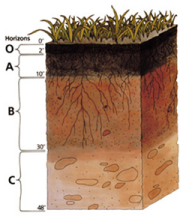
Soil and Environmental

Consulting Services, Inc.



Wednesday, November 08, 2023

Chip Carpenter
United Country Real Estate and Auction Se
chip@ucrealestateandauction.com
740-965-1208 | 614-206-1135

Re: Soil investigation for on-site septic disposal for the parcel split north of 5500 State Route 657, Bennington Township, Licking County, Ohio

Enclosed you will find the requested detailed soil descriptions for the parcel split north of 5500 State Route 657, Bennington Township, Licking County, Ohio

The soils of the selected sites were mapped and described on the enclosed sheets for your records. The locations of the soil borings have been located using GPS and the locations have been delineated on the enclosed map. Copies of this letter, soil boring descriptions, sketch, and system drawing should be submitted to local health department. The health department will make the determination if the soil and site area is suitable for onsite sewage treatment.

Please protect all areas approved for septic disposal by having the contractor stake and rope off the proposed locations prior to driveway and basement excavation. No soil, building, or waste material should be stored on the proposed absorption areas. Disturbance to the areas may result in compaction and the subsequent failure of the system. Any disturbance to the504 absorption area voids the results of this analysis.

If you have any questions or want to move forward with the septic design process feel free to contact us.

Steven Miller, CPSS

AREA REPRESENTED BY TEST HOLE

ST#6

AREA REPRESENTED BY TEST HOLE

ST#5

AREA REPRESENTED BY TEST HOLE

ST#4

AREA REPRESENTED BY TEST HOLE

ST#3

AREA MAPPED AS WETLAND

AREA MAPPED AS WETLAND

AREA MAPPED AS WETLAND

AREA REPRESENTED BY TEST HOLE

ST#2

AREA REPRESENTED BY TEST HOLE

AREA MAPPED AS WETLAND

ST#1

AREA MAPPED AS WETLAND

HUFF TR, DONNA GEAN

QUICK, CATHERINE J

ALL INFORMATION ON THIS PAGE, INCLUDING ELEVATIONS AND LOT DIMENSIONS, IS FOR REFERENCE PURPOSES ONLY AND IS NOT INTENDED TO REPRESENT A LEGAL SURVEY OR DOCUMENT. CONTOUR DATA DERIVED FROM DIGITAL DEM DATA. SEE INCLUDED LETTER AND SOIL BORING SHEETS FOR MORE INFORMATION.

TITLE: SITE AND SOIL EVALUATION
Site Layout

Parcel North of 5500 State Route 657
Bennington Township, Licking County, Ohio

DR. BY: SAM

DATE: 11/08/2023

FILE: 23K109

SHEET 1 OF 1

Drawn By:

Soil & Environmental Consulting Services, Inc.
PO Box 1121
Delaware OH 43015
614-578-1164

Site and Soil Evaluation for Sewage Treatment and Dispersal

County:	Licking	Land Use / Vegetation:	Wooded
Township / Sec.:	Bennington	Landform:	Till Plan
Property Address/Location:	North of 5500 SR 657	Position on Landform:	Backslope
	Marion Road	Percent Slope:	0.5 to 1.0%
Applicant Name:	Chip Carpenter	Shape of Slope:	Linear / Lnear
Address:		Bedrooms or GPD:	4
		Date:	Monday, November 06, 2023
Phone #:		Evaluator:	Steven Miller, CPSSc
Lot #:			Soil & Environmental Consulting, Inc.
Test Hole #:	1		P.O. Box 1121
Latitude/Longitude:			Delaware OH 43015
Method:	___ Pit ___ Auger X Tube	Job Number:	23K109
		Soil Series:	

Signature:

