

PHASE II GEOTECHNICAL DATA REPORT
GREEN POINT ROAD OVER INTERSTATE 395
BRIDGE NO. 1563, MAINEDOT WIN 029484.00
BREWER, MAINE

by
Haley & Aldrich, Inc.
Portland, Maine

for
HNTB Corporation
South Portland, Maine

File No. 0210037-004
May 2026





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May 15, 2026
File No. 0210037-004

HNTB Corporation
82 Running Hill Road, Suite 201
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Attention: Josh Olund, P.E., PhD
Associate Vice President/Structures Department Manager

Subject: Phase II Geotechnical Data Report
Green Point Road over Interstate 395
Bridge No. 1563, MaineDOT WIN 029484.00
Brewer, Maine

Ladies and Gentlemen:

This Phase II Geotechnical Data Report presents the results of the recent geotechnical field investigation and geotechnical laboratory testing programs conducted at the site. This work has been completed in accordance with our proposal dated June 4, 2025 and our executed contract signed on October 2, 2025.

Project Understanding

The existing 200-foot (ft)-long, two-span bridge carries the Green Point Road roadway over Interstate 395 (I-395; see Figures 1 and 2). Based on our review of the historical bridge drawings (dated December 1983) the existing cast-in-place concrete abutments, wingwalls and pier are supported on vertical and battered steel, end-bearing, H-piles. Abutment Nos. 1 and 2 are supported on 30- to 32-ft-long, steel HP 12x53 piles (maximum pile load of 71 tons). The pier is supported on 30-ft-long, steel HP 14x73 piles (maximum pile load of 75 tons).

Based on discussions with HNTB Corporation (HNTB), the project scope will be a full bridge replacement.

Horizontal Coordinate System and Elevation Datum

Plan locations of test borings (borings) are reported as northing and easting coordinates relative to the Maine State Plane Coordinate System, North American Datum of 1983 (NAD 83), Maine 2000 Central Zone (refer to Table I and boring logs in Appendix A). Elevations (El.) referenced herein are in feet (ft) and reference the North American Vertical Datum of 1988 (NAVD 88).

Geologic Setting

According to Maine Geological Survey's Veazie Surficial Geology Quadrangle, Maine (2008), the surficial geologic unit mapped within the site vicinity is the Presumpscot Formation which consists of silt, clay, and sand. According to Maine Geological Survey's Veazie Bedrock Geology Quadrangle, Maine (2011), bedrock at the site vicinity is mapped as the Brewer Formation of the Vassalboro Group which consists of Silurian Age fine-grained to very fine-grained siltstone and claystone slate.

Geotechnical Field Investigations

HISTORICAL GEOTECHNICAL FIELD INVESTIGATIONS

Three phases of historical geotechnical field investigations were conducted at the site by the MaineDOT in 1978, 1980, and 1982, in support of the design and construction of the existing bridge. The results of these investigations are summarized in the Phase I Geotechnical Data Report prepared by Haley & Aldrich, Inc. (Haley & Aldrich) dated May 15, 2026.

GEOTECHNICAL FIELD INVESTIGATION CONDUCTED BY HALEY & ALDRICH

Haley & Aldrich conducted a geotechnical field investigation at the site in October 2025. Four borings, designated BB-BGPR-101, BB-BGPR-101A, BB-BGPR-102 and BB-BGPR-103, were completed along the existing bridge alignment. Borings BB-BGPR-101, BB-BGPR-101A and BB-BGPR-103 were drilled through the approach embankments behind the existing abutments. Boring BB-BGPR-102 was drilled through the existing bridge deck and casing was advanced from the bridge deck to the ground surface below. Boring BB-BGPR-101 was terminated at 49 ft BGS due to broken core bit teeth. Therefore, an additional boring (BB-BGPR-101A) was advanced adjacent to boring BB-BGPR-101.

The boring locations were laid out in the field prior to the start of drilling by taping distances from existing site features. "As-drilled" boring locations and ground surface elevations were determined in the field by MaineDOT using global positioning system (GPS) survey equipment upon the completion of drilling and were provided to Haley & Aldrich. The "as-drilled" boring locations and ground surface elevations are summarized on the boring logs and Table I and are shown on Figure 2.

The borings were drilled by New England Boring Contractors (NEBC) of Hermon, Maine using a track-mounted Mobile B53 drill rig. The borings were drilled to depths ranging from approximately 42 to 63 ft below ground surface (BGS).

The borings were advanced using cased-wash drilling methods by either driving or spinning casing. Casing consisted of 4-inch (in.; HW-size) inside diameter (ID) steel casing and/or 3-in. (NW-size) ID steel casing. Casing blow count data is provided on the logs in Appendix A. Soil samples were generally collected continuously through the man-placed/existing fill (fill) and then typically at 5-ft intervals once naturally-deposited soils were encountered. The borings were extended to bedrock and collected approximately 5 to 11 ft of bedrock core.

Soil samples were collected by driving a 1-3/8-in. ID split-spoon sampler with a 140-lb hammer dropped from a height of 30 in., as indicated on the boring logs. Drilling and sampling were performed in accordance with MaineDOT specifications. The drill rig was equipped with an automatic hammer calibrated annually per MaineDOT requirements (Appendix A of MaineDOT Geotechnical Drilling Contract Specifications, revised June 2007). Haley & Aldrich reviewed the hammer calibration report provided by NEBC, confirmed that the hammer was calibrated within 12 months of when drilling was completed, and confirmed the hammer efficiency factor. A calculated hammer efficiency of 0.786 was used for the calibrated automatic hammer system for the drill rig.

The number of hammer blows required to advance the sampler through each 6-in. interval was recorded and is provided on the boring logs. The uncorrected SPT N-value is defined as the total number of blows required to advance the sampler through the middle 12 in. of the 24-in. sampling interval. The energy-corrected SPT N-value (N_{60}) is equal to the uncorrected N-value multiplied by the hammer efficiency factor divided by 0.6 (i.e., 60 percent calculated hammer efficiency). Both the raw blow count data and the corrected N-values are shown on the boring logs.

In-situ vane shear tests were conducted within the marine (clay) deposit soils. In-situ vane shear tests were conducted with a 55 mm by 110 mm Geonor rectangular vane (per MaineDOT requirements) attached to a 2-ft long, 12-mm diameter rod extension, attached to a string of 5/8-in. outside diameter (OD) hollow chrome-moly rods. At the in-situ vane shear test location, the vane was pushed (by hand) until the bottom of the vane was approximately 1 to 2 ft below the bottom of the borehole. The vane was then rotated at a rate of about 90 degrees per minute using a calibrated torque wrench. Results of the vane shear testing, including raw torque values and calculated undrained shear strengths, are provided on the boring logs in Appendix A.

Three relatively undisturbed samples of marine clay were obtained from the borings. The samples were obtained by advancing a 3-in. OD thin-wall Shelby tube into the clay using a piston sampler.

