

APPENDIX B

EXPLORATION LOGS

NOTES FOR EXPLORATION LOGS

KEY TO USCS TERMINOLOGY AND GRAPHIC SYMBOLS

MAJOR DIVISIONS (BASED UPON ASTM D 2488)			SYMBOLS	
			GRAPHIC	LETTER
COARSE - GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LESS THAN 5% PASSING THE NO. 200 SIEVE)		GW
		GRAVELS WITH FINES (MORE THAN 15% PASSING THE NO. 200 SIEVE)		GP
				GM
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS (LESS THAN 5% PASSING THE NO. 200 SIEVE)		SW
		SANDS WITH FINES (MORE THAN 15% PASSING THE NO. 200 SIEVE)		SP
				SM
FINE - GRAINED SOILS MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50	SILT OR CLAY ($<15\%$ RETAINED THE NO. 200 SIEVE)		ML
		SILT OR CLAY WITH SAND OR GRAVEL (15% TO 30% RETAINED THE NO. 200 SIEVE)		CL
		SANDY OR GRAVELY SILT OR CLAY ($>30\%$ RETAINED THE NO. 200 SIEVE)		OL
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50	SILT OR CLAY ($<15\%$ RETAINED THE NO. 200 SIEVE)		MH
		SILT OR CLAY WITH SAND OR GRAVEL (15% TO 30% RETAINED THE NO. 200 SIEVE)		CH
		SANDY OR GRAVELY SILT OR CLAY ($>30\%$ RETAINED THE NO. 200 SIEVE)		OH
HIGHLY ORGANIC SOILS				PT

NOTE: DUAL SYMBOLS ARE USED TO INDICATE COARSE-GRAINED SOILS CONTAINING AN ESTIMATED 10% FINES BY VISUAL CLASSIFICATION OR WHEN THE SOIL HAS BETWEEN 5 AND 12 PERCENT FINES FROM LABORATORY TESTS; AND FOR FINE-GRAINED SOILS WHEN THE PLOT OF LIQUID LIMIT & PLASTICITY INDEX VALUES FALLS IN THE PLASTICITY CHART'S CROSSHATCHED AREA. FINE-GRAINED SOILS ARE CLASSIFIED AS ORGANIC-OL OR OH, WHEN ENOUGH ORGANIC PARTICLES ARE PRESENT TO INFLUENCE ITS PROPERTIES. LABORATORY TEST RESULTS ARE USED TO SUPPLEMENT SOIL CLASSIFICATION BY THE VISUAL-MANUAL PROCEDURES OF ASTM D2488.

ADDITIONAL TERMINOLOGY AND GRAPHIC SYMBOLS

ADDITIONAL DESIGNATION	DESCRIPTION		GRAPHIC SYMBOLS
	TOPSOIL		
	MAN-MADE FILL		
	GLACIAL TILL		
	COBBLES AND BOULDERS		
RESIDUAL SOIL DESIGNATION	DESCRIPTION	"N" VALUE	
	HIGHLY WEATHERED ROCK	50 TO 50/1"	
	PARTIALLY WEATHERED ROCK	MORE THAN 50 BLOWS FOR 1" PENETRATION, AUGER PENETRABLE	

COARSE-GRAINED SOILS (GRAVEL AND SAND)

DESIGNATION	BLOWS PER FOOT (BPF) "N"
VERY LOOSE	0 - 4
LOOSE	5 - 10
MEDIUM DENSE	11 - 30
DENSE	31 - 50
VERY DENSE	>50

NOTE: "N" VALUE DETERMINED AS PER ASTM D1586

FINE-GRAINED SOILS (SILT AND CLAY)

CONSISTENCY	BPF "N"
VERY SOFT	<2
SOFT	2 - 4
MEDIUM STIFF	5 - 8
STIFF	9 - 15
VERY STIFF	16 - 30
HARD	>30

NOTE: ADDITIONAL DESIGNATIONS TO ADVANCE SAMPLER INDICATED IN BLOW COUNT COLUMN:
WOH = WEIGHT OF HAMMER
WOR = WEIGHT OF ROD(S)

SAMPLE TYPE

DESIGNATION	SYMBOL
SPLIT-SPOON	S-
SHELBY TUBE	U-
ROCK CORE	R-

WATER DESIGNATION

DESCRIPTION	SYMBOL
ENCOUNTERED DURING DRILLING	
UPON COMPLETION OF DRILLING	
24 HOURS AFTER COMPLETION	

NOTE: WATER OBSERVATIONS WERE MADE AT THE TIME INDICATED. POROSITY OF SOIL STRATA, WEATHER CONDITIONS, SITE TOPOGRAPHY, ETC. MAY CAUSE WATER LEVEL CHANGES.

