-	-	Fr-F1			
2 C3	36-45	7.5YR 6/1	7.5YR 6/4		S/L	35+	-	-	-	-	F1			
2 C4	45-54	7.5YR 6/1	7.5YR 6/8		S/L - S/L	25-30	10+*	-	-	-	Fr			
Limiting Conditions		Depth to (in)		Descriptive Notes		Remarks / Risk Factors								
Patched Seasonal Water Table		3'		Disturbed to 26"		Depth		could consider 26" as seasonal water table						
Apparent Water Table		-												
Highly Permeable Material		-												
Bedrock		none		to 54"										
Restrictive Layer		36"												

Note: The evaluation should include a complete site plan or site drawing.
 Probably natural soil material at 26"

* sandstone + siltstone fragments + siltstone fragments

② we used the 12-24" Depth for H. Linear Loading Rate
 used > 100% slope Site and Soil Evaluation for Sewage Treatment and Dispersal

Track #5

County: Athens

Township / Sec.: York

Traverse Address/Location: near 3770 Woodlane Dr.

Postion on Landform: upland

Applicant Name: Nelsonville, OH 45764

Address: Country Time Realty

ATT: Johnathan Smith, Land Specialist

Phone #: 3451 Cincinnati

Lot #: 5

Test Hole #: 1

Latitude/Longitude: N 39° 27.819' W 82° 12.438'

Method: ☒ Pit ☒ Auger ☐ Probe

Dug to 32" Augered Remainder

Land Use / Vegetation: mostly small woody vegetation

Landform: upland

Percent Slope: 15-20

Shape of Slope: convex

3-12-20

Carlos Cole

Certification Stamp or Certification #:

Signature: Carlos Cole

Phone #: 304-372-4809 - Home

304-532-4711 cell

24835

Soil Profile	Depth (Inches)	Matrix Color	Estimating Soil Saturation		Texture	Estimating Soil Density				Infiltration Loading Rate	Hydraulic Linear Loading Rate
			Redoximorphic Features	Depletions		Approx. % Clay	Approx. % Frequent	Grade	Size	Type (clump)	
Horizon					Class						
Ap1	0-6	10YR 3/2	3/3	-	S:L	12-14	0-2	2-1	F	Gr	vFr
Ap2	6-10	10YR 3/3	-	-	S:L/L	13-15	5-10 ⁺	1-2	F	Gr	vFr
BA	10-16	10YR 5/4	5/6 4/3	-	L	16-20	5-10 ⁺	1-2	F+M	SbH	Fr-vFr
2Bt1	16-22	7.5YR 5/4	-	-	S:L	20-24	10-15 ⁺	2-1	M	SbH	Fr
2Bt2	22-28	7.5YR 6/6	-	-	L/S:L	23-26	10-20 ⁺	1-2	M	SbH	Fr
2BC	28-35	7.5YR 6/6	-	7.5YR 7/2	S:L	27-30	15-20 ⁺	1	M	SbH	Fr
2C1	35-56	10YR 5/3	5/4 7.5YR 6/6	-	S:L	20-22	5-15 ⁺	-	-	-	Fr
2C2	56-60	10YR 4/3	10YR 3/1 10YR 5/6	-	S:L	27-31	5-10 ⁺	-	-	-	Fr
Limiting Conditions		Depth to (in.)	Descriptive Notes								
Perched Seasonal Water Table		28	Probably not water table								
Apparent Water Table		-									
Highly Permeable Material		-									
Bedrock		none	to 60"								
Restrictive Layer		none									

This Area Does not totally look natural

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

* Fine coal + sandstone gravels

* sandstone + siltstone rock fragments

* siltstone + coal pieces "small"

December 9, 2022



3050 Glennfinnan Dr.
Albany, OH 45710
740-698-9100
740-591-4776
sjwiley@goodgroundenvironmental.com

Mark Graham
3451 Cincinnati-Zanesville Road
Lancaster, Ohio 43130

RE: Findings for a Site and Soil Evaluation for a Subsurface Treatment System for a New Home on Tract 6, 3770 Woodlane Drive, Nelsonville, Ohio.

Dear Mr. Graham:

In accordance with our proposal sent to you on November 18, 2022, Good Ground LLC has conducted a site and soil evaluation to assess feasibility, to support design and to provide necessary documents for permitting through Athens County Health Department (ACHD) of a new on-site subsurface wastewater dispersal and treatment system (STS) for a new domicile located at Tract 6, 3770 Woodlane Drive, Nelsonville, Ohio. The new home will be placed on property that is currently listed as owned by Countrytyme Land Specialists LTD (Athens County parcel P030380002209). This property comprises approximately 7.52 acres and is located in the northeast quarter of the northeast quarter of Section 18, York Township, Athens County, as approximately shown on Figure 1. The new domicile will be a 3 bedroom home on a foundation with an estimated daily wastewater output of 360 of gallons per day (gpd).

On November 23 and November 29, 2022, Good Ground LLC evaluated the site and collected soil data from multiple extractions using a 3" diameter soil auger to depths of up to 60 inches below the ground surface and a 60-inch hammer probe. Soils were sampled in multiple locations. The collected soil data for four of these samples are attached to this letter report and identified as soil samples T6-2, T6-4, T6-5, and T6-6. Soil sample points were flagged in the field and GPS-located using a Trimble GeoXH 6000 unit. GPS data were imported into an ArcGIS format for map depiction. Soil sample locations are illustrated on Figures 1 and 2.

The new home will be located on a west-facing hillslope. The assessment area includes the hillslopes south of the new home location. There is approximately 60 feet of topographic relief within the assessment area. Slopes range from 15 to 75 percent. The current land uses include abandoned mine land and older, mixed successional forest.

There has been extensive surface and underground mining within the tract. The Ohio Department of Natural Resources "Mines of Ohio" website (<https://gis.ohiodnr.gov/MapView/?config=OhioMines>) shows that surface mining was conducted prior to 1961 and subjected to some level of reclamation in some areas. High walls and spoil piles remain. Soil samples indicate that reclamation involved the placement of approximately 1 foot of sandy loam atop graded mine spoil at some lower elevations. Trees on relict mine spoil piles are in the 60 to 80 year age range suggesting that surface mining could have been active in the 1940s. Underground mining occurred in the 1890s by Maple Hill Coal Company and again by the J.A. Lama Company in 1919. Several portals noted in the mine mapping dataset have apparently been sealed, as not observed during the site assessment. Open mine pits that retain and discharge acid water approximately follow the coal seam at elevation 740.