The borings sampled approximately 5 to 11 ft of bedrock using a 2-in. (NQ-size) ID diamond-tipped core barrel.

All soil and bedrock samples were classified in accordance with MaineDOT classification system and were preserved in glass sample jars and wooden core boxes. The samples that were not submitted for laboratory testing are available for review upon request.

Generalized Subsurface Conditions

The subsurface conditions encountered at the site consist of the following geologic units presented in order of increasing depth BGS: fill soils, marine deposits, glacial till, and bedrock.

SOIL AND BEDROCK DESCRIPTIONS

Soil

Refer to Table II for a summary of the soil units and encountered thicknesses at each boring location, based on the recent geotechnical field investigation. A description of each soil unit is provided separately, below. Detailed soil descriptions are provided on the boring logs in Appendix A. Please note that the soil descriptions provided on the boring logs and summarized below do not represent actual field conditions other than at the specific boring locations. The actual conditions may vary from those described and shown herein.

Geologic Unit	Range in Encountered Thickness (ft)	Generalized Description
Bituminous Concrete	0.4 to 0.5	An approximately 5 to 6-in.-thick layer of bituminous concrete was encountered at the ground surface in borings BB-BGPR-101, BB-BGPR-101A, and BB-BGPR-103.
Fill	6.0 to 22.6	Medium dense to dense fine to coarse SAND, trace to some gravel, and trace to little silt. Fill thickness was the greatest at the two borings behind the abutments (BB-BGPR-101 and BB-BGPR-103), where the thickness ranged from 22.5 to 22.6 ft. <i>(encountered in all borings)</i>
Marine Deposit	14.0 to 23.5	Very soft to stiff Silty CLAY to CLAY, trace to little sand, trace gravel, and occasional wood particles. <i>(encountered in all borings)</i>
Glacial Till	5.7 to 10.9	Hard to very stiff Silty to Sandy CLAY/SILT, little to some fine to coarse sand, trace to little gravel; hard to very stiff Gravelly SILT, trace to little fine to coarse sand, trace gravel. Dense, Clayey fine to coarse GRAVEL, little fine to coarse sand; medium dense, fine to coarse SAND, some silt, trace fine gravel. The glacial till was loosely to moderately bonded and contained occasional cobbles and boulders. <i>(encountered in all borings)</i>
Bedrock		Bedrock was encountered in all borings. The top of bedrock surface was encountered at depths ranging from 30.9 to 52.2 ft BGS.

Boring BB-BGPR-102 penetrated through the approximately 1-ft thick existing concrete bridge deck.

Please note that soil descriptions provided on the boring logs do not represent actual field conditions other than at the specific boring locations. The actual conditions encountered between boring locations may vary from those described herein.

Bedrock

As stated previously, approximately 5 to 11 ft of bedrock was cored in the borings. The sampled and recovered bedrock generally consisted of moderately hard to hard, fresh to slightly weathered, grey to dark grey, aphanitic, interbedded METASILTSTONE and carbonaceous SHALE. Primary joints were observed dipping at moderate to steep angles, are very close to close spaced, and tight to open.

Rock quality designation (RQD) is a common parameter that is used to help assess the competency of sampled bedrock. RQD is defined as the sum of pieces of recovered bedrock greater than 4 in. in length divided by the total length of the bedrock core run. RQD values for the bedrock encountered in the borings drilled at the site ranged from 0 to 93 percent, indicating variable bedrock quality; from very poor to excellent in accordance with the MaineDOT Geotechnical Section "Key to Soil and Rock Descriptions and Terms Field Identification Information" document, dated May 2024. The RQD typically ranged from 51 to 93 percent (good to excellent), with two core runs with 0 to 33 percent (poor to very poor).

Detailed bedrock core data and descriptions are provided on Table III and on the boring logs in Appendix A. In addition, photographs of the recovered bedrock core samples are provided for reference in Appendix B.

GROUNDWATER CONDITIONS

Groundwater levels were measured in borings BB-BGPR-101A, BB-BGPR-102 and BB-BGPR-103, during or shortly after the completion of drilling. Because boring BB-BGPR-101 was terminated early, the groundwater level was not measured. However, as shown in the table below, the groundwater level was measured in boring BB-BGPR-101A, which was drilled adjacent to boring BB-BGPR-101. Observed groundwater levels measured in the borings are summarized in the table below:

Boring No.	Groundwater Depth (ft, BGS)	Groundwater Elevation (ft, NAVD 88)
BB-BGPR-101A	34.7	118.8
BB-BGPR-102	42.3	90.6
BB-BGPR-103	32.0	125.4

Please note that these groundwater levels were measured during advancement of the borings and were influenced by drilling activities. It is important to note that the readings were taken over a relatively brief time and do not reflect static groundwater levels.

In general, groundwater levels are subject to variation due to seasonal changes, local soil and bedrock conditions, topography, precipitation, and the presence of below-grade structures. As such,

groundwater conditions encountered during construction may differ from those measured during the recent geotechnical field investigation presented in Appendix A.

Geotechnical Laboratory Testing Program

A geotechnical laboratory testing program was completed on disturbed and relatively undisturbed soil samples collected during the recent geotechnical field investigation to assist in soil classification and determination of engineering properties. All geotechnical laboratory soil testing was performed by GeoTesting Express, Inc. of Acton, Massachusetts. Geotechnical laboratory testing was performed in accordance with applicable ASTM International (ASTM) testing procedures. A summary of the geotechnical laboratory test results is below.

Laboratory Test	ASTM Test Designation	Geologic Unit	No. of Tests Completed	Range in Test Results
Grain Size	D6913	Fill	7	AASHTO Classification: A-1-a, A-1-b USCS Classification: SW-SM, SM, GW-SM
		Glacial Till	3	AASHTO Classification: A-2-4, A-4 USCS Classification: SM, CL-ML
Atterberg Limits	D4318	Marine Deposit	9	WC = 13 to 34% LL = 21 to 39% PL = 16 to 19% PI = 6 to 21%
		Glacial Till	3	USCS Classification: CL WC = 13 to 18% LL = 20 to 24% PL = 13 to 14% PI = 7 to 10%
Consolidated Undrained Direct Simple Shear	D6528	Marine Deposit	1	$S_u/\sigma'_{vc} = 0.19$ $\gamma_T = 115 \text{ pcf}$
Incremental One-Dimensional Consolidation	D2435	Marine Deposit	1	$\gamma_T = 119 \text{ pcf}$ <i>Note: compressibility and stress history parameters (e.g., OCR, CR, and RR) have not been interpreted for this report. We assume the design-builder will determine these values based on the laboratory testing results provided in Appendix C.</i>
Note: AASHTO = American Association of State and Highway Transportation Officials USCS = Unified Soil Classification System WC = water content LL = liquid limit PL = plastic limit PI = plasticity index			S_u = undrained shear strength σ'_{vc} = vertical consolidation stress γ_T = total unit weight pcf = pounds per cubic foot OCR = overconsolidation ratio CR = compression ratio RR = recompression ratio	

All laboratory test results are shown on boring logs included in Appendix A and complete results are provided in Appendix C.

