

GEOTECHNICAL DATA REPORT

Route 1 Reconstruction
Madawaska-Frenchville
Aroostook County
Maine

MaineDOT WIN 22657.00

July 1, 2026

PREPARED FOR:

Maine Department of Transportation
16 State House Station
Augusta, Maine 04333

PREPARED BY:

HNTB Corporation
82 Running Hill Road, Suite 201
South Portland, Maine 04106

HNTB has compiled this geotechnical data report to present the subsurface information obtained by the Maine Department of Transportation (MaineDOT) to support the reconstruction of a 5.74-mile section of Route 1 located in Madawaska-Frenchville, Aroostook County, Maine. The location of the project is depicted in Figure 1.

1.0 GEOLOGIC SETTING

Surficial geology in the vicinity of the project is mapped as predominately glacial till and shallow bedrock, with localized areas along the project alignment mapped as recent alluvium and older ice-contact deposits (Ground-Water Favorability and Surficial Geology of the Lower St. John River Valley, Maine, 1:62,500; U.S. Geological Survey, 1973). Surficial geology is depicted in Figure 2.

Bedrock underlying the project area is mapped as a weakly metamorphosed interbedded pelite and sandstone of the Seboomook Formation (Bedrock Geologic Map of Maine, 1:500,000; Maine Geological Survey, 1985). Bedrock geology is depicted in Figure 3.

2.0 SUBSURFACE EXPLORATION PROGRAM

Subsurface conditions along the project alignment were explored by drilling sixteen (16) shallow solid-stem-auger probes and 12 deeper test borings/ probes in a total of three series. All three series of subsurface explorations were drilled by the MaineDOT drill crew.

100-Series Subsurface Explorations: The 100-series subsurface explorations consisted of 16 shallow probes that were drilled on May 18, 2016 to evaluate the existing road base and shallow subbase materials. No Standard Penetration Testing (SPT) was done in the probes. All soil samples were taken from the drill auger flights for visual identification and laboratory testing. The probes were terminated at 4.5 to 5 feet Below the Ground Surface (BGS); refusal was not encountered in any of the 100-series probes.

200-Series Subsurface Explorations: The 200-series subsurface explorations consisted of four test boring-probe couplets located at the key large culvert crossings. Specifically, the couplets were drilled at approximate Stations 72+15, 84+14, 153+30, and 194+70. Each couplet consisted of a test boring and a probe located on a diagonal in opposite corners of the proposed culvert.

Standard Penetration Tests (SPTs) were completed and split-spoon soil samples were obtained typically at 5-foot intervals in the test borings. The probe in each couplet was advanced using solid stem augers, without SPTs or sampling, to verify the subsurface conditions were not notably different along the length of the culvert. The 200-series subsurface explorations were drilled on June 16 and 17, 2020.

The test borings were advanced to between 19 and 32 feet BGS which is below the proposed invert of the associated proposed culvert. An interpretive subsurface profile at each of the four culvert crossings that are based on the boring logs prepared by MaineDOT are included with the Figures.

It is noted that at the culvert proposed at approximate Station 153+50, bedrock was encountered in the test boring and refusal was encountered in the probe only a few feet below the proposed culvert invert elevation.

300-Series Subsurface Explorations: The 300-series subsurface explorations consisted of four test borings located in an area where a bedrock cut for the proposed ditch line and backslope was suspected between approximate Stations 322+00 and 325+00. The test borings were advanced with SPTs and sampling to the top of bedrock and 5 feet of rock was obtained. Bedrock was encountered between 4.1 and 6.7 feet BGS. The 300-series test borings were drilled on December 14, 2021.

Details of the sampling methods used, field data obtained, and soil and groundwater conditions encountered are presented on the boring logs. MaineDOT's key to soil and rock core sample descriptions and the logs of the subsurface explorations that were prepared by MaineDOT are provided in Appendix A.

A MaineDOT Geotechnical Team member selected the boring locations and drilling methods, designated type and depth of samplings obtained, reviewed field logs for accuracy and identified laboratory testing requirements. A New England Transportation Technician Certification Program (NETTCP) Certified Subsurface Inspector logged the subsurface conditions encountered in the field.

3.0 GEOTECHNICAL LABORATORY TESTING PROGRAM

A laboratory testing program was conducted on multiple soil samples obtained from the probes and test borings to assist in soil classification, evaluation of engineering properties of the soils, and geologic assessment of the project site. Laboratory testing was completed by MaineDOT's Central Laboratory. Testing consisted of thirty-six (36) standard sieve grain size analyses, three (3) sieve with hydrometer grain size analyses, and one (1) Atterberg limit tests, as well as natural water content. The results of laboratory tests are included as Appendix B. Laboratory test data are also summarized on the boring logs provided in Appendix A.

FIGURES

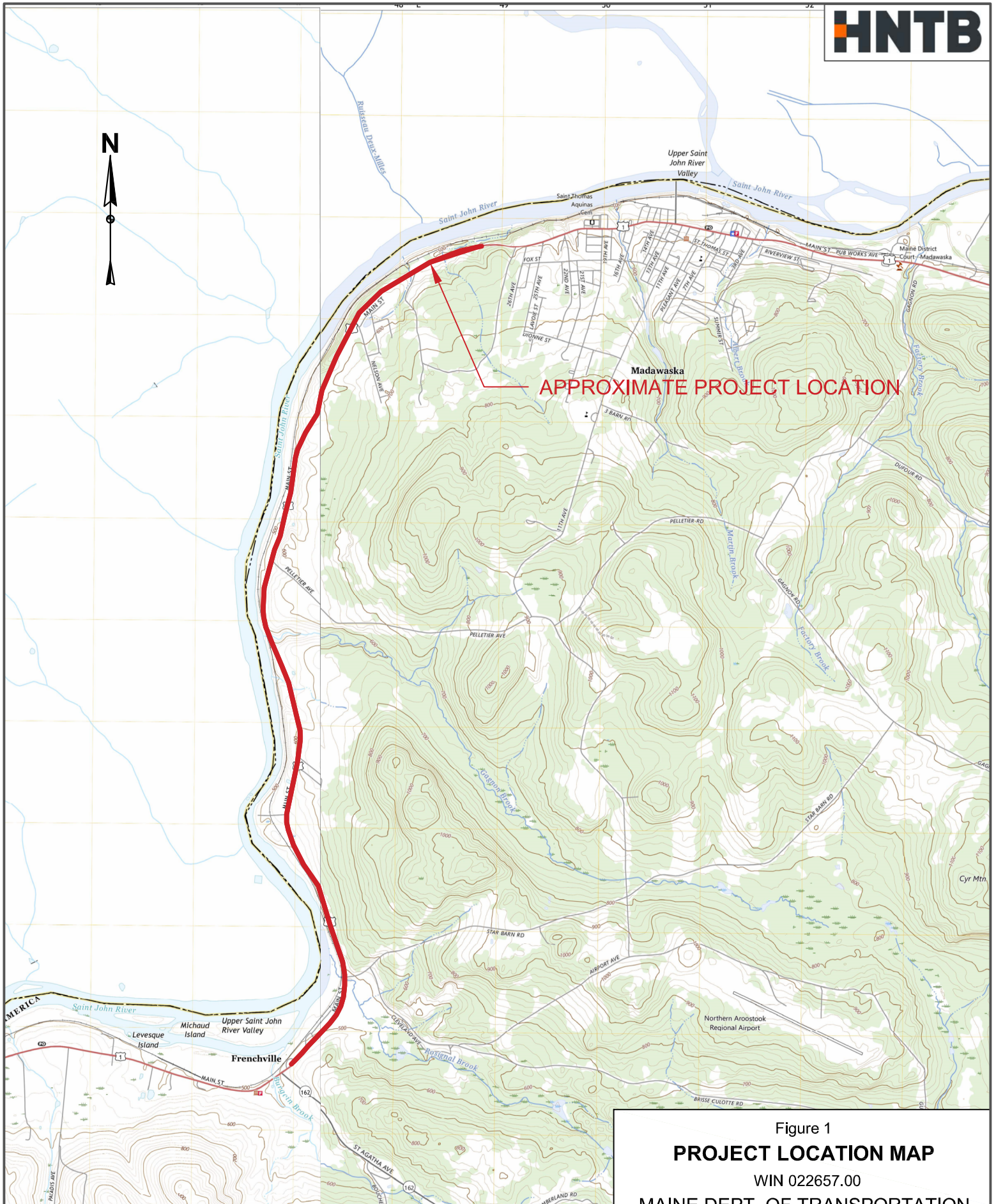


Figure 1
PROJECT LOCATION MAP
 WIN 022657.00
 MAINE DEPT. OF TRANSPORTATION
 MADAWASKA - FRENCHVILLE
 U.S. ROUTE 1



Till - Loose to very compact, poorly sorted, mostly nonstratified mixture of sand, silt, and gravel-size rock debris deposited from glacial ice. Till and bedrock are mapped together.



Qal - Alluvium - Predominantly silt, clay, and fine sand, but also includes coarse sand, gravel, and cobbles.



Qic - Ice-contact deposits - Well to poorly stratified deposits of sand, gravel, and cobbles, with some silt, clay, and boulders.



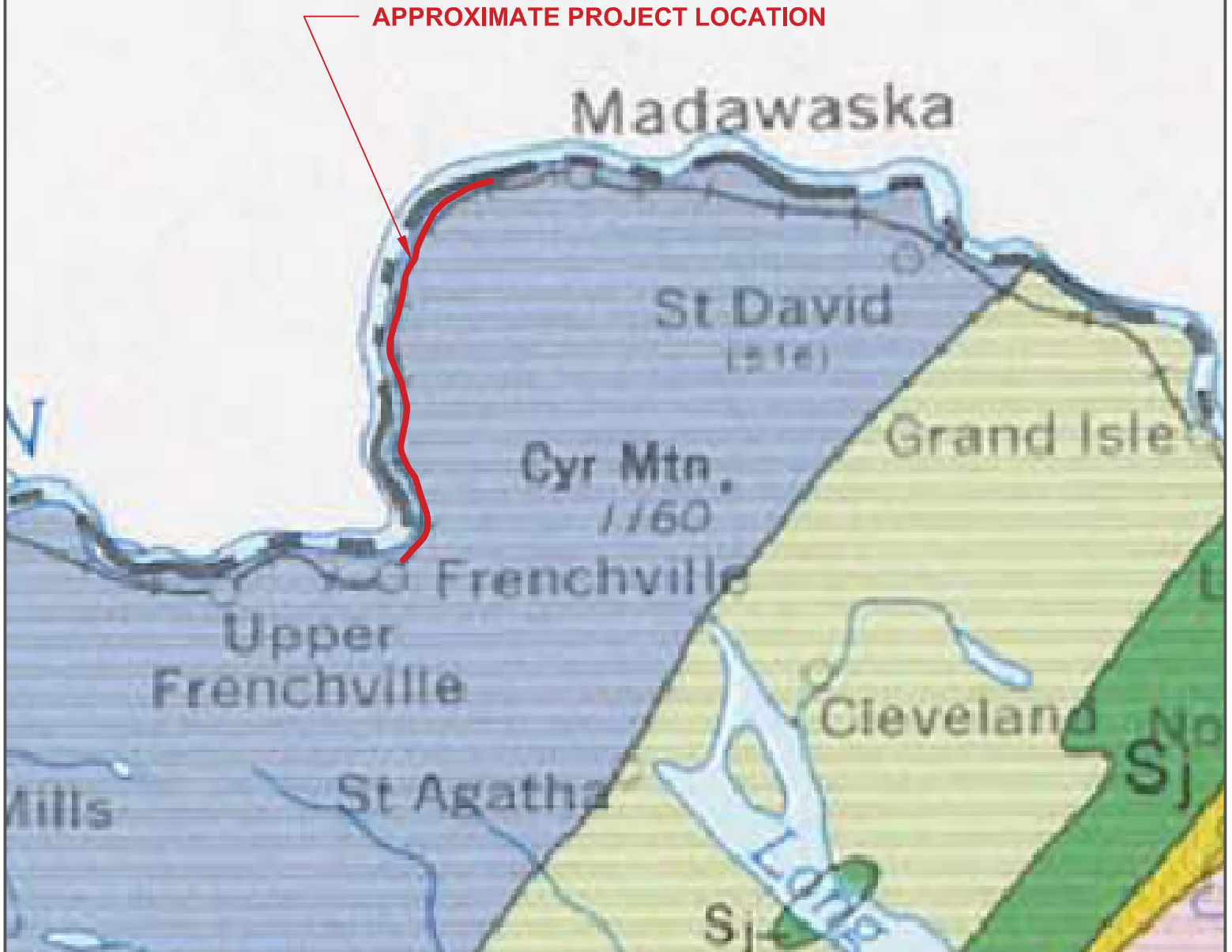
Figure 2
SURFICIAL GEOLOGY MAP

WIN 022657.00

MAINE DEPT. OF TRANSPORTATION
MADAWASKA - FRENCHVILLE
U.S. ROUTE 1



APPROXIMATE PROJECT LOCATION



Qs

Seboomook Formation - Interbedded pelite and sandstone (Q)

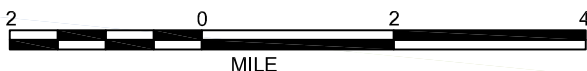
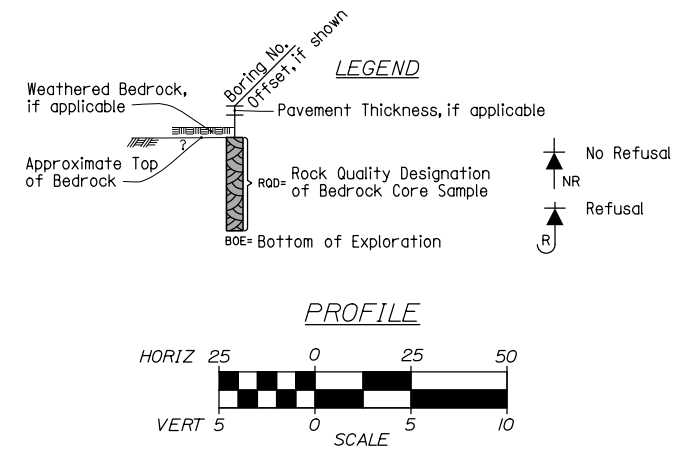


Figure 3

BEDROCK GEOLOGY MAP

WIN 022657.00

MAINE DEPT. OF TRANSPORTATION
MADAWASKA - FRENCHVILLE
U.S. ROUTE 1



84' X 78' POLYMER COATED CORRUGATED STEEL PIPE

5' CLEARING IMPACTS TO AVOID TO LEFT

PER HOMEOWNER

FLOWERS 1 STEP

PER HOMEOWNER

FLOWERS

510.307 HB-STREET LIGHT

HB-FRE-202

71+00

72+00

6' UD TY

HB-FRE-201

REMOVE

1:25

3" TO

OAK CLUMP 4" X 3" D.A.

15" OAK

BELL

WOOD LANDING/STEP

1 STORY RANCH/•10

ROCKY/GRAVEL BOTTOM

SPECIAL FILL (TYP.)

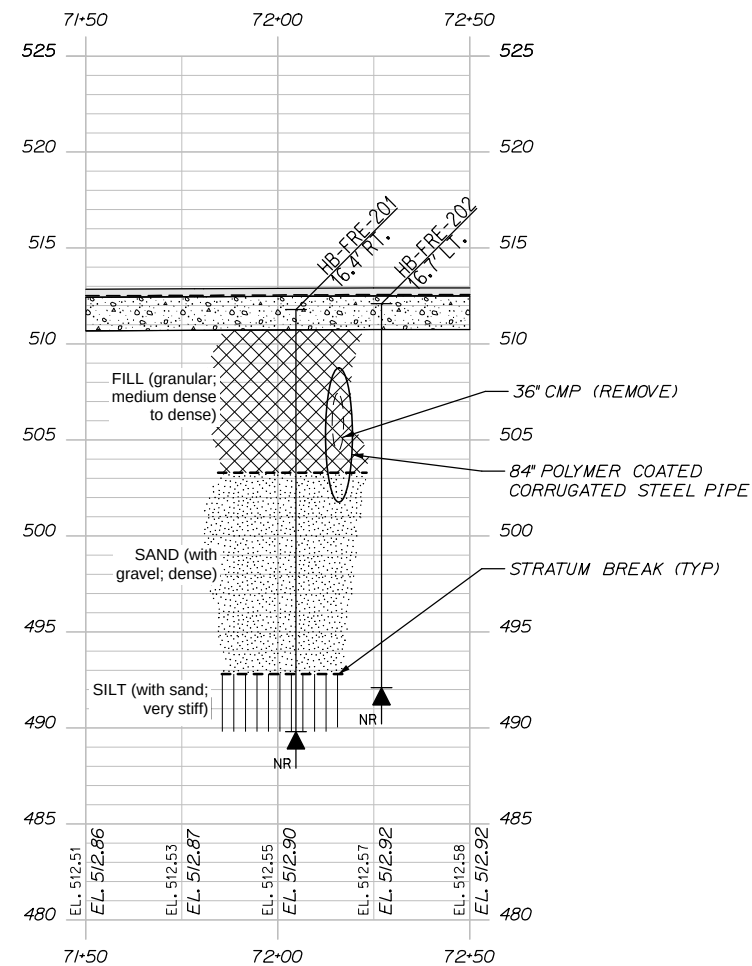
2' X 2' X 1' 5"

1" DIA WELL

FLOWER

ELEC. METER

SIR RA



PROFILE

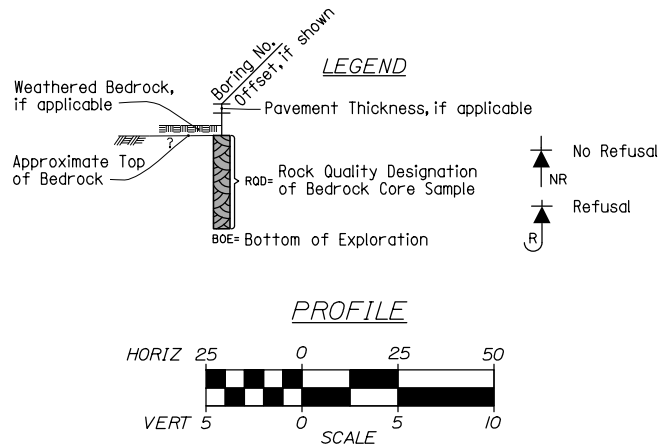
ISP NUMBER		MADAWASKA-FRENCHVILLE U.S. ROUTE 1				PROJ. MANAGER		R. Sourcy	BY	DATE	STATE OF MAINE DEPARTMENT OF TRANSPORTATION	
1 OF 4		INTERPRETIVE SUBSURFACE PROFILE LARGE CULVERT STA. 72+16				DESIGN-DETAILED		A. Sweet	K. Plunomo	05/26	SIGNATURE	
						CHECKED-REVISED		L. Zocchini	R. Hunt	06/26		
						DESIGN2-DETAILED2						
						DESIGN3-DETAILED3					P.E. NUMBER	
						DESIGNS 1						
						REVISIONS 2						
						REVISIONS 3						
						REVISIONS 4					DATE	
						FIELD CHANGES						
											WIN 022657.00 STP-2265(700) HIGHWAY PLANS	

Date:7/1/2026

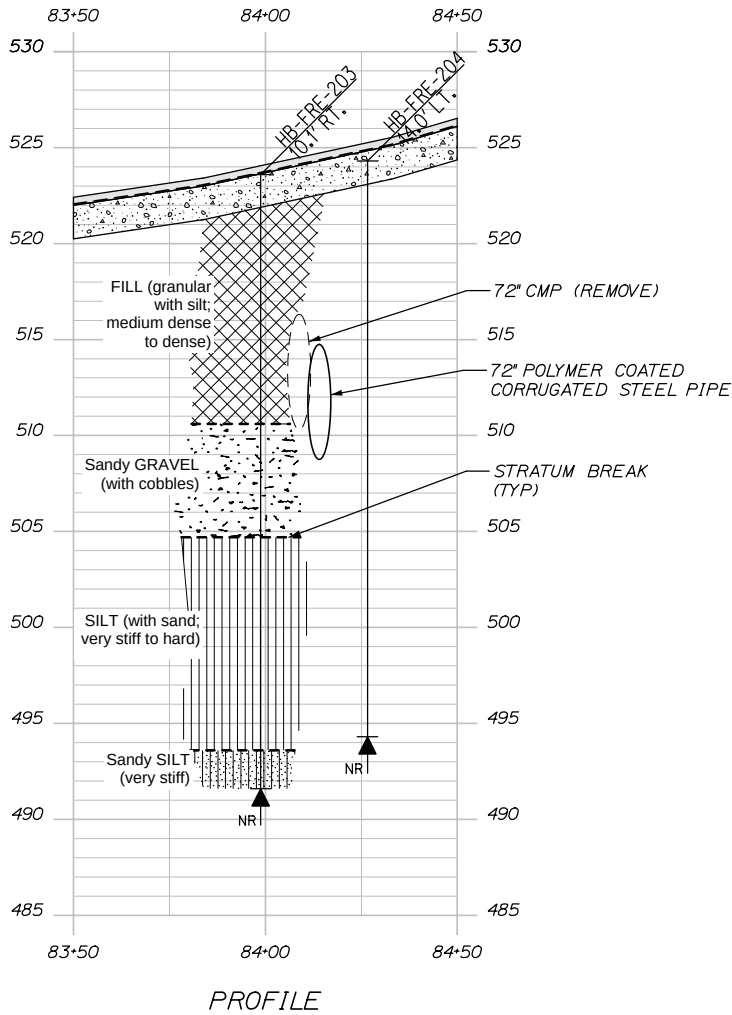
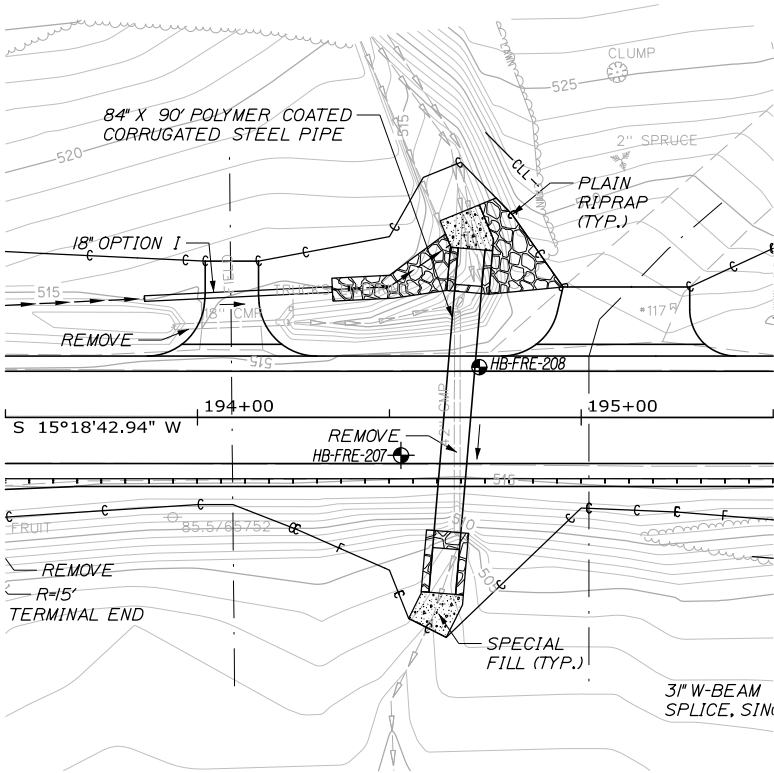
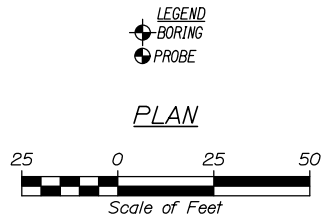
Username:

Division:

Filename: Profile_ISP_84+14.dgn



Note: This generalized interpretive soil profile is intended to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and have been developed by interpretations of widely spaced explorations and samples. Actual soil and bedrock transitions may vary and are probably more erratic. For more specific information refer to the exploration logs.