Soils outside of mined areas are formed in poorly stratified loess atop and colluvium from sandstone and siltstone. Soils within the tract are mapped in the USDA Soil Survey of Athens County as FbE, FbF - Fairpoint shaly clay loam, DtF - Dekalb-Westmoreland complex, and GsC - Guernsey silt loam . Most substrate observed below elevation 750 were found to be composed of side cast mine spoils. The unreclaimed high walls also approximate elevation 750. Some areas below elevation 740 have been re-soiled as part of the Ohio Abandoned Mine Land Reclamation program. Soils above 760 generally resemble the Dekalb silt loam, with very low clay content in all strata. All unmined soils are channery to very channery. Shallow bedrock was frequently observed above elevation 810. Bedrock was observed at sample T6-1 at 26 inches below the surface. Samples T6-2 and T6-3 are distant from the assumed new home location but could be used for an alternative home location. Shallow seasonal or apparent water tables were observed only in loose mine spoils in foot slope positions and open mine pits.

Selection of the assessment area is based on site topography, soil conditions and other natural or man-made features observed on the site. Design of the on-site subsurface wastewater treatment system is based on the most restrictive soil infiltration and permeability characteristics observed in the selected samples for the STS installation area. Collected soil characteristics for soils at least 18 inches below the surface were used with the Tyler Table (Table 1) to estimate the infiltration loading capacity, minimum infiltration area and minimum trench length for a primary and a replacement infiltration trench field for the new 3 bedroom home. The design layer for this treatment system is silt loam, which has an infiltration loading rate of 0.6 gallons per day per square foot. Daily design flow is based on the domestic default volume of wastewater production of 120 gpd per bedroom, or 360 gpd for the proposed home.

Table 1: Tyler Data for Calculation for Absorption Area and Dispersal Trench Length - Simple Infiltration Trench System

Soil Sample Number	Texture	Structure		Infiltration Loading Rate > 30 mg/l BOD (gal/day /ft ²)	Loading Rate Conditions		Hydraulic Linear Loading Rate (gal/day/lf)			Infiltration Area (SF)	Infiltration Component Length (ft)	Total Trench Length (LF)
		Shape	Grade		Slope %	Infiltration Distance (inches)	Infiltration Distance Factor	Design Flow (gpd)	SF/LF 24" Trench			
T6-2	L	BK	2	0.6	15	24-48	4.9	360	2	600	73	300
T6-4	SIL	BK	2	0.6	15	24-48	4.3	360	2	600	84	300
T6-5	L	BK	2	0.6	15	24-48	4.9	360	2	600	73	300
T6-6	L	BK	2	0.6	15	24-48	4.9	360	2	600	73	300

In addition to the minimum absorption area and minimum trench lengths derived through use of the Tyler Table, Ohio Health Department regulations require a “resting” area component. The resting area must be a minimum of 25% addition to the Tyler Table-derived design figures. The use of gravelless chambers, instead of gravel-filled trenches, allows reduction of the total length of trenches required, while continuing to accommodate the required resting trench area. Table 2 (attached) presents the calculations for both a gravel infiltration trench system and for gravelless system, with the resting area burden added.

Given the findings presented in Tables 1 and 2, the use of a gravelless chamber-based subsurface treatment system for wastewater dispersal would be both feasible and recommended for a new gravity-driven STS at the approximate location shown on Figure 2. The minimum septic system components for the new home would include:

- A 1500 gallon septic tank,

- Approximately 120 feet of 4-inch sewer pipe with joints and clean-out ports to connect the home to the septic tank and the septic tank to the distribution box,
- An accessible 5-port parallel distribution box with shut-off valves meeting the specifications of OAC Appendix A rules 3701-29-15.1 (F),
- Four 76-foot long by 24-inch wide Quick-4 EQ36 Equalizer Chambers (or equivalent) with end caps and inspection ports,
- Approximately 100 linear feet of 4-inch pipe to connect individually from the distribution box to each trench inlet.

All materials and equipment used for STS construction must meet the requirements of OAC 3701-29. A layout of the STS is shown on Figure 2 using the gravelless chamber trenches. The replacement system for the new home would be constructed south of the primary STS, as also shown on Figure 2. Trenches for the replacement system as shown would be the same length as the primary trench field.

All trenches would be excavated along the contour to a maximum depth of 18 inches at a minimum inter-trench spacing of 8 feet. Take care during construction to preserve soil infiltration capacity by not grading deeply or working when the soil is saturated. Should there be trees within the infiltration trench field area, do not grub. Cut them to the ground and excavate through the root system. The location selected for STS Field 1 as shown on Figure 2 appears to be the most practical option given the home location, the site topography, and the soil conditions.

The next step is identification of the STS system materials that considers actual system components and comparative system costs. These are choices that you the homeowner will make in consultation with your selected Ohio Environmental Protection Agency (OEPA) certified STS installer and ACHD. All materials and equipment used for STS construction must meet the requirements of OAC 3701-29.

A final specification of materials, a field layout and a final field sketch may be needed to obtain a permit to install the septic system in Athens County. It is likely that your chosen Ohio EPA-certified system installer can provide specifications, a list of materials and costs. The county health department sanitarian will most likely inspect the field layout prior to installation permit issuance. As result, the location of the new STS trench field, septic tank and distribution box will need to be finally marked on the ground by your selected installer. The ACHD can provide further guidance on system final documents, application forms that are needed, certified STS installers, and the names of septic system design engineers that could be needed for more complex systems.

This report is for the sole and only use of Mark Graham, Countrytyme Land Specialists LTD, or the owners of record of the subject property in support of obtaining a permit to install a subsurface septic treatment and dispersal system from the ACHD and shall not be used or relied upon by any other person, firm, corporation, or other entity. Please contact me if you have any additional questions. Thank you for allowing Good Ground LLC to assist you with this project.