LOG OF BORING NO. B-1

Sheet 1 of 1

PROJECT: **Monroe Street Slip**
PROJECT NO.: **31261651**
PROJECT LOCATION: **Mead Township Ohio**

WATER LEVEL (ft): **Dry** **Dry** **N/A**
DATE: **06/11/26** **06/11/26** **06/11/26**
CAVED (ft): **N/A** **N/A** **N/A**

DATE STARTED: **06/11/26**
DATE COMPLETED: **06/11/26**
DRILLING CONTRACTOR: **Penn Dril**
DRILLER: **Alex K.**
DRILLING METHOD: **3.25" Hollow Stem Auger**
SOIL SAMPLING METHOD: **18" Split Spoon Sampler**
ROCK SAMPLING METHOD: **NQ2 Double Tube Wireline**

WATER ENCOUNTERED DURING DRILLING (ft.): **Dry**
GROUND SURFACE ELEVATION: **818.5**
DATUM: **Google Earth**
DRILL MODEL: **DSA-Turbo**
DRILL CARRIER: **Track**
LOGGED BY: **S. Meredith**
CHECKED BY: **A. Null**

SAMPLE NUMBER	SAMPLE DEPTH (ft.)	SAMPLE RECOVERY (in.)	SAMPLE BLOWS/6 inches	N (blows/ft.)	ELEVATION (ft.)	DEPTH (ft.)	USCS	GRAPHIC SYMBOL	DESCRIPTION	REMARKS
					818.3	0	GP		AGG BASE: Brown and Gray, GRAVEL with Sand.	2" Asphalt
S-1	1.5	7	1-2-2	4	817.0		CH		FILL: Brown and Black, Dry to Moist, Soft to Medium Stiff, Sandy FAT CLAY.	
S-2	3.0	18	2-1-4	5						
S-3	4.5	16	3-3-5	8		5				
S-4	6.0	18	12-10-9	19	812.5		CH		NATIVE: Brown and Gray, Dry to Moist, Loose to Medium Dense, Sandy FAT CLAY with Gravel.	
S-5	7.5	3	5-4-6	10						(Low recovery due to gravel in spoon tip.)
S-6	9.0	16	5-6-50/4	56	809.5	10	HW		Brown and Gray, Dry, Highly Weathered Sandstone.	
R-1	10.5	17			808.0		ROCK		Interbedded LESTONE with Claystone, Light Brown to Gray, Highly Weathered, Soft to Hard, Highly Jointed, Laminated to Medium Bedding Thickness, Very Fine to Medium Grain Size. Unit RQD 73"/180"= 41% Rec 173"/180"= 96% Run-1 RQD 11"/18"= 61% Rec 17"/18"= 94% Run-2 RQD 30"/60"= 50% Rec 58"/60"= 96%	(Loss of Water from 10.5- 11.5)
R-2	12.0	58				15			Run-3 RQD 13"/60"= 22% Rec 56"/60"= 93%	
R-3	17.0	56				20			Run-4 RQD 19"/42"= 45% Rec 42"/42"= 100%	
R-4	22.0	42				25			Boring Terminated at 25.5'	
					793.0					

NOTES:



GEO-TECHNOLOGY ASSOCIATES, INC.
206 Bursca Drive,
Bridgeville, PA, 15017

LOG OF BORING NO. B-1

Sheet 1 of 1

LOG OF BORING NO. B-2

Sheet 1 of 2

PROJECT: **Monroe Street Slip**
PROJECT NO.: **31261651**
PROJECT LOCATION: **Mead Township Ohio**

WATER LEVEL (ft): **▼ Dry** **▼ Dry** **▼ N/A**
DATE: **06/11/26** **06/11/26** **06/11/26**
CAVED (ft): **N/A** **N/A** **N/A**

DATE STARTED: **06/11/26**
DATE COMPLETED: **06/11/26**
DRILLING CONTRACTOR: **Penn Drill**
DRILLER: **Alex K.**
DRILLING METHOD: **3.25" Hollow stem auger**
SOIL SAMPLING METHOD: **18" split spoon sampler**
ROCK SAMPLING METHOD: **NQ2 Double tube wireline**