HNTB

STATE OF MAINE DEPARTMENT OF TRANSPORTATION STP-2265(700) WIN 022657.00 HIGHWAY PLANS					DATE	
					BY	
					R. Source	
					PROJ. MANAGER	
					DESIGN-DETAILED	A. Sweet
					CHECKED-REVIEWED	K. Plurismo
					DESIGN-DETAILED2	L. Zaccchini
					DESIGN3-DETAILED3	R. Hunt
					REVISIONS 1	
					REVISIONS 2	
				REVISIONS 3		
				REVISIONS 4		
				FIELD CHANGES		
				DATE		

MADAWASKA-FRENCHVILLE U.S. ROUTE 1	INTERPRETIVE SUBSURFACE PROFILE LARGE CULVERT STA. 84+14
	ISP NUMBER

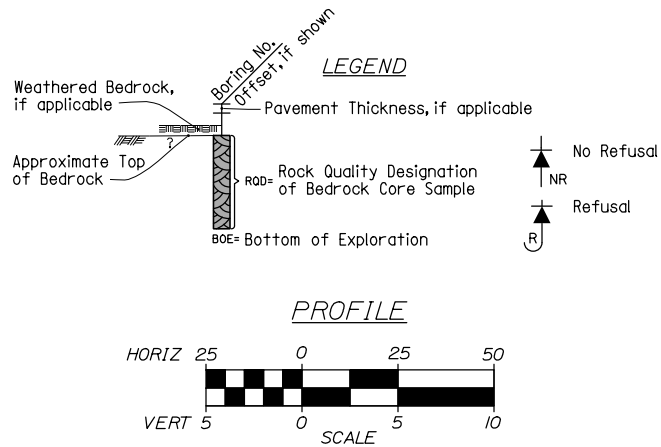
2
OF 4

Date:7/1/2026

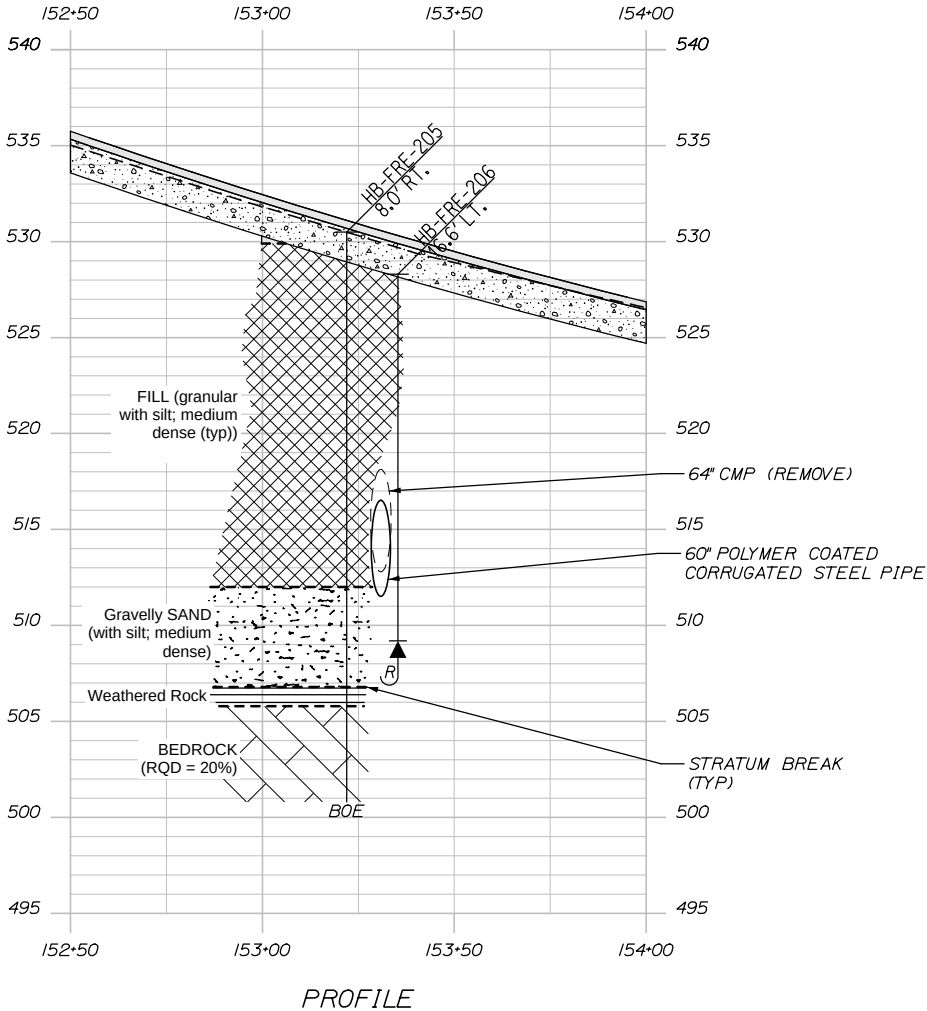
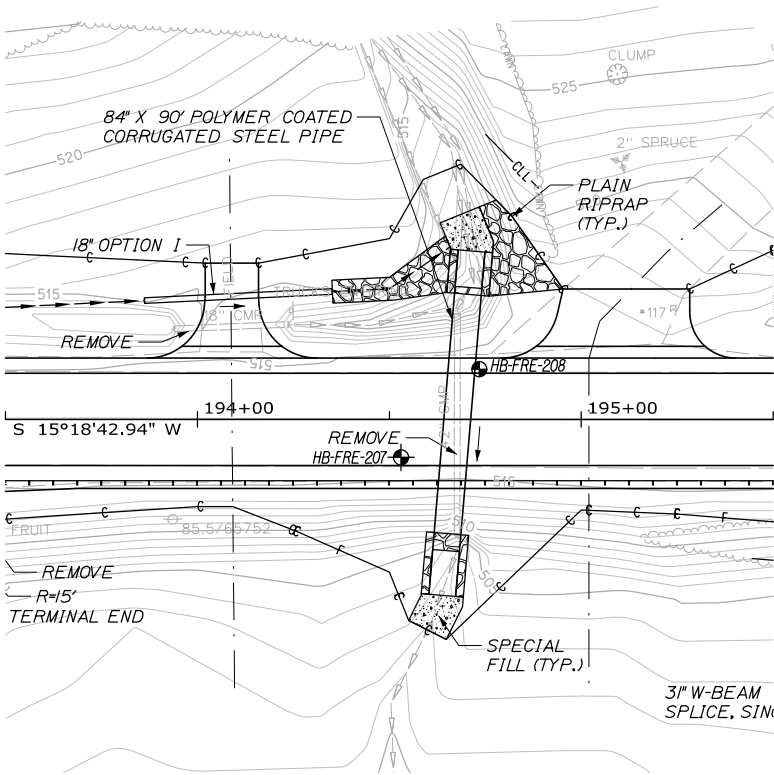
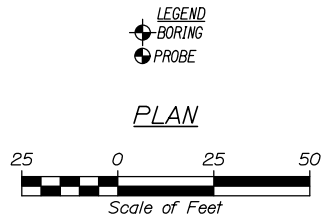
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Division:

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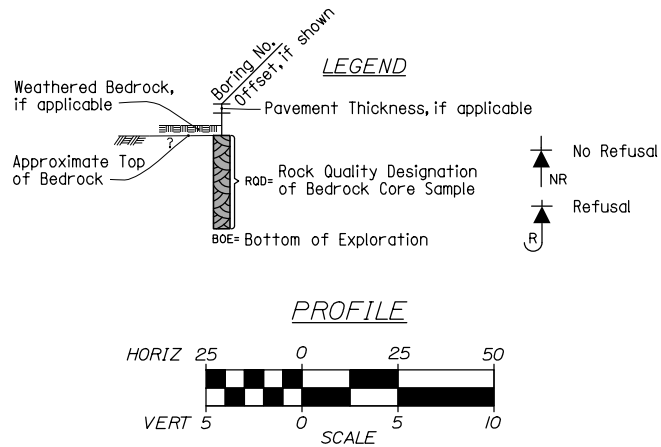


Note: This generalized interpretive soil profile is intended to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and have been developed by interpretations of widely spaced explorations and samples. Actual soil and bedrock transitions may vary and are probably more erratic. For more specific information refer to the exploration logs.

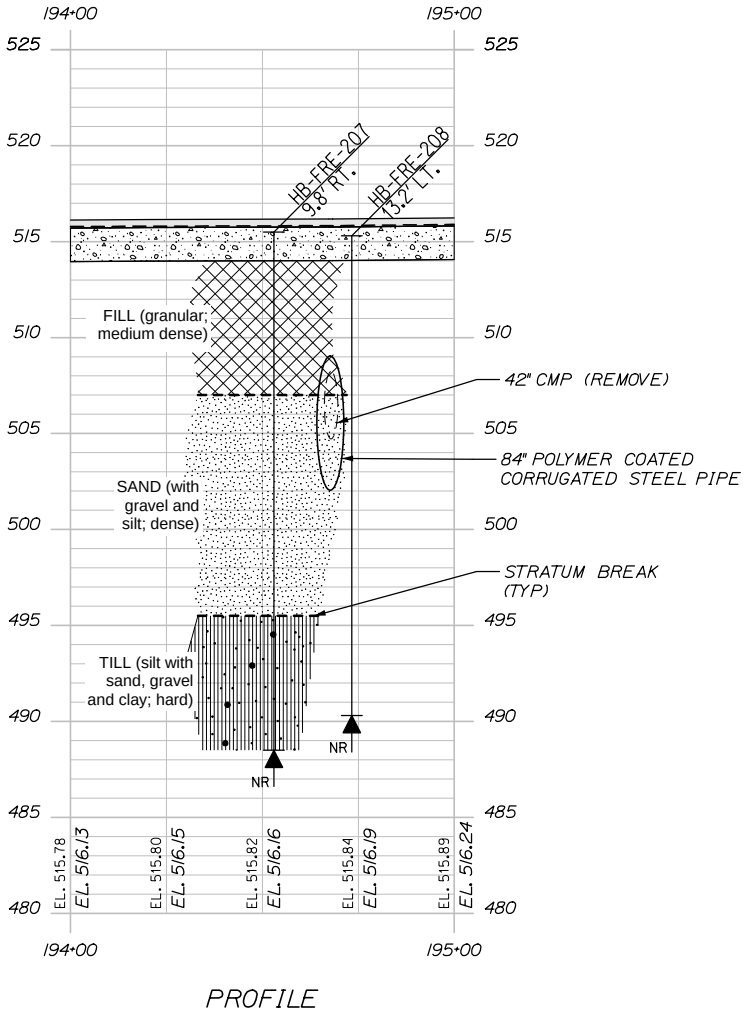
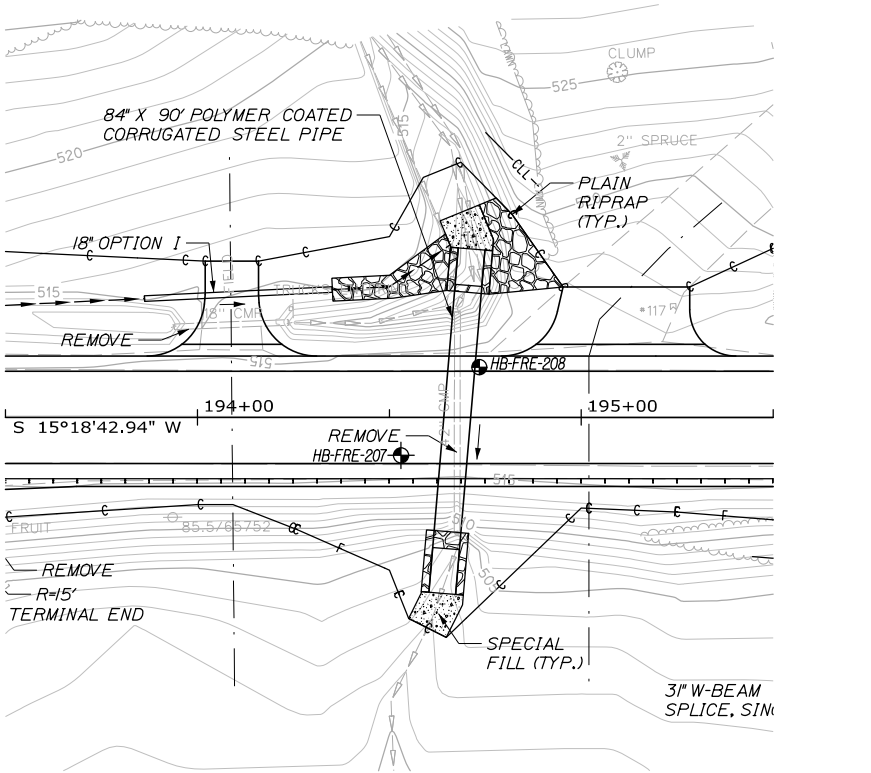
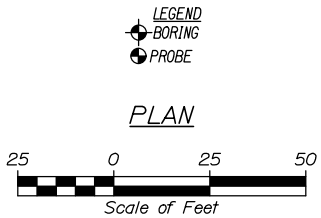


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STATE OF MAINE DEPARTMENT OF TRANSPORTATION		STP-2265(700)		WIN 022657.00		HIGHWAY PLANS	
MADAWASKA-FRENCHVILLE U.S. ROUTE 1		INTERPRETIVE SUBSURFACE PROFILE LARGE CULVERT STA. 153+30		ISP NUMBER 3		OF 4	
PROJ. MANAGER	R. Soucy	BY	R. Hart	DATE	06/26	SIGNATURE	
DESIGN-DETAILED	A. Sweet	CHECKED-REVIEWED	L. Zaccaria	DATE	06/26	P.E. NUMBER	
DESIGN-DETAILED		DESIGN-DETAILED		DATE		DATE	
REVISIONS 1		REVISIONS 1		DATE		DATE	
REVISIONS 2		REVISIONS 2		DATE		DATE	
REVISIONS 3		REVISIONS 3		DATE		DATE	
REVISIONS 4		REVISIONS 4		DATE		DATE	
FIELD CHANGES		FIELD CHANGES		DATE		DATE	



Note: This generalized interpretive soil profile is intended to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and have been developed by interpretations of widely spaced explorations and samples. Actual soil and bedrock transitions may vary and are probably more erratic. For more specific information refer to the exploration logs.



STATE OF MAINE DEPARTMENT OF TRANSPORTATION		SIGNATURE				P.E. NUMBER				WIN 022657.00		HIGHWAY PLANS	
MADAWASKA-FRENCHVILLE U.S. ROUTE 1		PROJ. MANAGER		R. Sourcy		BY		DATE		INTERPRETIVE SUBSURFACE PROFILE LARGE CULVERT STA. 194+68			
		DESIGN-DETAILED		A. Sweet		K. Purnomo		06/26					
ISP NUMBER 4 OF 4		CHECKED-REVISED		L. Zocchini		R. Hant		06/26		STP-2265(700)			
		DESIGN2-DETAILED2											
		DESIGN3-DETAILED3											
		REVISIONS 1											
		REVISIONS 2								WIN 022657.00			
		REVISIONS 3											
		REVISIONS 4											
		FIELD CHANGES											
		DATE								HIGHWAY PLANS			

APPENDIX A – BORING LOGS

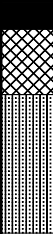
UNIFIED SOIL CLASSIFICATION SYSTEM					MODIFIED BURMISTER SYSTEM			
MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES				
COARSE-GRAINED SOILS (more than half of material is larger than No. 200 sieve size)	GRAVELS (more than half of coarse fraction is larger than No. 4 sieve size)	CLEAN GRAVELS	GW	Well-graded gravels, gravel-sand mixtures, little or no fines.	<u>Descriptive Term</u>			
		(little or no fines)	GP	Poorly-graded gravels, gravel sand mixtures, little or no fines.	<u>Portion of Total (%)</u>			
					trace	0 - 10		
	SANDS (more than half of coarse fraction is smaller than No. 4 sieve size)	GRAVEL WITH FINES (Appreciable amount of fines)	GM	Silty gravels, gravel-sand-silt mixtures.	little	11 - 20		
			GC	Clayey gravels, gravel-sand-clay mixtures.	some	21 - 35		
					adjective (e.g. Sandy, Clayey)	36 - 50		
					TERMS DESCRIBING DENSITY/CONSISTENCY			
					Coarse-grained soils (more than half of material is larger than No. 200 sieve): Includes (1) clean gravels; (2) Silty or Clayey gravels; and (3) Silty, Clayey or Gravelly sands. Density is rated according to standard penetration resistance (N-value).			
					<u>Density of Cohesionless Soils</u>		<u>Standard Penetration Resistance</u> N ₆₀ -Value (blows per foot)	
					Very loose	0 - 4		
					Loose	5 - 10		
					Medium Dense	11 - 30		
					Dense	31 - 50		
					Very Dense	> 50		
					Fine-grained soils (more than half of material is smaller than No. 200 sieve): Includes (1) inorganic and organic silts and clays; (2) Gravelly, Sandy or Silty clays; and (3) Clayey silts. Consistency is rated according to undrained shear strength as indicated.			
					<u>Consistency of Cohesive soils</u>	<u>SPT N₆₀-Value (blows per foot)</u>	<u>Approximate Undrained Shear Strength (psf)</u>	<u>Field Guidelines</u>
					Very Soft	WOH, WOR, WOP, <2	0 - 250	Fist easily penetrates
					Soft	2 - 4	250 - 500	Thumb easily penetrates
					Medium Stiff	5 - 8	500 - 1000	Thumb penetrates with moderate effort
					Stiff	9 - 15	1000 - 2000	Indented by thumb with great effort
					Very Stiff	16 - 30	2000 - 4000	Indented by thumbnail
					Hard	>30	over 4000	Indented by thumbnail with difficulty
					Rock Quality Designation (RQD):			
					RQD (%) = <u>sum of the lengths of intact pieces of core* > 4 inches</u> length of core advance			
					*Minimum NQ rock core (1.88 in. OD of core)			
					Rock Quality Based on RQD			
					<u>Rock Quality</u>	<u>RQD (%)</u>		
					Very Poor	≤25		
					Poor	26 - 50		
					Fair	51 - 75		
					Good	76 - 90		
					Excellent	91 - 100		
					Desired Rock Observations (in this order, if applicable):			
					Color (Munsell color chart)			
					Texture (aphanitic, fine-grained, etc.)			
					Rock Type (granite, schist, sandstone, etc.)			
					Hardness (very hard, hard, mod. hard, etc.)			
					Weathering (fresh, very slight, slight, moderate, mod. severe, severe, etc.)			
					Geologic discontinuities/jointing:			
					-dip (horiz - 0-5 deg., low angle - 5-35 deg., mod. dipping - 35-55 deg., steep - 55-85 deg., vertical - 85-90 deg.)			
					-spacing (very close - <2 inch, close - 2-12 inch, mod. close - 1-3 feet, wide - 3-10 feet, very wide >10 feet)			
					-tightness (tight, open, or healed)			
					-infilling (grain size, color, etc.)			
					Formation (Waterville, Ellsworth, Cape Elizabeth, etc.)			
					RQD and correlation to rock quality (very poor, poor, etc.)			
					ref: ASTM D6032 and FHWA NHI-16-072 GEC 5 - Geotechnical Site Characterization, Table 4-12			
					Recovery (inch/inch and percentage)			
					Rock Core Rate (X.X ft - Y.Y ft (min:sec))			
					Sample Container Labeling Requirements:			
					WIN	Blow Counts		
					Bridge Name / Town	Sample Recovery		
					Boring Number	Date		
					Sample Number	Personnel Initials		
					Sample Depth			
Maine Department of Transportation Geotechnical Section Key to Soil and Rock Descriptions and Terms Field Identification Information								

Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: A 5.74 mile portion of US Route 1 Location: Frenchville, Maine		Boring No.: HB-FRE-101 WIN: 22657.00				
Driller: MaineDOT			Elevation (ft.): 518.5		Auger ID/OD: 5" Dia.					
Operator: Daggett			Datum: NAVD88		Sampler: Off Flights					
Logged By: B. Wilder			Rig Type: CME 45C		Hammer Wt./Fall: N/A					
Date Start/Finish: 5/18/2016-5/18/2016			Drilling Method: Solid Stem Auger		Core Barrel: N/A					
Boring Location: 60+00, 10.3 ft Rt.			Casing ID/OD: N/A		Water Level*: None observed					
Hammer Efficiency Factor:			Hammer Type: Automatic ☐ Hydraulic ☐ Rope & Cathead ☐							
Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample Attempt U = Thin Wall Tube Sample MU = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test, PP = Pocket Penetrometer MV = Unsuccessful Field Vane Shear Test Attempt R = Rock Core Sample SSA = Solid Stem Auger HSA = Hollow Stem Auger RC = Roller Cone WOH = Weight of 140lb. Hammer WOR/C = Weight of Rods or Casing WO1P = Weight of One Person S _u = Peak/Remolded Field Vane Undrained Shear Strength (psf) S _{u(lab)} = Lab Vane Undrained Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) N-uncorrected = Raw Field SPT N-value Hammer Efficiency Factor = Rig Specific Annual Calibration Value N ₆₀ = SPT N-uncorrected Corrected for Hammer Efficiency N ₆₀ = (Hammer Efficiency Factor/60%)*N-uncorrected T _v = Pocket Torvane Shear Strength (psf) WC = Water Content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test										
Depth (ft.)	Sample Information								Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N ₆₀	Casing Blows	Elevation (ft.)		
0	B1		0.6 - 5.0				SSA	517.9	7" HMA.	G#264773 A-1-a, GW-GM WC=2.6%
									Brown, damp, fine to coarse Sandy GRAVEL, trace silt, occasional cobbles, (Fill).	
5								513.5	Bottom of Exploration at 5.0 feet below ground surface. NO REFUSAL	
10										
15										
20										
25										
Remarks:										
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.										Page 1 of 1 Boring No.: HB-FRE-101

Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: A 5.74 mile portion of US Route 1 Location: Frenchville, Maine				Boring No.: HB-FRE-102 WIN: 22657.00																																																																																																																																			
Driller: MaineDOT				Elevation (ft.) 517.2				Auger ID/OD: 5" Dia.																																																																																																																																			
Operator: Daggett				Datum: NAVD88				Sampler: Off Flights																																																																																																																																			
Logged By: B. Wilder				Rig Type: CME 45C				Hammer Wt./Fall: N/A																																																																																																																																			
Date Start/Finish: 5/18/2016-5/18/2016				Drilling Method: Solid Stem Auger				Core Barrel: N/A																																																																																																																																			
Boring Location: 80+00, 9.1 ft Lt.				Casing ID/OD: N/A				Water Level*: None observed																																																																																																																																			
Hammer Efficiency Factor:				Hammer Type: Automatic ☐ Hydraulic ☐ Rope & Cathead ☐																																																																																																																																							
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Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS						Project: A 5.74 mile portion of US Route 1		Boring No.: HB-FRE-103																																																																																																																																																																																																																
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Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: A 5.74 mile portion of US Route 1 Location: Frenchville, Maine				Boring No.: HB-FRE-104 WIN: 22657.00					
Driller: MaineDOT				Elevation (ft.): 585.9				Auger ID/OD: 5" Dia.					
Operator: Daggett				Datum: NAVD88				Sampler: Off Flights					
Logged By: B. Wilder				Rig Type: CME 45C				Hammer Wt./Fall: N/A					
Date Start/Finish: 5/18/2016-5/18/2016				Drilling Method: Solid Stem Auger				Core Barrel: N/A					
Boring Location: 120+00, 14.2 ft Lt. Shoulder				Casing ID/OD: N/A				Water Level*: None observed					
Hammer Efficiency Factor:				Hammer Type: Automatic ☐ Hydraulic ☐ Rope & Cathead ☐									
Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample Attempt U = Thin Wall Tube Sample MU = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test, PP = Pocket Penetrometer MV = Unsuccessful Field Vane Shear Test Attempt R = Rock Core Sample SSA = Solid Stem Auger HSA = Hollow Stem Auger RC = Roller Cone WOH = Weight of 140lb. Hammer WOR/C = Weight of Rods or Casing WO1P = Weight of One Person S _u = Peak/Remolded Field Vane Undrained Shear Strength (psf) S _{u(lab)} = Lab Vane Undrained Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) N-uncorrected = Raw Field SPT N-value Hammer Efficiency Factor = Rig Specific Annual Calibration Value N ₆₀ = SPT N-uncorrected Corrected for Hammer Efficiency N ₆₀ = (Hammer Efficiency Factor/60%)*N-uncorrected T _v = Pocket Torvane Shear Strength (psf) WC = Water Content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test													
Depth (ft.)	Sample Information									Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N ₆₀	Casing Blows						
0	S4		0.0 - 5.0							580.9		Brown, damp, fine to coarse Sandy GRAVEL, trace silt, occasional cobbles, (Fill).	G#270053 A-1-a, GW-GM WC=4.5%
5													
25													
Remarks:													
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.												Page 1 of 1	
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.												Boring No.: HB-FRE-104	

Maine Department of Transportation						Project: A 5.74 mile portion of US Route 1				Boring No.: HB-FRE-105									
Soil/Rock Exploration Log US CUSTOMARY UNITS						Location: Frenchville, Maine				WIN: 22657.00									
Driller: MaineDOT						Elevation (ft.): 582.2				Auger ID/OD: 5" Dia.									
Operator: Daggett						Datum: NAVD88				Sampler: Off Flights									
Logged By: B. Wilder						Rig Type: CME 45C				Hammer Wt./Fall: N/A									
Date Start/Finish: 5/18/2016-5/18/2016						Drilling Method: Solid Stem Auger				Core Barrel: N/A									
Boring Location: 140+00, 7.6 ft Rt.						Casing ID/OD: N/A				Water Level*: None observed									
Hammer Efficiency Factor:						Hammer Type: Automatic ☐ Hydraulic ☐ Rope & Cathead ☐													
Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample Attempt U = Thin Wall Tube Sample MU = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test, PP = Pocket Penetrometer MV = Unsuccessful Field Vane Shear Test Attempt						R = Rock Core Sample SSA = Solid Stem Auger HSA = Hollow Stem Auger RC = Roller Cone WOH = Weight of 140lb. Hammer WOR/C = Weight of Rods or Casing WO1P = Weight of One Person				S _u = Peak/Remolded Field Vane Undrained Shear Strength (psf) S _{u(lab)} = Lab Vane Undrained Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) N-uncorrected = Raw Field SPT N-value Hammer Efficiency Factor = Rig Specific Annual Calibration Value N ₆₀ = SPT N-uncorrected Corrected for Hammer Efficiency N ₆₀ = (Hammer Efficiency Factor/60%)*N-uncorrected				T _v = Pocket Torvane Shear Strength (psf) WC = Water Content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test					
Sample Information														Graphic Log		Visual Description and Remarks		Laboratory Testing Results/ AASHTO and Unified Class.	
Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N ₆₀	Casing Blows	Elevation (ft.)											
0	B3		0.6 - 2.0				SSA	581.6		-0.6	G#270054 A-1-a, GW-GM WC=2.7%								
	S5		2.0 - 5.0					580.2		-2.0									
5								577.2		-5.0									
									Bottom of Exploration at 5.0 feet below ground surface. NO REFUSAL										
10																			
15																			
20																			
25																			
Remarks:																			
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.										Page 1 of 1									
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.										Boring No.: HB-FRE-105									

Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: A 5.74 mile portion of US Route 1 Location: Frenchville, Maine		Boring No.: HB-FRE-106 WIN: 22657.00					
Driller: MaineDOT			Elevation (ft.): 506.2		Auger ID/OD: 5" Dia.						
Operator: Daggett			Datum: NAVD88		Sampler: Off Flights						
Logged By: B. Wilder			Rig Type: CME 45C		Hammer Wt./Fall: N/A						
Date Start/Finish: 5/18/2016-5/18/2016			Drilling Method: Solid Stem Auger		Core Barrel: N/A						
Boring Location: 160+00, 8.3 ft Lt.			Casing ID/OD: N/A		Water Level*: None observed						
Hammer Efficiency Factor:			Hammer Type: Automatic ☐ Hydraulic ☐ Rope & Cathead ☐								
Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample Attempt U = Thin Wall Tube Sample MU = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test, PP = Pocket Penetrometer MV = Unsuccessful Field Vane Shear Test Attempt R = Rock Core Sample SSA = Solid Stem Auger HSA = Hollow Stem Auger RC = Roller Cone WOH = Weight of 140lb. Hammer WOR/C = Weight of Rods or Casing WO1P = Weight of One Person S _u = Peak/Remolded Field Vane Undrained Shear Strength (psf) S _{u(lab)} = Lab Vane Undrained Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) N-uncorrected = Raw Field SPT N-value Hammer Efficiency Factor = Rig Specific Annual Calibration Value N ₆₀ = SPT N-uncorrected Corrected for Hammer Efficiency N ₆₀ = (Hammer Efficiency Factor/60%)*N-uncorrected T _v = Pocket Torvane Shear Strength (psf) WC = Water Content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test											
Depth (ft.)	Sample Information								Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N ₆₀	Casing Blows	Elevation (ft.)			
0	B4		0.6 - 4.5				SSA	505.6		7" HMA.	G#270055 A-1-a, GW-GM WC=2.8%
5								501.7		Brown, damp, fine to coarse Sandy GRAVEL, trace silt, occasional cobbles, (Fill). Bottom of Exploration at 4.5 feet below ground surface. NO REFUSAL	
10											
15											
20											
25											
Remarks:											
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.										Page 1 of 1 Boring No.: HB-FRE-106	

Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: A 5.74 mile portion of US Route 1 Location: Frenchville, Maine		Boring No.: HB-FRE-107 WIN: 22657.00					
Driller: MaineDOT			Elevation (ft.): 504.5		Auger ID/OD: 5" Dia.						
Operator: Daggett			Datum: NAVD88		Sampler: Off Flights						
Logged By: B. Wilder			Rig Type: CME 45C		Hammer Wt./Fall: N/A						
Date Start/Finish: 5/18/2016-5/18/2016			Drilling Method: Solid Stem Auger		Core Barrel: N/A						
Boring Location: 180+00, 12.8 ft Rt. Shoulder			Casing ID/OD: N/A		Water Level*: None observed						
Hammer Efficiency Factor:			Hammer Type: Automatic ☐ Hydraulic ☐ Rope & Cathead ☐								
Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample Attempt U = Thin Wall Tube Sample MU = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test, PP = Pocket Penetrometer MV = Unsuccessful Field Vane Shear Test Attempt R = Rock Core Sample SSA = Solid Stem Auger HSA = Hollow Stem Auger RC = Roller Cone WOH = Weight of 140lb. Hammer WOR/C = Weight of Rods or Casing WO1P = Weight of One Person S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf) S_{u(lab)} = Lab Vane Undrained Shear Strength (psf) q_p = Unconfined Compressive Strength (ksf) N-uncorrected = Raw Field SPT N-value Hammer Efficiency Factor = Rig Specific Annual Calibration Value N₆₀ = SPT N-uncorrected Corrected for Hammer Efficiency N₆₀ = (Hammer Efficiency Factor/60%)*N-uncorrected T_v = Pocket Torvane Shear Strength (psf) WC = Water Content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test											
Depth (ft.)	Sample Information								Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N ₆₀	Casing Blows	Elevation (ft.)			
0	S6		0.0 - 2.6				SSA	501.9		Brown, damp, Gravelly fine to coarse SAND, little silt, occasional cobbles, (Fill).	G#270056 A-1-a, SM WC=4.5%
	S7		2.6 - 5.0					2.6		Brown, moist, fine to coarse SAND, some silt, some gravel.	G#270057 A-2-4, SM WC=13.3%
5								499.5		Bottom of Exploration at 5.0 feet below ground surface. NO REFUSAL	
10											
15											
20											
25											
Remarks:											
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.										Page 1 of 1 Boring No.: HB-FRE-107	

Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: A 5.74 mile portion of US Route 1 Location: Frenchville, Maine				Boring No.: HB-FRE-108 WIN: 22657.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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Boring Location: 200+00, 14.0 ft Lt. Shoulder				Casing ID/OD: N/A				Water Level*: None observed																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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<table><thead><tr><th colspan="8">Sample Information</th><th rowspan="2">Elevation (ft.)</th><th rowspan="2">Graphic Log</th><th rowspan="2">Visual Description and Remarks</th><th rowspan="2">Laboratory Testing Results/ AASHTO and Unified Class.</th></tr><tr><th>Depth (ft.)</th><th>Sample No.</th><th>Pen./Rec. (in.)</th><th>Sample Depth (ft.)</th><th>Blows (/6 in.) Shear Strength (psf) or RQD (%)</th><th>N-uncorrected</th><th>N60</th><th>Casing Blows</th></tr></thead><tbody><tr><td>0</td><td>S8</td><td></td><td>0.0 - 3.8</td><td></td><td></td><td></td><td>SSA</td><td rowspan="2">511.1</td><td rowspan="2"></td><td rowspan="2">Brown, damp, fine to coarse Sandy GRAVEL, little silt, occasional cobbles, (Fill).</td><td rowspan="2">G#270058 A-1-a, GW-GM WC=5.6%</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td>S9</td><td></td><td>3.8 - 5.0</td><td></td><td></td><td></td><td></td><td rowspan="2">509.9</td><td rowspan="2"></td><td rowspan="2">Grey, wet, fine to coarse SAND, some silt, little gravel.</td><td rowspan="2"></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td rowspan="12"></td><td rowspan="12"></td><td rowspan="12">Bottom of Exploration at 5.0 feet below ground surface. 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Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: A 5.74 mile portion of US Route 1 Location: Frenchville, Maine		Boring No.: HB-FRE-109 WIN: 22657.00				
Driller: MaineDOT			Elevation (ft.): 517.8		Auger ID/OD: 5" Dia.					
Operator: Daggett			Datum: NAVD88		Sampler: Off Flights					
Logged By: B. Wilder			Rig Type: CME 45C		Hammer Wt./Fall: N/A					
Date Start/Finish: 5/18/2016-5/18/2016			Drilling Method: Solid Stem Auger		Core Barrel: N/A					
Boring Location: 220+00, 7.9 ft Rt.			Casing ID/OD: N/A		Water Level*: None observed					
Hammer Efficiency Factor:			Hammer Type: Automatic ☐ Hydraulic ☐ Rope & Cathead ☐							
Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample Attempt U = Thin Wall Tube Sample MU = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test, PP = Pocket Penetrometer MV = Unsuccessful Field Vane Shear Test Attempt R = Rock Core Sample SSA = Solid Stem Auger HSA = Hollow Stem Auger RC = Roller Cone WOH = Weight of 140lb. Hammer WOR/C = Weight of Rods or Casing WO1P = Weight of One Person S _u = Peak/Remolded Field Vane Undrained Shear Strength (psf) S _{u(lab)} = Lab Vane Undrained Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) N-uncorrected = Raw Field SPT N-value Hammer Efficiency Factor = Rig Specific Annual Calibration Value N ₆₀ = SPT N-uncorrected Corrected for Hammer Efficiency N ₆₀ = (Hammer Efficiency Factor/60%)*N-uncorrected T _v = Pocket Torvane Shear Strength (psf) WC = Water Content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test										
Depth (ft.)	Sample Information								Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N ₆₀	Casing Blows	Elevation (ft.)		
0	B5		0.7 - 5.0				SSA	517.1	8" HMA.	G#270059 A-1-a, GW-GM WC=2.5%
									Brown, damp, (wetter with depth), fine to coarse Sandy GRAVEL, trace silt, occasional cobbles, (Fill).	
5								512.8	Bottom of Exploration at 5.0 feet below ground surface. NO REFUSAL	
10										
15										
20										
25										
Remarks: Stratification lines represent approximate boundaries between soil types; transitions may be gradual.										
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.										Page 1 of 1 Boring No.: HB-FRE-109

Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: A 5.74 mile portion of US Route 1 Location: Frenchville, Maine		Boring No.: HB-FRE-110 WIN: 22657.00				
Driller: MaineDOT			Elevation (ft.): 572.3		Auger ID/OD: 5" Dia.					
Operator: Daggett			Datum: NAVD88		Sampler: Off Flights					
Logged By: B. Wilder			Rig Type: CME 45C		Hammer Wt./Fall: N/A					
Date Start/Finish: 5/18/2016-5/18/2016			Drilling Method: Solid Stem Auger		Core Barrel: N/A					
Boring Location: 240+00, 7.9 ft Lt.			Casing ID/OD: N/A		Water Level*: None observed					
Hammer Efficiency Factor:			Hammer Type: Automatic ☐ Hydraulic ☐ Rope & Cathead ☐							
Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample Attempt U = Thin Wall Tube Sample MU = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test, PP = Pocket Penetrometer MV = Unsuccessful Field Vane Shear Test Attempt R = Rock Core Sample SSA = Solid Stem Auger HSA = Hollow Stem Auger RC = Roller Cone WOH = Weight of 140lb. Hammer WOR/C = Weight of Rods or Casing WO1P = Weight of One Person S _u = Peak/Remolded Field Vane Undrained Shear Strength (psf) S _{u(lab)} = Lab Vane Undrained Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) N-uncorrected = Raw Field SPT N-value Hammer Efficiency Factor = Rig Specific Annual Calibration Value N ₆₀ = SPT N-uncorrected Corrected for Hammer Efficiency N ₆₀ = (Hammer Efficiency Factor/60%)*N-uncorrected T _v = Pocket Torvane Shear Strength (psf) WC = Water Content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test										
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	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N ₆₀	Casing Blows	Elevation (ft.)		
0	B6		0.7 - 5.0				SSA	571.6	8" HMA.	G#270060 A-1-a, GW-GM WC=3.2%
									Brown, damp, (wetter with depth), fine to coarse Sandy GRAVEL, trace silt, occasional cobbles, (Fill).	
5								567.3	Bottom of Exploration at 5.0 feet below ground surface. NO REFUSAL	
10										
15										
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Stratification lines represent approximate boundaries between soil types; transitions may be gradual.										Page 1 of 1 Boring No.: HB-FRE-110

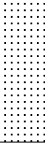
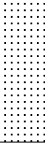
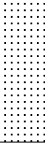
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Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: A 5.74 mile portion of US Route 1 Location: Frenchville, Maine				Boring No.: HB-FRE-112 WIN: 22657.00						
Driller: MaineDOT				Elevation (ft.): 519.2				Auger ID/OD: 5" Dia.						
Operator: Daggett				Datum: NAVD88				Sampler: Off Flights						
Logged By: B. Wilder				Rig Type: CME 45C				Hammer Wt./Fall: N/A						
Date Start/Finish: 5/18/2016-5/18/2016				Drilling Method: Solid Stem Auger				Core Barrel: N/A						
Boring Location: 280+10, 13.2 ft Lt. Shoulder				Casing ID/OD: N/A				Water Level*: None observed						
Hammer Efficiency Factor:				Hammer Type: Automatic ☐ Hydraulic ☐ Rope & Cathead ☐										
Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample Attempt U = Thin Wall Tube Sample MU = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test, PP = Pocket Penetrometer MV = Unsuccessful Field Vane Shear Test Attempt R = Rock Core Sample SSA = Solid Stem Auger HSA = Hollow Stem Auger RC = Roller Cone WOH = Weight of 140lb. Hammer WOR/C = Weight of Rods or Casing WO1P = Weight of One Person S _u = Peak/Remolded Field Vane Undrained Shear Strength (psf) S _{u(lab)} = Lab Vane Undrained Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) N-uncorrected = Raw Field SPT N-value Hammer Efficiency Factor = Rig Specific Annual Calibration Value N ₆₀ = SPT N-uncorrected Corrected for Hammer Efficiency N ₆₀ = (Hammer Efficiency Factor/60%)*N-uncorrected T _v = Pocket Torvane Shear Strength (psf) WC = Water Content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test														
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	S12		2.8 - 5.0					516.4					Grey, wet, fine to coarse SAND, some silt, little gravel.	G#270063 A-2-4, SM WC=14.6%
								514.2						
5										Bottom of Exploration at 5.0 feet below ground surface. NO REFUSAL				
10														
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Remarks: Stratification lines represent approximate boundaries between soil types; transitions may be gradual.														
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.											Page 1 of 1 Boring No.: HB-FRE-112			

Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: A 5.74 mile portion of US Route 1 Location: Frenchville, Maine				Boring No.: HB-FRE-113 WIN: 22657.00																																																																																																																		
Driller: MaineDOT				Elevation (ft.): 516.6				Auger ID/OD: 5" Dia.																																																																																																																		
Operator: Daggett				Datum: NAVD88				Sampler: Off Flights																																																																																																																		
Logged By: B. Wilder				Rig Type: CME 45C				Hammer Wt./Fall: N/A																																																																																																																		
Date Start/Finish: 5/18/2016-5/18/2016				Drilling Method: Solid Stem Auger				Core Barrel: N/A																																																																																																																		
Boring Location: 300+00, 7.4 ft Rt.				Casing ID/OD: N/A				Water Level*: None observed																																																																																																																		
Hammer Efficiency Factor:				Hammer Type: Automatic ☐ Hydraulic ☐ Rope & Cathead ☐																																																																																																																						
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Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: A 5.74 mile portion of US Route 1 Location: Frenchville, Maine		Boring No.: HB-FRE-114 WIN: 22657.00					
Driller: MaineDOT			Elevation (ft.): 512.3		Auger ID/OD: 5" Dia.						
Operator: Daggett			Datum: NAVD88		Sampler: Off Flights						
Logged By: B. Wilder			Rig Type: CME 45C		Hammer Wt./Fall: N/A						
Date Start/Finish: 5/18/2016-5/18/2016			Drilling Method: Solid Stem Auger		Core Barrel: N/A						
Boring Location: 320+00, 8.2 ft Lt.			Casing ID/OD: N/A		Water Level*: None observed						
Hammer Efficiency Factor:			Hammer Type: Automatic ☐ Hydraulic ☐ Rope & Cathead ☐								
Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample Attempt U = Thin Wall Tube Sample MU = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test, PP = Pocket Penetrometer MV = Unsuccessful Field Vane Shear Test Attempt R = Rock Core Sample SSA = Solid Stem Auger HSA = Hollow Stem Auger RC = Roller Cone WOH = Weight of 140lb. Hammer WOR/C = Weight of Rods or Casing WO1P = Weight of One Person S _u = Peak/Remolded Field Vane Undrained Shear Strength (psf) S _{u(lab)} = Lab Vane Undrained Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) N-uncorrected = Raw Field SPT N-value Hammer Efficiency Factor = Rig Specific Annual Calibration Value N ₆₀ = SPT N-uncorrected Corrected for Hammer Efficiency N ₆₀ = (Hammer Efficiency Factor/60%)*N-uncorrected T _v = Pocket Torvane Shear Strength (psf) WC = Water Content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test											
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0	B8		0.7 - 5.0				SSA	511.6		8" HMA.	G#270065 A-1-a, GM WC=3.1%
5								507.3		Brown, damp, fine to coarse Sandy GRAVEL, little silt, occasional cobbles, (Fill). Bottom of Exploration at 5.0 feet below ground surface. NO REFUSAL	
10											
15											
20											
25											
Remarks:											
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.										Page 1 of 1 Boring No.: HB-FRE-114	

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Maine Department of Transportation						Project: A 5.74 mile portion of US Route 1				Boring No.: HB-FRE-115																																																																																																																																																																																																					
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Operator: Daggett						Datum: NAVD88				Sampler: Off Flights																																																																																																																																																																																																					
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Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: A 5.74 mile portion of US Route 1 Location: Frenchville, Maine				Boring No.: HB-FRE-116 WIN: 22657.00																																																																																																																																																																																																																																																
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Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: A 5.74 mile portion of US Route 1 Location: Frenchville, Maine		Boring No.: HB-FRE-201 WIN: 22657.00					
Driller: MaineDOT			Elevation (ft.): 511.8			Auger ID/OD: 5" Dia.					
Operator: Daggett			Datum: NAVD88			Sampler: Standard Split Spoon					
Logged By: B. Wilder			Rig Type: CME 45C			Hammer Wt./Fall: 140#/30"					
Date Start/Finish: 6/16/2020; 07:30-09:30			Drilling Method: Solid Stem Auger			Core Barrel: N/A					
Boring Location: 72+04.7, 16.4 ft Rt.			Casing ID/OD: N/A			Water Level*: 15.0 ft bgs.					
Hammer Efficiency Factor: 0.886			Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐								
Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample Attempt U = Thin Wall Tube Sample MU = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test, PP = Pocket Penetrometer MV = Unsuccessful Field Vane Shear Test Attempt R = Rock Core Sample SSA = Solid Stem Auger HSA = Hollow Stem Auger RC = Roller Cone WOH = Weight of 140lb. Hammer WOR/C = Weight of Rods or Casing WO1P = Weight of One Person S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf) S_{u(lab)} = Lab Vane Undrained Shear Strength (psf) q_p = Unconfined Compressive Strength (ksf) N-uncorrected = Raw Field SPT N-value Hammer Efficiency Factor = Rig Specific Annual Calibration Value N₆₀ = SPT N-uncorrected Corrected for Hammer Efficiency N₆₀ = (Hammer Efficiency Factor/60%)*N-uncorrected T_v = Pocket Torvane Shear Strength (psf) WC = Water Content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test											
Depth (ft.)	Sample Information								Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N ₆₀	Casing Blows	Elevation (ft.)			
0	1D	24/20	0.0 - 2.0	9/14/13/13	27	40	SSA			Brown, damp, dense, fine to coarse SAND, some gravel, little silt, (Fill).	G#340724 A-1-b, SM WC=4.9%
5	2D	24/12	5.0 - 7.0	4/4/4/9	8	12				Brown, damp, medium dense, Gravelly fine to coarse SAND, little silt, (Fill).	G#340725 A-1-a, SM WC=5.4%
10	3D	24/17	10.0 - 12.0	6/18/14/16	32	47				Brown, wet, dense, fine to coarse SAND, some gravel, little silt.	G#340726 A-1-b, SM WC=7.8%
15	4D	24/16	15.0 - 17.0	4/13/15/21	28	41				Brown, wet, dense, fine to coarse SAND, some gravel, little silt.	G#340727 A-1-b, SM WC=12.1%
20	5D	24/20	20.0 - 22.0	3/5/8/16	13	19				Brown, wet, very stiff, SILT, little fine to medium sand.	G#340728 A-4, CL WC=25.3%
25										Bottom of Exploration at 22.0 feet below ground surface. NO REFUSAL	
Remarks:											
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.										Page 1 of 1 Boring No.: HB-FRE-201	

Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: A 5.74 mile portion of US Route 1 Location: Frenchville, Maine				Boring No.: HB-FRE-202 WIN: 22657.00				
Driller: MaineDOT				Elevation (ft.): 512.1				Auger ID/OD: 5" Dia.				
Operator: Daggett				Datum: NAVD88				Sampler: N/A				
Logged By: B. Wilder				Rig Type: CME 45C				Hammer Wt./Fall: N/A				
Date Start/Finish: 6/16/2020				Drilling Method: Solid Stem Auger				Core Barrel: N/A				
Boring Location: 72+27,16.7 ft Lt.				Casing ID/OD: N/A				Water Level*: None observed				
Hammer Efficiency Factor:				Hammer Type: Automatic ☐ Hydraulic ☐ Rope & Cathead ☐								
Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample Attempt U = Thin Wall Tube Sample MU = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test, PP = Pocket Penetrometer MV = Unsuccessful Field Vane Shear Test Attempt R = Rock Core Sample SSA = Solid Stem Auger HSA = Hollow Stem Auger RC = Roller Cone WOH = Weight of 140lb. Hammer WOR/C = Weight of Rods or Casing WO1P = Weight of One Person S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf) S_u(lab) = Lab Vane Undrained Shear Strength (psf) q_p = Unconfined Compressive Strength (ksf) N-uncorrected = Raw Field SPT N-value Hammer Efficiency Factor = Rig Specific Annual Calibration Value N₆₀ = SPT N-uncorrected Corrected for Hammer Efficiency N₆₀ = (Hammer Efficiency Factor/60%)*N-uncorrected T_v = Pocket Torvane Shear Strength (psf) WC = Water Content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test												
Depth (ft.)	Sample Information									Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N ₆₀	Casing Blows	Elevation (ft.)				
0							SSA				Probe, no material samples taken.	
5												
10												
15												
20									492.1		Bottom of Exploration at 20.0 feet below ground surface. NO REFUSAL	
25												
Remarks:												
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.											Page 1 of 1	
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.											Boring No.: HB-FRE-202	

Maine Department of Transportation										Project: A 5.74 mile portion of US Route 1		Boring No.: HB-FRE-203							
Soil/Rock Exploration Log US CUSTOMARY UNITS										Location: Frenchville, Maine		WIN: 22657.00							
Driller: MaineDOT					Elevation (ft.): 523.6					Auger ID/OD: 5" Solid Stem									
Operator: Daggett					Datum: NAVD88					Sampler: Standard Split Spoon									
Logged By: B. Wilder					Rig Type: CME 45C					Hammer Wt./Fall: 140#/30"									
Date Start/Finish: 6/17/2020; 07:30-10:00					Drilling Method: Cased Wash Boring					Core Barrel: N/A									
Boring Location: 83+98.8, 10.1 ft Rt.					Casing ID/OD: NW-3"					Water Level*: 18.0 ft bgs.									
Hammer Efficiency Factor: 0.886					Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐														
Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample Attempt U = Thin Wall Tube Sample MU = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test, PP = Pocket Penetrometer MV = Unsuccessful Field Vane Shear Test Attempt										R = Rock Core Sample SSA = Solid Stem Auger HSA = Hollow Stem Auger RC = Roller Cone WOH = Weight of 140lb. Hammer WOR/C = Weight of Rods or Casing WO1P = Weight of One Person					S _u = Peak/Remolded Field Vane Undrained Shear Strength (psf) S _{u(lab)} = Lab Vane Undrained Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) N-uncorrected = Raw Field SPT N-value Hammer Efficiency Factor = Rig Specific Annual Calibration Value N ₆₀ = SPT N-uncorrected Corrected for Hammer Efficiency N ₆₀ = (Hammer Efficiency Factor/60%)*N-uncorrected				
T _v = Pocket Torvane Shear Strength (psf) WC = Water Content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test																			
Sample Information																			
Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N ₆₀	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.								
0							SSA	523.1		6" HMA.									
	1D	24/18	1.0 - 3.0	15/17/14/15	31	46				Brown, damp, dense, Gravelly fine to coarse SAND, little silt, (Fill).	G#340729 A-1-b, SM WC=6.1%								
5	2D	24/17	5.0 - 7.0	6/6/4/4	10	15				Brown, moist, medium dense, fine to coarse SAND, some gravel, some silt, (Fill).	G#340730 A-1-b, SM WC=9.3%								
10	3D	21.6/14	10.0 - 11.8	5/15/5/40(3.6")	20	30				Brown, moist, medium dense, fine to coarse SAND, some gravel, some silt, (Fill).	G#340731 A-1-b, SM WC=12.8%								
										Cobbles from 11.8-12.1 ft bgs.									
15	4D	6/6	15.0 - 15.5	50	---					Brown, wet, fine to coarse Sandy GRAVEL, little silt. Cobbles from 15.5-15.9 ft bgs.	G#340732 A-1-b, SM WC=14.2%								
										Cobbles from 18.6-18.9 ft bgs.									
20	5D	24/13	20.0 - 22.0	10/13/14/17	27	40				Brown, wet, hard, SILT, little fine to medium sand.	G#340733 A-4, CL WC=28.0%								
25																			
Remarks:																			
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.										Page 1 of 2									
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.										Boring No.: HB-FRE-203									

[illegible]

Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: A 5.74 mile portion of US Route 1 Location: Frenchville, Maine				Boring No.: HB-FRE-204 WIN: 22657.00				
Driller: MaineDOT			Elevation (ft.): 524.3			Auger ID/OD: 5" Dia.						
Operator: Daggett			Datum: NAVD88			Sampler: N/A						
Logged By: B. Wilder			Rig Type: CME 45C			Hammer Wt./Fall: N/A						
Date Start/Finish: 6/17/2020			Drilling Method: Solid Stem Auger			Core Barrel: N/A						
Boring Location: 84+26.6, 14.0 ft Lt.			Casing ID/OD: N/A			Water Level*: None observed						
Hammer Efficiency Factor:			Hammer Type: Automatic ☐ Hydraulic ☐ Rope & Cathead ☐									
Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample Attempt U = Thin Wall Tube Sample MU = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test, PP = Pocket Penetrometer MV = Unsuccessful Field Vane Shear Test Attempt R = Rock Core Sample SSA = Solid Stem Auger HSA = Hollow Stem Auger RC = Roller Cone WOH = Weight of 140lb. Hammer WOR/C = Weight of Rods or Casing WO1P = Weight of One Person S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf) S_{u(lab)} = Lab Vane Undrained Shear Strength (psf) q_p = Unconfined Compressive Strength (ksf) N-uncorrected = Raw Field SPT N-value Hammer Efficiency Factor = Rig Specific Annual Calibration Value N₆₀ = SPT N-uncorrected Corrected for Hammer Efficiency N₆₀ = (Hammer Efficiency Factor/60%)*N-uncorrected T_v = Pocket Torvane Shear Strength (psf) WC = Water Content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test												
Depth (ft.)	Sample Information									Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N ₆₀	Casing Blows	Elevation (ft.)				
0							SSA				Probe, no material samples taken.	
5												
10												
15												
20												
25												
Remarks:												
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.												
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.											Page 1 of 2	
											Boring No.: HB-FRE-204	

Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS						Project: A 5.74 mile portion of US Route 1				Boring No.: HB-FRE-204															
						Location: Frenchville, Maine				WIN: 22657.00															
Driller: MaineDOT						Elevation (ft.) 524.3				Auger ID/OD: 5" Dia.															
Operator: Daggett						Datum: NAVD88				Sampler: N/A															
Logged By: B. Wilder						Rig Type: CME 45C				Hammer Wt./Fall: N/A															
Date Start/Finish: 6/17/2020						Drilling Method: Solid Stem Auger				Core Barrel: N/A															
Boring Location: 84+26.6, 14.0 ft Lt.						Casing ID/OD: N/A				Water Level*: None observed															
Hammer Efficiency Factor:						Hammer Type: Automatic ☐ Hydraulic ☐ Rope & Cathead ☐																			
Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample Attempt U = Thin Wall Tube Sample MU = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test, PP = Pocket Penetrometer MV = Unsuccessful Field Vane Shear Test Attempt						R = Rock Core Sample SSA = Solid Stem Auger HSA = Hollow Stem Auger RC = Roller Cone WOH = Weight of 140 lb. Hammer WOR/C = Weight of Rods or Casing WO1P = Weight of One Person				Su = Peak/Remolded Field Vane Undrained Shear Strength (psf) Su(lab) = Lab Vane Undrained Shear Strength (psf) qp = Unconfined Compressive Strength (ksf) N-uncorrected = Raw Field SPT N-value Hammer Efficiency Factor = Rig Specific Annual Calibration Value N60 = SPT N-uncorrected Corrected for Hammer Efficiency N60 = (Hammer Efficiency Factor/60%)*N-uncorrected				Ty = Pocket Torvane Shear Strength (psf) WC = Water Content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test											
Sample Information																									
Depth (ft.)		Sample No.		Pen./Rec. (in.)		Sample Depth (ft.)		Blows (/6 in.) Shear Strength (psf) or RQD (%)		N-uncorrected		N60		Casing Blows		Elevation (ft.)		Graphic Log		Visual Description and Remarks				Laboratory Testing Results/ AASHTO Unified Class.	
25																									