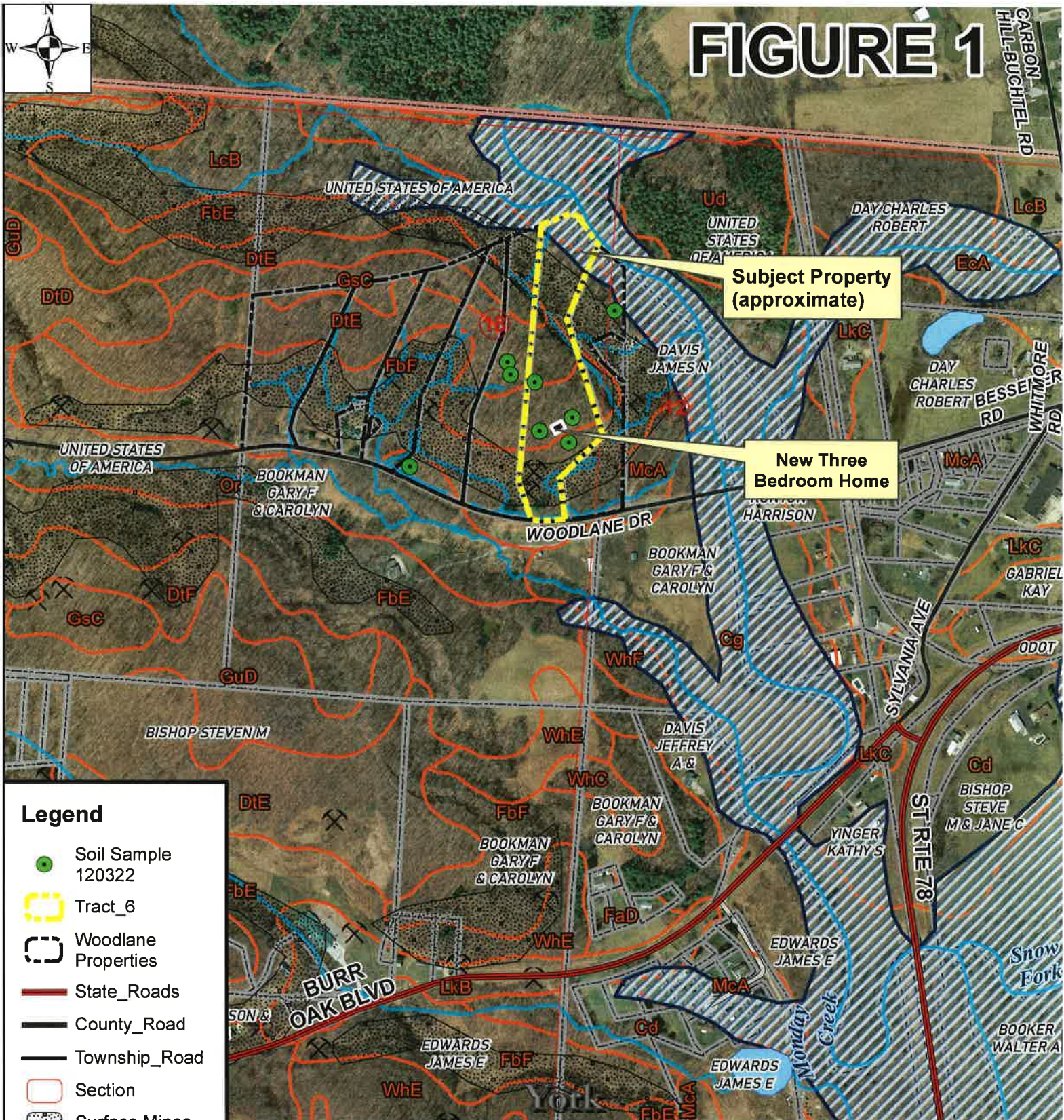
Robert L. Wiley, President,
Good Ground LLC

Attachments: Figure 1, Figure 2
Table 2
4 Soil Data Forms

TABLE 2 Infiltration Trench Length Calculations - Primary AND Replacement

Parcel	P030380002209	
Owner/Client:	Donovan Kuhn/Mark Graham	
Calculation of the Trench Bottom Area and Trench Length Required for Shallow Leaching Gravel Infiltration Trenches		
Design Parameters	Value	Comment
Wastewater Source:	Cabin	Manual Input
Condition:	New	Manual Input
Daily WW Volume (gal/day):	360	Manual Input
Soil		
Texture	SL	Soil data sheet input
Shape	BK	Soil data sheet input
Grade	2	Soil data sheet input
Sample	ML1	Tyler Table input
Tyler Table Data		
Loading Rate (gpd/sf)	0.6	Tyler Table input
Slope (%)	4	Soil data sheet input
Infiltration Distance (inches)	24-48	Soil data sheet input
Tyler Calculations		
Infiltration Area (sf)	600	Daily WW volume/Loading Rate in gpd/sf
Hydraulic Loading Rate (gpd/lf)	5.5	Tyle Table input
Minimum Trench Length (ft)	65	Infiltration area/min trench length for 24" trench
Proposed Trench Width (ft):	2	Manual input
Number of Minimum Length Trenches Needed	4.58	Total Trenches needed at minium length
On-Site Feasible Trench Length (ft)	100	Manual input length needed for 3 equal trenches
Number of Feasible-length Trenches	3	Infiltration area/feasible trench length
Resting Trenches (min 25% addition)	1	Additional resting trenches
Total Number of Trenches Needed at on-site feasible Length:	4	Number of trenches needed for Shallow Gravel Infiltration System
Absorption Base Width/ Trench Spacing(ft):	5	(HLLR/soil infiltration rate)/2
The required minimum bottom area for a Gravelless trench (chamber) shall be no less than 75% of a shallow gravel infiltration trench		
Calculation of the Trench Bottom Area and Trench Length Required for Gravelless (chamber) Infiltration Trenches		
Total Infiltration area using chambers (sf)	450	Total infiltration area X 0.75
Minimum Trench Length (ft)	65	Infiltration area/min trench length for 24" trench
Number of Minimum Length Trenches Needed	3.4	Total Trenches needed at minium length
On-Site Feasible Trench Length (ft)	75	Manual input length needed for 3 equal trenches
Round to Number of Uncut 4' Sections	76	Total actual trench length for uncut sections
		Actual trench length/minimum number of chambers needed
Minumum Infiltration Trenches Needed	3	
Resting Trenches (min 25% addition)	1	Additional resting trench
Total Number of Trenches Needed at On-site Feasible Length:	4	Number of trenches needed for a Gravelless chamber infiltration system

FIGURE 1



Legend

- Soil Sample 120322
- Tract_6
- Woodlane Properties
- State_Roads
- County_Road
- Township_Road
- Section
- Surface Mines
- Stream Channels

100 YR Floodplain

- 100 YR Floodplain
- Parcels_0923...
- USDA Soils

SITE FEATURES AND LOCATION

Countrytyme Land Specialist, Ltd.
Tract 6, 3770 Woodlane Dr, Nelsonville
Section 18, York Township