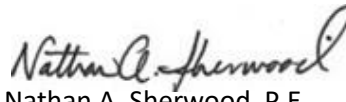
Closure

We appreciate the opportunity to provide geotechnical engineering services on this project. Please do not hesitate to call if you have any questions or comments.

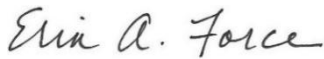
Sincerely yours,
HALEY & ALDRICH, INC.



Camilo J. Fernandez-Escobar
Staff Geotechnical Engineer



Nathan A. Sherwood, P.E.
Senior Project Manager



Erin A. Force, P.E.
Senior Associate



Enclosures:

- Table I – Subsurface Exploration Location Data
- Table II – Subsurface Exploration Subsurface Data
- Table III – Subsurface Exploration Bedrock Core Data
- Figure 1 – Project Locus
- Figure 2 – Boring Location Plan
- Appendix A – Boring Logs
- Appendix B – Bedrock Core Photographs
- Appendix C – Laboratory Test Results

<https://haleyaldrich.sharepoint.com/sites/MaineDepartmentofTransportation2/Shared Documents/0210037.MaineDOT-Brewer I-395 Design Build/Deliverables/Phase 2 - Geotech Data Reports/Green Point Road Bridge No. 1563/2026-0515-HAI-I395-Green Point Rd Bridge-Phase II GDR-F.docx>

References

1. Hildreth, Carol T., *Surficial Geology of the Veazie 7.5-Minute Quadrangle, Penobscot County, Maine*, Maine Geological Survey, Department of Conservation, Augusta, Maine, Open File Report No. 08-56, 2008.
2. Pollock, Stephen G., *Bedrock Geology of the Veazie Quadrangle, Maine*, Maine Geological Survey, Department of Conservation, Augusta, Maine, Open File Report No. 11-58, 2011.

<https://haleyaldrich.sharepoint.com/sites/MaineDepartmentofTransportation2/Shared Documents/0210037.MaineDOT-Brewer I-395 Design Build/Deliverables/Phase 2 - Geotech Data Reports/Green Point Road Bridge No. 1563/2026-0515-HAI-I395-Green Point Rd Bridge-Phase II GDR-F.docx>

TABLES

TABLE I

Subsurface Exploration Location Data
Green Point Road over Interstate 395
Bridge No. 1563, MaineDOT WIN 029484.00
Brewer, Maine

Haley & Aldrich, Inc. File No.: 0210037-004

Boring No. ¹	Ground Surface Elevation ² (ft)	Station ³	Offset Distance (ft) & Direction ³	Horizontal Coordinates ⁴	
				Northing (Y)	Easting (X)
BB-BGPR-101	153.7	TBD	TBD	464,533	1,738,813
BB-BGPR-101A	153.5	TBD	TBD	464,528	1,738,811
BB-BGPR-102	132.9	TBD	TBD	464,655	1,738,853
BB-BGPR-103	157.4	TBD	TBD	464,761	1,738,866

Notes:

¹ Boring locations are shown on Figure 2, Boring Location Plan.

² Ground surface elevations at boring locations were determined in the field by MaineDOT using GPS survey equipment, are measured in feet (ft), and reference the North American Vertical Datum of 1988 (NAVD 88).

³ Station and offset and direction information to be determined (TBD) after baseline stationing is available.

⁴ As-drilled coordinates of borings were determined by MaineDOT using GPS survey equipment, are measured in feet (ft), and reference the NAD83, Maine 2000 West Zone coordinate system.

	Individual	Date
Prepared By:	CEF	1/16/2026
Checked By:	SLB	1/22/2026
Reviewed By:	NAS/EAF	1/23/2026

TABLE II
Subsurface Exploration Subsurface Data
Green Point Road over Interstate 395
Bridge No. 1563, MaineDOT WIN 029484.00
Brewer, Maine

Haley & Aldrich, Inc. File No.: 0210037-004

Boring No. ¹	Ground Surface Elevation ³ (ft)	Stratigraphic Data ^{3,4}												Bottom of Exploration Depth (ft)	Elevation of Bottom of Exploration ³ (ft)
		Bituminous Concrete Thickness (ft)	Fill			Marine Deposit			Glacial Till			Bedrock			
			Depth to Top (ft)	Elevation of Top (ft)	Thickness (ft)	Depth to Top (ft)	Elevation of Top (ft)	Thickness (ft)	Depth to Top (ft)	Elevation of Top (ft)	Thickness (ft)	Depth to Top (ft)	Elevation of Top (ft)		
BB-BGPR-101 ²	153.7	0.4	0.4	153.3	22.6	23.0	130.7	18.4	41.4	112.3	9.3	50.7	103.0	55.5	98.2
BB-BGPR-101A	153.5	--	--	--	--	--	--	--	--	--	--	51.0	102.5	61.0	92.5
BB-BGPR-102	132.9	0.0	0.0	132.9	6.0	6.0	126.9	14.0	20.0	112.9	10.9	30.9	102.0	42.0	90.9
BB-BGPR-103	157.4	0.5	0.5	156.9	22.5	23.0	134.4	23.5	46.5	110.9	5.7	52.2	105.2	63.2	94.2

Notes:

- ¹ Boring locations are shown on Figure 2, Boring Location Plan.
- ² Boring BB-BGPR-101 was terminated at 55.5 ft below ground surface due to broken core bit teeth. Boring BB-BGPR-101A was drilled to collect additional bedrock information.
- ³ Ground surface elevations at boring locations were determined in the field by MaineDOT using GPS survey equipment, are measured in feet (ft), and reference the North American Vertical Datum of 1988 (NAVD 88).
- ⁴ "--" indicates sampling not completed to determine presence of stratum.