Maine Department of Transportation										Project: A 5.74 mile portion of US Route 1		Boring No.: HB-FRE-205	
Soil/Rock Exploration Log US CUSTOMARY UNITS										Location: Frenchville, Maine		WIN: 22657.00	
Driller: MaineDOT					Elevation (ft.): 530.5					Auger ID/OD: 5" Solid Stem			
Operator: Daggett					Datum: NAVD88					Sampler: Standard Split Spoon			
Logged By: B. Wilder					Rig Type: CME 45C					Hammer Wt./Fall: 140#/30"			
Date Start/Finish: 6/17/2020; 10:30-14:00					Drilling Method: Cased Wash Boring					Core Barrel: NQ-2"			
Boring Location: 153+22, 8.0 ft Rt.					Casing ID/OD: NW-3"					Water Level*: 14.0 ft bgs.			
Hammer Efficiency Factor: 0.886					Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐								
Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample Attempt U = Thin Wall Tube Sample MU = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test, PP = Pocket Penetrometer MV = Unsuccessful Field Vane Shear Test Attempt R = Rock Core Sample SSA = Solid Stem Auger HSA = Hollow Stem Auger RC = Roller Cone WOH = Weight of 140lb. Hammer WOR/C = Weight of Rods or Casing WO1P = Weight of One Person S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf) S_{u(lab)} = Lab Vane Undrained Shear Strength (psf) q_p = Unconfined Compressive Strength (ksf) N-uncorrected = Raw Field SPT N-value Hammer Efficiency Factor = Rig Specific Annual Calibration Value N₆₀ = SPT N-uncorrected Corrected for Hammer Efficiency N₆₀ = (Hammer Efficiency Factor/60%)*N-uncorrected T_v = Pocket Torvane Shear Strength (psf) WC = Water Content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test													
Sample Information													
Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N ₆₀	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.		
0							SSA	529.9		7" HMA.			
	1D	24/19	1.0 - 3.0	10/23/19/24	42	62				Brown, damp, very dense, fine to coarse SAND, some gravel, little silt, (Fill).	G#340736 A-1-a, SM WC=3.5%		
5	2D	24/15	5.0 - 7.0	7/9/6/6	15	22				Brown, damp, medium dense, fine to coarse SAND, some gravel, some silt, (Fill).	G#340737 A-1-b, SM WC=8.3%		
10	3D	24/12	10.0 - 12.0	7/6/6/9	12	18				Brown, damp, medium dense, fine to coarse SAND, some gravel, some silt, (Fill).			
15	4D	24/16	15.0 - 17.0	8/9/8/16	17	25	25			Brown, damp, medium dense, fine to coarse SAND, some gravel, some silt, wood, (Fill).			
							133			Wood from 16.5-17.2 ft bgs.			
							71	512.0					
20	5D	24/13	20.0 - 22.0	13/10/10/11	20	30	27			Grey, wet, medium dense, Gravelly fine to coarse SAND, little silt, (Till).	G#340738 A-1-a, SM WC=17.6%		
							20						
							69						
							a100 RCA	506.8		a100 blows for 0.7 ft.			
25	R1	60/60	24.7 - 29.7	RQD = 20%			NQ-2	505.8		Weathered BEDROCK. Roller Coned Ahead to 24.7 ft bgs.			
Remarks:													

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 2

Boring No.: HB-FRE-205

Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS						Project: A 5.74 mile portion of US Route 1				Boring No.: HB-FRE-205																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
						Location: Frenchville, Maine				WIN: 22657.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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Definitions: D = Split Spoon SampleMD = Unsuccessful Split Spoon Sample AttemptU = Thin Wall Tube SampleMU = Unsuccessful Thin Wall Tube Sample AttemptV = Field Vane Shear Test, PP = Pocket PenetrometerMV = Unsuccessful Field Vane Shear Test Attempt						R = Rock Core SampleSSA = Solid Stem AugerHSA = Hollow Stem AugerRC = Roller ConeWOH = Weight of 140 lb. HammerWOR/C = Weight of Rods or CasingWO1P = Weight of One Person				S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)S_{u(lab)} = Lab Vane Undrained Shear Strength (psf)q_p = Unconfined Compressive Strength (ksf)N-uncorrected = Raw Field SPT N-valueHammer Efficiency Factor = Rig Specific Annual Calibration ValueN₆₀ = SPT N-uncorrected Corrected for Hammer EfficiencyN₆₀ = (Hammer Efficiency Factor/60%)*N-uncorrected				T_v = Pocket Torvane Shear Strength (psf)WC = Water Content, percentLL = Liquid LimitPL = Plastic LimitPI = Plasticity IndexG = Grain Size AnalysisC = Consolidation Test																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
<table><thead><tr><th rowspan="2">Depth (ft.)</th><th colspan="9">Sample Information</th><th rowspan="2">Graphic Log</th><th rowspan="2">Visual Description and Remarks</th><th rowspan="2">Laboratory Testing Results/AASHTO and Unified Class.</th></tr><tr><th>Sample No.</th><th>Pen./Rec. (in.)</th><th>Sample Depth (ft.)</th><th>Blows (/6 in.) Shear Strength (psf) or RQD (%)</th><th>N-uncorrected</th><th>N₆₀</th><th>Casing Blows</th><th>Elevation (ft.)</th></tr></thead><tbody><tr><td>25</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td rowspan="10"> Top of Bedrock at Elev. 505.8 ft. R1: Bedrock: Interbedded PELITE and SANDSTONE, [Seboomook Formation]. 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Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: A 5.74 mile portion of US Route 1 Location: Frenchville, Maine				Boring No.: HB-FRE-206 WIN: 22657.00				
Driller: MaineDOT				Elevation (ft.): 528.3				Auger ID/OD: 5" Dia.				
Operator: Daggett				Datum: NAVD88				Sampler: N/A				
Logged By: B. Wilder				Rig Type: CME 45C				Hammer Wt./Fall: N/A				
Date Start/Finish: 6/17/2020				Drilling Method: Solid Stem Auger				Core Barrel: N/A				
Boring Location: 153+35.3, 16.6 ft Lt.				Casing ID/OD: N/A				Water Level*: None observed				
Hammer Efficiency Factor:				Hammer Type: Automatic ☐ Hydraulic ☐ Rope & Cathead ☐								
Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample Attempt U = Thin Wall Tube Sample MU = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test, PP = Pocket Penetrometer MV = Unsuccessful Field Vane Shear Test Attempt R = Rock Core Sample SSA = Solid Stem Auger HSA = Hollow Stem Auger RC = Roller Cone WOH = Weight of 140lb. Hammer WOR/C = Weight of Rods or Casing WO1P = Weight of One Person S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf) S_u(lab) = Lab Vane Undrained Shear Strength (psf) q_p = Unconfined Compressive Strength (ksf) N-uncorrected = Raw Field SPT N-value Hammer Efficiency Factor = Rig Specific Annual Calibration Value N₆₀ = SPT N-uncorrected Corrected for Hammer Efficiency N₆₀ = (Hammer Efficiency Factor/60%)*N-uncorrected T_v = Pocket Torvane Shear Strength (psf) WC = Water Content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test												
Depth (ft.)	Sample Information									Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N ₆₀	Casing Blows	Elevation (ft.)				
0							SSA				Probe, no material samples taken.	
5												
10												
15												
20									509.2		Bottom of Exploration at 19.1 feet below ground surface. REFUSAL	
25												
Remarks:												
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.										Page 1 of 1		
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.										Boring No.: HB-FRE-206		

Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: A 5.74 mile portion of US Route 1 Location: Frenchville, Maine		Boring No.: HB-FRE-207 WIN: 22657.00						
Driller: MaineDOT			Elevation (ft.): 515.5			Auger ID/OD: 5" Solid Stem						
Operator: Daggett			Datum: NAVD88			Sampler: Standard Split Spoon						
Logged By: B. Wilder			Rig Type: CME 45C			Hammer Wt./Fall: 140#/30"						
Date Start/Finish: 6/17/2020; 14:00-15:30			Drilling Method: Cased Wash Boring			Core Barrel: N/A						
Boring Location: 194+53, 9.8 ft Rt.			Casing ID/OD: NW-3"			Water Level*: 18.0 ft bgs.						
Hammer Efficiency Factor: 0.886			Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐									
Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample Attempt U = Thin Wall Tube Sample MU = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test, PP = Pocket Penetrometer MV = Unsuccessful Field Vane Shear Test Attempt R = Rock Core Sample SSA = Solid Stem Auger HSA = Hollow Stem Auger RC = Roller Cone WOH = Weight of 140lb. Hammer WOR/C = Weight of Rods or Casing WO1P = Weight of One Person S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf) S_{u(lab)} = Lab Vane Undrained Shear Strength (psf) q_p = Unconfined Compressive Strength (ksf) N-uncorrected = Raw Field SPT N-value Hammer Efficiency Factor = Rig Specific Annual Calibration Value N₆₀ = SPT N-uncorrected Corrected for Hammer Efficiency N₆₀ = (Hammer Efficiency Factor/60%)*N-uncorrected T_v = Pocket Torvane Shear Strength (psf) WC = Water Content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test												
Depth (ft.)	Sample Information								Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N ₆₀	Casing Blows					
0							SSA	515.0		6" HMA.		
	1D	24/15	1.0 - 3.0	7/11/9/10	20	30				Brown, damp, medium dense, fine to coarse SAND, some gravel, little silt, (Fill).	G#340739 A-1-b, SM WC=4.8%	
5										Brown, moist, medium dense, Gravelly fine to coarse SAND, little silt, (Fill).	G#340740 A-1-b, SM WC=9.2%	
	2D	24/14	5.0 - 7.0	4/8/6/10	14	21						
10								507.0		Brown, wet, dense, fine to coarse SAND, some silt, some gravel, (Till).	G#340741 A-2-4, SM WC=24.0%	
	3D	24/18	10.0 - 12.0	7/9/16/8	25	37	29					
15										Grey, wet, medium dense, fine to coarse SAND, some silt, some gravel, little clay, (Till).	G#340742 A-4, SC-SM WC=9.4%	
	4D	24/13	15.0 - 17.0	5/8/9/12	17	25	OPEN HOLE					
20								495.5		Grey, wet, hard, SILT, some fine to coarse sand, little gravel, little clay, (Till).	G#340743 A-4, SC-SM WC=8.8%	
	5D	24/20	20.0 - 22.0	14/23/27/40	50	74						
25												
Remarks:												
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.											Page 1 of 2 Boring No.: HB-FRE-207	

Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: A 5.74 mile portion of US Route 1 Location: Frenchville, Maine				Boring No.: HB-FRE-207 WIN: 22657.00				
Driller: MaineDOT				Elevation (ft.): 515.5				Auger ID/OD: 5" Solid Stem				
Operator: Daggett				Datum: NAVD88				Sampler: Standard Split Spoon				
Logged By: B. Wilder				Rig Type: CME 45C				Hammer Wt./Fall: 140#/30"				
Date Start/Finish: 6/17/2020; 14:00-15:30				Drilling Method: Cased Wash Boring				Core Barrel: N/A				
Boring Location: 194+53, 9.8 ft Rt.				Casing ID/OD: NW-3"				Water Level*: 18.0 ft bgs.				
Hammer Efficiency Factor: 0.886				Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐								
Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample Attempt U = Thin Wall Tube Sample MU = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test, PP = Pocket Penetrometer MV = Unsuccessful Field Vane Shear Test Attempt R = Rock Core Sample SSA = Solid Stem Auger HSA = Hollow Stem Auger RC = Roller Cone WOH = Weight of 140 lb. Hammer WOR/C = Weight of Rods or Casing WO1P = Weight of One Person S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf) S_u(lab) = Lab Vane Undrained Shear Strength (psf) q_p = Unconfined Compressive Strength (ksf) N-uncorrected = Raw Field SPT N-value Hammer Efficiency Factor = Rig Specific Annual Calibration Value N₆₀ = SPT N-uncorrected Corrected for Hammer Efficiency N₆₀ = (Hammer Efficiency Factor/60%)*N-uncorrected T_v = Pocket Torvane Shear Strength (psf) WC = Water Content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test												
Depth (ft.)	Sample Information								Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N ₆₀	Casing Blows					
25	6D	24/18	25.0 - 27.0	31/26/27/40	53	78		488.5		Grey, wet, hard, SILT, some fine to coarse sand, little gravel, little clay, (Till).		
										Bottom of Exploration at 27.0 feet below ground surface. NO REFUSAL		
30												
35												
40												
45												
50												
Remarks:												
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.										Page 2 of 2		
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.										Boring No.: HB-FRE-207		

Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS										Project: A 5.74 mile portion of US Route 1 Location: Frenchville, Maine				Boring No.: HB-FRE-208 WIN: 22657.00			
Driller: MaineDOT				Elevation (ft.): 515.3				Auger ID/OD: 5" Dia.									
Operator: Daggett				Datum: NAVD88				Sampler: N/A									
Logged By: B. Wilder				Rig Type: CME 45C				Hammer Wt./Fall: N/A									
Date Start/Finish: 6/17/2020				Drilling Method: Solid Stem Auger				Core Barrel: N/A									
Boring Location: 194+73.3, 13.2 ft Lt.				Casing ID/OD: N/A				Water Level*: None observed									
Hammer Efficiency Factor:				Hammer Type: Automatic ☐ Hydraulic ☐ Rope & Cathead ☐													
Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample Attempt U = Thin Wall Tube Sample MU = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test, PP = Pocket Penetrometer MV = Unsuccessful Field Vane Shear Test Attempt R = Rock Core Sample SSA = Solid Stem Auger HSA = Hollow Stem Auger RC = Roller Cone WOH = Weight of 140lb. Hammer WOR/C = Weight of Rods or Casing WO1P = Weight of One Person S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf) S_{u(lab)} = Lab Vane Undrained Shear Strength (psf) q_p = Unconfined Compressive Strength (ksf) N-uncorrected = Raw Field SPT N-value Hammer Efficiency Factor = Rig Specific Annual Calibration Value N₆₀ = SPT N-uncorrected Corrected for Hammer Efficiency N₆₀ = (Hammer Efficiency Factor/60%)*N-uncorrected T_v = Pocket Torvane Shear Strength (psf) WC = Water Content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test																	
Depth (ft.)	Sample Information									Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.					
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N ₆₀	Casing Blows	Elevation (ft.)									
0							SSA			Probe, no material samples taken.							
5																	
10																	
15																	
20																	
25																	
Remarks:																	
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.										Page 1 of 2							
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.										Boring No.: HB-FRE-208							

Maine Department of Transportation <u>Soil/Rock Exploration Log</u> <u>US CUSTOMARY UNITS</u>				Project: A 5.74 mile portion of US Route 1 Location: Frenchville, Maine				Boring No.: HB-FRE-208 WIN: 22657.00																																																																																																																																																																																																					
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Boring Location: 194+73.3, 13.2 ft Lt.				Casing ID/OD: N/A				Water Level*: None observed																																																																																																																																																																																																					
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Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: A 5.74 mile portion of US Route 1 Location: Frenchville, Maine				Boring No.: HB-FRE-301 WIN: 22657.00					
Driller: MaineDOT				Elevation (ft.): 512.1				Auger ID/OD: 5" Solid Stem					
Operator: Daggett/Brooks				Datum: NAVD88				Sampler: Standard Split Spoon					
Logged By: B. Wilder				Rig Type: CME 45C				Hammer Wt./Fall: 140#/30"					
Date Start/Finish: 12/14/2021; 12:30-13:30				Drilling Method: Cased Wash Boring				Core Barrel: NQ-2"					
Boring Location: 321+98.7, 8.1 ft Lt.				Casing ID/OD: NW-3"				Water Level*: 4.8 ft bgs.					
Hammer Efficiency Factor: 0.974				Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐									
Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample Attempt U = Thin Wall Tube Sample MU = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test, PP = Pocket Penetrometer MV = Unsuccessful Field Vane Shear Test Attempt R = Rock Core Sample SSA = Solid Stem Auger HSA = Hollow Stem Auger RC = Roller Cone WOH = Weight of 140lb. Hammer WOR/C = Weight of Rods or Casing WO1P = Weight of One Person S _u = Peak/Remolded Field Vane Undrained Shear Strength (psf) S _{u(lab)} = Lab Vane Undrained Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) N-uncorrected = Raw Field SPT N-value Hammer Efficiency Factor = Rig Specific Annual Calibration Value N ₆₀ = SPT N-uncorrected Corrected for Hammer Efficiency N ₆₀ = (Hammer Efficiency Factor/60%)*N-uncorrected T _v = Pocket Torvane Shear Strength (psf) WC = Water Content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test													
Depth (ft.)	Sample Information								Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class.	
	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N ₆₀	Casing	Blows					
0								SSA	511.7				
	1D	24/19	1.0 - 3.0	23/14/9/7	23	37							
5	2D	24/16	5.0 - 7.0	16/19/28/60	47	76							
	R1	60/60	7.0 - 12.0	RQD = 0%			NQ-2						
10													
20													
25													
Remarks:													
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.												Page 1 of 1	
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.										Boring No.: HB-FRE-301			

[illegible]

[illegible]

Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS										Project: A 5.74 mile portion of US Route 1 Location: Frenchville, Maine			Boring No.: HB-FRE-304 WIN: 22657.00											
Driller: MaineDOT					Elevation (ft.): 507.8					Auger ID/OD: 5" Solid Stem														
Operator: Daggett/Brooks					Datum: NAVD88					Sampler: Standard Split Spoon														
Logged By: B. Wilder					Rig Type: CME 45C					Hammer Wt./Fall: 140#/30"														
Date Start/Finish: 12/14/2021; 08:30-09:30					Drilling Method: Cased Wash Boring					Core Barrel: NQ-2"														
Boring Location: 324+98.4, 9.3 ft Lt.					Casing ID/OD: NW-3"					Water Level*: 4.0 ft bgs.														
Hammer Efficiency Factor: 0.974					Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐																			
Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample Attempt U = Thin Wall Tube Sample MU = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test, PP = Pocket Penetrometer MV = Unsuccessful Field Vane Shear Test Attempt										R = Rock Core Sample SSA = Solid Stem Auger HSA = Hollow Stem Auger RC = Roller Cone WOH = Weight of 140lb. Hammer WOR/C = Weight of Rods or Casing WO1P = Weight of One Person					S _u = Peak/Remolded Field Vane Undrained Shear Strength (psf) S _{u(lab)} = Lab Vane Undrained Shear Strength (psf) q _p = Unconfined Compressive Strength (ksf) N-uncorrected = Raw Field SPT N-value Hammer Efficiency Factor = Rig Specific Annual Calibration Value N ₆₀ = SPT N-uncorrected Corrected for Hammer Efficiency N ₆₀ = (Hammer Efficiency Factor/60%)*N-uncorrected					T _v = Pocket Torvane Shear Strength (psf) WC = Water Content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test				
Sample Information																								
Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N ₆₀	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks					Laboratory Testing Results/ AASHTO and Unified Class.									
0							SSA	507.4		5" HMA.														
	1D	24/18	1.0 - 3.0	26/15/5/6	20	32				Brown, damp, dense, fine to coarse SAND, some gravel, some silt, with rock fragments, (Fill).														
5	MD R1	2.4/0 60/60	5.0 - 5.2 5.2 - 10.2	40(2.4") RQD = 20%	---		a50 NQ-2	502.6		a50 blows for 0.2 ft. Failed sample attempt.														
										Top of Bedrock at Elev. 502.6 ft. R1: Bedrock: Interbedded PELITE and SANDSTONE, [Seboomook Formation]. Rock Quality = Very Poor R1: Core Times (min:sec) 5.2-6.2 ft (1:41) 6.2-7.2 ft (1:35) 7.2-8.2 ft (1:19) 8.2-9.2 ft (1:26) 9.2-10.2 ft (1:20) 100% Recovery														
10								497.6																
25																								
Remarks:																								
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.																								
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.																								
Page 1 of 1																								
Boring No.: HB-FRE-304																								

APPENDIX B – LABORATORY TEST RESULTS

State of Maine - Department of Transportation
Laboratory Testing Summary Sheet

Town(s): Frenchville

Work Number: 22657.00

Boring & Sample Identification Number	Station (Feet)	Offset (Feet)	Depth (Feet)	Reference Number	G.S.D.C. Sheet	W.C. %	L.L.	P.I.	Classification		
									Unified	AASHTO	Frost
HB-FRE-101, B1	60+00	10.3 Rt.	0.58-5.0	264773	1	2.6			GW-GM	A-1-a	0
HB-FRE-102, B2	80+00	9.1 Lt.	0.67-2.8	264774	1	3.5			SM	A-1-a	II
HB-FRE-102, S1	80+00	9.1 Lt.	2.8-5.0	264775	5	23.9			SM	A-4	III
HB-FRE-103, S2	100+10	12.4 Rt.	0.0-1.6	270051	3	6.5			SM	A-1-b	II
HB-FRE-103, S3	100+10	12.4 Rt.	1.6-5.0	270052	5	14.8			SM	A-2-4	II
HB-FRE-104, S4	120+00	14.2 Lt.	0.0-5.0	270053	3	4.5			GW-GM	A-1-a	0
HB-FRE-105, B3	140+00	7.6 Rt.	0.58-2.0	270054	1	2.7			GW-GM	A-1-a	0
HB-FRE-106, B4	160+00	8.3 Lt.	0.58-4.5	270055	1	2.8			GW-GM	A-1-a	0
HB-FRE-107, S6	180+00	12.8 Rt.	0.0-2.6	270056	3	4.5			SM	A-1-a	II
HB-FRE-107, S7	180+00	12.8 Rt.	2.6-5.0	270057	5	13.3			SM	A-2-4	II
HB-FRE-108, S8	200+00	14.0 Lt.	0.0-3.8	270058	3	5.6			GW-GM	A-1-a	I
HB-FRE-109, B5	220+00	7.9 Rt.	0.67-5.0	270059	2	2.5			GW-GM	A-1-a	0
HB-FRE-110, B6	240+00	7.9 Lt.	0.67-5.0	270060	2	3.2			GW-GM	A-1-a	0
HB-FRE-111, S10	260+10	13.3 Rt.	0.0-5.0	270061	4	4.9			SM	A-1-b	II
HB-FRE-112, S11	280+10	13.2 Lt.	0.0-2.8	270062	4	5.2			SW-SM	A-1-a	0
HB-FRE-112, S12	280+10	13.2 Lt.	2.8-5.0	270063	5	14.6			SM	A-2-4	II
HB-FRE-113, B7	300+00	7.4 Rt.	0.67-2.4	270064	2	3.6			SM	A-1-b	II
HB-FRE-114, B8	320+00	8.2 Lt.	0.67-5.0	270065	2	3.1			GM	A-1-a	I
HB-FRE-115, S14	340+00	14.5 Rt.	0.0-1.7	270066	4	6.3			SM	A-2-4	II
HB-FRE-201, 1D	72+04.7	16.4 Rt.	0.0-2.0	340724	6	4.9			SM	A-1-b	II
HB-FRE-201, 2D	72+04.7	16.4 Rt.	5.0-7.0	340725	6	5.4			SM	A-1-a	II
HB-FRE-201, 3D	72+04.7	16.4 Rt.	10.0-12.0	340726	6	7.8			SM	A-1-b	II
HB-FRE-201, 4D	72+04.7	16.4 Rt.	15.0-17.0	340727	6	12.1			SM	A-1-b	II
HB-FRE-201, 5D	72+04.7	16.4 Rt.	20.0-22.0	340728	6	25.3			CL	A-4	IV
HB-FRE-203, 1D	83+98.8	10.1 Rt.	1.0-3.0	340729	7	6.1			SM	A-1-b	II
HB-FRE-203, 2D	83+98.8	10.1 Rt.	5.0-7.0	340730	7	9.3			SM	A-1-b	II
HB-FRE-203, 3D	83+98.8	10.1 Rt.	10.0-11.8	340731	7	12.8			SM	A-1-b	II
HB-FRE-203, 4D	83+98.8	10.1 Rt.	15.0-15.5	340732	7	14.2			SM	A-1-b	II
HB-FRE-203, 5D	83+98.8	10.1 Rt.	20.0-22.0	340733	8	28.0			CL	A-4	IV
HB-FRE-203, 6D	83+98.8	10.1 Rt.	26.0-27.0	340734	8	22.2	-N	P-	CL	A-4	IV
HB-FRE-203, 7D	83+98.8	10.1 Rt.	30.0-32.0	340735	8	20.1			CL	A-4	IV
HB-FRE-205, 1D	153+22	8.0 Rt.	1.0-3.0	340736	9	3.5			SM	A-1-a	II
HB-FRE-205, 2D	153+22	8.0 Rt.	5.0-7.0	340737	9	8.3			SM	A-1-b	II
HB-FRE-205, 5D	153+22	8.0 Rt.	20.0-22.0	340738	9	17.6			SM	A-1-a	II
HB-FRE-207, 1D	194+53	9.8 Rt.	1.0-3.0	340739	10	4.8			SM	A-1-b	II
HB-FRE-207, 2D	194+53	9.8 Rt.	5.0-7.0	340740	10	9.2			SM	A-1-b	II
HB-FRE-207, 3D	194+53	9.8 Rt.	10.0-12.0	340741	10	24.0			SM	A-2-4	II
HB-FRE-207, 4D	194+53	9.8 Rt.	15.0-17.0	340742	10	9.4			SC-SM	A-4	III
HB-FRE-207,5D	194+53	9.8 Rt.	20.0-22.0	340743	10	8.8			SC-SM	A-4	III

Classification of these soil samples is in accordance with AASHTO Classification System M-145-40. This classification is followed by the "Frost Susceptibility Rating" from zero (non-frost susceptible) to Class IV (highly frost susceptible).

The "Frost Susceptibility Rating" is based upon the MaineDOT and Corps of Engineers Classification Systems.

GSDC = Grain Size Distribution Curve as determined by AASHTO T 88-93 (1996) and/or ASTM D 422-63 (Reapproved 1998)

WC = water content as determined by AASHTO T 265-93 and/or ASTM D 2216-98

LL = Liquid limit as determined by AASHTO T 89-96 and/or ASTM D 4318-98 NP = Non Plastic

PI = Plasticity Index as determined by AASHTO 90-96 and/or ASTM D4318-98



GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No. **264773** Boring No./Sample No. **HB-FRE-101/B1** Sample Description **GEOTECHNICAL (DISTURBED)** Sampled **5/18/2016** Received **6/3/2016**

Sample Type: **GEOTECHNICAL** Location: Station: **60+00** Offset, ft: **10.3 RT** Dbfg, ft: **0.58-5.0**

WIN/Town **022657.00 - FRENCHVILLE** Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	100.0
1 in. [25.0 mm]	91.6
¾ in. [19.0 mm]	86.5
½ in. [12.5 mm]	76.0
⅜ in. [9.5 mm]	69.7
¼ in. [6.3 mm]	59.2
No. 4 [4.75 mm]	51.5
No. 10 [2.00 mm]	36.3
No. 20 [0.850 mm]	26.2
No. 40 [0.425 mm]	20.2
No. 60 [0.250 mm]	16.8
No. 100 [0.150 mm]	13.4
No. 200 [0.075 mm]	10.2

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	2.6

Consolidation (T 216)

Trimming, Water Content, %

	Initial	Final		Void Ratio	% Strain
Water Content, %			Pmin		
Dry Density, lbs/ft³			Pp		
Void Ratio			Pmax		
Saturation, %			Cc/C'c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear tons/ft²	Remold tons/ft²	U. Shear tons/ft²	Remold tons/ft²		

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**Date Reported: **6/10/2016**

Paper Copy: Lab File; Project File; Geotech File



GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No.

Boring No./Sample No.