480 240 0 480 Feet



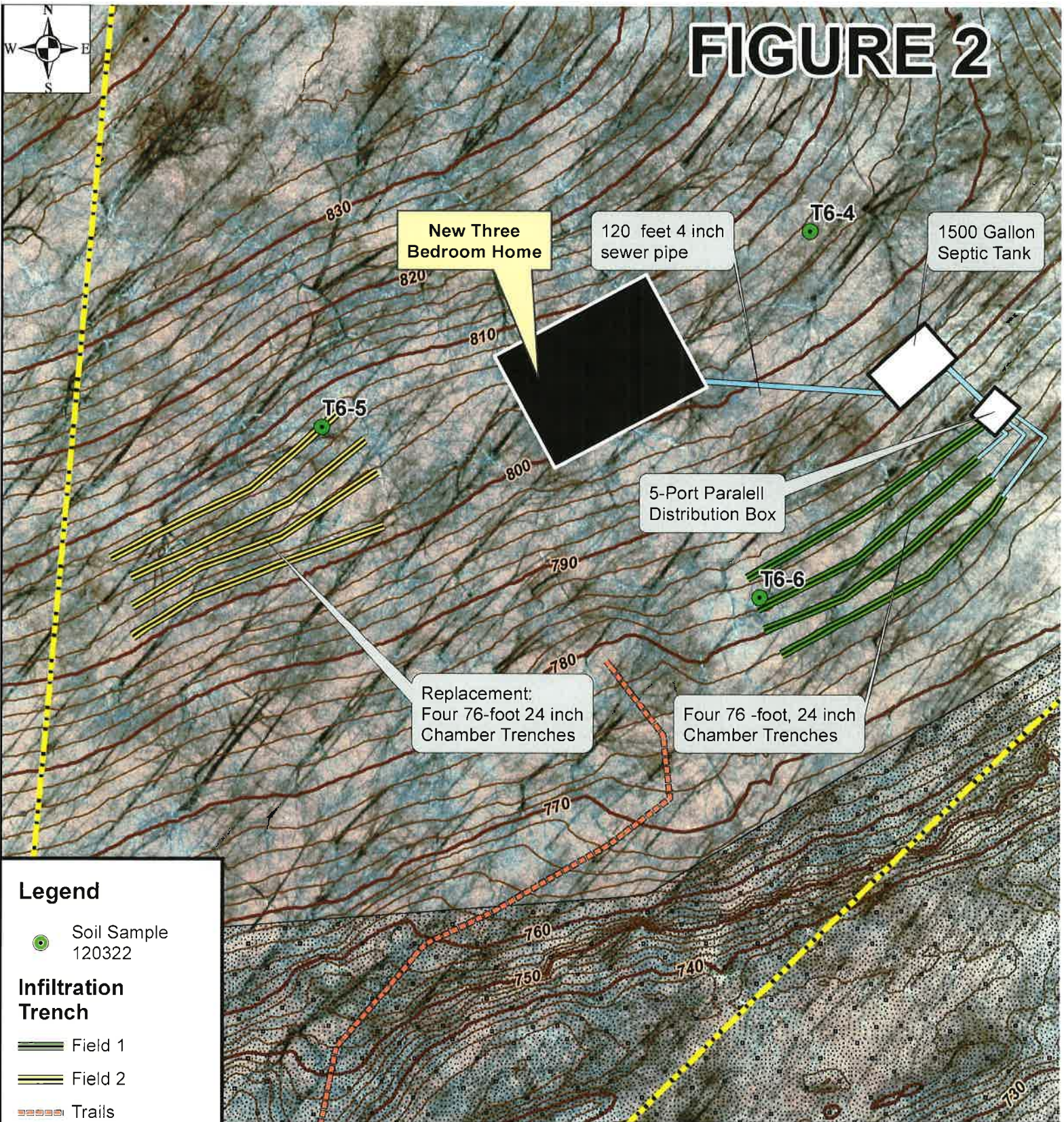
1 inch = 600 feet

Contour Interval: NA

Prepared by Good Ground LLC. 120422
 Planimetrics: Athens County Auditors DB & 2012/2020 OGRIP:
<http://gis5.ohio.gov/geodatadownload/>
 Coordinate System: NAD 1983, Ohio State Plane, Feet
 Parcel Data based on "Parcels 091520
 Soil code key found on pages iv and 119 Athens County Soil Survey. USDA, ODNR, 1985.



FIGURE 2



Legend

Soil Sample
120322

Infiltration Trench

Field 1

Field 2

Trails

Tract_6

Woodlane
Properties

Surface Mines

Contour Interval

2 feet

10 feet

SEPTIC SYSTEM DESIGN LAYOUT

Countrytyme Land Specialist, Ltd.
Tract 6, 3770 Woodlane Dr, Nelsonville
Section 18, York Township

30 15 0 30 Feet

1 inch = 40 feet

Contour Interval: 2 feet

Prepared by Good Ground LLC, 120422
Planimetrics: Athens County Auditors DB &
2012/2020 OGRIP:
<http://gis5.oil.ohio.gov/geodatadownload/>
Coordinate System: NAD 1983, Ohio State Plane,
Feet.
Parcel Data based on "Parcels 091520
Soil code key found on pages iv and 119 Athens
County Soil Survey. USDA, ODNR, 1985.