Phone#: p-614.579.1164
soilconsultant@yahoo.com

Soil Profile		Estimating Soil Saturation			Estimating Soil Permeability							
		Munsell Color (hue, value, chroma)										
			Redoximorphic Features		Texture			Structure				
Horizon	Depth (inches)	Matrix Color	Concentrations	Depletions	Class	Approx. % Clay	Approx. % Fragments	Grade	Size	Type (shape)	Consistence	Other Soil Features
Ap	0 to 6	10YR 4/3			sil	20	2	3	m	sbk	fr	
BEg	6 to 10	10YR 5/2			sicl	30	2	1	m	sbk	fi	
Btg	10 to 45	10YR 5/1	25%10YR 5/4		sicl	36	2	2	m	sbk	fi	
BC	45 to 50	10YR 5/3		35%10YR 5/2	sicl	34	2	1	m	sbk	fi	
Cd	50+	10YR 4/3		30%10yR 5/1	cl	32	5	0		m	vfi	

Limiting Conditions	inches	Description	Remarks / Risk Factors:
Perched Seasonal Water Table	6	perched on glacial till	Surface water should be diverted around system. Subsurface ag drainage may be present.
Apparent Water Table	>60		
Highly Permeable Material	>60		
Bedrock	>60		
Restrictive Layer	50	glacial till	

Note : The evaluation shall include a complete site plan or site drawing including all requirements in paragraphs (B)(1) through (B)(4) of OAC 3701-29-08.

Site and Soil Evaluation for Sewage Treatment and Dispersal

County:	Licking	Land Use / Vegetation:	Wooded
Township / Sec.:	Bennington	Landform:	Till Plan
Property Address/Location:	North of 5500 SR 657	Position on Landform:	Backslope
	Marion Road	Percent Slope:	0.5 to 1.0%
Applicant Name:	Chip Carpenter	Shape of Slope:	Linear / Lnear
Address:		Bedrooms or GPD:	4
		Date:	Monday, November 06, 2023
Phone #:		Evaluator:	Steven Miller, CPSSc
Lot #:			Soil & Environmental Consulting, Inc.
Test Hole #:	2		P.O. Box 1121
Latitude/Longitude:			Delaware OH 43015
Method:	___ Pit ___ Auger X Tube	Job Number:	23K109
		Soil Series:	

Signature:

Phone#: p-614.579.1164
soilconsultant@yahoo.com

Soil Profile		Estimating Soil Saturation			Estimating Soil Permeability							
		Munsell Color (hue, value, chroma)										
			Redoximorphic Features		Texture			Structure				
Horizon	Depth (inches)	Matrix Color	Concentrations	Depletions	Class	Approx. % Clay	Approx. % Fragments	Grade	Size	Type (shape)	Consistence	Other Soil Features
Ap	0 to 6	10YR 4/3			sil	20	2	3	m	sbk	fr	
BEg	6 to 11	10YR 5/2			sicl	32	2	1	m	sbk	fi	
Btg	11 to 52	10YR 5/1	25%10YR 5/4		sicl	38	2	2	m	sbk	fi	
BC	52 to 55	10YR 6/3		35%10YR 5/2	sicl	35	2	1	m	sbk	fi	
Cd	55+	10YR 5/4		30%10yR 5/1	cl	32	5	0		m	vfi	

Limiting Conditions	inches	Description	Remarks / Risk Factors:
Perched Seasonal Water Table	6	perched on glacial till	Surface water should be diverted around system. Subsurface ag drainage may be present.
Apparent Water Table	>60		
Highly Permeable Material	>60		
Bedrock	>60		
Restrictive Layer	50	glacial till	

Note : The evaluation shall include a complete site plan or site drawing including all requirements in paragraphs (B)(1) through (B)(4) of OAC 3701-29-08.

Site and Soil Evaluation for Sewage Treatment and Dispersal

County:	Licking	Land Use / Vegetation:	Wooded
Township / Sec.:	Bennington	Landform:	Till Plan
Property Address/Location:	North of 5500 SR 657	Position on Landform:	Backslope
	Marion Road	Percent Slope:	0.5 to 1.0%
Applicant Name:	Chip Carpenter	Shape of Slope:	Linear / Lnear
Address:		Bedrooms or GPD:	4
		Date:	Monday, November 06, 2023
Phone #:		Evaluator:	Steven Miller, CPSSc
Lot #:			Soil & Environmental Consulting, Inc.
Test Hole #:	3		P.O. Box 1121
Latitude/Longitude:			Delaware OH 43015
Method:	___ Pit ___ Auger X Tube	Job Number:	23K109
		Soil Series:	