Sample Description

Sampled

Received

264774

HB-FRE-102/B2

GEOTECHNICAL (DISTURBED)

5/18/2016

6/3/2016

Sample Type: **GEOTECHNICAL** Location:

Station: **80+00** Offset, ft: **9.1** LT Dbfg, ft: **0.67-2.8**

WIN/Town 022657.00 - FRENCHVILLE

Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	100.0
1 in. [25.0 mm]	97.6
¾ in. [19.0 mm]	95.6
½ in. [12.5 mm]	86.4
⅜ in. [9.5 mm]	78.5
¼ in. [6.3 mm]	68.1
No. 4 [4.75 mm]	60.2
No. 10 [2.00 mm]	41.7
No. 20 [0.850 mm]	29.9
No. 40 [0.425 mm]	23.1
No. 60 [0.250 mm]	19.9
No. 100 [0.150 mm]	17.2
No. 200 [0.075 mm]	14.1

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	3.5

Consolidation (T 216)

Trimmings, Water Content, %					
	Initial	Final		Void Ratio	% Strain
Water Content, %			Pmin		
Dry Density, lbs/ft³			Pp		
Void Ratio			Pmax		
Saturation, %			Cc/C'c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear	Remold	U. Shear	Remold		
	tons/ft²	tons/ft²	tons/ft²	tons/ft²		

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**

Date Reported: 6/10/2016

Paper Copy: Lab File: Project File: Geotech File



GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No.

Boring No./Sample No.

Sample Description

Sampled

Received

264775

HB-FRE-102/S1

GEOTECHNICAL (DISTURBED)

5/18/2016

6/3/2016

Sample Type: **GEOTECHNICAL** Location:

Station: **80+00** Offset, ft: **9.1** LT Dbfg, ft: **2.8-5.0**

WIN/Town 022657.00 - FRENCHVILLE

Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	
1 in. [25.0 mm]	
¾ in. [19.0 mm]	100.0
½ in. [12.5 mm]	100.0
⅜ in. [9.5 mm]	99.5
¼ in. [6.3 mm]	97.7
No. 4 [4.75 mm]	96.2
No. 10 [2.00 mm]	91.0
No. 20 [0.850 mm]	86.3
No. 40 [0.425 mm]	82.3
No. 60 [0.250 mm]	71.0
No. 100 [0.150 mm]	54.9
No. 200 [0.075 mm]	38.3

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	23.9

Consolidation (T 216)

Trimmings, Water Content, %					
	Initial	Final		Void Ratio	% Strain
Water Content, %			Pmin		
Dry Density, lbs/ft³			Pp		
Void Ratio			Pmax		
Saturation, %			Cc/C'c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear	Remold	U. Shear	Remold		
	tons/ft²	tons/ft²	tons/ft²	tons/ft²		

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**

Date Reported: **6/8/2016**

Paper Copy: Lab File: Project File: Geotech File



GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No.

Boring No./Sample No.

Sample Description

Sampled

Received

270051

HB-FRE-103/S2

GEOTECHNICAL (DISTURBED)

5/18/2016

6/3/2016

Sample Type: **GEOTECHNICAL** Location:

Station: **100+10** Offset, ft: **12.4** RT Dbfg, ft: **0.0-1.6**

WIN/Town 022657.00 - FRENCHVILLE

Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	100.0
1 in. [25.0 mm]	
¾ in. [19.0 mm]	100.0
½ in. [12.5 mm]	93.4
⅜ in. [9.5 mm]	86.8
¼ in. [6.3 mm]	77.8
No. 4 [4.75 mm]	71.0
No. 10 [2.00 mm]	52.2
No. 20 [0.850 mm]	36.8
No. 40 [0.425 mm]	28.2
No. 60 [0.250 mm]	23.6
No. 100 [0.150 mm]	20.9
No. 200 [0.075 mm]	17.5

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	6.5

Consolidation (T 216)

Trimmings, Water Content, %					
	Initial	Final		Void Ratio	% Strain
Water Content, %			Pmin		
Dry Density, lbs/ft³			Pp		
Void Ratio			Pmax		
Saturation, %			Cc/C'c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear	Remold	U. Shear	Remold		
	tons/ft ²	tons/ft ²	tons/ft ²	tons/ft ²		
0-1	1.5	1.5	1.5	1.5	15	Stiff clay
1-2	1.5	1.5	1.5	1.5	15	Stiff clay
2-3	1.5	1.5	1.5	1.5	15	Stiff clay
3-4	1.5	1.5	1.5	1.5	15	Stiff clay
4-5	1.5	1.5	1.5	1.5	15	Stiff clay
5-6	1.5	1.5	1.5	1.5	15	Stiff clay
6-7	1.5	1.5	1.5	1.5	15	Stiff clay
7-8	1.5	1.5	1.5	1.5	15	Stiff clay
8-9	1.5	1.5	1.5	1.5	15	Stiff clay
9-10	1.5	1.5	1.5	1.5	15	Stiff clay
10-11	1.5	1.5	1.5	1.5	15	Stiff clay
11-12	1.5	1.5	1.5	1.5	15	Stiff clay
12-13	1.5	1.5	1.5	1.5	15	Stiff clay
13-14	1.5	1.5	1.5	1.5	15	Stiff clay
14-15	1.5	1.5	1.5	1.5	15	Stiff clay
15-16	1.5	1.5	1.5	1.5	15	Stiff clay
16-17	1.5	1.5	1.5	1.5	15	Stiff clay
17-18	1.5	1.5	1.5	1.5	15	Stiff clay
18-19	1.5	1.5	1.5	1.5	15	Stiff clay
19-20	1.5	1.5	1.5	1.5	15	Stiff clay
20-21	1.5	1.5	1.5	1.5	15	Stiff clay
21-22	1.5	1.5	1.5	1.5	15	Stiff clay
22-23	1.5	1.5	1.5	1.5	15	Stiff clay
23-24	1.5	1.5	1.5	1.5	15	Stiff clay
24-25	1.5	1.5	1.5	1.5	15	Stiff clay
25-26	1.5	1.5	1.5	1.5	15	Stiff clay
26-27	1.5	1.5	1.5	1.5	15	Stiff clay
27-28	1.5	1.5	1.5	1.5	15	Stiff clay
28-29	1.5	1.5	1.5	1.5	15	Stiff clay
29-30	1.5	1.5	1.5	1.5	15	Stiff clay
30-31	1.5	1.5	1.5	1.5	15	Stiff clay
31-32	1.5	1.5	1.5	1.5	15	Stiff clay
32-33	1.5	1.5	1.5	1.5	15	Stiff clay
33-34	1.5	1.5	1.5	1.5	15	Stiff clay
34-35	1.5	1.5	1.5	1.5	15	Stiff clay
35-36	1.5	1.5	1.5	1.5	15	Stiff clay
36-37	1.5	1.5	1.5	1.5	15	Stiff clay
37-38	1.5	1.5	1.5	1.5	15	Stiff clay
38-39	1.5	1.5	1.5	1.5	15	Stiff clay
39-40	1.5	1.5	1.5	1.5	15	Stiff clay
40-41	1.5	1.5	1.5	1.5	15	Stiff clay
41-42	1.5	1.5	1.5	1.5	15	Stiff clay
42-43	1.5	1.5	1.5	1.5	15	Stiff clay
43-44	1.5	1.5	1.5	1.5	15	Stiff clay
44-45	1.5	1.5	1.5	1.5	15	Stiff clay
45-46	1.5	1.5	1.5	1.5	15	Stiff clay
46-47	1.5	1.5	1.5	1.5	15	Stiff clay
47-48	1.5	1.5	1.5	1.5	15	Stiff clay
48-49	1.5	1.5	1.5	1.5	15	Stiff clay
49-50	1.5	1.5	1.5	1.5	15	Stiff clay
50-51	1.5	1.5	1.5	1.5	15	Stiff clay
51-52	1.5	1.5	1.5	1.5	15	Stiff clay
52-53	1.5	1.5	1.5	1.5	15	Stiff clay
53-54	1.5	1.5	1.5	1.5	15	Stiff clay
54-55	1.5	1.5	1.5	1.5	15	Stiff clay

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**

Date Reported: **6/9/2016**

Paper Copy: Lab File: Project File: Geotech File



GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No.

Boring No./Sample No.

Sample Description

Sampled

Received

270052

HB-FRE-103/S3

GEOTECHNICAL (DISTURBED)

5/18/2016

6/3/2016

Sample Type: **GEOTECHNICAL** Location:

Station: **100+10** Offset, ft: **12.4** RT Dbfg, ft: **1.6-5.0**

WIN/Town 022657.00 - FRENCHVILLE

Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	100.0
1 in. [25.0 mm]	91.4
¾ in. [19.0 mm]	91.4
½ in. [12.5 mm]	85.2
⅜ in. [9.5 mm]	82.5
¼ in. [6.3 mm]	76.8
No. 4 [4.75 mm]	73.2
No. 10 [2.00 mm]	63.7
No. 20 [0.850 mm]	56.0
No. 40 [0.425 mm]	50.8
No. 60 [0.250 mm]	46.6
No. 100 [0.150 mm]	41.3
No. 200 [0.075 mm]	33.5

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	14.8

Consolidation (T 216)

Trimmings, Water Content, %					
	Initial	Final		Void Ratio	% Strain
Water Content, %			Pmin		
Dry Density, lbs/ft³			Pp		
Void Ratio			Pmax		
Saturation, %			Cc/C'c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear	Remold	U. Shear	Remold		
	tons/ft²	tons/ft²	tons/ft²	tons/ft²		

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**

Date Reported: **6/8/2016**

Paper Copy: Lab File: Project File: Geotech File



GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No.

Boring No./Sample No.

Sample Description

Sampled

Received

270053

HB-FRE-104/S4

GEOTECHNICAL (DISTURBED)

5/18/2016

6/3/2016

Sample Type: **GEOTECHNICAL** Location:

Station: **120+00** Offset, ft: **14.2** LT Dbfg, ft: **0.0-5.0**

WIN/Town 022657.00 - FRENCHVILLE

Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	100.0
1 in. [25.0 mm]	74.2
¾ in. [19.0 mm]	74.2
½ in. [12.5 mm]	63.0
⅜ in. [9.5 mm]	59.5
¼ in. [6.3 mm]	50.5
No. 4 [4.75 mm]	45.2
No. 10 [2.00 mm]	32.5
No. 20 [0.850 mm]	21.8
No. 40 [0.425 mm]	15.0
No. 60 [0.250 mm]	11.8
No. 100 [0.150 mm]	9.8
No. 200 [0.075 mm]	7.9

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	4.5

Consolidation (T 216)

Trimmings, Water Content, %			
	Initial	Final	
Water Content, %			Pmin
Dry Density, lbs/ft³			Pp
Void Ratio			Pmax
Saturation, %			Cc/C'c

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear	Remold	U. Shear	Remold		
	tons/ft²	tons/ft²	tons/ft²	tons/ft²		

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**

Date Reported: **6/9/2016**

Paper Copy: Lab File; Project File; Geotech File



GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No. **270054** Boring No./Sample No. **HB-FRE-105/B3** Sample Description **GEOTECHNICAL (DISTURBED)** Sampled **5/18/2016** Received **6/3/2016**

Sample Type: **GEOTECHNICAL** Location: Station: **140+00** Offset, ft: **7.6** RT Dbfg, ft: **0.58-2.0**

WIN/Town **022657.00 - FRENCHVILLE** Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	100.0
1 in. [25.0 mm]	90.6
¾ in. [19.0 mm]	84.6
½ in. [12.5 mm]	72.1
⅜ in. [9.5 mm]	65.1
¼ in. [6.3 mm]	56.3
No. 4 [4.75 mm]	50.3
No. 10 [2.00 mm]	35.9
No. 20 [0.850 mm]	25.6
No. 40 [0.425 mm]	19.2
No. 60 [0.250 mm]	15.4
No. 100 [0.150 mm]	13.0
No. 200 [0.075 mm]	10.3

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	2.7

Consolidation (T 216)

Trimming, Water Content, %					
	Initial	Final		Void Ratio	% Strain
Water Content, %			P _{min}		
Dry Density, lbs/ft³			P _p		
Void Ratio			P _{max}		
Saturation, %			C _c /C' _c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear	Remold	U. Shear	Remold		
	tons/ft²	tons/ft²	tons/ft²	tons/ft²		

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**

Date Reported: **6/10/2016**

Paper Copy: Lab File; Project File; Geotech File



GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No.

Boring No./Sample No.

Sample Description

Sampled

Received

270055

HB-FRE-106/B4

GEOTECHNICAL (DISTURBED)

5/18/2016

6/3/2016

Sample Type: **GEOTECHNICAL** Location:

Station: **160+00** Offset, ft: **8.3** LT Dbfg, ft: **0.58-4.5**

WIN/Town 022657.00 - FRENCHVILLE

Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	100.0
1 in. [25.0 mm]	91.3
¾ in. [19.0 mm]	85.6
½ in. [12.5 mm]	73.2
⅜ in. [9.5 mm]	64.7
¼ in. [6.3 mm]	54.1
No. 4 [4.75 mm]	47.8
No. 10 [2.00 mm]	34.1
No. 20 [0.850 mm]	24.4
No. 40 [0.425 mm]	18.0
No. 60 [0.250 mm]	14.7
No. 100 [0.150 mm]	12.3
No. 200 [0.075 mm]	9.8

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	2.8

Consolidation (T 216)

Trimmings, Water Content, %					
	Initial	Final		Void Ratio	% Strain
Water Content, %			Pmin		
Dry Density, lbs/ft³			Pp		
Void Ratio			Pmax		
Saturation, %			Cc/C'c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear	Remold	U. Shear	Remold		
	tons/ft²	tons/ft²	tons/ft²	tons/ft²		

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**

Date Reported: 6/10/2016

Paper Copy: Lab File: Project File: Geotech File



GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No.

Boring No./Sample No.

Sample Description

Sampled

Received

270056

HB-FRE-107/S6

GEOTECHNICAL (DISTURBED)

5/18/2016

6/3/2016

Sample Type: **GEOTECHNICAL** Location:

Station: **180+00** Offset, ft: **12.8** RT Dbfg, ft: **0.0-2.6**

WIN/Town 022657.00 - FRENCHVILLE

Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	100.0
1 in. [25.0 mm]	95.5
¾ in. [19.0 mm]	86.5
½ in. [12.5 mm]	80.5
⅜ in. [9.5 mm]	76.6
¼ in. [6.3 mm]	67.9
No. 4 [4.75 mm]	62.3
No. 10 [2.00 mm]	46.8
No. 20 [0.850 mm]	33.8
No. 40 [0.425 mm]	26.2
No. 60 [0.250 mm]	21.1
No. 100 [0.150 mm]	18.2
No. 200 [0.075 mm]	14.7

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	4.5

Consolidation (T 216)

Trimmings, Water Content, %					
	Initial	Final		Void Ratio	% Strain
Water Content, %			Pmin		
Dry Density, lbs/ft³			Pp		
Void Ratio			Pmax		
Saturation, %			Cc/C'c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear	Remold	U. Shear	Remold		
	tons/ft²	tons/ft²	tons/ft²	tons/ft²		

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**

Date Reported: **6/9/2016**

Paper Copy: Lab File: Project File: Geotech File



GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No. **270057** Boring No./Sample No. **HB-FRE-107/S7** Sample Description **GEOTECHNICAL (DISTURBED)** Sampled **5/18/2016** Received **6/3/2016**

Sample Type: **GEOTECHNICAL** Location: Station: **180+00** Offset, ft: **12.8 RT** Dbfg, ft: **2.6-5.0**

WIN/Town **022657.00 - FRENCHVILLE** Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	100.0
1 in. [25.0 mm]	92.0
¾ in. [19.0 mm]	92.0
½ in. [12.5 mm]	89.2
⅜ in. [9.5 mm]	87.1
¼ in. [6.3 mm]	81.4
No. 4 [4.75 mm]	77.7
No. 10 [2.00 mm]	66.8
No. 20 [0.850 mm]	57.8
No. 40 [0.425 mm]	51.6
No. 60 [0.250 mm]	45.8
No. 100 [0.150 mm]	40.5
No. 200 [0.075 mm]	31.9

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	13.3

Consolidation (T 216)

Trimming, Water Content, %					
	Initial	Final		Void Ratio	% Strain
Water Content, %			P _{min}		
Dry Density, lbs/ft³			P _p		
Void Ratio			P _{max}		
Saturation, %			C _c /C' _c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear	Remold	U. Shear	Remold		
	tons/ft²	tons/ft²	tons/ft²	tons/ft²		

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**

Date Reported: **6/8/2016**

Paper Copy: Lab File; Project File; Geotech File



GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No. **270058** Boring No./Sample No. **HB-FRE-108/S8** Sample Description **GEOTECHNICAL (DISTURBED)** Sampled **5/18/2016** Received **6/3/2016**

Sample Type: **GEOTECHNICAL** Location: Station: **200+00** Offset, ft: **14.0** LT Dbfg, ft: **0.0-3.0**

WIN/Town **022657.00 - FRENCHVILLE** Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	100.0
1 in. [25.0 mm]	89.8
¾ in. [19.0 mm]	86.8
½ in. [12.5 mm]	77.9
⅜ in. [9.5 mm]	71.3
¼ in. [6.3 mm]	61.9
No. 4 [4.75 mm]	56.2
No. 10 [2.00 mm]	41.7
No. 20 [0.850 mm]	29.5
No. 40 [0.425 mm]	21.1
No. 60 [0.250 mm]	16.8
No. 100 [0.150 mm]	14.6
No. 200 [0.075 mm]	11.9

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	5.6

Consolidation (T 216)

Trimming, Water Content, %					
	Initial	Final		Void Ratio	% Strain
Water Content, %			P _{min}		
Dry Density, lbs/ft³			P _p		
Void Ratio			P _{max}		
Saturation, %			C _c /C' _c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear	Remold	U. Shear	Remold		
	tons/ft²	tons/ft²	tons/ft²	tons/ft²		

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**

Date Reported: **6/9/2016**

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GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No.

Boring No./Sample No.

Sample Description

Sampled

Received

270059

HB-FRE-109/B5

GEOTECHNICAL (DISTURBED)

5/18/2016

6/3/2016

Sample Type: **GEOTECHNICAL** Location:

Station: **220+00** Offset, ft: **7.9** RT Dbfg, ft: **0.67-5.0**

WIN/Town 022657.00 - FRENCHVILLE

Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	100.0
1 in. [25.0 mm]	89.0
¾ in. [19.0 mm]	85.3
½ in. [12.5 mm]	74.2
⅜ in. [9.5 mm]	69.5
¼ in. [6.3 mm]	58.5
No. 4 [4.75 mm]	52.3
No. 10 [2.00 mm]	37.8
No. 20 [0.850 mm]	26.4
No. 40 [0.425 mm]	18.8
No. 60 [0.250 mm]	14.9
No. 100 [0.150 mm]	12.0
No. 200 [0.075 mm]	9.2

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	2.5

Consolidation (T 216)

Trimmings, Water Content, %					
	Initial	Final		Void Ratio	% Strain
Water Content, %			Pmin		
Dry Density, lbs/ft³			Pp		
Void Ratio			Pmax		
Saturation, %			Cc/C'c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear	Remold	U. Shear	Remold		
	tons/ft²	tons/ft²	tons/ft²	tons/ft²		

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**

Date Reported: 6/10/2016

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GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No.

Boring No./Sample No.

Sample Description

Sampled

Received

270060

HB-FRE-110/B6

GEOTECHNICAL (DISTURBED)

5/18/2016

6/3/2016

Sample Type: **GEOTECHNICAL** Location:

Station: **240+00** Offset, ft: **7.9** LT Dbfg, ft: **0.67-5.0**

WIN/Town 022657.00 - FRENCHVILLE

Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	100.0
1 in. [25.0 mm]	90.7
¾ in. [19.0 mm]	83.5
½ in. [12.5 mm]	72.6
⅜ in. [9.5 mm]	66.2
¼ in. [6.3 mm]	55.9
No. 4 [4.75 mm]	49.9
No. 10 [2.00 mm]	37.2
No. 20 [0.850 mm]	26.4
No. 40 [0.425 mm]	19.2
No. 60 [0.250 mm]	15.4
No. 100 [0.150 mm]	13.0
No. 200 [0.075 mm]	10.5

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	3.2

Consolidation (T 216)

Trimmings, Water Content, %					
	Initial	Final		Void Ratio	% Strain
Water Content, %			Pmin		
Dry Density, lbs/ft³			Pp		
Void Ratio			Pmax		
Saturation, %			Cc/C'c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear	Remold	U. Shear	Remold		
	tons/ft²	tons/ft²	tons/ft²	tons/ft²		

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**

Date Reported: 6/10/2016

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GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No.

Boring No./Sample No.

Sample Description

Sampled

Received

270061

HB-FRE-111/S10

GEOTECHNICAL (DISTURBED)

5/18/2016

6/3/2016

Sample Type: **GEOTECHNICAL** Location:

Station: **260+10** Offset, ft: **13.3** RT Dbfg, ft: **0.0-5.0**

WIN/Town 022657.00 - FRENCHVILLE

Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	100.0
1 in. [25.0 mm]	97.0
¾ in. [19.0 mm]	96.1
½ in. [12.5 mm]	86.6
⅜ in. [9.5 mm]	82.3
¼ in. [6.3 mm]	72.0
No. 4 [4.75 mm]	65.8
No. 10 [2.00 mm]	50.0
No. 20 [0.850 mm]	36.5
No. 40 [0.425 mm]	27.2
No. 60 [0.250 mm]	22.3
No. 100 [0.150 mm]	18.9
No. 200 [0.075 mm]	15.3

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	4.9

Consolidation (T 216)

Trimmings, Water Content, %					
	Initial	Final		Void Ratio	% Strain
Water Content, %			Pmin		
Dry Density, lbs/ft³			Pp		
Void Ratio			Pmax		
Saturation, %			Cc/C'c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear	Remold	U. Shear	Remold		
	tons/ft²	tons/ft²	tons/ft²	tons/ft²		

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**

Date Reported: **6/8/2016**

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GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No.

Boring No./Sample No.

Sample Description

Sampled

Received

270062

HB-FRE-112/S11

GEOTECHNICAL (DISTURBED)

5/18/2016

6/3/2016

Sample Type: **GEOTECHNICAL** Location:

Station: **280+10** Offset, ft: **13.2** LT Dbfg, ft: **0.0-2.8**

WIN/Town 022657.00 - FRENCHVILLE

Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	
1 in. [25.0 mm]	97.9
¾ in. [19.0 mm]	93.2
½ in. [12.5 mm]	82.1
⅜ in. [9.5 mm]	75.7
¼ in. [6.3 mm]	65.1
No. 4 [4.75 mm]	57.8
No. 10 [2.00 mm]	40.9
No. 20 [0.850 mm]	28.8
No. 40 [0.425 mm]	20.9
No. 60 [0.250 mm]	17.3
No. 100 [0.150 mm]	14.6
No. 200 [0.075 mm]	11.7

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	5.2

Consolidation (T 216)

Trimmings, Water Content, %					
	Initial	Final		Void Ratio	% Strain
Water Content, %			Pmin		
Dry Density, lbs/ft³			Pp		
Void Ratio			Pmax		
Saturation, %			Cc/C'c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear	Remold	U. Shear	Remold		
	tons/ft²	tons/ft²	tons/ft²	tons/ft²		

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**

Date Reported: **6/10/2016**

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GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No.

Boring No./Sample No.

Sample Description

Sampled

Received

270063

HB-FRE-112/S12

GEOTECHNICAL (DISTURBED)

5/18/2016

6/3/2016

Sample Type: **GEOTECHNICAL** Location:

Station: **280+10** Offset, ft: **13.2** LT Dbfg, ft: **2.8-5.0**

WIN/Town 022657.00 - FRENCHVILLE

Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	
1 in. [25.0 mm]	
¾ in. [19.0 mm]	100.0
½ in. [12.5 mm]	97.6
⅜ in. [9.5 mm]	95.2
¼ in. [6.3 mm]	89.7
No. 4 [4.75 mm]	85.8
No. 10 [2.00 mm]	73.9
No. 20 [0.850 mm]	63.2
No. 40 [0.425 mm]	54.7
No. 60 [0.250 mm]	48.3
No. 100 [0.150 mm]	42.3
No. 200 [0.075 mm]	30.9

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	14.6

Consolidation (T 216)

Trimmings, Water Content, %					
	Initial	Final		Void Ratio	% Strain
Water Content, %			Pmin		
Dry Density, lbs/ft³			Pp		
Void Ratio			Pmax		
Saturation, %			Cc/C'c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear	Remold	U. Shear	Remold		
	tons/ft²	tons/ft²	tons/ft²	tons/ft²		

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**

Date Reported: **6/9/2016**

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GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No. **270064** Boring No./Sample No. **HB-FRE-113/B7** Sample Description **GEOTECHNICAL (DISTURBED)** Sampled **5/18/2016** Received **6/3/2016**

Sample Type: **GEOTECHNICAL** Location: Station: **300+00** Offset, ft: **7.4** RT Dbfg, ft: **0.67-2.4**

WIN/Town **022657.00 - FRENCHVILLE** Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	100.0
1 in. [25.0 mm]	98.9
¾ in. [19.0 mm]	96.4
½ in. [12.5 mm]	86.4
⅜ in. [9.5 mm]	80.2
¼ in. [6.3 mm]	68.7
No. 4 [4.75 mm]	62.3
No. 10 [2.00 mm]	46.0
No. 20 [0.850 mm]	33.7
No. 40 [0.425 mm]	26.8
No. 60 [0.250 mm]	22.8
No. 100 [0.150 mm]	19.8
No. 200 [0.075 mm]	16.2

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	3.6

Consolidation (T 216)

Trimming, Water Content, %					
	Initial	Final		Void Ratio	% Strain
Water Content, %			Pmin		
Dry Density, lbs/ft³			Pp		
Void Ratio			Pmax		
Saturation, %			Cc/C'c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear	Remold	U. Shear	Remold		
	tons/ft²	tons/ft²	tons/ft²	tons/ft²		

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**

Date Reported: **6/10/2016**

Paper Copy: Lab File; Project File; Geotech File



GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No.

Boring No./Sample No.