	Individual	Date
Prepared By:	CFE	1/16/2026
Checked By:	SLB	1/22/2026
Reviewed By:	NAS/EAF	1/23/2026

TABLE III
Subsurface Exploration Bedrock Core Data
Green Point Road over Interstate 395
Bridge No. 1563, MaineDOT WIN 029484.00
Brewer, Maine

Haley & Aldrich, Inc. File No.: 0210037-004

Boring No. ¹	Ground Surface Elevation ² (ft)	Bedrock Core Diameter (in.)	Run					Total Core Recovery ³		Rock Quality Designation ^{4,5}			Physical Rock Parameters		Lithologic, Bedrock Mass, and Discontinuity Description ⁶
			No.	Depth Below Ground Surface (ft)			Total Length (in.)	Recovered Length (in.)	%	Length (in.)	%	Rock Quality	Weathering	Estimated Field Strength	
				Top	Bottom	Midpoint									
BB-BGPR-101	153.7	NQ-2"	R1	51.0	55.5	53.3	54.0	51.0	94%	44.8	83%	Good	Fresh to Slightly Weathered	Moderately Hard to Hard	Grey to dark grey, aphanitic, interbedded METASILTSTONE and carbonaceous SHALE with minor pyrite, moderately hard to hard, fresh to slightly weathered. Primary joint sets moderately dipping to steep, spaced very close to close, smooth and planar to rough and undulating, fresh, tight to open. Calcite veins throughout.
BB-BGPR-101A	153.5		R1	51.0	56.0	53.5	60.0	59.0	98%	51.0	85%	Good	Fresh	Moderately Hard to Hard	Grey to dark grey, aphanitic, interbedded METASILTSTONE and carbonaceous SHALE with minor pyrite, moderately hard to hard, fresh. Primary joint sets moderately dipping, spaced very close to moderately close, smooth and planar to rough and undulating, fresh, tight to open, occasional slight brown infilling. Calcite veins throughout.
			R2	56.0	59.8	57.9	45.6	43.0	94%	32.8	72%	Fair	Fresh to Moderately Weathered	Moderately Hard to Hard	Grey, aphanitic, METASILTSTONE, moderately hard to hard, fresh to moderately weathered at 59.2 ft. Joints are horizontal to moderately dipping, spaced very close to close, rough and undulating, fresh to decomposed, open with some brown silt infilling.
			R3	59.8	61.0	60.4	14.4	9.0	63%	0.0	0%	Very Poor	Moderately Weathered	Moderately Hard to Hard	Similar to R2, except moderately weathered and highly fractured.

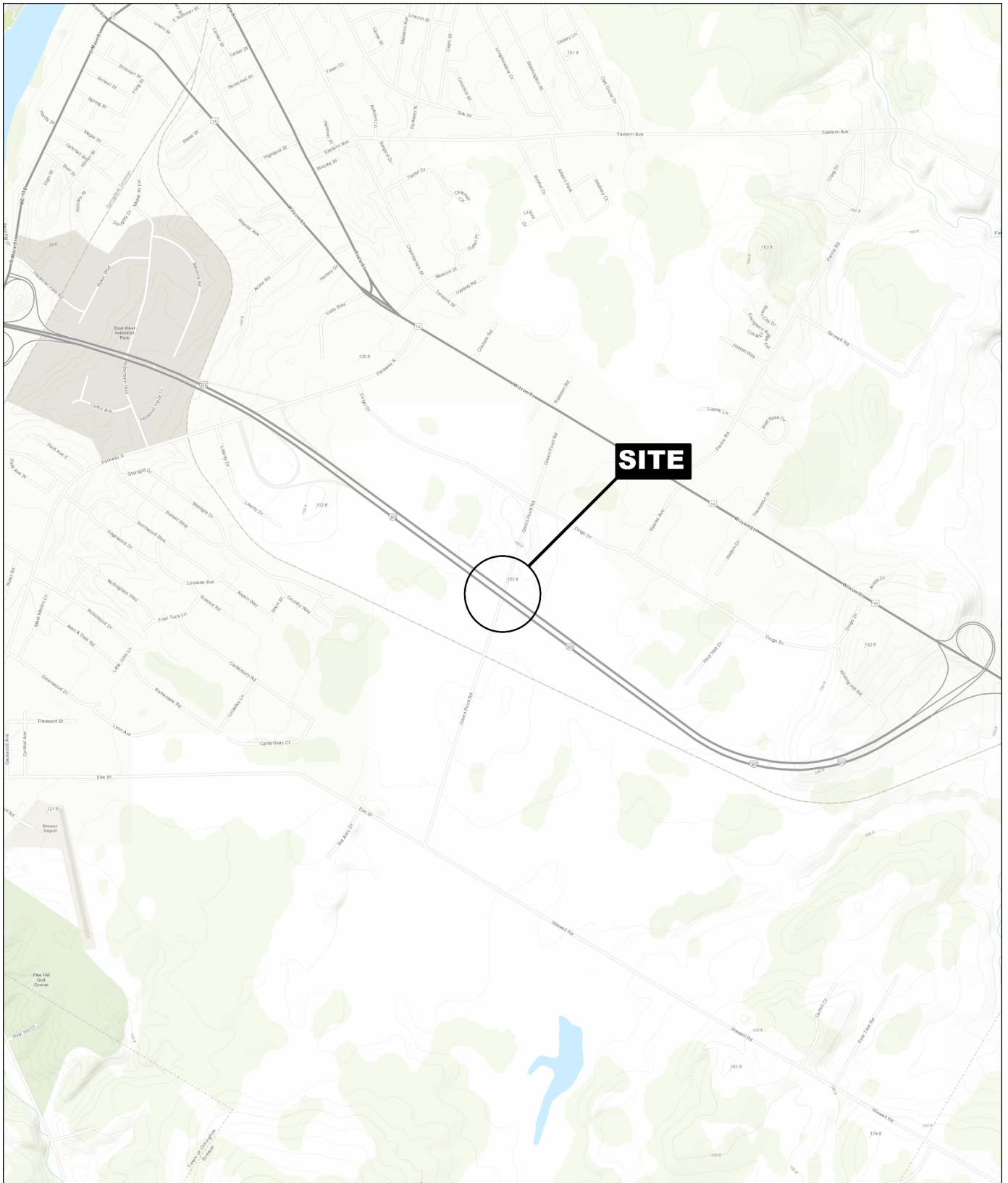
Boring No. ¹	Ground Surface Elevation ² (ft)	Bedrock Core Diameter (in.)	Run					Total Core Recovery ³		Rock Quality Designation ^{4,5}			Physical Rock Parameters		Lithologic, Bedrock Mass, and Discontinuity Description ⁶
			No.	Depth Below Ground Surface (ft)			Total Length (in.)	Recovered Length (in.)	%	Length (in.)	%	Rock Quality	Weathering	Estimated Field Strength	
				Top	Bottom	Midpoint									
BB-BGPR-102	132.9	NQ-2"	R1	32.0	36.0	34.0	48.0	44.0	92%	27.8	58%	Fair	Fresh to Slightly Weathered	Moderately Hard to Hard	Grey to dark grey, aphanitic, interbedded METASILTSTONE and carbonaceous SHALE with minor pyrite, moderately hard to hard, fresh to slightly weathered. Primary joist sets moderately dipping to steep, spaced very close to close, rough and undulating to smooth and planar, fresh to decomposed, tight to open. Secondary joint sets horizontal to low angle, spaced close, rough and undulating, fresh to decomposed, open. Calcite veins throughout.
			R2	36.0	40.7	38.4	56.4	56.0	99%	33.8	60%	Fair	Fresh to Slightly Weathered	Moderately Hard to Hard	Similar to R1. Primary joint sets moderately dipping to steep, spaced very close to close, rough and undulating to smooth and planar, fresh to discolored, tight to open. Secondary joint sets horizontal to low angle, spaced extremely close, rough and undulating, fresh to discolored, open. Calcite veins throughout.
			R3	40.7	42.0	41.4	15.6	15.0	96%	14.5	93%	Excellent	Fresh to Slightly Weathered	Moderately Hard to Hard	Similar to R1. Primary joint sets moderately dipping, close, smooth and planar, fresh, open. Calcite veins throughout.
BB-BGPR-103	157.4		R1	53.0	59.2	56.1	74.4	68.0	91%	37.9	51%	Fair	Fresh to Slightly Weathered	Hard to Moderately Hard	Dark grey, aphanitic, METASILTSTONE, hard to moderately hard, fresh to slightly weathered. Primary joint sets are moderately dipping to steep, spaced very close to moderately close, smooth and planar to rough and undulating, slight discoloration, tight to open. Secondary joint sets are low angle, spaced very close to close, rough and undulating, slight discoloration, open. Quartz and calcite veins throughout.
			R2	59.2	63.2	61.2	48.0	48.0	100%	15.8	33%	Poor	Fresh to Slightly Weathered	Hard to Moderately Hard	Similar to R1, except with occasional slight brown silt infilling.