WATER ENCOUNTERED DURING DRILLING (ft.): **Dry**
GROUND SURFACE ELEVATION: **817**
DATUM: **Site Plan**
DRILL MODEL: **DSA-Turbo**
DRILL CARRIER: **Track**
LOGGED BY: **S. Meredith**
CHECKED BY: **A. Null**

SAMPLE NUMBER	SAMPLE DEPTH (ft.)	SAMPLE RECOVERY (in.)	SAMPLE BLOWS/6 inches	N (blows/ft.)	ELEVATION (ft.)	DEPTH (ft.)	USCS	GRAPHIC SYMBOL		
									DESCRIPTION	REMARKS
					816.8	0				
							GP		AGG BASE: Brown and Gray, GRAVEL with Sand.	2" Asphalt/Pavement
S-1	1.5	18	2-2-2	4	815.5		CL		FILL: Brown, Dry to Moist, Soft, LEAN CLAY with Sand and Gravel.	
S-2	3.0	18	2-2-7	9	814.0		GC		Dark Brown to Gray, Dry to Moist, Loose, Clayey GRAVEL.	
S-3	4.5	7	12-17-32	49	812.5	5	CL		NATIVE: Light Brown, Dry to Moist, Medium Dense to Dense, Sandy LEAN CLAY	
S-4	6.0	8	18-8-9	17						(Increase in Gravel)
S-5	7.5	10	12-10-9	19						
S-6	9.0	8	10-20-50/2	70	808.0		HW		Light Brown, Dry, Highly Weathered Shale.	
R-1	10.5	23			806.5	10	ROCK		Interbedded LIMESTONE with Claystone, Gray to Brown, Highly Weathered, Very Soft to Moderately Hard, Highly Jointed, Laminated to Thin, Very Fine to Fine Grain Size	
R-2	12.5	60				15			Unit RQD 79"/184"= 42.9% Rec 247"/248" 99% Run-1 RQD 11"/23"= 47% Rec 23"/24"= 95% Run-2 RQD 19"/60"= 32% Rec 60"/60"= 100%	(Augers Grinding at 10.5') (Loss of Water from 11' 12')
R-3	17.5	60				20			Run-3 RQD 28"/60"= 46% Rec 60"/60"= 100%	
R-4	22.5	36				25			Run-4 RQD 16"/36"= 44% Rec 36"/36"=100%	
R-5	25.5	60							Run-5 RQD 13"/60"= 21% Rec 60"/60"= 100%	

NOTES:



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206 Bursca Drive,
Bridgeville, PA, 15017

LOG OF BORING NO. B-2

Sheet 1 of 2

LOG OF BORING NO. B-2

Sheet 2 of 2

PROJECT: **Monroe Street Slip**
 PROJECT NO.: **31261651**
 PROJECT LOCATION: **Mead Township Ohio**

WATER LEVEL (ft): ▼ Dry ▼ Dry ▼ N/A
 DATE: 06/11/26 06/11/26 06/11/26
 CAVED (ft): N/A N/A N/A

SAMPLE NUMBER	SAMPLE DEPTH (ft.)	SAMPLE RECOVERY (in.)	SAMPLE BLOWS/6 inches	N (blows/ft.)	ELEVATION (ft.)	DEPTH (ft.)	USCS	GRAPHIC SYMBOL		
									DESCRIPTION	REMARKS
R-6	30.5	60			785.5	30				
							ROCK		Run-6 RQD 41"/60"= 68% Rec 60"/60"= 100%	
									SILTSTONE, Light Gray to Gray, Fresh to Slightly Weathered, Hard, Slightly Fractured, Medium Bedding Thickness, Very Fine Grain Size Unit RQD 33"/48"= 68% Rec 48"/48"= 100%	
					781.5	35			Boring Terminated at 35.5'	
						40				
						45				
						50				
						55				
						60				
						65				



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 206 Bursca Drive,
 Bridgeville, PA, 15017