Sample Description

Sampled

Received

270065

HB-FRE-114/B8

GEOTECHNICAL (DISTURBED)

5/18/2016

6/1/2016

Sample Type: **GEOTECHNICAL** Location:

Station: **320+00** Offset, ft: **8.2** LT Dbfg, ft: **0.67-5.0**

WIN/Town 022657.00 - FRENCHVILLE

Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	100.0
1 in. [25.0 mm]	93.2
¾ in. [19.0 mm]	87.3
½ in. [12.5 mm]	77.0
⅜ in. [9.5 mm]	68.1
¼ in. [6.3 mm]	57.6
No. 4 [4.75 mm]	51.6
No. 10 [2.00 mm]	37.6
No. 20 [0.850 mm]	28.9
No. 40 [0.425 mm]	23.7
No. 60 [0.250 mm]	20.3
No. 100 [0.150 mm]	17.6
No. 200 [0.075 mm]	14.4

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	3.1

Consolidation (T 216)

Trimmings, Water Content, %					
	Initial	Final		Void Ratio	% Strain
Water Content, %			Pmin		
Dry Density, lbs/ft³			Pp		
Void Ratio			Pmax		
Saturation, %			Cc/C'c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear	Remold	U. Shear	Remold		
	tons/ft ²	tons/ft ²	tons/ft ²	tons/ft ²		
0-1	1.0	0.8	1.2	1.0	15	Soft clay
1-2	1.2	1.0	1.4	1.2	18	Soft clay
2-3	1.5	1.2	1.8	1.5	20	Soft clay
3-4	1.8	1.5	2.2	1.8	22	Soft clay
4-5	2.0	1.8	2.5	2.0	25	Soft clay
5-6	2.2	2.0	2.8	2.2	28	Soft clay
6-7	2.5	2.2	3.2	2.5	30	Soft clay
7-8	2.8	2.5	3.5	2.8	32	Soft clay
8-9	3.0	2.8	3.8	3.0	35	Soft clay
9-10	3.2	3.0	4.0	3.2	38	Soft clay
10-11	3.5	3.2	4.5	3.5	40	Soft clay
11-12	3.8	3.5	5.0	3.8	42	Soft clay
12-13	4.0	3.8	5.5	4.0	45	Soft clay
13-14	4.2	4.0	6.0	4.2	48	Soft clay
14-15	4.5	4.2	6.5	4.5	50	Soft clay
15-16	4.8	4.5	7.0	4.8	52	Soft clay
16-17	5.0	4.8	7.5	5.0	55	Soft clay
17-18	5.2	5.0	8.0	5.2	58	Soft clay
18-19	5.5	5.2	8.5	5.5	60	Soft clay
19-20	5.8	5.5	9.0	5.8	62	Soft clay
20-21	6.0	5.8	9.5	6.0	65	Soft clay
21-22	6.2	6.0	10.0	6.2	68	Soft clay
22-23	6.5	6.2	10.5	6.5	70	Soft clay
23-24	6.8	6.5	11.0	6.8	72	Soft clay
24-25	7.0	6.8	11.5	7.0	75	Soft clay
25-26	7.2	7.0	12.0	7.2	78	Soft clay
26-27	7.5	7.2	12.5	7.5	80	Soft clay
27-28	7.8	7.5	13.0	7.8	82	Soft clay
28-29	8.0	7.8	13.5	8.0	85	Soft clay
29-30	8.2	8.0	14.0	8.2	88	Soft clay
30-31	8.5	8.2	14.5	8.5	90	Soft clay
31-32	8.8	8.5	15.0	8.8	92	Soft clay
32-33	9.0	8.8	15.5	9.0	95	Soft clay
33-34	9.2	9.0	16.0	9.2	98	Soft clay
34-35	9.5	9.2	16.5	9.5	100	Soft clay

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**

Date Reported: **6/9/2016**

Paper Copy: Lab File: Project File: Geotech File



GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No. **270066** Boring No./Sample No. **HB-FRE-115/S14** Sample Description **GEOTECHNICAL (DISTURBED)** Sampled **5/18/2016** Received **6/3/2016**

Sample Type: **GEOTECHNICAL** Location: Station: **340+00** Offset, ft: **14.5 RT** Dbfg, ft: **0.0-1.7**

WIN/Town **022657.00 - FRENCHVILLE** Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	100.0
1 in. [25.0 mm]	100.0
¾ in. [19.0 mm]	100.0
½ in. [12.5 mm]	94.0
⅜ in. [9.5 mm]	88.3
¼ in. [6.3 mm]	79.6
No. 4 [4.75 mm]	73.3
No. 10 [2.00 mm]	57.7
No. 20 [0.850 mm]	45.4
No. 40 [0.425 mm]	37.8
No. 60 [0.250 mm]	33.8
No. 100 [0.150 mm]	30.4
No. 200 [0.075 mm]	25.7

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	6.3

Consolidation (T 216)

Trimming, Water Content, %

	Initial	Final		Void Ratio	% Strain
Water Content, %			Pmin		
Dry Density, lbs/ft³			Pp		
Void Ratio			Pmax		
Saturation, %			Cc/C'c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear	Remold	U. Shear	Remold		
	tons/ft²	tons/ft²	tons/ft²	tons/ft²		

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**Date Reported: **6/9/2016**

Paper Copy: Lab File; Project File; Geotech File



GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No. **340724** Boring No./Sample No. **HB-FRE-201/1D** Sample Description **GEOTECHNICAL (DISTURBED)** Sampled **6/16/2020** Received **6/23/2020**

Sample Type: **GEOTECHNICAL** Location: Station: **72+04.7** Offset, ft: **16.4** RT Dbfg, ft: **0.0-2.0**

WIN/Town **022657.00 - FRENCHVILLE** Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	100.0
1 in. [25.0 mm]	94.8
¾ in. [19.0 mm]	94.8
½ in. [12.5 mm]	93.1
⅜ in. [9.5 mm]	88.2
¼ in. [6.3 mm]	80.7
No. 4 [4.75 mm]	75.0
No. 10 [2.00 mm]	58.6
No. 20 [0.850 mm]	44.0
No. 40 [0.425 mm]	34.4
No. 60 [0.250 mm]	28.1
No. 100 [0.150 mm]	24.1
No. 200 [0.075 mm]	19.0

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	4.9

Consolidation (T 216)

Trimming, Water Content, %

	Initial	Final		Void Ratio	% Strain
Water Content, %			Pmin		
Dry Density, lbs/ft³			Pp		
Void Ratio			Pmax		
Saturation, %			Cc/C'c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear	Remold	U. Shear	Remold		
	tons/ft²	tons/ft²	tons/ft²	tons/ft²		

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**

Date Reported: **6/30/2020**

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GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No.

Boring No./Sample No.

Sample Description

Sampled

Received

340725

HB-FRE-201/2D

GEOTECHNICAL (DISTURBED)

6/16/2020

6/23/2020

Sample Type: **GEOTECHNICAL** Location:

Station: **72+04.7** Offset, ft: **16.4** RT Dbfg, ft: **5.0-7.0**

WIN/Town 022657.00 - FRENCHVILLE

Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	
1 in. [25.0 mm]	
¾ in. [19.0 mm]	100.0
½ in. [12.5 mm]	86.5
⅜ in. [9.5 mm]	82.5
¼ in. [6.3 mm]	71.8
No. 4 [4.75 mm]	64.2
No. 10 [2.00 mm]	45.9
No. 20 [0.850 mm]	32.8
No. 40 [0.425 mm]	24.9
No. 60 [0.250 mm]	20.5
No. 100 [0.150 mm]	17.7
No. 200 [0.075 mm]	13.6

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	5.4

Consolidation (T 216)

Trimmings, Water Content, %					
	Initial	Final		Void Ratio	% Strain
Water Content, %			Pmin		
Dry Density, lbs/ft³			Pp		
Void Ratio			Pmax		
Saturation, %			Cc/C'c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear	Remold	U. Shear	Remold		
	tons/ft²	tons/ft²	tons/ft²	tons/ft²		

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**

Date Reported: 6/30/2020

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GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No.

Boring No./Sample No.

Sample Description

Sampled

Received

340726

HB-FRE-201/3D

GEOTECHNICAL (DISTURBED)

6/16/2020

6/23/2020

Sample Type: **GEOTECHNICAL** Location:

Station: **72+04.7** Offset, ft: **16.4** RT Dbfg, ft: **10.0-12.0**

WIN/Town 022657.00 - FRENCHVILLE

Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	
1 in. [25.0 mm]	100.0
¾ in. [19.0 mm]	96.9
½ in. [12.5 mm]	90.8
⅜ in. [9.5 mm]	83.9
¼ in. [6.3 mm]	73.4
No. 4 [4.75 mm]	66.6
No. 10 [2.00 mm]	48.9
No. 20 [0.850 mm]	36.1
No. 40 [0.425 mm]	28.8
No. 60 [0.250 mm]	23.5
No. 100 [0.150 mm]	19.8
No. 200 [0.075 mm]	15.1

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	7.8

Consolidation (T 216)

Trimmings, Water Content, %					
	Initial	Final		Void Ratio	% Strain
Water Content, %			Pmin		
Dry Density, lbs/ft³			Pp		
Void Ratio			Pmax		
Saturation, %			Cc/C'c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear	Remold	U. Shear	Remold		
	tons/ft²	tons/ft²	tons/ft²	tons/ft²		

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**

Date Reported: 6/30/2020

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GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No.

Boring No./Sample No.

Sample Description

Sampled

Received

340727

HB-FRE-201/4D

GEOTECHNICAL (DISTURBED)

6/16/2020

6/23/2020

Sample Type: **GEOTECHNICAL** Location:

Station: **72+04.7** Offset, ft: **16.4** RT Dbfg, ft: **15.0-17.0**

WIN/Town 022657.00 - FRENCHVILLE

Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	
1 in. [25.0 mm]	100.0
¾ in. [19.0 mm]	89.0
½ in. [12.5 mm]	85.1
⅜ in. [9.5 mm]	80.5
¼ in. [6.3 mm]	73.6
No. 4 [4.75 mm]	67.6
No. 10 [2.00 mm]	51.9
No. 20 [0.850 mm]	36.9
No. 40 [0.425 mm]	28.3
No. 60 [0.250 mm]	23.9
No. 100 [0.150 mm]	21.2
No. 200 [0.075 mm]	16.3

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	12.1

Consolidation (T 216)

Trimmings, Water Content, %					
	Initial	Final		Void Ratio	% Strain
Water Content, %			Pmin		
Dry Density, lbs/ft³			Pp		
Void Ratio			Pmax		
Saturation, %			Cc/C'c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear	Remold	U. Shear	Remold		
	tons/ft²	tons/ft²	tons/ft²	tons/ft²		

Comments:

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GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No. **340728** Boring No./Sample No. **HB-FRE-201/5D** Sample Description **GEOTECHNICAL (DISTURBED)** Sampled **6/16/2020** Received **6/23/2020**

Sample Type: **GEOTECHNICAL** Location: Station: **72+04.7** Offset, ft: **16.4** RT Dbfg, ft: **20.0-22.0**

WIN/Town **022657.00 - FRENCHVILLE** Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	
1 in. [25.0 mm]	
¾ in. [19.0 mm]	
½ in. [12.5 mm]	
⅜ in. [9.5 mm]	
¼ in. [6.3 mm]	
No. 4 [4.75 mm]	100.0
No. 10 [2.00 mm]	99.9
No. 20 [0.850 mm]	99.7
No. 40 [0.425 mm]	99.5
No. 60 [0.250 mm]	99.0
No. 100 [0.150 mm]	96.8
No. 200 [0.075 mm]	87.9

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	25.3

Consolidation (T 216)

Trimming, Water Content, %

	Initial	Final		Void Ratio	% Strain
Water Content, %			P _{min}		
Dry Density, lbs/ft³			P _p		
Void Ratio			P _{max}		
Saturation, %			C _c /C' _c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear	Remold	U. Shear	Remold		
	tons/ft²	tons/ft²	tons/ft²	tons/ft²		

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**Date Reported: **6/30/2020**

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GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No.

Boring No./Sample No.

Sample Description

Sampled

Received

340729

HB-FRE-203/1D

GEOTECHNICAL (DISTURBED)

6/17/2020

6/23/2020

Sample Type: **GEOTECHNICAL** Location:

Station: **83+98.8** Offset, ft: **10.1** RT Dbfg, ft: **1.0-3.0**

WIN/Town 022657.00 - FRENCHVILLE

Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	
1 in. [25.0 mm]	100.0
¾ in. [19.0 mm]	94.9
½ in. [12.5 mm]	84.0
⅜ in. [9.5 mm]	79.5
¼ in. [6.3 mm]	70.7
No. 4 [4.75 mm]	64.6
No. 10 [2.00 mm]	47.7
No. 20 [0.850 mm]	35.7
No. 40 [0.425 mm]	28.3
No. 60 [0.250 mm]	23.8
No. 100 [0.150 mm]	20.7
No. 200 [0.075 mm]	16.6

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	6.1

Consolidation (T 216)

Trimmings, Water Content, %					
	Initial	Final		Void Ratio	% Strain
Water Content, %			Pmin		
Dry Density, lbs/ft³			Pp		
Void Ratio			Pmax		
Saturation, %			Cc/C'c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear	Remold	U. Shear	Remold		
	tons/ft²	tons/ft²	tons/ft²	tons/ft²		

Comments:

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GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No.

Boring No./Sample No.

Sample Description

Sampled

Received

340730

HB-FRE-203/2D

GEOTECHNICAL (DISTURBED)

6/17/2020

6/23/2020

Sample Type: **GEOTECHNICAL** Location:

Station: **83+98.8** Offset, ft: **10.1** RT Dbfg, ft: **5.0-7.0**

WIN/Town 022657.00 - FRENCHVILLE

Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	
1 in. [25.0 mm]	100.0
¾ in. [19.0 mm]	98.2
½ in. [12.5 mm]	86.4
⅜ in. [9.5 mm]	82.4
¼ in. [6.3 mm]	72.7
No. 4 [4.75 mm]	67.1
No. 10 [2.00 mm]	53.2
No. 20 [0.850 mm]	42.5
No. 40 [0.425 mm]	36.4
No. 60 [0.250 mm]	32.4
No. 100 [0.150 mm]	29.3
No. 200 [0.075 mm]	24.1

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	9.3

Consolidation (T 216)

Trimmings, Water Content, %					
	Initial	Final		Void Ratio	% Strain
Water Content, %			Pmin		
Dry Density, lbs/ft³			Pp		
Void Ratio			Pmax		
Saturation, %			Cc/C'c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear	Remold	U. Shear	Remold		
	tons/ft²	tons/ft²	tons/ft²	tons/ft²		

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**

Date Reported: 6/29/2020

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GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No. **340731** Boring No./Sample No. **HB-FRE-203/3D** Sample Description **GEOTECHNICAL (DISTURBED)** Sampled **6/17/2020** Received **6/23/2020**

Sample Type: **GEOTECHNICAL** Location: Station: **83+98.8** Offset, ft: **10.1** RT Dbfg, ft: **10.0-11.8**

WIN/Town **022657.00 - FRENCHVILLE** Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	100.0
1 in. [25.0 mm]	92.3
¾ in. [19.0 mm]	86.9
½ in. [12.5 mm]	82.3
⅜ in. [9.5 mm]	77.0
¼ in. [6.3 mm]	68.5
No. 4 [4.75 mm]	64.8
No. 10 [2.00 mm]	55.2
No. 20 [0.850 mm]	47.8
No. 40 [0.425 mm]	41.7
No. 60 [0.250 mm]	35.9
No. 100 [0.150 mm]	30.8
No. 200 [0.075 mm]	22.7

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	12.8

Consolidation (T 216)

Trimming, Water Content, %

	Initial	Final		Void Ratio	% Strain
Water Content, %			Pmin		
Dry Density, lbs/ft³			Pp		
Void Ratio			Pmax		
Saturation, %			Cc/C'c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear	Remold	U. Shear	Remold		
	tons/ft²	tons/ft²	tons/ft²	tons/ft²		

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**Date Reported: **6/30/2020**

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GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No. **340732** Boring No./Sample No. **HB-FRE-203/4D** Sample Description **GEOTECHNICAL (DISTURBED)** Sampled **6/17/2020** Received **6/23/2020**

Sample Type: **GEOTECHNICAL** Location: Station: **83+98.8** Offset, ft: **10.1** RT Dbfg, ft: **15.0-15.5**

WIN/Town **022657.00 - FRENCHVILLE** Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	100.0
1 in. [25.0 mm]	80.5
¾ in. [19.0 mm]	80.5
½ in. [12.5 mm]	71.1
⅜ in. [9.5 mm]	67.0
¼ in. [6.3 mm]	58.6
No. 4 [4.75 mm]	53.9
No. 10 [2.00 mm]	43.4
No. 20 [0.850 mm]	35.4
No. 40 [0.425 mm]	29.7
No. 60 [0.250 mm]	26.0
No. 100 [0.150 mm]	23.0
No. 200 [0.075 mm]	16.9

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	14.2

Consolidation (T 216)

Trimming, Water Content, %

	Initial	Final		Void Ratio	% Strain
Water Content, %			Pmin		
Dry Density, lbs/ft³			Pp		
Void Ratio			Pmax		
Saturation, %			Cc/C'c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear	Remold	U. Shear	Remold		
	tons/ft²	tons/ft²	tons/ft²	tons/ft²		

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**Date Reported: **6/30/2020**

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GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No. **340733** Boring No./Sample No. **HB-FRE-203/5D** Sample Description **GEOTECHNICAL (DISTURBED)** Sampled **6/17/2020** Received **6/23/2020**

Sample Type: **GEOTECHNICAL** Location: Station: **83+98.8** Offset, ft: **10.1** RT Dbfg, ft: **20.0-22.0**

WIN/Town **022657.00 - FRENCHVILLE** Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	
1 in. [25.0 mm]	
¾ in. [19.0 mm]	
½ in. [12.5 mm]	
⅜ in. [9.5 mm]	
¼ in. [6.3 mm]	
No. 4 [4.75 mm]	100.0
No. 10 [2.00 mm]	99.6
No. 20 [0.850 mm]	99.0
No. 40 [0.425 mm]	98.9
No. 60 [0.250 mm]	98.8
No. 100 [0.150 mm]	98.6
No. 200 [0.075 mm]	88.3

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	28.0

Consolidation (T 216)

Trimming, Water Content, %

	Initial	Final		Void Ratio	% Strain
Water Content, %			Pmin		
Dry Density, lbs/ft³			Pp		
Void Ratio			Pmax		
Saturation, %			Cc/C'c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear tons/ft²	Remold tons/ft²	U. Shear tons/ft²	Remold tons/ft²		

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**Date Reported: **6/29/2020**

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GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No. **340734** Boring No./Sample No. **HB-FRE-203/6D** Sample Description **GEOTECHNICAL (DISTURBED)** Sampled **6/17/2020** Received **6/23/2020**

Sample Type: **GEOTECHNICAL** Location: Station: **83+98.8** Offset, ft: **10.1** RT Dbfg, ft: **26.0-27.0**

WIN/Town **022657.00 - FRENCHVILLE** Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 88)

Wash Method

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	
1 in. [25.0 mm]	
¾ in. [19.0 mm]	
½ in. [12.5 mm]	
⅜ in. [9.5 mm]	
¼ in. [6.3 mm]	
No. 4 [4.75 mm]	100.0
No. 10 [2.00 mm]	99.8
No. 20 [0.850 mm]	
No. 40 [0.425 mm]	99.4
No. 60 [0.250 mm]	
No. 100 [0.150 mm]	
No. 200 [0.075 mm]	95.0
[0.0281 mm]	76.8
[0.0196 mm]	56.2
[0.0122 mm]	38.4
[0.0088 mm]	32.5
[0.0063 mm]	29.5
[0.0031 mm]	23.7
[0.0013 mm]	17.8

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	NP
Specific Gravity, Corrected to 20°C (T 100)	2.58
Loss on Ignition, % (T 267)	
Water Content (T 265), %	22.2

Consolidation (T 216)

Trimming, Water Content, %					
	Initial	Final		Void Ratio	% Strain
Water Content, %			Pmin		
Dry Density, lbs/ft³			Pp		
Void Ratio			Pmax		
Saturation, %			Cc/C'c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear	Remold	U. Shear	Remold		
	tons/ft²	tons/ft²	tons/ft²	tons/ft²		

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**

Date Reported: **7/1/2020**

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GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No. **340735** Boring No./Sample No. **HB-FRE-203/7D** Sample Description **GEOTECHNICAL (DISTURBED)** Sampled **6/17/2020** Received **6/23/2020**

Sample Type: **GEOTECHNICAL** Location: Station: **83+98.8** Offset, ft: **10.1** RT Dbfg, ft: **30.0-32.0**

WIN/Town **022657.00 - FRENCHVILLE** Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	
1 in. [25.0 mm]	
¾ in. [19.0 mm]	
½ in. [12.5 mm]	
⅜ in. [9.5 mm]	
¼ in. [6.3 mm]	
No. 4 [4.75 mm]	100.0
No. 10 [2.00 mm]	100.0
No. 20 [0.850 mm]	99.9
No. 40 [0.425 mm]	99.6
No. 60 [0.250 mm]	98.7
No. 100 [0.150 mm]	93.8
No. 200 [0.075 mm]	61.3

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	20.1

Consolidation (T 216)

Trimming, Water Content, %

	Initial	Final		Void Ratio	% Strain
Water Content, %			Pmin		
Dry Density, lbs/ft³			Pp		
Void Ratio			Pmax		
Saturation, %			Cc/C'c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear tons/ft²	Remold tons/ft²	U. Shear tons/ft²	Remold tons/ft²		

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**Date Reported: **6/29/2020**

Paper Copy: Lab File; Project File; Geotech File



GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No.

Boring No./Sample No.

Sample Description

Sampled

Received

340736

HB-FRE-205/1D

GEOTECHNICAL (DISTURBED)

6/17/2020

6/23/2020

Sample Type: **GEOTECHNICAL** Location:

Station: **153+22** Offset, ft: **8.0** RT Dbfg, ft: **1.0-3.0**

WIN/Town 022657.00 - FRENCHVILLE

Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	
1 in. [25.0 mm]	
¾ in. [19.0 mm]	100.0
½ in. [12.5 mm]	87.5
⅜ in. [9.5 mm]	80.2
¼ in. [6.3 mm]	70.0
No. 4 [4.75 mm]	64.5
No. 10 [2.00 mm]	47.6
No. 20 [0.850 mm]	34.7
No. 40 [0.425 mm]	26.1
No. 60 [0.250 mm]	20.8
No. 100 [0.150 mm]	17.8
No. 200 [0.075 mm]	13.8

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	3.5

Consolidation (T 216)

Trimmings, Water Content, %					
	Initial	Final		Void Ratio	% Strain
Water Content, %			Pmin		
Dry Density, lbs/ft³			Pp		
Void Ratio			Pmax		
Saturation, %			Cc/C'c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear	Remold	U. Shear	Remold		
	tons/ft ²	tons/ft ²	tons/ft ²	tons/ft ²		
0-1	1.0	0.8	1.2	1.0	15	Soft clay
1-2	1.2	1.0	1.4	1.2	18	Soft clay
2-3	1.5	1.2	1.8	1.5	20	Soft clay
3-4	1.8	1.5	2.2	1.8	22	Soft clay
4-5	2.0	1.8	2.5	2.0	25	Soft clay
5-6	2.2	2.0	2.8	2.2	28	Soft clay
6-7	2.5	2.2	3.2	2.5	30	Soft clay
7-8	2.8	2.5	3.5	2.8	32	Soft clay
8-9	3.0	2.8	3.8	3.0	35	Soft clay
9-10	3.2	3.0	4.0	3.2	38	Soft clay
10-11	3.5	3.2	4.5	3.5	40	Soft clay
11-12	3.8	3.5	5.0	3.8	42	Soft clay
12-13	4.0	3.8	5.5	4.0	45	Soft clay
13-14	4.2	4.0	6.0	4.2	48	Soft clay
14-15	4.5	4.2	6.5	4.5	50	Soft clay
15-16	4.8	4.5	7.0	4.8	52	Soft clay
16-17	5.0	4.8	7.5	5.0	55	Soft clay
17-18	5.2	5.0	8.0	5.2	58	Soft clay
18-19	5.5	5.2	8.5	5.5	60	Soft clay
19-20	5.8	5.5	9.0	5.8	62	Soft clay
20-21	6.0	5.8	9.5	6.0	65	Soft clay
21-22	6.2	6.0	10.0	6.2	68	Soft clay
22-23	6.5	6.2	10.5	6.5	70	Soft clay
23-24	6.8	6.5	11.0	6.8	72	Soft clay
24-25	7.0	6.8	11.5	7.0	75	Soft clay
25-26	7.2	7.0	12.0	7.2	78	Soft clay
26-27	7.5	7.2	12.5	7.5	80	Soft clay
27-28	7.8	7.5	13.0	7.8	82	Soft clay
28-29	8.0	7.8	13.5	8.0	85	Soft clay
29-30	8.2	8.0	14.0	8.2	88	Soft clay
30-31	8.5	8.2	14.5	8.5	90	Soft clay
31-32	8.8	8.5	15.0	8.8	92	Soft clay
32-33	9.0	8.8	15.5	9.0	95	Soft clay
33-34	9.2	9.0	16.0	9.2	98	Soft clay
34-35	9.5	9.2	16.5	9.5	100	Soft clay

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**

Date Reported: 6/30/2020

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GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No. **340737** Boring No./Sample No. **HB-FRE-205/2D** Sample Description **GEOTECHNICAL (DISTURBED)** Sampled **6/17/2020** Received **6/23/2020**

Sample Type: **GEOTECHNICAL** Location: Station: **153+22** Offset, ft: **8.0** RT Dbfg, ft: **5.0-7.0**

WIN/Town **022657.00 - FRENCHVILLE** Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	
1 in. [25.0 mm]	
¾ in. [19.0 mm]	100.0
½ in. [12.5 mm]	91.3
⅜ in. [9.5 mm]	86.6
¼ in. [6.3 mm]	77.7
No. 4 [4.75 mm]	72.6
No. 10 [2.00 mm]	57.8
No. 20 [0.850 mm]	45.9
No. 40 [0.425 mm]	38.1
No. 60 [0.250 mm]	32.6
No. 100 [0.150 mm]	28.9
No. 200 [0.075 mm]	23.7

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	8.3

Consolidation (T 216)

Trimming, Water Content, %

	Initial	Final		Void Ratio	% Strain
Water Content, %			Pmin		
Dry Density, lbs/ft³			Pp		
Void Ratio			Pmax		
Saturation, %			Cc/C'c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear tons/ft²	Remold tons/ft²	U. Shear tons/ft²	Remold tons/ft²		

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**

Date Reported: **6/30/2020**

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GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No. **340738** Boring No./Sample No. **HB-FRE-205/5D** Sample Description **GEOTECHNICAL (DISTURBED)** Sampled **6/17/2020** Received **6/23/2020**

Sample Type: **GEOTECHNICAL** Location: Station: **153+22** Offset, ft: **8.0** RT Dbfg, ft: **20.0-22.0**

WIN/Town **022657.00 - FRENCHVILLE** Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	
1 in. [25.0 mm]	100.0
¾ in. [19.0 mm]	86.6
½ in. [12.5 mm]	81.7
⅜ in. [9.5 mm]	74.5
¼ in. [6.3 mm]	64.8
No. 4 [4.75 mm]	58.5
No. 10 [2.00 mm]	40.9
No. 20 [0.850 mm]	29.7
No. 40 [0.425 mm]	24.1
No. 60 [0.250 mm]	20.1
No. 100 [0.150 mm]	17.4
No. 200 [0.075 mm]	13.0

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	17.6

Consolidation (T 216)

Trimming, Water Content, %

	Initial	Final		Void Ratio	% Strain
Water Content, %			Pmin		
Dry Density, lbs/ft³			Pp		
Void Ratio			Pmax		
Saturation, %			Cc/C'c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear tons/ft²	Remold tons/ft²	U. Shear tons/ft²	Remold tons/ft²		

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**Date Reported: **6/30/2020**

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GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No. **340739** Boring No./Sample No. **HB-FRE-207/1D** Sample Description **GEOTECHNICAL (DISTURBED)** Sampled **6/16/2020** Received **6/23/2020**

Sample Type: **GEOTECHNICAL** Location: Station: **194+53** Offset, ft: **9.8** RT Dbfg, ft: **1.0-3.0**

WIN/Town **022657.00 - FRENCHVILLE** Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	
1 in. [25.0 mm]	100.0
¾ in. [19.0 mm]	97.4
½ in. [12.5 mm]	86.5
⅜ in. [9.5 mm]	81.4
¼ in. [6.3 mm]	72.9
No. 4 [4.75 mm]	67.5
No. 10 [2.00 mm]	50.4
No. 20 [0.850 mm]	36.2
No. 40 [0.425 mm]	26.7
No. 60 [0.250 mm]	21.2
No. 100 [0.150 mm]	17.7
No. 200 [0.075 mm]	12.9

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	4.8

Consolidation (T 216)

Trimming, Water Content, %

	Initial	Final		Void Ratio	% Strain
Water Content, %			Pmin		
Dry Density, lbs/ft³			Pp		
Void Ratio			Pmax		
Saturation, %			Cc/C'c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear	Remold	U. Shear	Remold		
	tons/ft²	tons/ft²	tons/ft²	tons/ft²		

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**Date Reported: **6/30/2020**

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GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No. **340740** Boring No./Sample No. **HB-FRE-207/2D** Sample Description **GEOTECHNICAL (DISTURBED)** Sampled **6/16/2020** Received **6/23/2020**

Sample Type: **GEOTECHNICAL** Location: Station: **194+53** Offset, ft: **9.8** RT Dbfg, ft: **5.0-7.0**

WIN/Town **022657.00 - FRENCHVILLE** Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	
1 in. [25.0 mm]	100.0
¾ in. [19.0 mm]	85.6
½ in. [12.5 mm]	78.8
⅜ in. [9.5 mm]	73.8
¼ in. [6.3 mm]	64.3
No. 4 [4.75 mm]	59.9
No. 10 [2.00 mm]	47.9
No. 20 [0.850 mm]	37.8
No. 40 [0.425 mm]	31.1
No. 60 [0.250 mm]	26.8
No. 100 [0.150 mm]	23.7
No. 200 [0.075 mm]	18.2

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	9.2

Consolidation (T 216)

Trimming, Water Content, %

	Initial	Final		Void Ratio	% Strain
Water Content, %			Pmin		
Dry Density, lbs/ft³			Pp		
Void Ratio			Pmax		
Saturation, %			Cc/C'c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear	Remold	U. Shear	Remold		
	tons/ft²	tons/ft²	tons/ft²	tons/ft²		

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**Date Reported: **6/30/2020**

Paper Copy: Lab File; Project File; Geotech File



GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No.