Site and Soil Evaluation for Sewage Treatment and Dispersal											TH#	T6-2
County:	Athens					Landuse/ Vegetation:		Successional forest				
TWP./Section:	Nelsonville City, Section 12 and 18					Landform:		Upland				
Property Address/Location:	3770 Woodlane Drive Nelsonville, Ohio 45764					Position on Landform:		Hillslope				
Applicant Name:	Donovan Kuhn/Mark Graham					Percent Slope:		10-15%				
Applicant Address:	3451 Cincinnati-Zanesville Road Lancaster, Ohio 43130					Slope Shape:		Convex-Linear				
Phone #:	614-354-5317 Cell					Date:		November 21, 2022				
Lot #:	P030380002209					Evaluator:		Robert L. Willey				
Test Hole #:	T6-2					3050 Glennfinnan Drive		Cert. Stamp or Cert. #: ODH Certified April, 2016 Signature: 				
Lat./Long; ddms	39.46540556					Albany, OH 45710						
Method (circle):	Pit	Auger	Probe	All	Mapped soil type(s):		GsC - Guernsey silt loam					
					FbE, FbF - Fairpoint shaly clay loam							
					DtF - Dekalb-Westmoreland complex		740-698-9100					
Estimating Soil Permeability												
Soil Profile	Estimating Soil Saturation									Other Soil Features		
	Munsell Color											
Horizon	Depth (inches)	Matrix Color	Active Redox Features		Texture Approx. % Clay	Approx. % Fragments	Structure		Consistence			
			Concretions	Depletions			Grade	Size		Type (shape)		
A	0-7	10YR5/4	NONE	NONE	15	1-5	2	f	fr	Channery		
B1	7-23	7.5YR6/4	NONE	NONE	15	10-15	2	f	fr			
B2	23-32	10YR5/6	NONE	NONE	15	5-10	2	f	fr			
B3	32-41	10YR2/1	NONE	NONE	10	1-5	2	f	fr		Pre coal	
B4	41-52	10YR6/6	NONE	NONE	15	1-5	2	f	fr			
Limiting Conditions						Remarks/ Risk Factors:						
Perched Seasonal Water Table			Depth to (inches)									
Not Encountered			Not Encountered									
Apparent Water Table			Not Encountered									
Highly Permeable Material			Not Encountered									
Bedrock			52"									
Restrictive Layer			Not Encountered									

Site and Soil Evaluation for Sewage Treatment and Dispersal							
						TH#	T6-4
County:	Athens	Landuse/Vegetation:				Successional forest	
TWP./Section:	Nelsonville City, Section 12 and 18	Landform:				Upland	
Property Address/Location:	3770 Woodlane Drive Nelsonville, Ohio 45764	Position on Landform:				Hillslope	
Applicant Name:	Donovan Kuhn/Mark Graham	Percent Slope:				10-15%	
Applicant Address:	3451 Cincinnati-Zanesville Road Lancaster, Ohio 43130	Slope Shape:				Convex-Linear	
Phone #:	614-354-5317 Cell	Date:				November 21, 2022	
Lot #:	P030380002209	Evaluator:				Robert L. Wiley	
Test Hole #:	T6-4	3050 Glennfinnan Drive				Signature: 	
Lat/Long; ddms	39.46469748	Mapped soil type(s):				GsC - Guernsey silt loam	
Method (circle):	Pit Auger Probe All	FbE, FbP - Fairpoint shaly clay loam				DtF - Dekalb-Westmoreland complex	740-698-9100
Estimating Soil Permeability							
Soil Profile	Estimating Soil Saturation			Texture			
	Munsell Color	Active Redox Features		Approx. % Clay		Approx. % Fragments	
	Matrix Color	Concretions	Depletions	Class	Grade	Type (shape)	Consistence
A	10YR4/4	NONE	NONE	sil	<1	f sbk	f f
B1	10YR5/6	NONE	NONE	sil	2	f sbk	f channery
C1	10YR6/6	NONE	NONE	I	2	f sbk	f
Limiting Conditions							
Perched Seasonal Water Table	Depth to (inches)	Descriptive Notes				Remarks/ Risk Factors:	
Apparent Water Table	Not Encountered						
Highly Permeable Material	Not Encountered						
Bedrock	55"						
Restrictive Layer	Not Encountered						

March 16, 2020

Johnathan Smith (Countrytyme Land Specialist)
3451 Cincinnati-Zanesville Rd, SW
Lancaster, OH 43130

Dear Mr. Smith:

We would like to thank you for requesting our assistance to identify the specific soil properties on your property (**Lot #7, 3770 Woodlane Drive**) (**Parcel # P030380002200**), Nelsonville, in Athens 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 Athens 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: Patrick McGarry, R. S. Athens County Health Department

Soil and Site Evaluation Discussion

This soil evaluation is for a new STS (sewage treatment system) for a new 2 or 3 bedroom home (example that may change) on your property. On the attached sketch map, we have approximately located, a possible new home site and proposed a large filter field area to serve as both the primary and secondary filter field areas. The proposed filter field area is located on the bench or lower sideslope area just upslope of Woodlane drive. The soils have developed from a combination of residual and colluvium from this siltstone parent material. The old surface mine activities seem to be upslope of the proposed filter field area and these soils seem to be natural soils. The proposed house site is located on the old surface mine bench.