Signature:

Phone#: p-614.579.1164
soilconsultant@yahoo.com

Soil Profile		Estimating Soil Saturation			Estimating Soil Permeability							
		Munsell Color (hue, value, chroma)										
			Redoximorphic Features		Texture			Structure				
Horizon	Depth (inches)	Matrix Color	Concentrations	Depletions	Class	Approx. % Clay	Approx. % Fragments	Grade	Size	Type (shape)	Consistence	Other Soil Features
Ap	0 to 6	10YR 4/3			sil	20	2	3	m	sbk	fr	
BEg	6 to 9	10YR 5/2			sicl	35	2	1	m	sbk	fi	
Btg	9 to 44	10YR 5/1	40%10YR 5/3		sicl	35	2	2	m	sbk	fi	
BC	44 to 48	10YR 6/3		30%10yR 5/2	sicl	32	2	1	m	sbk	fi	
Cd	48+	10YR 5/4		25%10YR 5/2	cl	30	5	0		m	vfi	

Limiting Conditions	inches	Description	Remarks / Risk Factors:
Perched Seasonal Water Table	6	perched on glacial till	Surface water should be diverted around system. Subsurface ag drainage may be present.
Apparent Water Table	>60		
Highly Permeable Material	>60		
Bedrock	>60		
Restrictive Layer	48	glacial till	

Note : The evaluation shall include a complete site plan or site drawing including all requirements in paragraphs (B)(1) through (B)(4) of OAC 3701-29-08.

Site and Soil Evaluation for Sewage Treatment and Dispersal

County:	Licking	Land Use / Vegetation:	Wooded
Township / Sec.:	Bennington	Landform:	Till Plan
Property Address/Location:	North of 5500 SR 657	Position on Landform:	Backslope
	Marion Road	Percent Slope:	0.5 to 1.0%
Applicant Name:	Chip Carpenter	Shape of Slope:	Linear / Lnear
Address:		Bedrooms or GPD:	4
		Date:	Monday, November 06, 2023
Phone #:		Evaluator:	Steven Miller, CPSSc
Lot #:			Soil & Environmental Consulting, Inc.
Test Hole #:	4		P.O. Box 1121
Latitude/Longitude:			Delaware OH 43015
Method:	___ Pit ___ Auger X Tube	Job Number:	23K109
		Soil Series:	

Signature:

Phone#: p-614.579.1164
soilconsultant@yahoo.com

Soil Profile		Estimating Soil Saturation			Estimating Soil Permeability							
		Munsell Color (hue, value, chroma)										
			Redoximorphic Features		Texture			Structure				
Horizon	Depth (inches)	Matrix Color	Concentrations	Depletions	Class	Approx. % Clay	Approx. % Fragments	Grade	Size	Type (shape)	Consistence	Other Soil Features
Ap	0 to 6	10YR 4/3			sil	20	2	3	m	sbk	fr	
BEg	6 to 12	10YR 5/2			sicl	34	2	1	m	sbk	fi	
Btg	12 to 39	10YR 5/1	25%!0YR 5/4		sicl	36	2	2	m	sbk	fi	
BC	39 to 44	10YR 6/3		25%!0YR 5/2	sicl	32	2	1	m	sbk	fi	
Cd	44+	10YR 5/4		40%10yR 5/1	cl	30	5	0		m	vfi	

Limiting Conditions	inches	Description	Remarks / Risk Factors:
Perched Seasonal Water Table	6	perched on glacial till	Surface water should be diverted around system. Subsurface ag drainage may be present.
Apparent Water Table	>60		
Highly Permeable Material	>60		
Bedrock	>60		
Restrictive Layer	44	glacial till	

Note : The evaluation shall include a complete site plan or site drawing including all requirements in paragraphs (B)(1) through (B)(4) of OAC 3701-29-08.