Boring No./Sample No.

Sample Description

Sampled

Received

340741

HB-FRE-207/3D

GEOTECHNICAL (DISTURBED)

6/16/2020

6/23/2020

Sample Type: **GEOTECHNICAL** Location:

Station: **194+53** Offset, ft: **9.8** RT Dbfg, ft: **10.0-12.0**

WIN/Town 022657.00 - FRENCHVILLE

Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 27, T 11)

Wash Method

Procedure A

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	
1 in. [25.0 mm]	100.0
¾ in. [19.0 mm]	94.5
½ in. [12.5 mm]	91.3
⅜ in. [9.5 mm]	88.5
¼ in. [6.3 mm]	81.4
No. 4 [4.75 mm]	77.4
No. 10 [2.00 mm]	63.5
No. 20 [0.850 mm]	51.4
No. 40 [0.425 mm]	42.3
No. 60 [0.250 mm]	36.4
No. 100 [0.150 mm]	32.4
No. 200 [0.075 mm]	26.9

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	
Loss on Ignition, % (T 267)	
Water Content (T 265), %	24.0

Consolidation (T 216)

Trimmings, Water Content, %					
	Initial	Final		Void Ratio	% Strain
Water Content, %			Pmin		
Dry Density, lbs/ft³			Pp		
Void Ratio			Pmax		
Saturation, %			Cc/C'c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear	Remold	U. Shear	Remold		
	tons/ft²	tons/ft²	tons/ft²	tons/ft²		

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**

Date Reported: 6/30/2020

Paper Copy: Lab File: Project File: Geotech File



GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No. **340742** Boring No./Sample No. **HB-FRE-207/4D** Sample Description **GEOTECHNICAL (DISTURBED)** Sampled **6/16/2020** Received **6/23/2020**

Sample Type: **GEOTECHNICAL** Location: Station: **194+53** Offset, ft: **9.8** RT Dbfg, ft: **15.0-17.0**

WIN/Town **022657.00 - FRENCHVILLE** Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 88)

Wash Method

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	100.0
1 in. [25.0 mm]	91.2
¾ in. [19.0 mm]	83.9
½ in. [12.5 mm]	81.6
⅜ in. [9.5 mm]	79.8
¼ in. [6.3 mm]	75.2
No. 4 [4.75 mm]	71.9
No. 10 [2.00 mm]	63.9
No. 20 [0.850 mm]	
No. 40 [0.425 mm]	52.6
No. 60 [0.250 mm]	
No. 100 [0.150 mm]	
No. 200 [0.075 mm]	41.9
[0.0281 mm]	35.0
[0.0183 mm]	32.0
[0.0109 mm]	27.4
[0.0079 mm]	24.4
[0.0058 mm]	19.8
[0.0029 mm]	15.2
[0.0013 mm]	10.7

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	2.75
Loss on Ignition, % (T 267)	
Water Content (T 265), %	9.4

Consolidation (T 216)

Trimming, Water Content, %					
	Initial	Final		Void Ratio	% Strain
Water Content, %			Pmin		
Dry Density, lbs/ft³			Pp		
Void Ratio			Pmax		
Saturation, %			Cc/C'c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear	Remold	U. Shear	Remold		
	tons/ft²	tons/ft²	tons/ft²	tons/ft²		

Comments:

AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**

Date Reported: **7/1/2020**

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GEOTECHNICAL TEST REPORT

Central Laboratory

SAMPLE INFORMATION

Reference No. **340743** Boring No./Sample No. **HB-FRE-207/5D** Sample Description **GEOTECHNICAL (DISTURBED)** Sampled **6/16/2020** Received **6/23/2020**

Sample Type: **GEOTECHNICAL** Location: Station: **194+53** Offset, ft: **9.8** RT Dbfg, ft: **20.0-22.0**

WIN/Town **022657.00 - FRENCHVILLE** Sampler: **BRUCE WILDER**

TEST RESULTS

Sieve Analysis (T 88)

Wash Method

SIEVE SIZE U.S. [SI]	% Passing
3 in. [75.0 mm]	
1 in. [25.0 mm]	100.0
¾ in. [19.0 mm]	98.0
½ in. [12.5 mm]	91.3
⅜ in. [9.5 mm]	88.3
¼ in. [6.3 mm]	84.0
No. 4 [4.75 mm]	80.9
No. 10 [2.00 mm]	72.5
No. 20 [0.850 mm]	
No. 40 [0.425 mm]	61.1
No. 60 [0.250 mm]	
No. 100 [0.150 mm]	
No. 200 [0.075 mm]	48.9
[0.0277 mm]	43.7
[0.0186 mm]	36.7
[0.0110 mm]	33.2
[0.0079 mm]	29.7
[0.0057 mm]	26.2
[0.0029 mm]	19.2
[0.0013 mm]	14.0

Miscellaneous Tests

Liquid Limit @ 25 blows (T 89), %	
Plastic Limit (T 90), %	
Plasticity Index (T 90), %	
Specific Gravity, Corrected to 20°C (T 100)	2.74
Loss on Ignition, % (T 267)	
Water Content (T 265), %	8.8

Consolidation (T 216)

Trimming, Water Content, %					
	Initial	Final		Void Ratio	% Strain
Water Content, %			Pmin		
Dry Density, lbs/ft³			Pp		
Void Ratio			Pmax		
Saturation, %			Cc/C'c		

Vane Shear Test on Shelby Tubes (Maine DOT)

Depth taken in tube, ft	3 In.		6 In.		Water Content, %	Description of Material Sampled at the Various Tube Depths
	U. Shear	Remold	U. Shear	Remold		
	tons/ft²	tons/ft²	tons/ft²	tons/ft²		

Comments:

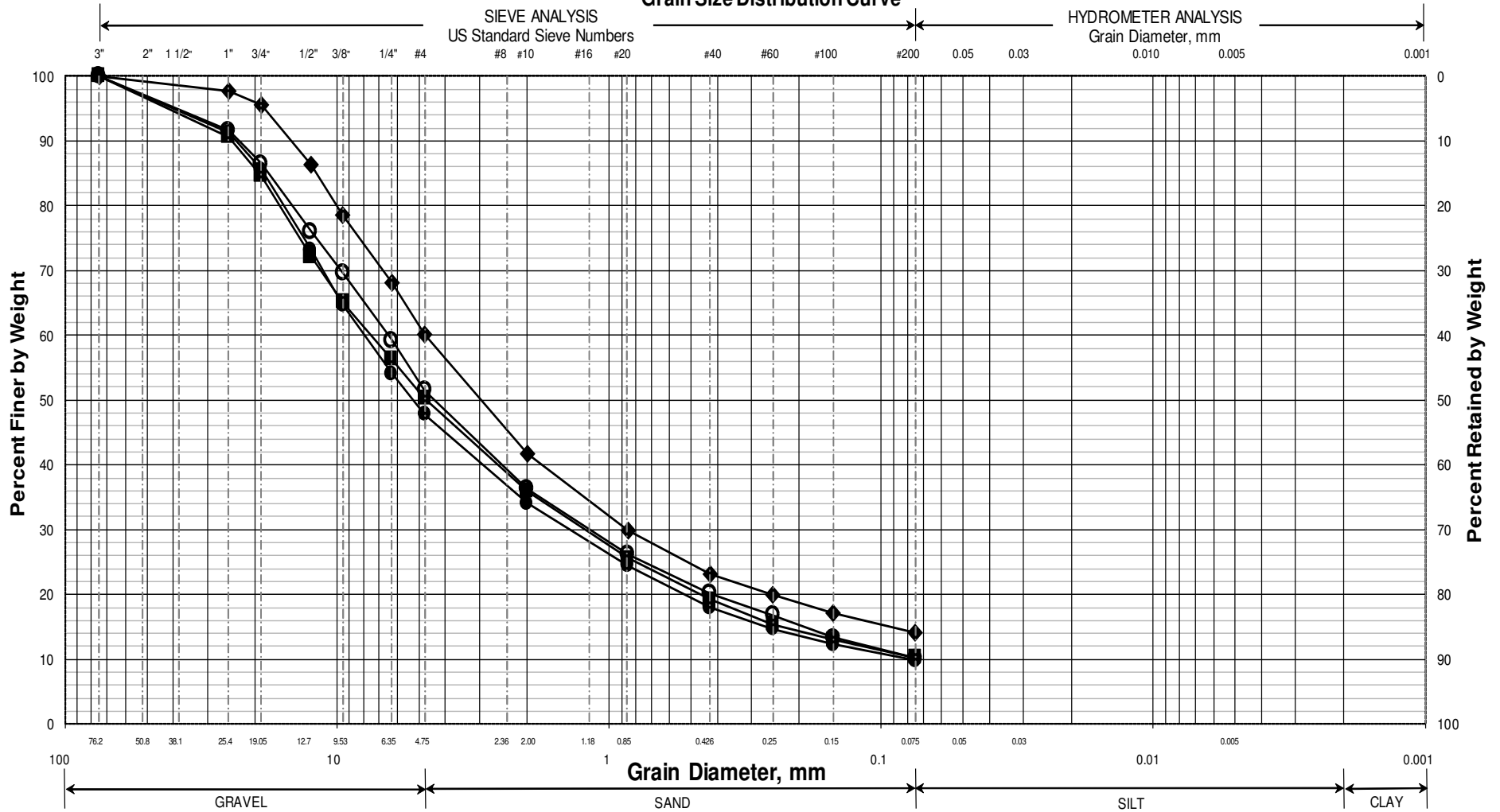
AUTHORIZATION AND DISTRIBUTION

Reported by: **GREGORY LIDSTONE**

Date Reported: **7/1/2020**

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Maine Department of Transportation Grain Size Distribution Curve

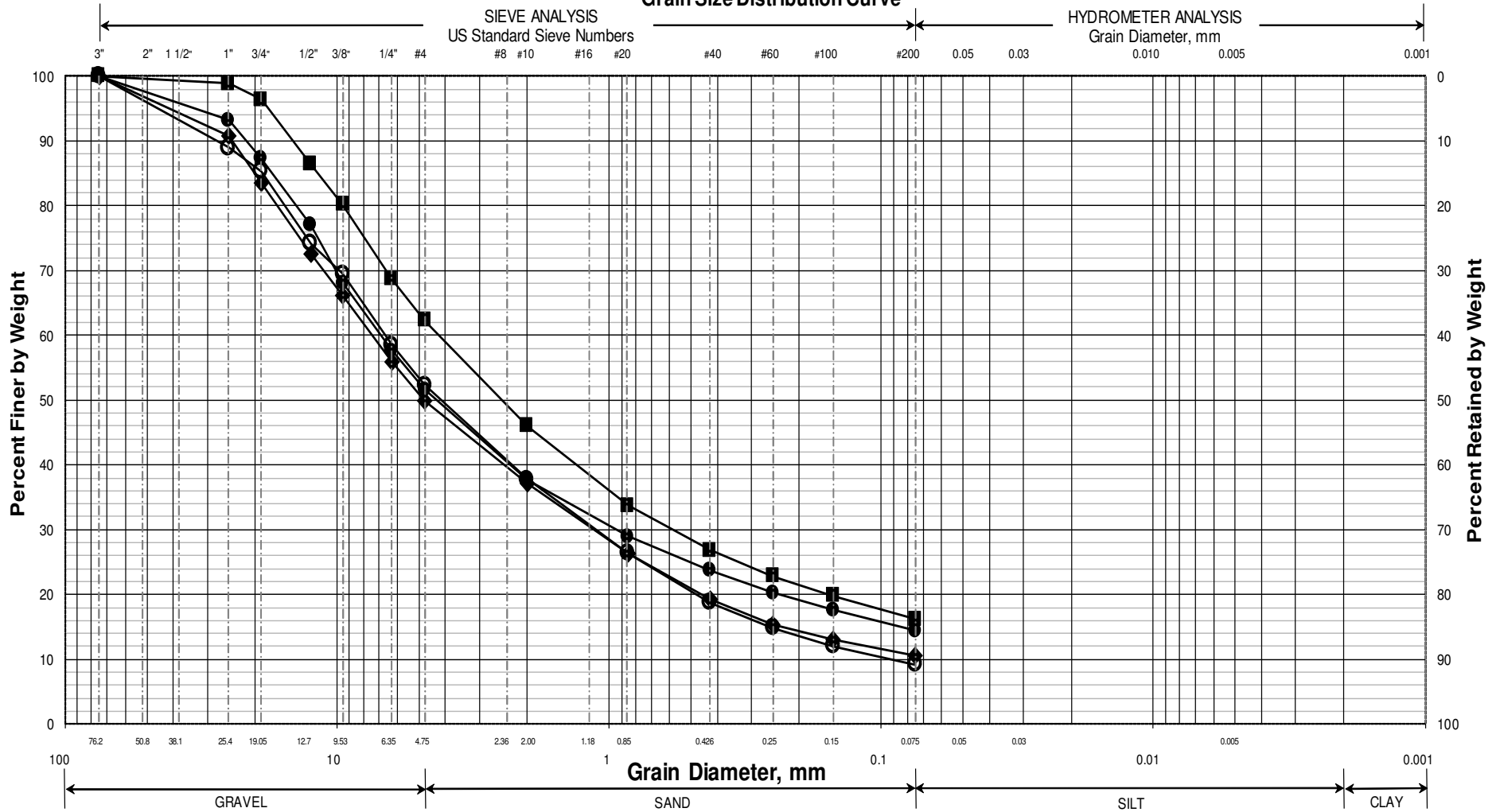


UNIFIED CLASSIFICATION

	Boring/Sample No.	Station	Offset, ft	Depth, ft	Description	WC, %	LL	PL	PI
○	HB-FRE-101/B1	60+00	10.3 RT	0.58-5.0	Sandy GRAVEL, trace silt.	2.6			
◆	HB-FRE-102/B2	80+00	9.1 LT	0.67-2.8	Gravelly SAND, little silt.	3.5			
■	HB-FRE-105/B3	140+00	7.6 RT	0.58-2.0	Sandy GRAVEL, trace silt.	2.7			
●	HB-FRE-106/B4	160+00	8.3 LT	0.58-4.5	Sandy GRAVEL, trace silt.	2.8			
▲									
X									

WIN
022657.00
Town
Frenchville
Reported by/Date
WHITE, TERRY A 6/23/2020

Maine Department of Transportation Grain Size Distribution Curve

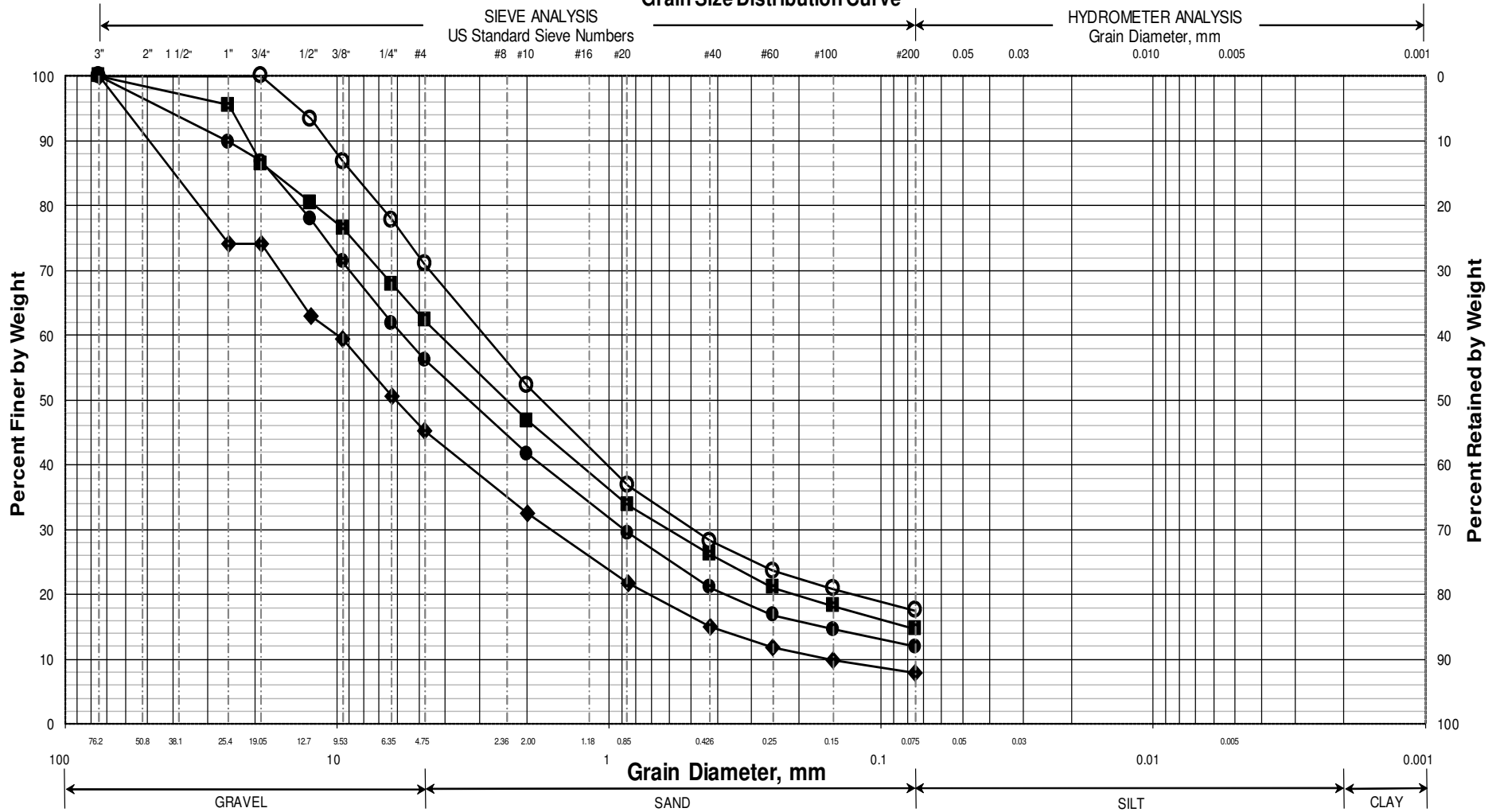


UNIFIED CLASSIFICATION

	Boring/Sample No.	Station	Offset, ft	Depth, ft	Description	WC, %	LL	PL	PI
○	HB-FRE-109/B5	220+00	7.9 RT	0.67-5.0	Sandy GRAVEL, trace silt.	2.5			
◆	HB-FRE-110/B6	240+00	7.9 LT	0.67-5.0	Sandy GRAVEL, trace silt.	3.2			
■	HB-FRE-113/B7	300+00	7.4 RT	0.67-2.4	Gravelly SAND, little silt.	3.6			
●	HB-FRE-114/B8	320+00	8.2 LT	0.67-5.0	Sandy GRAVEL, little silt.	3.1			
▲									
X									

WIN
022657.00
Town
Frenchville
Reported by/Date
WHITE, TERRY A 6/23/2020

Maine Department of Transportation Grain Size Distribution Curve

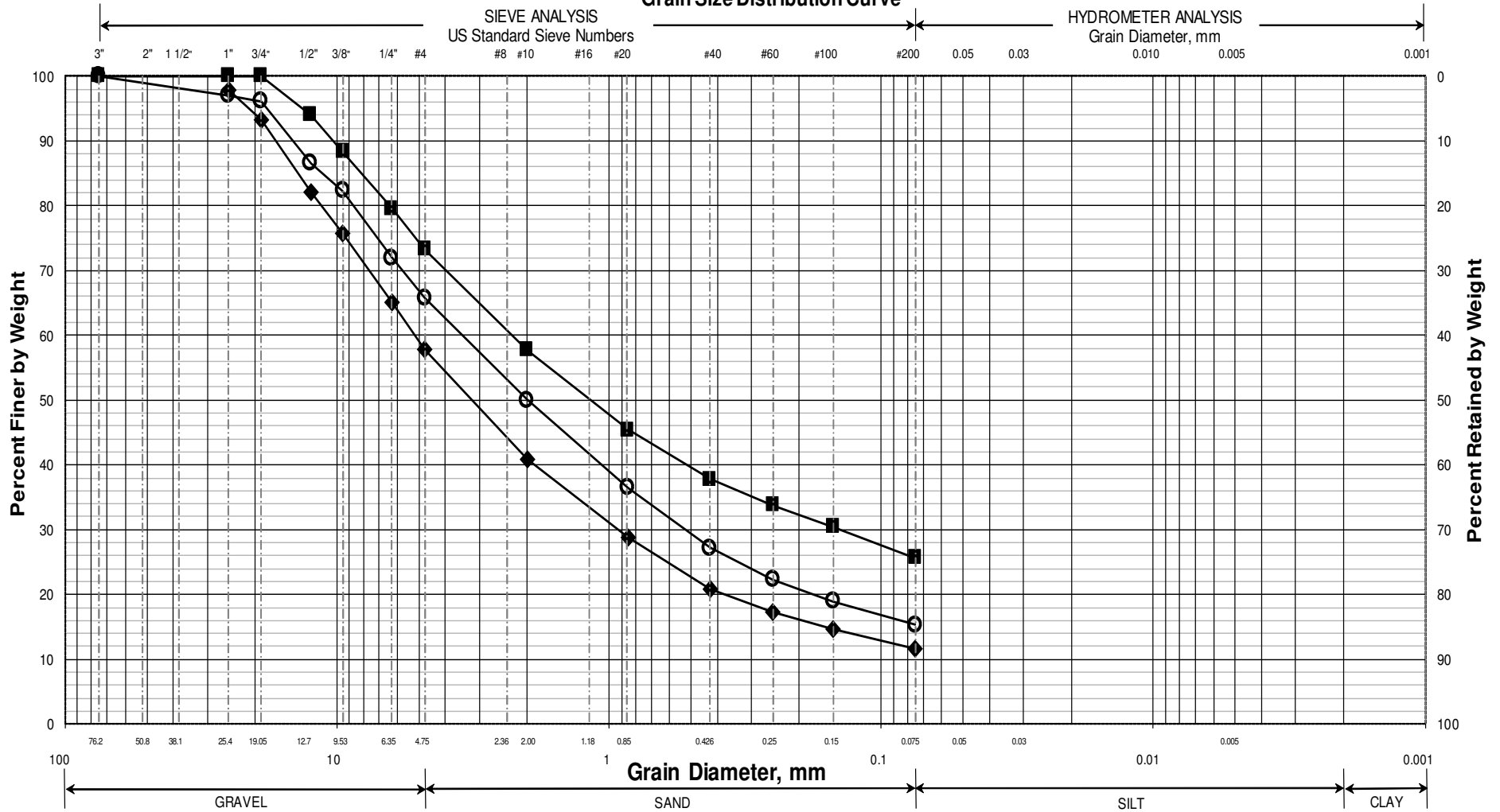


UNIFIED CLASSIFICATION

	Boring/Sample No.	Station	Offset, ft	Depth, ft	Description	WC, %	LL	PL	PI
○	HB-FRE-103/S2	100+10	12.4 RT	0.0-1.6	SAND, some gravel, little silt.	6.5			
◆	HB-FRE-104/S4	120+00	14.2 LT	0.0-5.0	Sandy GRAVEL, trace silt.	4.5			
■	HB-FRE-107/S6	180+00	12.8 RT	0.0-2.6	Gravelly SAND, little silt.	4.5			
●	HB-FRE-108/S8	200+00	14.0 LT	0.0-3.0	Sandy GRAVEL, little silt.	5.6			
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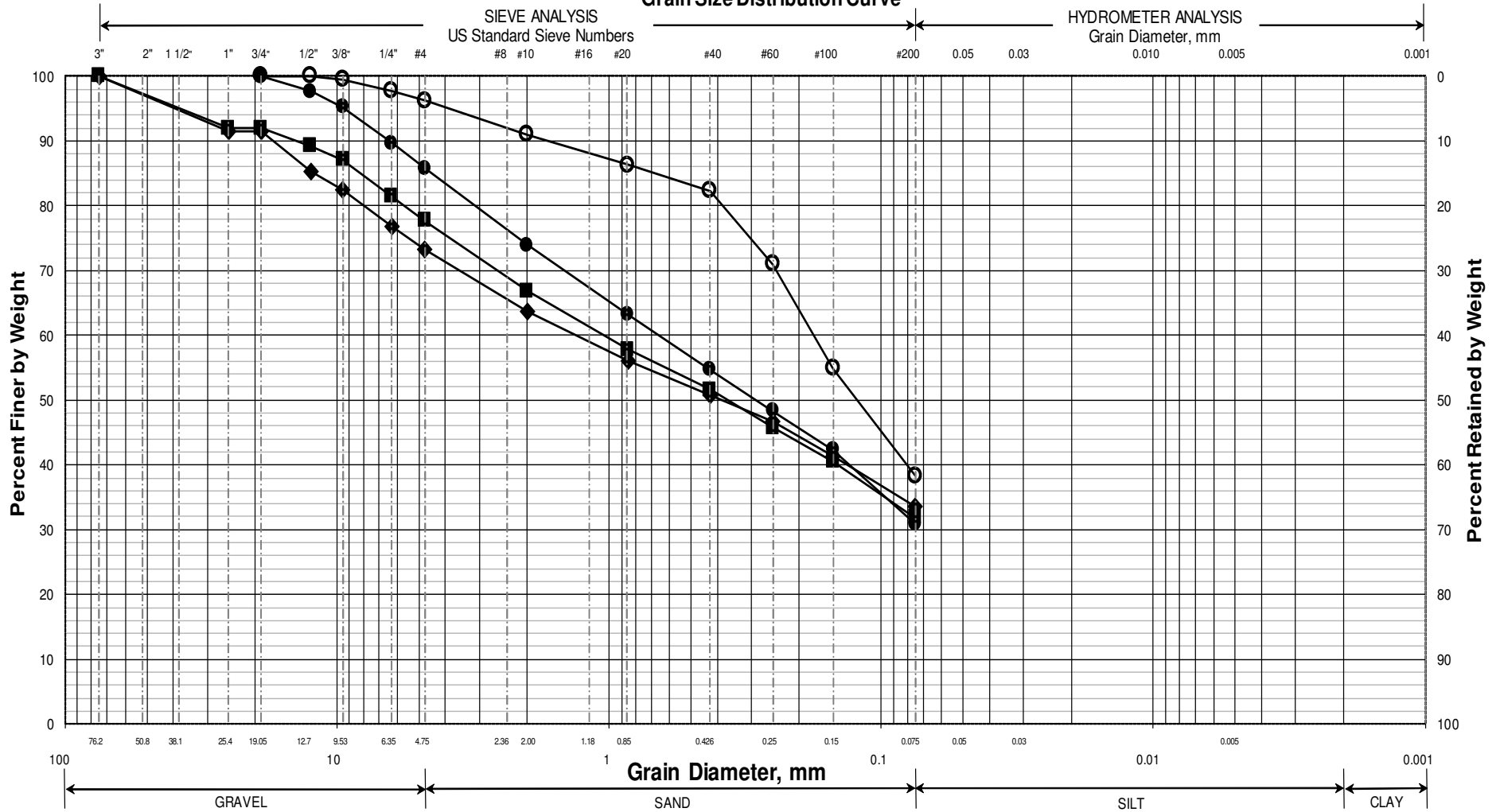