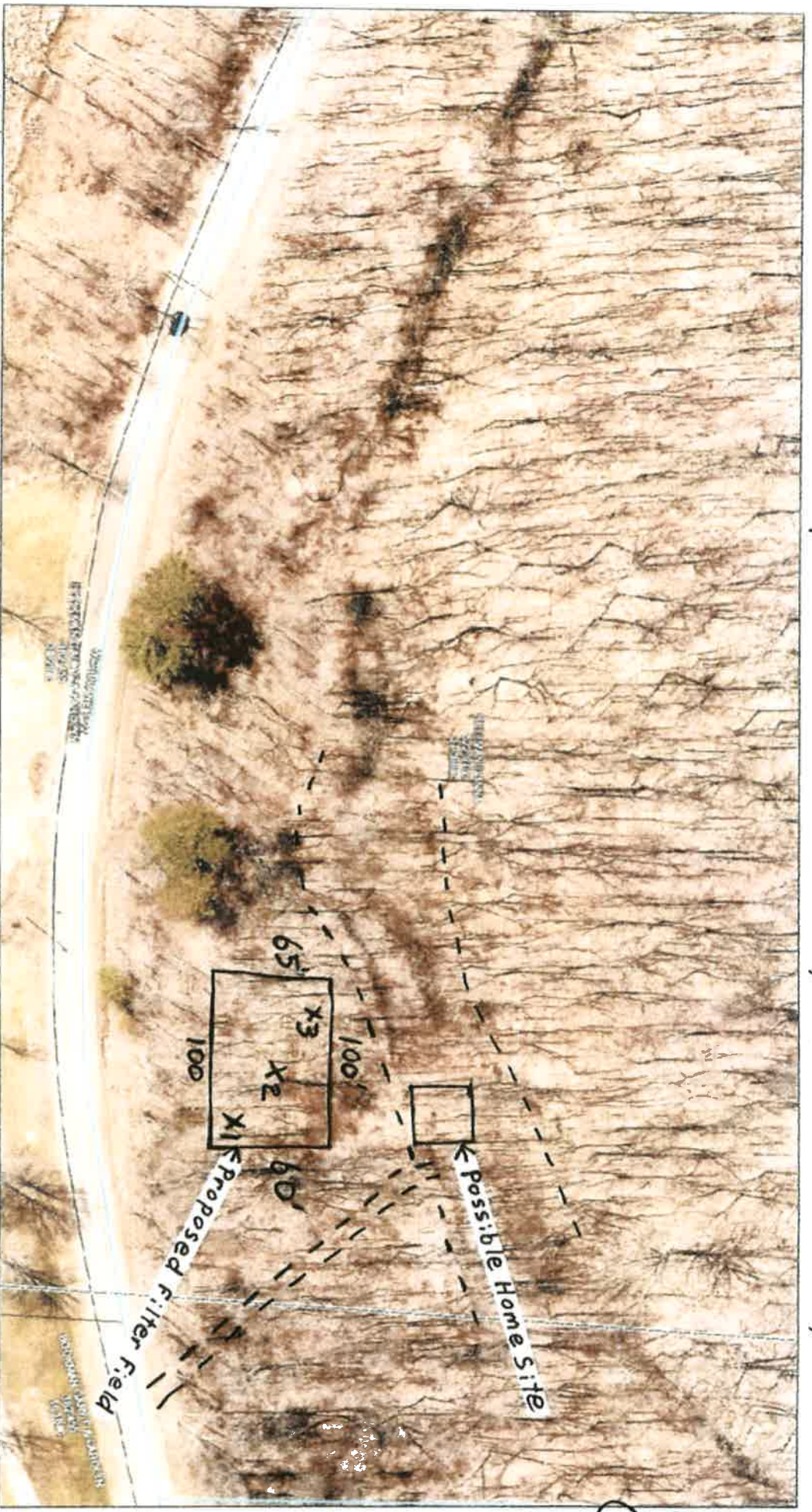
The soils throughout the proposed filter field area have develop from the siltstone bedrock, similar to the surface mine highwall, overburden exposed bedrock. The #1 soil site description shows the better soils, if we can assume these same soils follow the contour of the slope, this would be the better part of the proposed filter field. We can also assume the upper part of the soil profile is colluvium and the lower part of the profile is residual developed soil that usually has a higher percent of clay and is more restrictive for water movement. These soils seem to be basically dry soils, however we found the gray depletions at depths of 20 to 27 inches, that indicate a seasonal high water throughout the area. These grays are common in the under lying parent material bedrock, so some of the grays are not reduced iron or depletions, but some are indicators of a seasonal water table.

We have shown the location of the proposed septic or acriation tank absorption field area on the sketch map. We have marked the proposed filter field area with pink wire flags and pink ribbon on the taller vegetation, if present at the approximated 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 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. We have attached a design worksheet using the #1 soil description in the proposed filter field to give you an indication of what we seen on site.

Location Map



Sketch Map for Countrytyme Property (track #7)



X1, X2, X3 - Soil Site Descriptions

----- Possible Driveway location

----- Area Between Dashed line is Highwall, Cut Area (Ditch) + outslope of Surface Mine

These are all Approximate Locations (not to Scale)

② we used the 12.24" Depth for H. Linear Loading Rate
 used >10% slope Site and Soil Evaluation for Sewage Treatment and Dispersal

Trach #7

County: Athens Land Use / Vegetation: Trees all sizes
 Township / Sec.: York Landform: upland
 Property Address/Location: Near 3770 Woodlane Dr. Position on Landform: side
 Applicant Name: Nelsonville, OH 45764 Percent Slope: 15-20
 Address: Country Time Realty Shape of Slope: convex some uneven areas but not bad
 Address: Att: Johnathan Smith, Land Specialist
 Phone #: 3451 Cincinnati-Zanesville Rd, SW Drive 3-12-20
 Lot #: Lancaster, OH 43130 PH # 614-530-8998 Evaluator: Carlos Cole
 Test Hole #: 1 Test Hole ft: 1 Signature: Carlos Cole
 Latitude/Longitude: N39°27.827' W82°12.346' Certificate Stamp or Certification #: 24035
 Method: ✓ PH ✓ Auger Probe Phone #: 304-372-4809 - Home
Dug to 32" + Augered Remainder 304-532-4711 cell

Soil Profile		Estimating Soil Saturation			Estimating Soil Permeability								
		Measured Color (moist, water, dryness)			Redoximorphic Features								
Horizon	Depth (inches)	Munsell Color	Concentrations	Depth (inches)	Class	Texture	Approx. % Clay	Approx. % Fragments	Grade	Size	Type (depth)	Conductivity	
Ap1	0-6	10YR 4/2	+4/3	-	L/SiL	14-16	0-24	5+	2-1	F+m	Gv	VFR	
Ap2	6-10	10YR 4/4	-	-	S:L/L	17-20	5+	+	1-2	M	Sbh	FR	
Ba	10-14	10YR 6/4	+5/4	-	S:L	21-23	10-15	+	2-1	M	Sbh	FR	
B+1	14-19	10YR 6/6	-	-	S:L/SiL	25-27	15+		2-1	M+C	Sbh	FR	
B+2	19-27	10YR 6/6	-	-	S:L/SiL	26-29	15	+	1-2	M+C	Sbh	FR	
Bc	27-31	10YR 6/4	+6/6	7.5YR 7/2	S:L	29-32	10-15	+	1	M	Sbh	FR	
C1	31-37	10YR 6/6	+7/1 mixed		S:L	32-35	10-15	+	-	-	-	FR-FI	
C2	37-43	10YR 6/1	2.5Y 5/4		S:L-S:L	35+	10	+	-	-	-	FI-FR	
C3	43-50+	10YR 6/1	2.5Y 5/4		S:L-S:L	40+	5	+	-	-	-	FI	
Limiting Conditions		Depth to (in.)		Descriptive Notes									
Purified Seasonal Water Table		27											
Apparent Water Table		-											
Highly Permeable Material		-											
Bedrock		none											
Restrictive Layer		37											

Infiltration Loading Rate	gal/ds/ft ²	Hydraulic Linear Loading Rate	
0.5	3.5		
1.6	3.3		
1.6	3.3		
1.2	2.1		
2.1			

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

* sandstone fragments
 ** more gravelly fragments
 *** siltstone + shale fragments

② we used the 12-24" Depth for H. Linear Loading Rate
used 10% slope Site and Soil Evaluation for Sewage Treatment and Dispersal

Track 7

County: Athens

Land Use / Vegetation: Small trees (few large)

Township / Soc.: York

Latitude

Property Address/location: Near 3770 Wood Lane Dr. Position on Landfront:

Nelsonville, OH 45764

Percent Slope:

side - Beach

Applicant Name:

Country Time Realty

Slope of Slope:

convex

Address:

Attn: Johnathan Smith, Land Specialist

3-12-20

Phone #:

3451 Cincinnati Zanesville Rd, SWDover

Carlos Cole

Lot #:

Lancaster, OH 43130 PH # 614-530-8998

Carlos Cole

Signature:

Carlos Cole

Certification Blowing or Certification #:

24835

Total Hole #:

2

Latitude/Longitude: N39° 27.828' W 82° 12.353'

Method:

PI Auger Probe

Dug to 32" + Augered Remainder

Threat:

304-372-4809 - Home

304-532-4711 cell

Soil Profile		Estimating Soil Saturation				Estimating Soil Permeability							
Horizon	Depth (inches)	Matrix Color	Redoximorphic Features		Class	Texture		Structure			Consistence	Infiltration Loading Rate gal/d2/ft2	Hydraulic Linear Loading Rate
			Concretions	Depletions		Approx. % Clay	Approx. % Fragments	Grade	Size	Type (clay)			
Ap	0-6	10YR 4/3 + 4/4		-	S:L	15-17	2 +	2-1	F+M	Gr	vfr	.6	3.3
BA	6-10	10YR 5/4 + 5/6 -		-	S:L	19-21	5 +	1-2	M	SbH	Fr	.4	3.3
Bt1	10-16	10YR + 7.5 YR 6/4		-	S:L	26-29	5-10 +	2-1	M	SbH	Fr	.4	3.3
Bt2	16-20	10YR 6/4		10YR 7/3	S:L	25-27	5-10 +	1-2	M	SbH	Fr	.4	3.3
Bc	20-27	10YR 6/4		10YR 7 1/2	S:L / S:L	26-28	10-15 +	1	M	SbH	Fr	.4	3.3
C1	27-36	2.5Y 6/4 mixed + 6/2		10YR 7/1	S:L	25-28	10-20 +	-	-	-	Fr		
C2	36-44	2.5Y 6/4		10YR 7/1	S:L	24-29	15-25 +	-	-	-	Fr		
C3	44-50 +	10YR 6/8 + 7/1 + 6/4		10YR 7/1	S:L + S:L	25-30	10-15	FR	FR	FR	FR		
Limiting Conditions		Descriptive Notes											
Perched Seasonal Water Table		20		Partly Rock colors									
Apparent Water Table		-											
Highly Permeable Material		-											
Bedrock		50 +											
Restrictive Layer		none											

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

x silt stone

Mostly Dry

A little moisture at 30"

② we used the 12-24" Depth for H. Linear Loading Rate
 used 710% slope Site and Soil Evaluation for Sewage Treatment and Dispersal

Tree #7

County:

Athens

Land Use / Vegetation: small trees & few large

Township / Sec:

York

Landform:

upland

Property Address:

Near 3770 Woodlane Dr.

Position on Landform:

side

Applicant Name:

Country, OH 45764

Percent Slope:

15

Address:

Att: Johnathan Smith, Land Specialist

3-12-20

Phone #:

3451 Cincinnati Zanesville Rd, SW Ohio

3-12-20

#3

Lot #:

7

Evaluator:

Carlos Cole

Signature:

Carlos Cole

Certification Stamp or Certification #:

24835

Test Hole #:

3

Latitude/Longitude: N39° 27.840' W82° 12.364'

Phone #:

304-372-4809 - Home

Method:

Pit

Auger

Probe

304-532-4711 cell

Dug to 31" + Augered Remainder

Soil Profile		Estimating Soil Saturation				Estimating Soil Permeability							
Horizon	Depth (inches)	Matrix Color	Redoximorphic Features		Class	Texture		Structure			Consolidation	Infiltration Loading Rate gal./sq. ft./hr.	Hydraulic Linear Loading Rate
			Concentrations	Depletions		Approx. % Clay	Approx. % Fragments	Grade	Size	Type (shape)			
AP	0-6	10YR 4/3	+4/4	-	S:L/L	15-17	2	2-1	F	Gr	V Fr	0.5	3.0
BA	6-10	7.5YR 4/4	+6/4	-	S:L/L	18-22	2-5	1-2	M	Sbk	Fr		
BT1	10-17	7.5YR 5/6	-	-	S:CL	26-29	2-5 ⁺	2-1	M	Sbk	Fr		
BT2	17-23	10YR 6/4	-	-	S:L/S:CL	25-28	5-10 ⁺	1-2	M	Sbk	Fr		
BT3	23-28	10YR 7.5YR 6/6		10YR 7/2	S:CL	27-29	5 ⁺	1	M	Sbk	Fr		
BC	28-32	10YR 6/4	7.5YR 5/6	10YR 7/2	S:CL	29-31	2-5 ⁺	1	M	Sbk	Fr		
C1	32-35	10YR 7/1	7.5YR 5/6	-	S:CL	30-33	2 ⁺	-	-	-	Fr-Fi		
C2	35-40	10YR 7/1	-	-	S:CL-S:CL	33-40	2 ⁺	-	-	-	Fi		
C3	40-50	10YR 6/4	6/6	7/1	L-S:L	23-26	10-25 ⁺	-	-	-	Fr		
Limiting Conditions		Depth to (in.)	Descriptive Notes		Remarks / Risk Factors:								
Perched Seasonal Water Table		23	Partly Rock colors										
Apparent Water Table		-											
Highly Permeable Material		-											
Bedrock		48-50											
Restrictive Layer		35-40											

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

* siltstone Rock Fragments

Dry Soil P.T

Plat of Survey

City of Nelsonville, Township of York, County of Athens, State of Ohio, being part of Section 18, Township 12N, Range 15W, of the Ohio Company Purchase.

PREPARED FOR

Countrywide Land Specialists, Ltd.