Notes:

- ¹ Boring locations are shown on Figure 2, Boring Location Plan.
- ² Ground surface elevations at boring locations were determined in the field by MaineDOT using GPS survey equipment, are measured in feet (ft), and reference the North American Vertical Datum of 1988 (NAVD 88).
- ³ Total core recovery (TCR) is the length of core recovered divided by the length of the run.
- ⁴ Rock Quality Designation (RQD) is the total length of intact, full-diameter core pieces recovered with a length greater than or equal to twice the core diameter (i.e., length of at least 4 in.) measured along the core axis. The percent RQD is the total length of RQD measured versus the run length. Note that vertical discontinuities are not included in determination of RQD.
- ⁵ Designation based on RQD in accordance with MaineDOT Geotechnical Section "Key to Soil and Rock Descriptions and Terms" Field Identification Information, dated May 2024.
- ⁶ Refer to the boring logs in Appendix A and bedrock core photographs in Appendix B for additional information.

	Individual	Date
Prepared By:	CFE	1/16/2025
Checked By:	SLB	1/22/2026
Reviewed By:	NAS/EAF	1/23/2026

FIGURES



0210037.001 LOCUS HALEYALDRICHUBOIS



SITE COORDINATES: 44°46'26"N, 68°44'45"W



MAP SOURCE: USGS

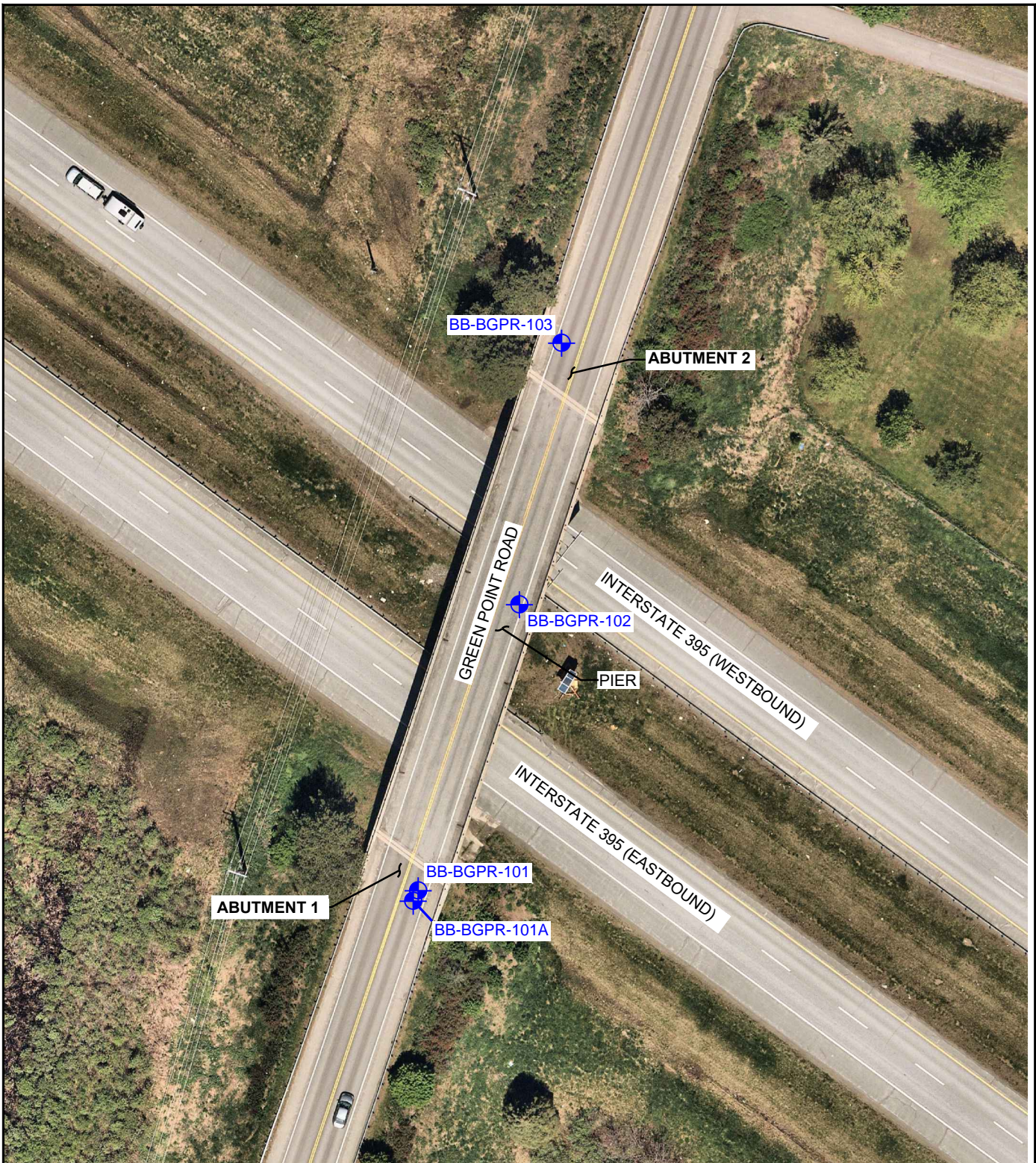
**HALEY
ALDRICH**

GREEN POINT ROAD OVER INTERSTATE 395
BRIDGE NO. 1563, MAINEDOT WIN 029484.00
BREWER, MAINE

PROJECT LOCUS

APPROXIMATE SCALE: 1 INCH = 2,000 FEET
MAY 2026

FIGURE 1



LEGEND

BB-BGPR-101



DESIGNATION AND AS-DRILLED LOCATION OF TEST BORING DRILLED BY NEW ENGLAND BORING CONTRACTORS AND MONITORED IN THE FIELD BY HALEY & ALDRICH, INC. IN OCTOBER 2025.