Site and Soil Evaluation for Sewage Treatment and Dispersal

County:	Licking	Land Use / Vegetation:	Wooded
Township / Sec.:	Bennington	Landform:	Till Plan
Property Address/Location:	North of 5500 SR 657	Position on Landform:	Backslope
	Marion Road	Percent Slope:	0.5 to 1.0%
Applicant Name:	Chip Carpenter	Shape of Slope:	Linear / Lnear
Address:		Bedrooms or GPD:	4
		Date:	Monday, November 06, 2023
Phone #:		Evaluator:	Steven Miller, CPSSc
Lot #:			Soil & Environmental Consulting, Inc.
Test Hole #:	5		P.O. Box 1121
Latitude/Longitude:			Delaware OH 43015
Method:	___ Pit ___ Auger X Tube	Job Number:	23K109
		Soil Series:	

Signature:

Phone#: p-614.579.1164
soilconsultant@yahoo.com

Soil Profile		Estimating Soil Saturation			Estimating Soil Permeability							
		Munsell Color (hue, value, chroma)										
			Redoximorphic Features		Texture			Structure				
Horizon	Depth (inches)	Matrix Color	Concentrations	Depletions	Class	Approx. % Clay	Approx. % Fragments	Grade	Size	Type (shape)	Consistence	Other Soil Features
Ap	0 to 6	10YR 4/3			sil	20	2	3	m	sbk	fr	
BEg	6 to 10	10YR 6/2			sicl	35	2	1	m	sbk	fi	
Btg	10t o 43	10YR 6/1	25%!0yR 5/4		sicl	36	2	2	m	sbk	fi	
BC	43 to 50	10YR 6/3		30%10YR 5/2	sicl	34	2	1	m	sbk	fi	
Cd	50+	10YR 5/4		35%10yR 5/2	cl	32	5	0		m	vfi	

Limiting Conditions	inches	Description	Remarks / Risk Factors:
Perched Seasonal Water Table	6	perched on glacial till	Surface water should be diverted around system. Subsurface ag drainage may be present.
Apparent Water Table	>60		
Highly Permeable Material	>60		
Bedrock	>60		
Restrictive Layer	50	glacial till	

Note : The evaluation shall include a complete site plan or site drawing including all requirements in paragraphs (B)(1) through (B)(4) of OAC 3701-29-08.

Site and Soil Evaluation for Sewage Treatment and Dispersal

County:	Licking	Land Use / Vegetation:	Wooded
Township / Sec.:	Bennington	Landform:	Till Plan
Property Address/Location:	North of 5500 SR 657	Position on Landform:	Backslope
	Marion Road	Percent Slope:	0.5 to 1.0%
Applicant Name:	Chip Carpenter	Shape of Slope:	Linear / Lnear
Address:		Bedrooms or GPD:	4
		Date:	Monday, November 06, 2023
Phone #:		Evaluator:	Steven Miller, CPSSc
Lot #:			Soil & Environmental Consulting, Inc.
Test Hole #:	6		P.O. Box 1121
Latitude/Longitude:			Delaware OH 43015
Method:	___ Pit ___ Auger X Tube	Job Number:	23K109
		Soil Series:	

Signature:

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Soil Profile		Estimating Soil Saturation			Estimating Soil Permeability							
		Munsell Color (hue, value, chroma)										
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Horizon	Depth (inches)	Matrix Color	Concentrations	Depletions	Class	Approx. % Clay	Approx. % Fragments	Grade	Size	Type (shape)	Consistence	Other Soil Features
Ap	0 to 6	10YR 4/3			sil	20	2	3	m	sbk	fr	
BEg	6 to 11	10YR 6/2			sicl	34	2	1	m	sbk	fi	
Btg	11 to 47	10YR 6/1	30%10YR 5/4		sicl	36	2	2	m	sbk	fi	
BC	47 to 52	10YR 6/3		25%10yR 5/4	sicl	32	2	1	m	sbk	fi	
Cd	52+	10YR 5/4		20%10yR 5/4	cl	30	5	0		m	vfi	

Limiting Conditions	inches	Description	Remarks / Risk Factors:
Perched Seasonal Water Table	6	perched on glacial till	Surface water should be diverted around system. Subsurface ag drainage may be present.
Apparent Water Table	>60		
Highly Permeable Material	>60		
Bedrock	>60		
Restrictive Layer	52	glacial till	

Note : The evaluation shall include a complete site plan or site drawing including all requirements in paragraphs (B)(1) through (B)(4) of OAC 3701-29-08.