LOG OF BORING NO. B-2

Sheet 2 of 2



Photo 1 - Boring B-1, Box 1 of 1



Photo 2 - Boring B-2, Box 1 of 2



CORE BOX PHOTOGRAPHS
 MONROE STREET SLIP
 BELMONT COUNTY, OHIO



Photo 2 - Boring B-2, Box 2 of 2



CORE BOX PHOTOGRAPHS
MONROE STREET SLIP
BELMONT COUNTY, OHIO

APPENDIX C

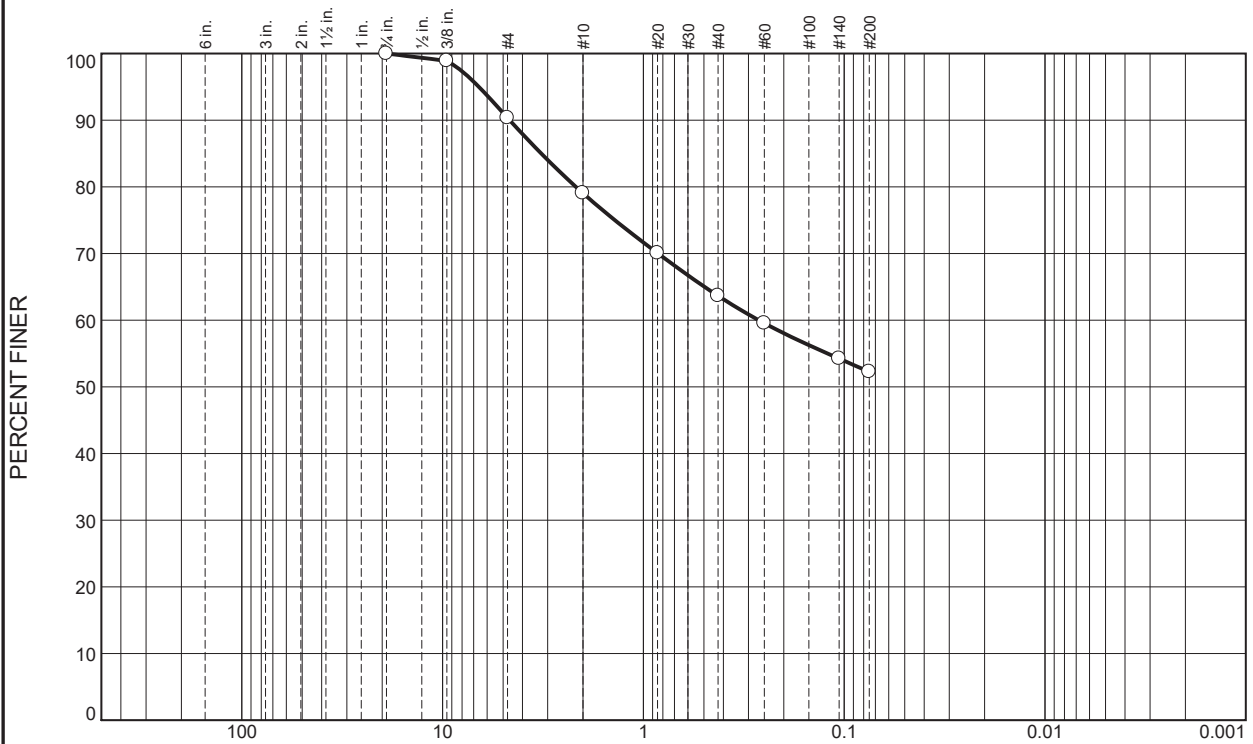
LABORATORY TEST RESULTS

Monroe Street Slip
31261651

P:\GEO Projects\Verdantas\Landslides\Verdantas - Monroe Street Slip\04 Lab\Monroe Road Slip NMC

ASTM Specifications performed may include: D421, D422, D2216, D2217, and D4318.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	9.6	11.4	15.3	11.4	52.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75	100.0		
.375	98.9		
#4	90.4		
#10	79.0		
#20	70.1		
#40	63.7		
#60	59.5		
#140	54.2		
#200	52.3		

* (no specification provided)

Soil Description

Sandy Fat Clay

Atterberg Limits

PL= 29 LL= 62 PI= 33 NM= 26.9

Coefficients

D₉₀= 4.6352 D₈₅= 3.2261 D₆₀= 0.2664
D₅₀= D₃₀= D₁₅=
D₁₀= C_u= C_c=

Classification

USCS= CH AASHTO= A-7-6(14)

Remarks

Source of Sample: B-1 Depth: 3-4.5
Sample Number: S-2

Date: 6/24/2026



GEO-TECHNOLOGY ASSOCIATES, INC.