NOTES

1. AERIAL IMAGE SHOWN IS DATED MAY 22, 2023 AND WAS DOWNLOADED FROM THE NEARMAP ONLINE DATABASE.
2. THE BORING LOCATIONS SHOWN ARE APPROXIMATE AND ARE NOT POSITIONED BASED ON THE SURVEY DATA.



0 30 60
 SCALE IN FEET

**HALEY
 ALDRICH**

GREEN POINT ROAD OVER INTERSTATE 395
 BRIDGE NO. 1563, MAINEDOT WIN 029484.00
 BREWER, MAINE

BORING LOCATION PLAN

SCALE: AS SHOWN
 MAY 2026

FIGURE 2

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> trace little some adjective (e.g. Sandy, Clayey)	<u>Portion of Total (%)</u> 0 - 10 11 - 20 21 - 35 36 - 50				
		(little or no fines)	GP	Poorly-graded gravels, gravel sand mixtures, little or no fines.						
		GRAVEL WITH FINES (Appreciable amount of fines)	GM	Silty gravels, gravel-sand-silt mixtures.						
	SANDS (more than half of coarse fraction is smaller than No. 4 sieve size)	CLEAN SANDS	SW	Well-graded sands, Gravelly sands, little or no fines		TERMS DESCRIBING DENSITY/CONSISTENCY <u>Coarse-grained soils</u> (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> Very loose Loose Medium Dense Dense Very Dense <u>Standard Penetration Resistance</u> N ₆₀ -Value (blows per foot) 0 - 4 5 - 10 11 - 30 31 - 50 > 50 <u>Fine-grained soils</u> (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> Very Soft Soft Medium Stiff Stiff Very Stiff Hard				
		(little or no fines)	SP	Poorly-graded sands, Gravelly sand, little or no fines.						
		SANDS WITH FINES (Appreciable amount of fines)	SM	Silty sands, sand-silt mixtures						
FINE-GRAINED SOILS (more than half of material is smaller than No. 200 sieve size)	SILTS AND CLAYS (liquid limit less than 50)		SC	Clayey sands, sand-clay mixtures.	<u>Approximate Undrained Shear Strength (psf)</u> WOH, WOR, WOP, <2 2 - 4 5 - 8 9 - 15 16 - 30 >30					
		ML	Inorganic silts and very fine sands, rock flour, Silty or Clayey fine sands, or Clayey silts with slight plasticity.	0 - 250						
		CL	Inorganic clays of low to medium plasticity, Gravelly clays, Sandy clays, Silty clays, lean clays.	250 - 500						
	SILTS AND CLAYS (liquid limit greater than 50)	OL	Organic silts and organic Silty clays of low plasticity.	500 - 1000						
		MH	Inorganic silts, micaceous or diatomaceous fine Sandy or Silty soils, elastic silts.	1000 - 2000						
		CH	Inorganic clays of high plasticity, fat clays.	2000 - 4000						
	HIGHLY ORGANIC SOILS	OH	Organic clays of medium to high plasticity, organic silts.	over 4000						
		Pt	Peat and other highly organic soils.	Field Guidelines Fist easily penetrates Thumb easily penetrates Thumb penetrates with moderate effort Indented by thumb with great effort Indented by thumbnail Indented by thumbnail with difficulty						
Desired Soil Observations (in this order, if applicable): Color (Munsell color chart) Moisture (dry, damp, moist, wet) Density/Consistency (from above right hand side) Texture (fine, medium, coarse, etc.) Name (Sand, Silty Sand, Clay, etc., including portions - trace, little, etc.) Gradation (well-graded, poorly-graded, uniform, etc.) Plasticity (non-plastic, slightly plastic, moderately plastic, highly plastic) Structure (layering, fractures, cracks, etc.) Bonding (well, moderately, loosely, etc.,) Cementation (weak, moderate, or strong) Geologic Origin (till, marine clay, alluvium, etc.) Groundwater level					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))					
Maine Department of Transportation Geotechnical Section Key to Soil and Rock Descriptions and Terms Field Identification Information					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				Project: Green Point Road over Interstate 394, Bridge No. 1563 Location: Brewer, Maine		Boring No.: BB-BGPR-101					
Soil/Rock Exploration Log US CUSTOMARY UNITS				WIN: 029484.00							
Driller: New England Boring Contractors		Elevation (ft.): 153.7		Auger ID/OD: SSA-5.0" OD							
Operator: G. McDougal		Datum: NAVD88		Sampler: 24" Standard Split Spoon							
Logged By: S. Butler		Rig Type: Mobile Drill B-53		Hammer Wt./Fall: 140#/30"							
Date Start/Finish: 10/14/2025-10/16/2025		Drilling Method: Cased Wash Boring		Core Barrel: NQ-2.0" ID							
Boring Location: N: 464,533; E: 1,738,813		Casing ID/OD: HW/NW-4.0/3.0" ID		Water Level*: --							
Hammer Efficiency Factor: 0.786		Hammer Type: Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>									
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							SSA	153.3		BITUMINOUS CONCRETE Brown, dry, very dense, fine to coarse SAND, well-graded, some fine to coarse gravel, trace silt, (Fill). Brown, dry, loose, Gravelly fine to coarse SAND, well-graded, little silt, (Fill). Brown, dry, medium dense, fine to coarse SAND, well-graded, little fine to coarse gravel, trace silt, (Fill). Brown, moist, medium dense, fine to coarse SAND, well-graded, trace fine to coarse gravel, trace silt, loosely bonded, (Fill). Brown, moist, medium dense, fine to coarse SAND, well-graded, some fine gravel, little silt, (Fill). Brown, moist, medium dense, fine to coarse SAND, well-graded, some fine to coarse gravel, trace silt, (Fill). Note: Used 3" spoon to collect sample after no recovery with standard spoon. Blow counts are from standard spoon. Brown, moist, dense, fine to coarse SAND, well-graded, little fine to coarse gravel, trace silt, (Fill). Brown, moist, dense, fine to coarse SAND, well-graded, trace fine to coarse gravel, trace silt, (Fill). Brown, moist, medium dense, fine to coarse SAND, well-graded, some fine to coarse gravel, trace silt, (Fill). Brown, moist, dense, fine to coarse SAND, well-graded, trace fine to coarse gravel, little silt, with styrofoam particles, (Fill). Brown, moist, medium dense, fine to coarse SAND, well-graded, little fine to coarse gravel, little silt, (Fill). Light grey-brown, moist, hard, SILT, little fine to coarse gravel, trace coarse sand, slightly plastic, with asphalt and wood	G#847788 A-1-a, SW-SM G#847789 A-1-b, SW-SM G#847790 A-1-b, SW-SM G#847783 WC=13%
1D	17/12	1.0 - 2.4	24/22/50(5")				15				
2D	24/7	3.0 - 5.0	10/4/3/5	7	9	13	7				
3D	24/14	5.0 - 7.0	10/7/10/7	17	22	HW	148.7				
4D	24/8	7.0 - 9.0	15/10/9/16	19	25	9	49				
5D	24/6	9.0 - 11.0	10/6/11/12	17	22	HW					
6D	24/7	11.0 - 13.0	10/9/9/18	18	24		32				
7D	24/12	13.0 - 15.0	9/13/11/14	24	31	91	96				
8D	24/9	15.0 - 17.0	13/13/15/13	28	37	HW					
9D	24/9	17.0 - 19.0	9/7/8/13	15	20	17	76				
10D	24/13	19.0 - 21.0	15/15/14/15	29	38	HW	96				
11D	24/3	21.0 - 23.0	8/7/6/7	13	17	117	71				
12D	24/19	24.0 - 26.0	23/21/19/40	40	52	HW	83				
Remarks: 1. BGS = Below Existing Ground Surface.											
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.										Page 1 of 3 Boring No.: BB-BGPR-101	

Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: Green Point Road over Interstate 394, Bridge No. 1563 Location: Brewer, Maine				Boring No.: BB-BGPR-101 WIN: 029484.00				
Driller: New England Boring Contractors				Elevation (ft.): 153.7				Auger ID/OD: SSA-5.0" OD				
Operator: G. McDougal				Datum: NAVD88				Sampler: 24" Standard Split Spoon				
Logged By: S. Butler				Rig Type: Mobile Drill B-53				Hammer Wt./Fall: 140#/30"				
Date Start/Finish: 10/14/2025-10/16/2025				Drilling Method: Cased Wash Boring				Core Barrel: NQ-2.0" ID				
Boring Location: N: 464,533; E: 1,738,813				Casing ID/OD: HW/NW-4.0/3.0" ID				Water Level*: --				
Hammer Efficiency Factor: 0.786 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				Hammer Type: Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/> 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 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				
25							32	124.7		particles, (Marine Deposit).	LL=26% PL=16% PI=10%	
							126					
							122					
							100					
30	13D	24/24	29.0 - 31.0	5/4/6/7	10	13	HW				Olive-brown, mottled, moist, stiff, Silty CLAY, trace fine sand, slightly plastic, (Marine Deposit).	
35	14D	24/24	34.0 - 36.0	1/2/3/4	5	7					Olive-brown, wet, medium stiff, CLAY, trace fine sand, slightly plastic, with wood particles, (Marine Deposit).	G#847784 WC=30% LL=39% PL=18% PI=21%
	15D V1	24/24	36.0 - 38.0 36.6 - 37.0	Su=1,550/330 psf			96	112.3		55x110mm vane raw torque readings: V1: 400/85 in-lbs Note: Vane refused at 37.0 ft.		
							122				Grey-brown, wet, stiff, CLAY, slightly plastic, with wood particles, (Marine Deposit).	
	1U	24/21	38.0 - 40.0	PUSH			180					
							108					
40	16D V2	24/20	40.0 - 42.0 40.6 - 41.0	Su=1,205/250psf			HW				55x110mm vane raw torque readings: V2: 310/65 in-lbs Note: Vane refused at 41.3 ft.	G#847785 WC=28% LL=29% PL=16% PI=13%
											Grey-brown, wet, stiff, CLAY, trace fine gravel, trace fine sand, slightly plastic, (Marine Deposit).	
											Note: Bottom 0.2 ft of sample 16D likely glacial till.	
45	17D	24/13	45.0 - 47.0	21/18/10/14	28	37					Grey-brown, wet, dense, fine to coarse SAND, poorly-graded, some silt, trace fine gravel, loosely bonded, (Glacial Till).	G#847791 A-2-4, SM
50												
Remarks: 1. BGS = Below Existing Ground Surface.												
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.										Page 2 of 3 Boring No.: BB-BGPR-101		
* 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.												

<div>Maine Department of Transportation</div> <div>Soil/Rock Exploration Log</div> <div>US CUSTOMARY UNITS</div>				<div>Project: Green Point Road over Interstate 394, Bridge No. 1563</div> <div>Location: Brewer, Maine</div>		<div>Boring No.: BB-BGPR-101</div> <div>WIN: 029484.00</div>			
Driller: New England Boring Contractors		Elevation (ft.): 153.7		Auger ID/OD: SSA-5.0" OD					
Operator: G. McDougal		Datum: NAVD88		Sampler: 24" Standard Split Spoon					
Logged By: S. Butler		Rig Type: Mobile Drill B-53		Hammer Wt./Fall: 140#/30"					
Date Start/Finish: 10/14/2025-10/16/2025		Drilling Method: Cased Wash Boring		Core Barrel: NQ-2.0" ID					
Boring Location: N: 464,533; E: 1,738,813		Casing ID/OD: HW/NW-4.0/3.0" ID		Water Level*: --					
Hammer Efficiency Factor: 0.786		Hammer Type: Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>							
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		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		
50	18D	8/6	50.0 - 50.7	50/24(2")				103.7	<div>50.0</div> <div>50.7</div> <div>55</div> <div>55.5</div> <div>60</div> <div>65</div> <div>70</div> <div>75</div>
	R1	54/51	51.0 - 55.5	RQD = 83%			NQ	103.0	
Remarks:									
1. BGS = Below Existing Ground Surface.									
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Maine Department of Transportation <u>Soil/Rock Exploration Log</u> US CUSTOMARY UNITS				Project: Green Point Road over Interstate 394, Bridge No. 1563 Location: Brewer, Maine				Boring No.: BB-BGPR-101A WIN: 029484.00			
Driller: New England Boring Contractors				Elevation (ft.): 153.5				Auger ID/OD: SSA-5.0" OD			
Operator: G. McDougal				Datum: NAVD88				Sampler: 24" Standard Split Spoon			
Logged By: S. Butler				Rig Type: Mobile Drill B-53				Hammer Wt./Fall: 140#/30"			
Date Start/Finish: 10/15/2025-10/16/2025				Drilling Method: Cased Wash Boring				Core Barrel: NQ-2.0" ID			
Boring Location: N: 464,528; E: 1,738,811				Casing ID/OD: HW/NW-4.0/3.0" ID				Water Level*: 34.7 ft BGS			
Hammer Efficiency Factor: 0.786				Hammer Type: Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>							
<div>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 MV = Unsuccessful Field Vane Shear Test Attempt</div> <div>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</div> <div>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</div> <div>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</div>											
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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									Note: Terminated boring BB-BGPR-101 due to broken core bit teeth. Advanced additional boring BB-BGPR-101A adjacent to boring BB-BGPR-101. Refer to boring BB-BGPR-101 for overburden soil information from 0.0-51.0 ft.		
5											
10											
15											
20											
25											
Remarks: 1. BGS = Below Existing Ground Surface.											
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.									Page 1 of 3		
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[illegible]