Landforms
Upland*
Terrace
Flood Plain
Lake Pain
Beach Ridge
*Includes glacial till plain and end moraine

Position on Landform
Depression
Flat
Knoll
Crest
Hillslope
Footslope

Shape of Slope
Convex
Concave
Linear
Complex

Horizon Nomenclature

Master Horizons	
O	Predominantly organic matter (litter & humus)
A	Mineral, organic matter (humus) accumulation, loss of Fe, Al, clay
E	Mineral, loss of Si, Fe, Al, clay, organic matter
B	Subsurface accumulation of clay, Fe, Al, Si, humus; sesquioxides; loss of $CaCo_3$; subsurface soil structure
C	Little or no pedogenic alteration, unconsoilidated earthy material, soft bedrock
R	Hard bedrock

Horizon Suffixes	
a	Highly decomposed organic matter
b	Buried genetic horizon
d	Densic layer (physically root restrictive)
e	Moderately decomposed organic matter
g	Strong gley
i	Slightly decomposed organic matter
p	Plow layer or artificial disturbance
r	Weathered or soft bedrock
t	Illuvial accumulation of silicate clay
w	Weak color or structure within B
x	Fragipan characteristics

Horizon Modifiers
Numerical Prefixes: Used to denote lithologic discontinuities.
Numerical Suffixes: Used to denote subdivisions within a master horizon.

Soil Texture

Texture Class Abbreviations		Textural Class Modifiers	
Course Sand	cos	Gravelly	GR
Sand	s	Fine Gravelly	FGR
Fine Sand	fs	Medium Gravelly	MGR
Very Fine Sand	vfs	Coarse Gravelly	CGR
Loamy Coarse Sand	lcos	Very Gravelly	VGR
Loamy Sand	ls	Extremely Gravelly	XGR
Loamy Fine Sand	lfs	Cobbly	CB
Loamy Very Fine Sand	lvfs	Very Cobbly	VCB
Coarse Sandy Loam	cosl	Extremely Cobbly	XCB
Sandy Loam	sl	Stony	ST
Fine Sandy Loam	fsl	Very Stony	VST
Very Fine Sandy Loam	vfsl	Extremely Stony	XST
Loam	l	Bouldery	BY
Silt Loam	sil	Very Bouldery	VBY
Silt	si	Extremely Bouldery	XBY
Sandy Clay Loam	scl	Channery	CN
Clay Loam	cl	Very Channery	VCN
Silty Clay Loam	sicl	Extremely Channery	XCN
Sandy Clay	sc	Flaggy	FL
Silty Clay	sic	Very Flaggy	VFL
Clay	c	Extremely Flaggy	XFL

*Estimate approximate clay percentage within 5 percent

Soil Structure

Grade		Size		Type (Shape)	
Structureless	0	Very Fine	vf	Granular	gr
Weak	1	Fine	f	Angular Blocky	abk
Moderate	2	Medium	m	Subangular Blocky	sbk
Strong	3	Coarse	co	Platy	pl
		Very Coarse	vc	Prismatic	pr
		Extr. Coarse	ec	Columnar	cpr
		Very Thin*	vn	Single Grain	sg
		Thin*	tn	Massive	m
		Thick*	tk	Cloddy	CDY
		Very Thick*	vk		

* The sizes Very Thin, Thin, Thick, and Very Thick, are used when describing platy structure only. Substitute thin for fine, and thick for coarse when describing platy structure.

Moist Consistence	
Loose	l
Very Friable	vfr
Friable	fr
Firm	fi
Very Firm	vfi
Extremely Firm	efi

For a more detailed explanation on describing and sampling soils, please refer to the "Field Book for Describing and Sampling Soils"
Schoeneberger, P.J., Wysocki, D.A., Benham, E.C., and Broderson, W.D. (editors) 2002. Field book for describing and sampling soils, version 2.0. Natural Resources Conservation Service, USDA, National Soil Survey Center, Lincoln, NE.