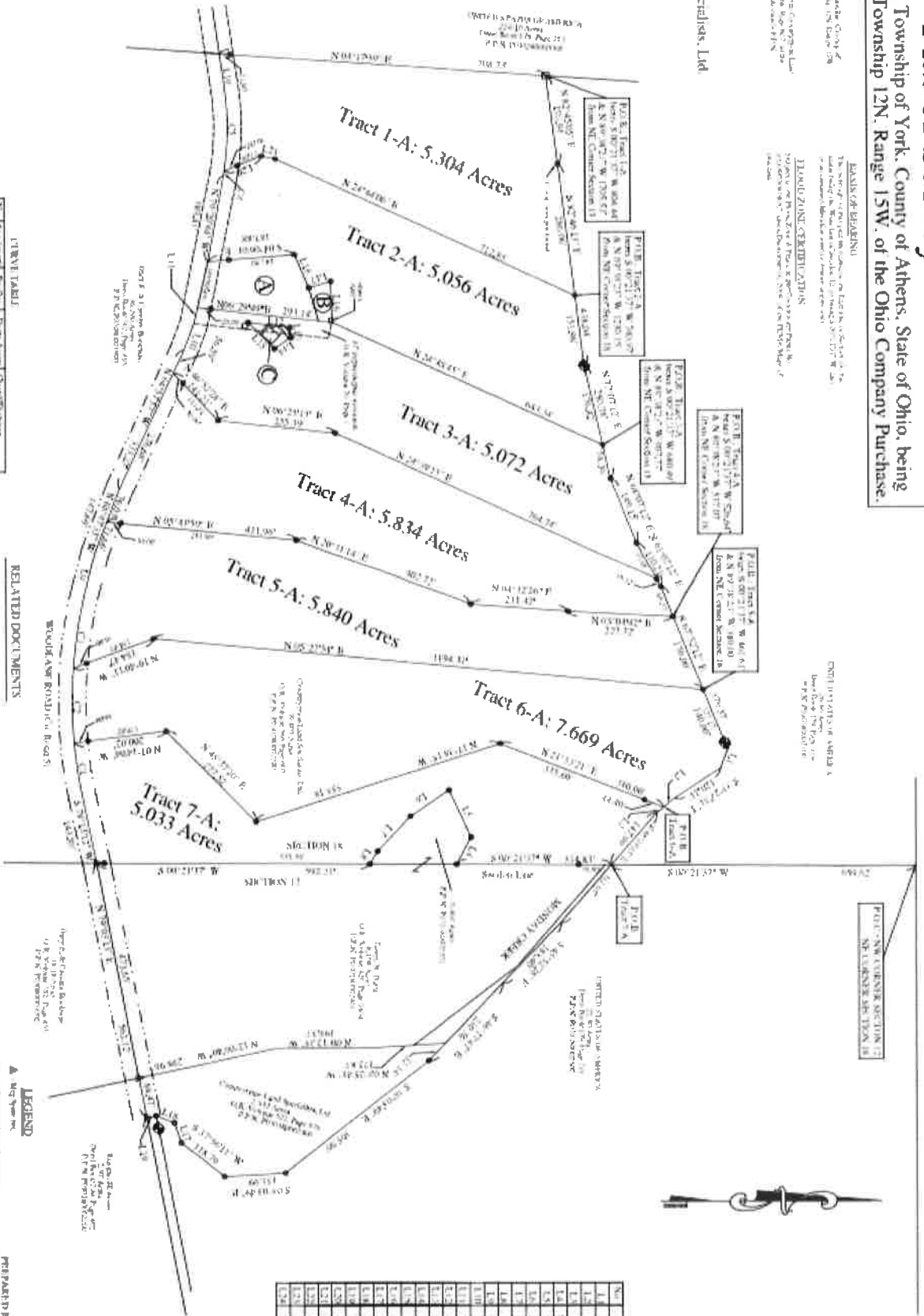
PREPARED BY

S.A. FINELAND SURVEYING, INC.
10000 Survey Road, Suite 100
Nelsonville, Ohio 43068
Phone: 740.252.4064
Email: info@fineand.com

This plat was prepared by S.A. Fineand Surveying, Inc., a professional land surveying firm, under the supervision of a Professional Land Surveyor, and is subject to the Ohio Surveying Board's jurisdiction.

DATE OF SURVEY: 10/15/2013
DATE OF PLAT: 10/15/2013
BY: S.A. FINELAND SURVEYING, INC.

PLAT OF SECTION 18, TOWNSHIP 12N, RANGE 15W, OF THE OHIO COMPANY PURCHASE.



LINE TABLE

NO.	BEARING	DISTANCE
1	N 89° 22' 48" E	43.96
2	S 70° 08' 51" E	252.11
3	S 70° 08' 51" E	14.98
4	N 61° 52' 48" E	14.98
5	S 40° 52' 11" E	112.64
6	S 31° 57' 07" E	104.47
7	S 40° 52' 11" E	104.47
8	S 40° 52' 11" E	11.70
9	S 70° 08' 51" E	84.57
10	S 70° 08' 51" E	14.98
11	N 61° 52' 48" E	14.98
12	S 70° 08' 51" E	14.98
13	S 70° 08' 51" E	14.98
14	S 70° 08' 51" E	14.98
15	S 70° 08' 51" E	14.98
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22	S 70° 08' 51" E	14.98
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46	S 70° 08' 51" E	14.98
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82	S 70° 08' 51" E	14.98
83	S 70° 08' 51" E	14.98
84	S 70° 08' 51" E	14.98
85	S 70° 08' 51" E	14.98
86	S 70° 08' 51" E	14.98
87	S 70° 08' 51" E	14.98
88	S 70° 08' 51" E	14.98
89	S 70° 08' 51" E	14.98
90	S 70° 08' 51" E	14.98
91	S 70° 08' 51" E	14.98
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94	S 70° 08' 51" E	14.98
95	S 70° 08' 51" E	14.98
96	S 70° 08' 51" E	14.98
97	S 70° 08' 51" E	14.98
98	S 70° 08' 51" E	14.98
99	S 70° 08' 51" E	14.98
100	S 70° 08' 51" E	14.98

TRACT TABLE

NO.	TRACT NO.	TRACT AREA	TOTAL AREA
1	1	5.304	5.304
2	2	5.056	10.360
3	3	5.072	15.432
4	4	5.834	21.266
5	5	5.840	27.106
6	6	7.669	34.775
7	7	5.033	39.808

RELATED DOCUMENTS

- 2000 Survey of 8.108 Acres by Kenneth E. Highland, P.S., S. 7381
- 2013 Survey for U.S. Forest Service by Robert C. Caner, P.S., S. 7228

GRAPHIC SCALE



LEGEND

- Survey Line
- Survey Point
- Survey Station
- Survey Boundary
- Survey Area
- Survey Point
- Survey Station
- Survey Boundary
- Survey Area

PREPARED BY:

S.A. FINELAND SURVEYING, INC.
10000 Survey Road, Suite 100
Nelsonville, Ohio 43068
Phone: 740.252.4064
Email: info@fineand.com