UNIFIED CLASSIFICATION

	Boring/Sample No.	Station	Offset, ft	Depth, ft	Description	WC, %	LL	PL	PI
○	HB-FRE-111/S10	260+10	13.3 RT	0.0-5.0	SAND, some gravel, little silt.	4.9			
◆	HB-FRE-112/S11	280+10	13.2 LT	0.0-2.8	Gravelly SAND, little silt.	5.2			
■	HB-FRE-115/S14	340+00	14.5 RT	0.0-1.7	SAND, some silt, some gravel.	6.3			
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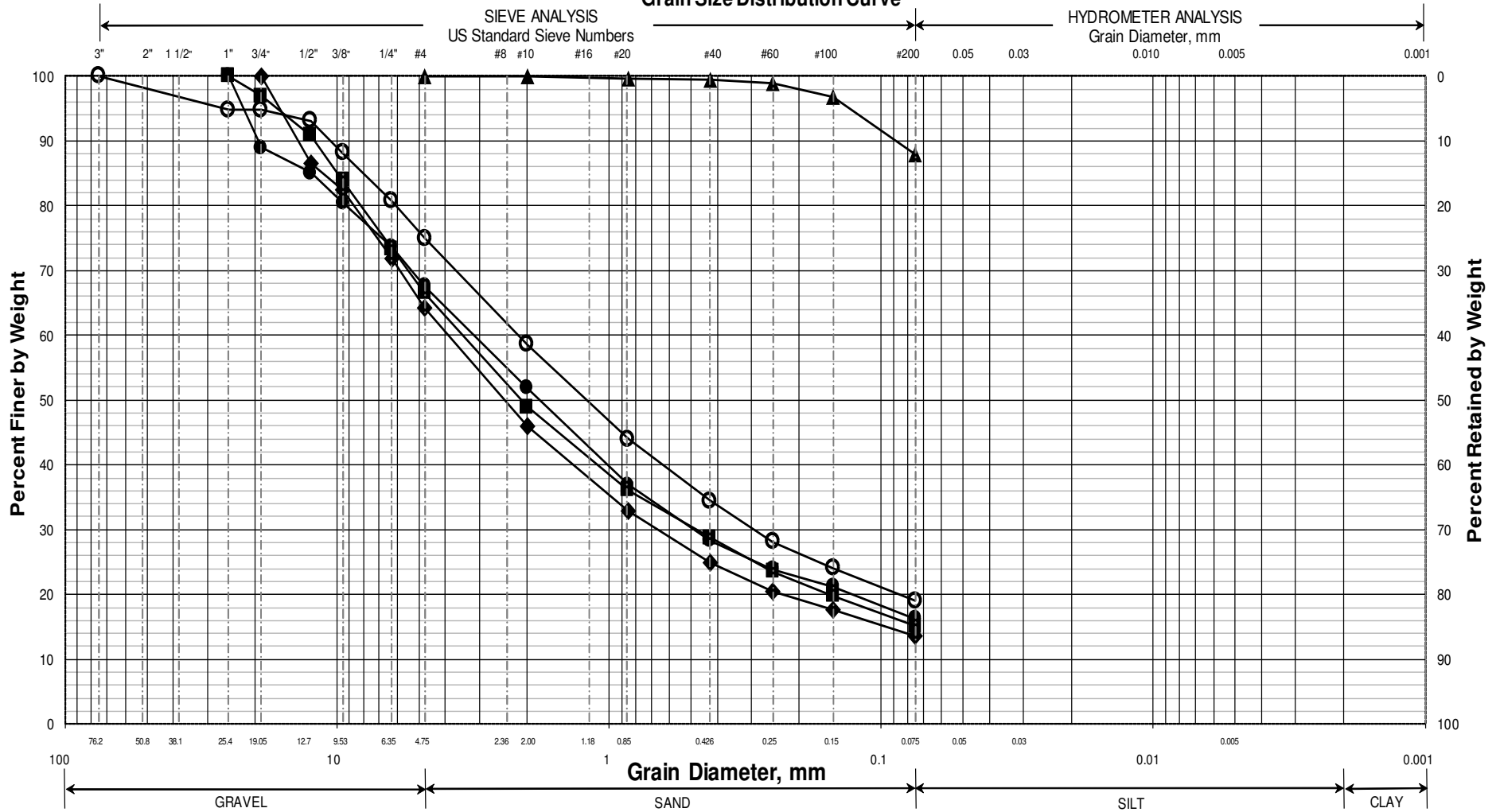


UNIFIED CLASSIFICATION

	Boring/Sample No.	Station	Offset, ft	Depth, ft	Description	WC, %	LL	PL	PI
○	HB-FRE-102/S1	80+00	9.1 LT	2.8-5.0	Silty SAND, trace gravel.	23.9			
◆	HB-FRE-103/S3	100+10	12.4 RT	1.6-5.0	SAND, some silt, some gravel.	14.8			
■	HB-FRE-107/S7	180+00	12.8 RT	2.6-5.0	SAND, some silt, some gravel.	13.3			
●	HB-FRE-112/S12	280+10	13.2 LT	2.8-5.0	SAND, some silt, little gravel.	14.6			
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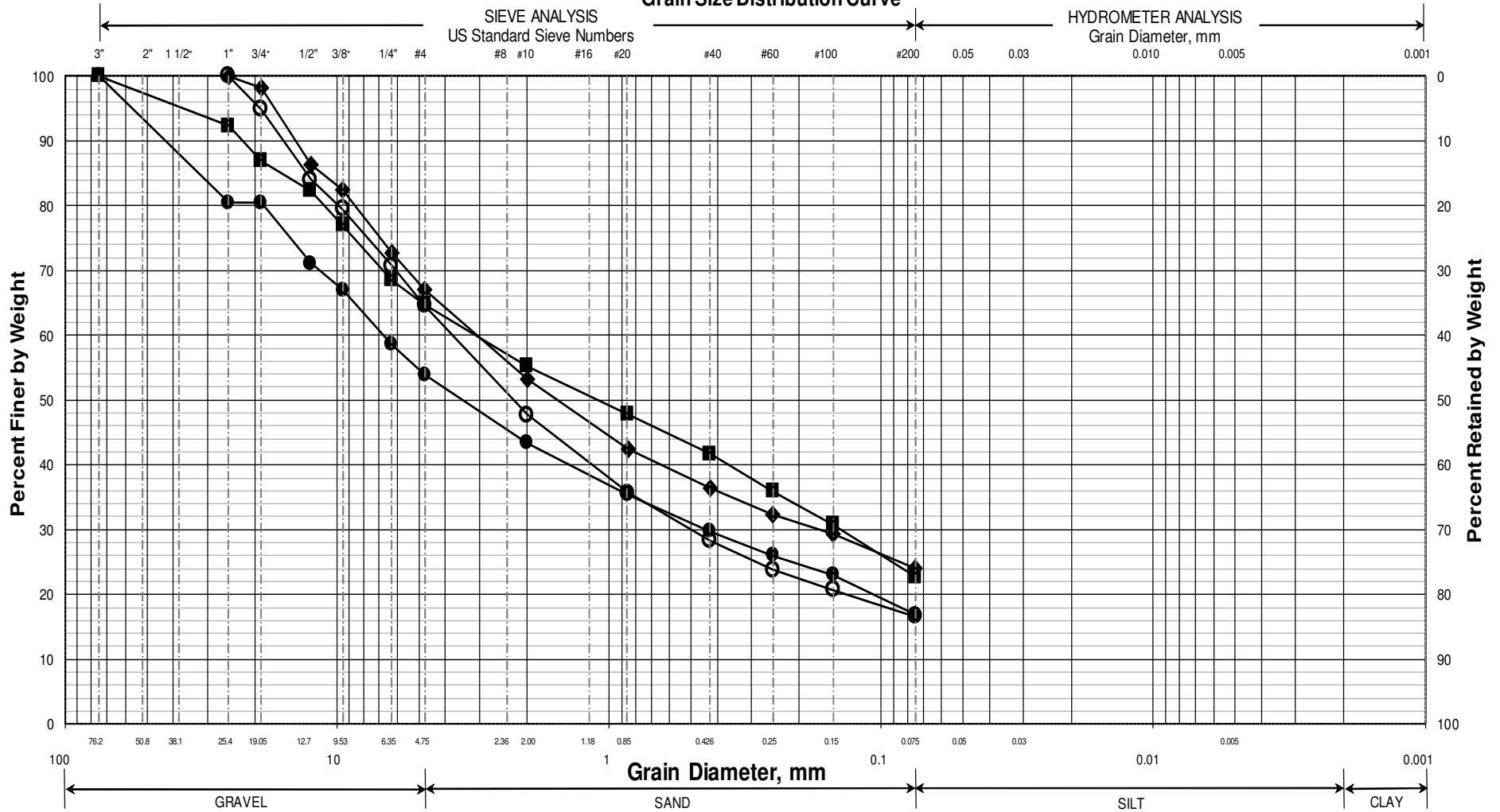


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	Boring/Sample No.	Station	Offset, ft	Depth, ft	Description	WC, %	LL	PL	PI
○	HB-FRE-201/1D	72+04.7	16.4 RT	0.0-2.0	SAND, some gravel, little silt.	4.9			
◆	HB-FRE-201/2D	72+04.7	16.4 RT	5.0-7.0	Gravelly SAND, little silt.	5.4			
■	HB-FRE-201/3D	72+04.7	16.4 RT	10.0-12.0	SAND, some gravel, little silt.	7.8			
●	HB-FRE-201/4D	72+04.7	16.4 RT	15.0-17.0	SAND, some gravel, little silt.	12.1			
▲	HB-FRE-201/5D	72+04.7	16.4 RT	20.0-22.0	SILT, little sand.	25.3			
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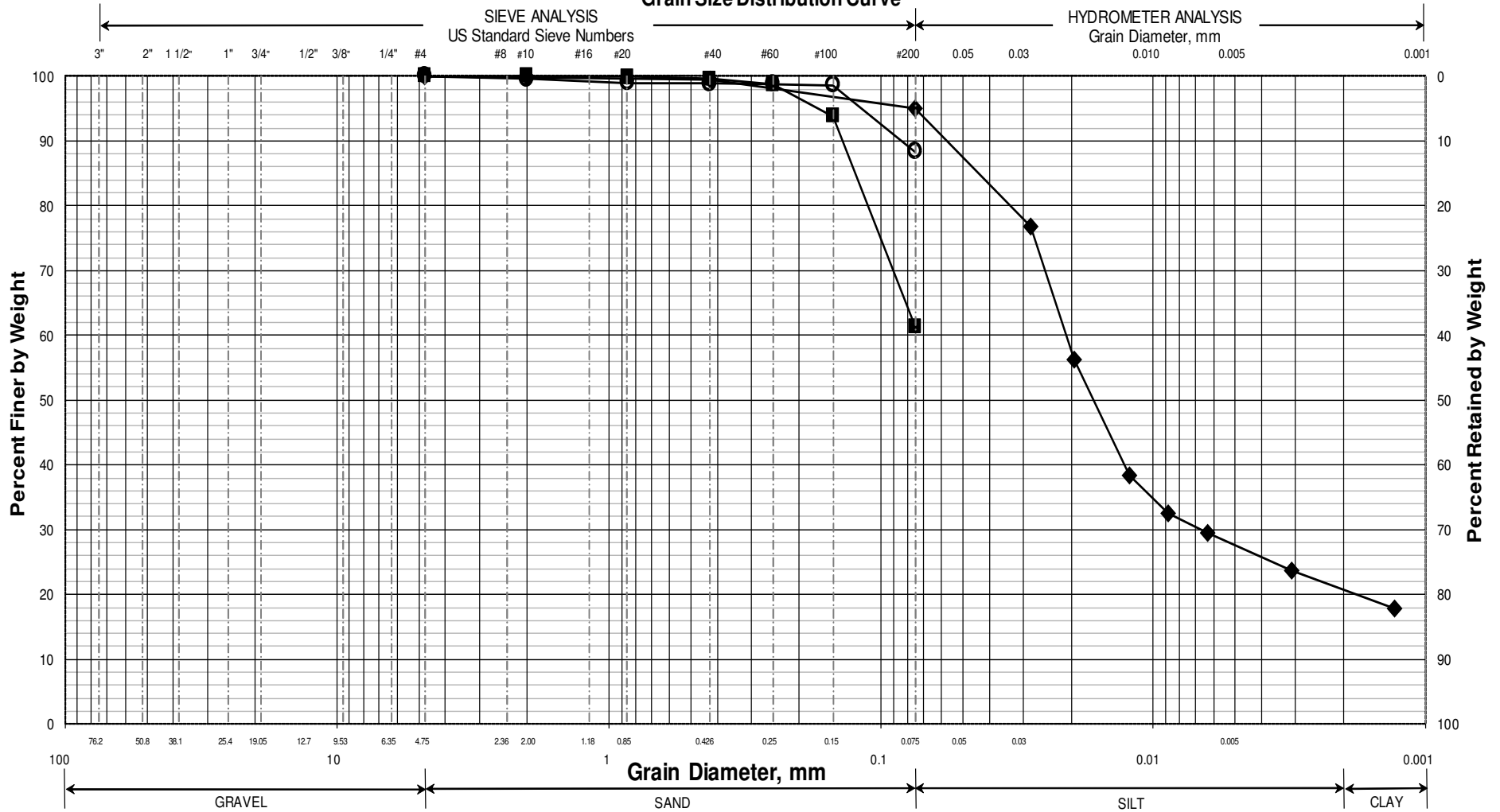


UNIFIED CLASSIFICATION

	Boring/Sample No.	Station	Offset, ft	Depth, ft	Description	WC, %	LL	PL	PI
○	HB-FRE-203/1D	83+98.8	10.1 RT	1.0-3.0	Gravelly SAND, little silt.	6.1			
◆	HB-FRE-203/2D	83+98.8	10.1 RT	5.0-7.0	SAND, some gravel, some silt.	9.3			
■	HB-FRE-203/3D	83+98.8	10.1 RT	10.0-11.8	SAND, some gravel, some silt.	12.8			
●	HB-FRE-203/4D	83+98.8	10.1 RT	15.0-15.5	Sandy GRAVEL, little silt.	14.2			
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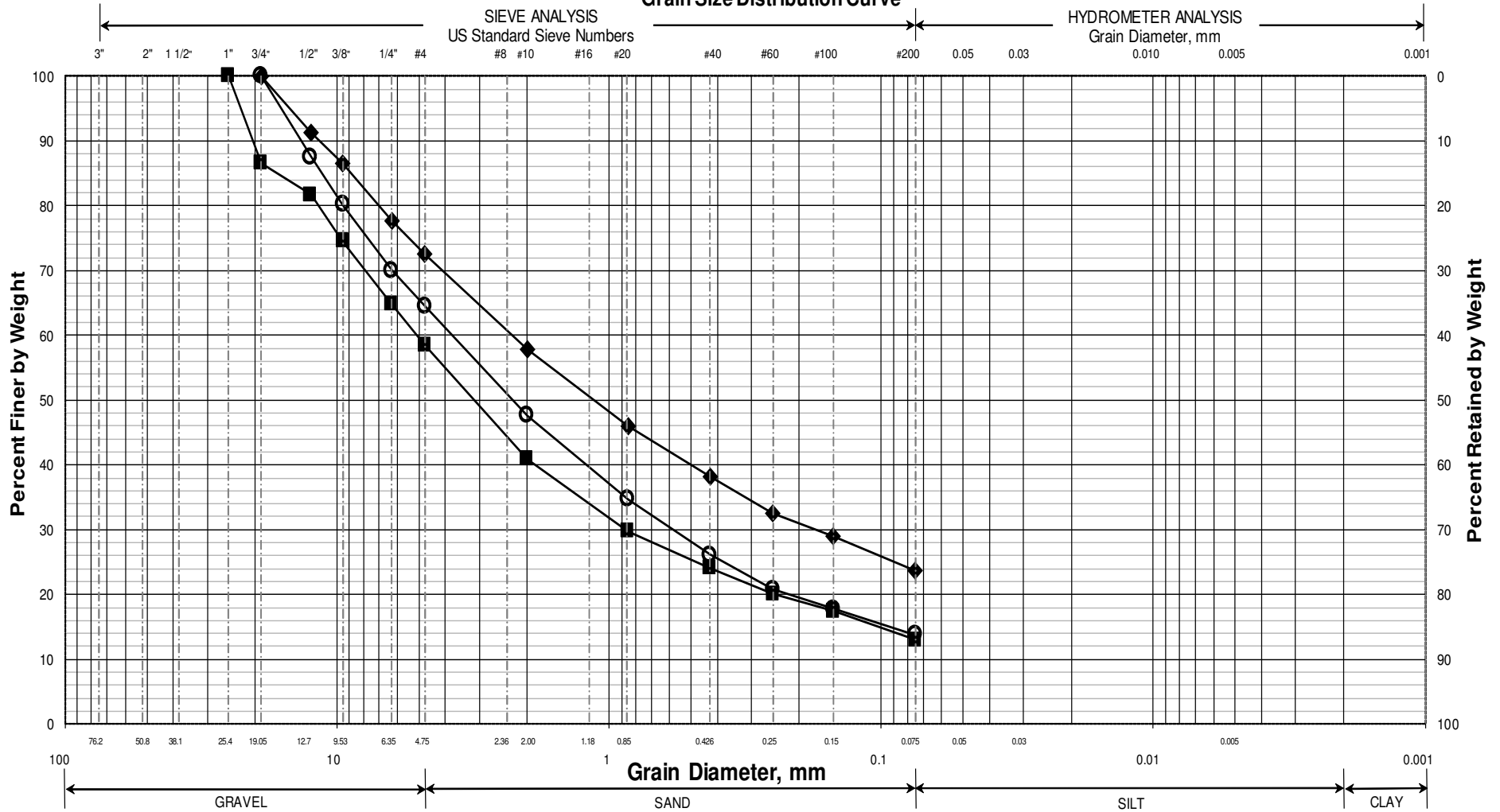


UNIFIED CLASSIFICATION

	Boring/Sample No.	Station	Offset, ft	Depth, ft	Description	WC, %	LL	PL	PI
O	HB-FRE-203/5D	83+98.8	10.1 RT	20.0-22.0	SILT, little sand.	28.0			
◆	HB-FRE-203/6D	83+98.8	10.1 RT	26.0-27.0	SILT, little clay, trace sand.	22.2			NP
■	HB-FRE-203/7D	83+98.8	10.1 RT	30.0-32.0	Sandy SILT.	20.1			
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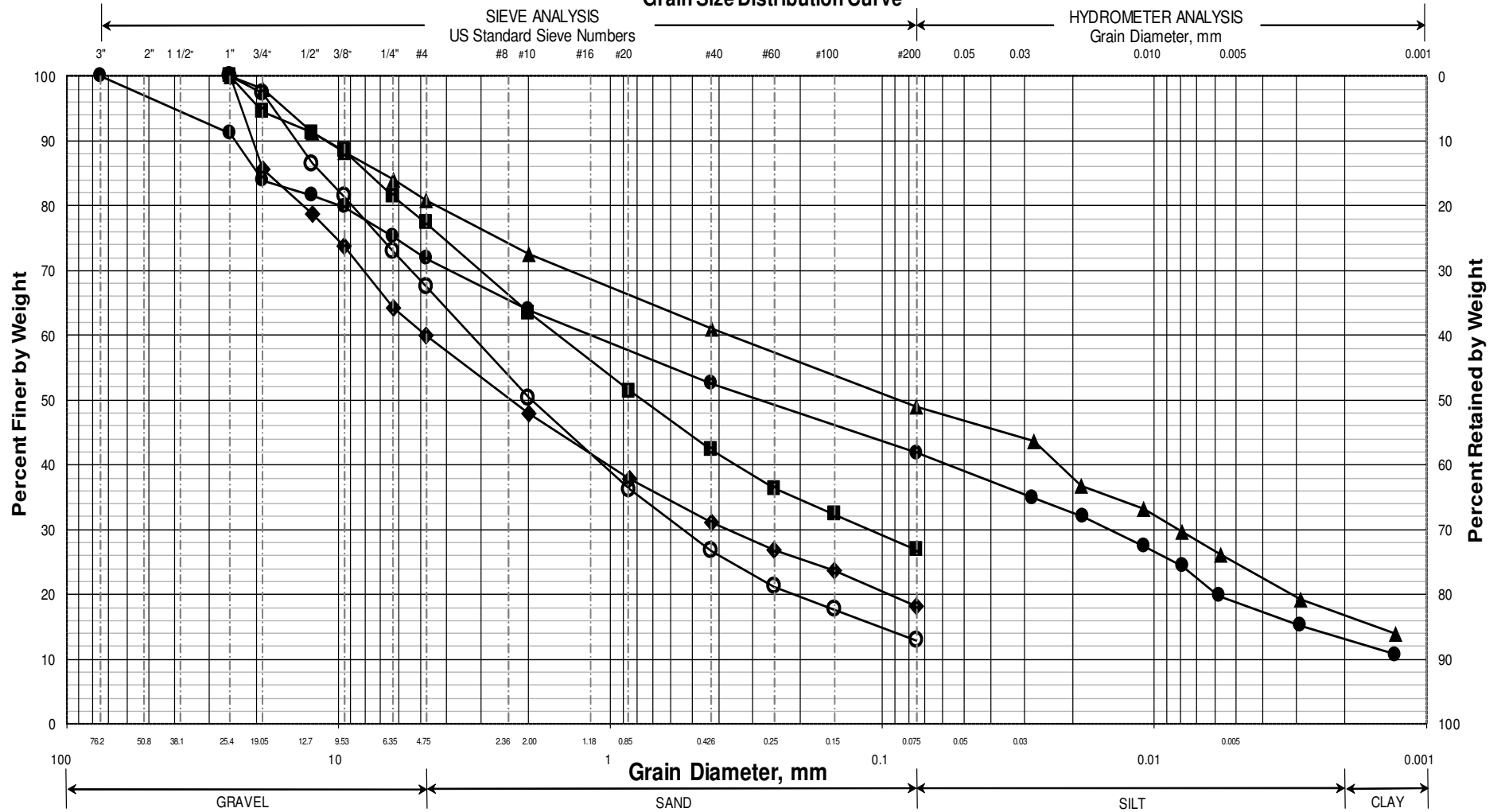


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	Boring/Sample No.	Station	Offset, ft	Depth, ft	Description	WC, %	LL	PL	PI
○	HB-FRE-205/1D	153+22	8.0 RT	1.0-3.0	SAND, some gravel, little silt.	3.5			
◆	HB-FRE-205/2D	153+22	8.0 RT	5.0-7.0	SAND, some gravel, some silt.	8.3			
■	HB-FRE-205/5D	153+22	8.0 RT	20.0-22.0	Gravelly SAND, little silt.	17.6			
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	Boring/Sample No.	Station	Offset, ft	Depth, ft	Description	WC, %	LL	PL	PI
○	HB-FRE-207/1D	194+53	9.8 RT	1.0-3.0	SAND, some gravel, little silt.	4.8			
◆	HB-FRE-207/2D	194+53	9.8 RT	5.0-7.0	Gravelly SAND, little silt.	9.2			
■	HB-FRE-207/3D	194+53	9.8 RT	10.0-12.0	SAND, some silt, some gravel.	24.0			
●	HB-FRE-207/4D	194+53	9.8 RT	15.0-17.0	SAND, some silt, some gravel, little clay.	9.4			
▲	HB-FRE-207/5D	194+53	9.8 RT	20.0-22.0	SILT, some sand, little gravel, little clay.	8.8			
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