1803 Mt. Rose Avenue
York, PA 17403

Client: Verdantas
Project: Monroe St. Landslide

Project No: 31261651

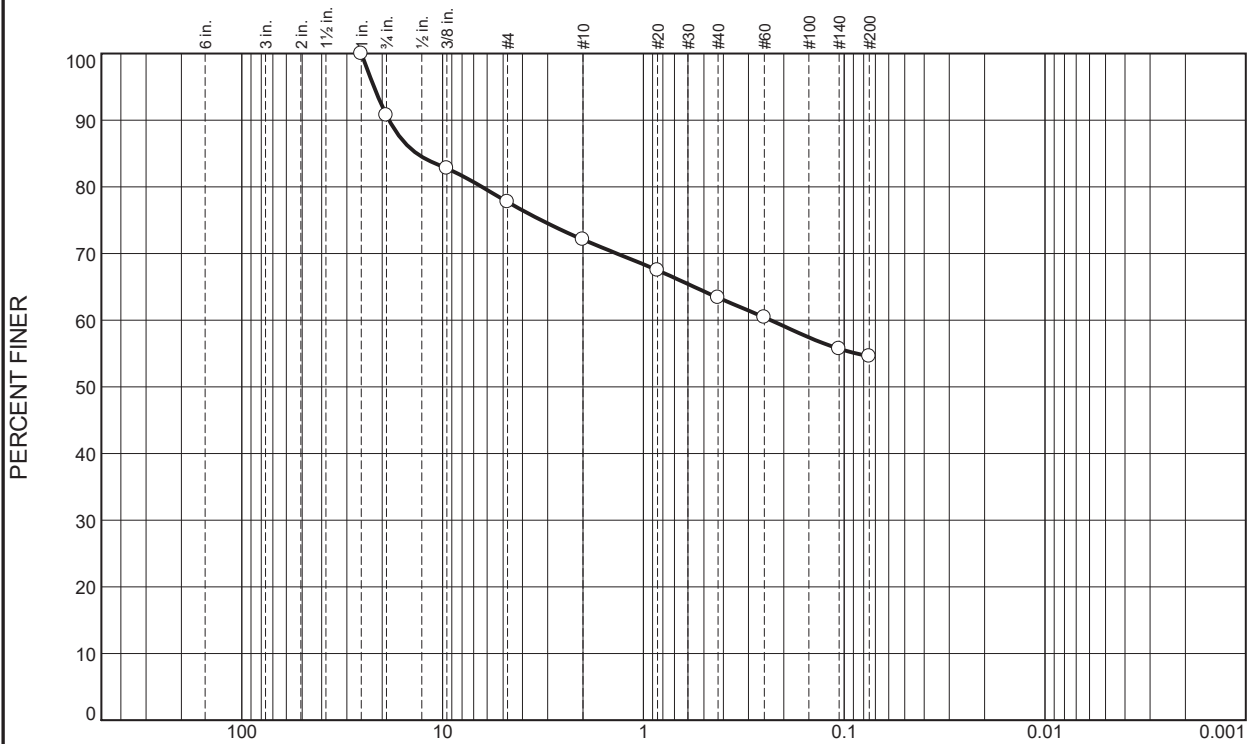
Figure

Tested By: LRT

Checked By: ALN

ASTM Specifications performed may include: D421, D422, D2216, D2217, and D4318.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	9.2	13.1	5.6	8.7	8.8	54.6	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1	100.0		
.75	90.8		
.375	82.8		
#4	77.7		
#10	72.1		
#20	67.5		
#40	63.4		
#60	60.4		
#140	55.7		
#200	54.6		

* (no specification provided)

Soil Description
Sandy Fat Clay With Gravel

Atterberg Limits
PL= 26 LL= 58 PI= 32 NM= 21.4

Coefficients
D₉₀= 18.4794 D₈₅= 13.4399 D₆₀= 0.2322
D₅₀= D₃₀= D₁₅=
D₁₀= C_u= C_c=

Classification
USCS= CH AASHTO= A-7-6(15)

Remarks

Source of Sample: B-1 Depth: 7-10
Sample Number: S-5/6

Date: 6/24/2026



GEO-TECHNOLOGY ASSOCIATES, INC.
1803 Mt. Rose Avenue
York, PA 17403

Client: Verdantas
Project: Monroe St. Landslide

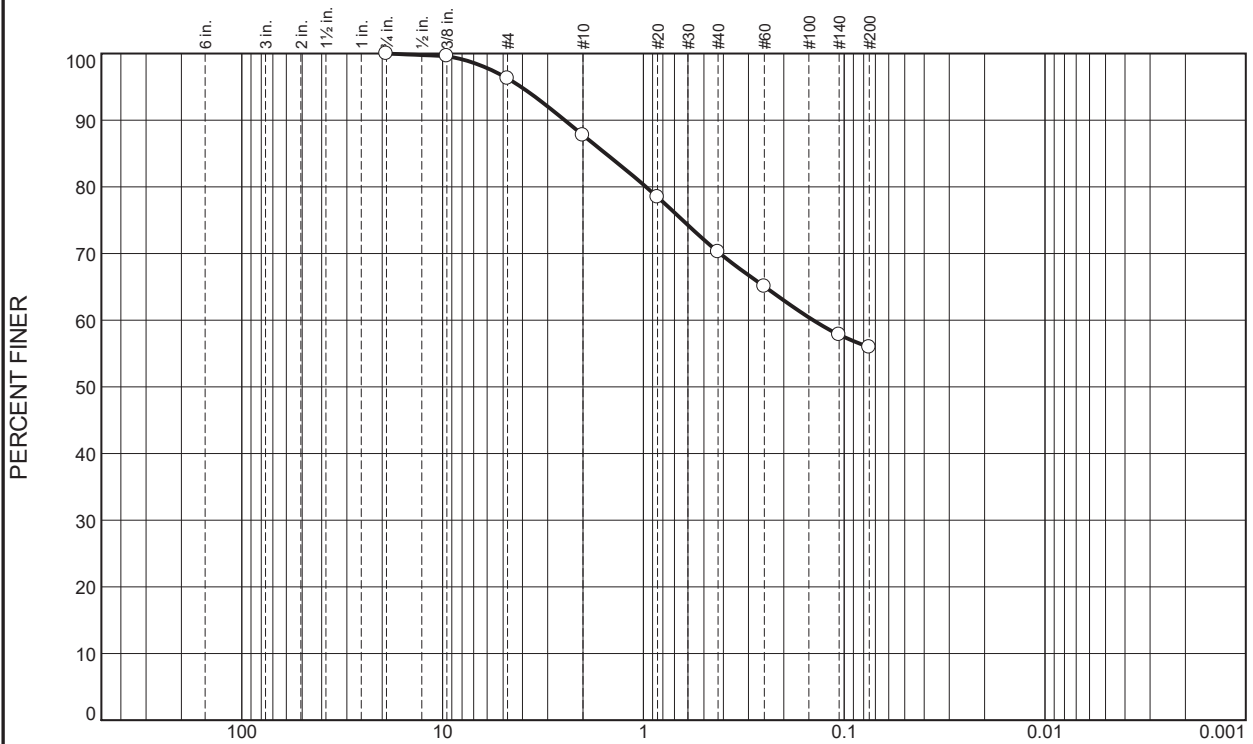
Project No: 31261651

Figure

Tested By: LRT Checked By: ALN

ASTM Specifications performed may include: D421, D422, D2216, D2217, and D4318.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	3.7	8.6	17.5	14.2	56.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75	100.0		
.375	99.6		
#4	96.3		
#10	87.7		
#20	78.5		
#40	70.2		
#60	65.1		
#140	57.8		
#200	56.0		

* (no specification provided)

Soil Description

Sandy Lean Clay

Atterberg Limits

PL= 23 LL= 43 PI= 20 NM= 11.9

Coefficients

D₉₀= 2.4661 D₈₅= 1.5425 D₆₀= 0.1427
D₅₀= D₃₀= D₁₅=
D₁₀= C_u= C_c=

Classification

USCS= CL AASHTO= A-7-6(9)

Remarks

Source of Sample: B-2 Depth: 9-10
Sample Number: S-6

Date: 6/24/2026



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ASSOCIATES, INC.
1803 Mt. Rose Avenue
York, PA 17403

Client: Verdantas
Project: Monroe St. Landslide

Project No: 31261651

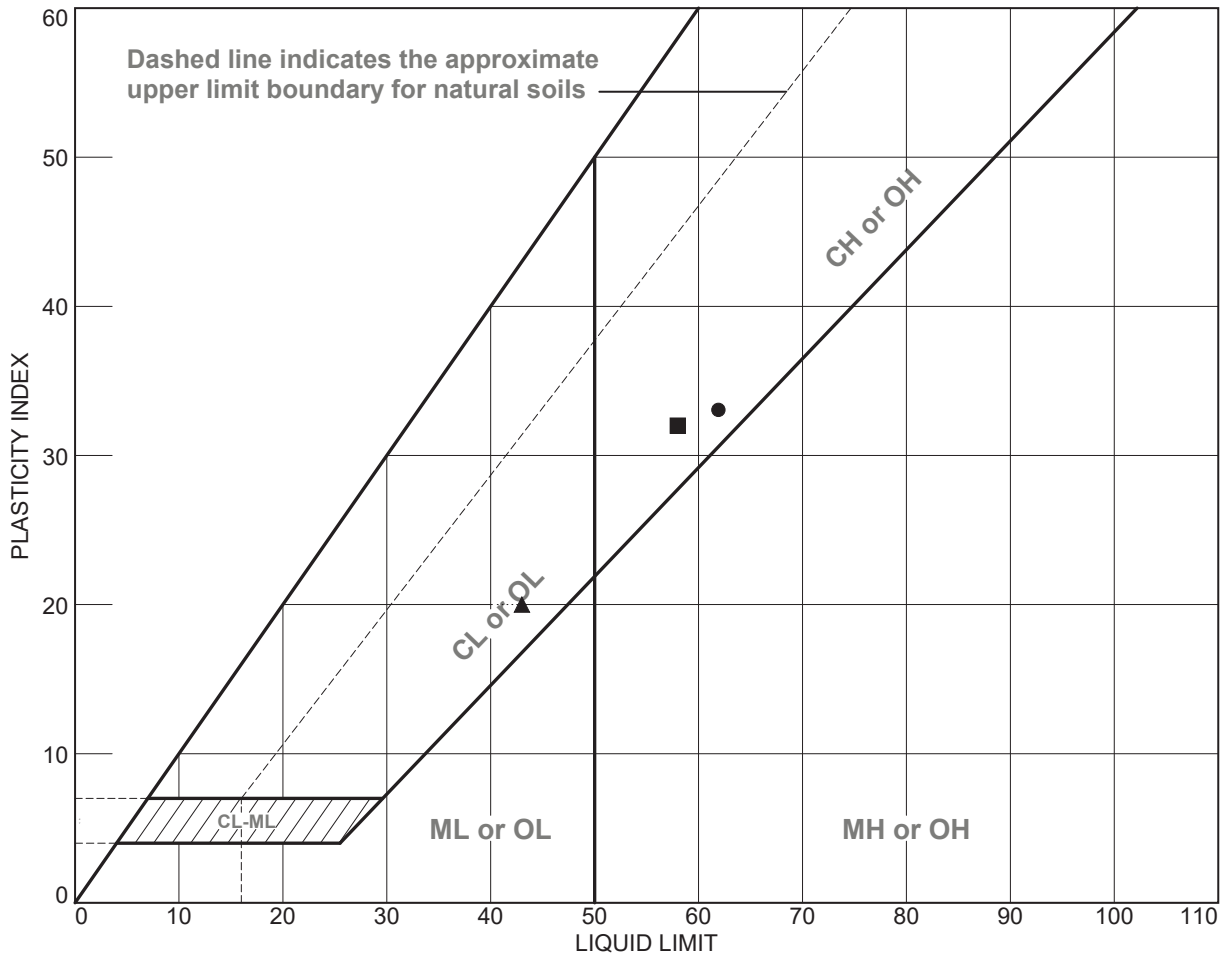
Figure

Tested By: LRT

Checked By: ALN

ASTM Specifications performed may include: D421, D422, D2216, D2217, and D4318.

LIQUID AND PLASTIC LIMITS TEST REPORT - ASTM D4318



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	B-1	S-2	3-4.5	26.9	29	62	33	CH
■	B-1	S-5/6	7-10	21.4	26	58	32	CH
▲	B-2	S-6	9-10	11.9	23	43	20	CL



GEO-TECHNOLOGY ASSOCIATES, INC.
1803 Mt. Rose Avenue
York, PA 17403

Client: Verdantas
Project: Monroe St. Landslide

Project No.: 31261651

Figure

Tested By: LRT Checked By: ALN

CORE ID	B-1 R2
	12.0'-12.4'
Diameter	2.0"
Length	4.010
	4.040
	4.020
Average	4.023
Pounds	28220
PSI	8987



CORE ID	B-2 R3
	17.5'-18.0'
Diameter	2.0"
Length	4.010
	4.010
	3.990
Average	4.003
Pounds	6380
PSI	2032