<div>Maine Department of Transportation</div> <div>Soil/Rock Exploration Log US CUSTOMARY UNITS</div>						<div>Project: Green Point Road over Interstate 394, Bridge No. 1563</div> <div>Location: Brewer, Maine</div>		<div>Boring No.: BB-BGPR-101A</div> <div>WIN: 029484.00</div>																																																																																																																																																																																																																																																																															
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<table><thead><tr><th rowspan="2">Depth (ft.)</th><th colspan="8">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>50</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td rowspan="12"></td><td rowspan="12">Top of Bedrock Elev. 102.5 ft. R1: Grey to dark grey, aphanitic, interbedded METASILTSTONE and carbonaceous SHALE with minor pyrite, moderately hard to hard, fresh. Primary joint sets moderately dipping, spaced very close to moderately close, smooth and planar to rough and undulating, fresh, tight to open, occasional slight brown infilling. Calcite veins throughout. BREWER FORMATION Recovery = 98% Rock Mass Quality = Good R1 Core Times (min:sec) 51.0-52.0 ft (3:27) 52.0-53.0 ft (1:46) 53.0-54.0 ft (2:03) 54.0-55.0 ft (2:14) 55.0-56.0 ft (2:28) R2: Grey, aphanitic, METASILTSTONE, moderately hard to hard, fresh to moderately weathered at 59.2 ft. Joints are horizontal to moderately dipping, spaced very close to close, rough and undulating, fresh to decomposed, open with some brown silt infilling. BREWER FORMATION Recovery = 94% Rock Mass Quality = Fair R2 Core Times (min:sec) 56.0-57.0 ft (2:49) 57.0-58.0 ft (2:36) 58.0-59.0 ft (2:40) 59.0-59.8 ft (3:34) R3: Similar to R2, except moderately weathered and highly fractured. 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Maine Department of Transportation					Project: Green Point Road over Interstate 394, Bridge No. 1563 Location: Brewer, Maine		Boring No.: BB-BGPR-102						
Soil/Rock Exploration Log US CUSTOMARY UNITS					WIN: 029484.00								
Driller: New England Boring Contractors			Elevation (ft.): 132.9		Auger ID/OD: SSA-5.0" OD								
Operator: G. McDougal			Datum: NAVD88		Sampler: 24" Standard Split Spoon								
Logged By: S. Butler			Rig Type: Mobile Drill B-53		Hammer Wt./Fall: 140#/30"								
Date Start/Finish: 10/17/2025-10/20/2025			Drilling Method: Cased Wash Boring		Core Barrel: NQ-2.0" ID								
Boring Location: N: 464,655; E: 1,738,853			Casing ID/OD: HW/NW-4.0/3.0" ID		Water Level*: 42.3 ft BGS								
Hammer Efficiency Factor: 0.786			Hammer Type: Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>										
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						
0	1D	24/11	0.0 - 2.0	14/8/13/14	21	28	HW		Black to brown, dry, medium dense, fine to coarse SAND, well-graded, little fine to coarse gravel, trace silt, (Fill).	G#847792 A-1-a, SM			
	2D	24/12	2.0 - 4.0	3/9/17/17	26	34						Brown, moist, dense, fine to coarse SAND, poorly-graded, some fine gravel, little silt, (Fill).	G#847786 WC=26% LL=36% PL=19% PI=17%
	3D	24/24	4.0 - 6.0	14/16/19/20	35	46	94						
5	4D	24/24	6.0 - 8.0	7/6/6/7	12	16	HW		Olive-brown, mottled, moist, very stiff, Silty CLAY, moderately plastic, blocky, (Marine Deposit).	G#847795 WC=18% LL=24% PL=14% PI=10%			
	5D	24/21	11.0 - 13.0	2/3/3/4	6	8						Olive-brown, mottled, moist, medium stiff, CLAY, moderately plastic, blocky, with trace wood particles, (Marine Deposit).	Note: Vane refusal to push past approximately 13.4 ft. Olive-brown to grey, moist, medium stiff, CLAY, moderately plastic, with trace wood particles, (Marine Deposit)
	6D	24/24	13.0 - 15.0	1/2/3/3	5	7							
10	1U	24/23	15.0 - 17.0	PUSH					Grey-brown, moist, dense, Clayey fine to coarse GRAVEL, little fine to coarse sand, moderately bonded, (Glacial Till). Note: Vane refusal at 21.0 ft.	G#847795 WC=18% LL=24% PL=14% PI=10%			
	7D	24/14	17.0 - 19.0	Su=950/155 psf								Grey-brown, moist, dense, Clayey fine to coarse GRAVEL, little fine to coarse sand, moderately bonded, (Glacial Till). Note: Vane refusal at 21.0 ft.	G#847795 WC=18% LL=24% PL=14% PI=10%
	V1		17.6 - 18.0	Su=890/175 psf									
	V2		18.6 - 19.0						Grey-brown, moist, dense, Clayey fine to coarse GRAVEL, little fine to coarse sand, moderately bonded, (Glacial Till). Note: Vane refusal at 21.0 ft.	G#847795 WC=18% LL=24% PL=14% PI=10%			
15	8D	24/6	20.0 - 22.0	14/23/17/16	40	52						Grey-brown, moist, dense, Clayey fine to coarse GRAVEL, little fine to coarse sand, moderately bonded, (Glacial Till). Note: Vane refusal at 21.0 ft.	G#847795 WC=18% LL=24% PL=14% PI=10%
									Grey-brown, moist, dense, Clayey fine to coarse GRAVEL, little fine to coarse sand, moderately bonded, (Glacial Till). Note: Vane refusal at 21.0 ft.	G#847795 WC=18% LL=24% PL=14% PI=10%			
20												Grey-brown, moist, dense, Clayey fine to coarse GRAVEL, little fine to coarse sand, moderately bonded, (Glacial Till). Note: Vane refusal at 21.0 ft.	G#847795 WC=18% LL=24% PL=14% PI=10%
									Grey-brown, moist, dense, Clayey fine to coarse GRAVEL, little fine to coarse sand, moderately bonded, (Glacial Till). Note: Vane refusal at 21.0 ft.	G#847795 WC=18% LL=24% PL=14% PI=10%			
25												Grey-brown, moist, dense, Clayey fine to coarse GRAVEL, little fine to coarse sand, moderately bonded, (Glacial Till). Note: Vane refusal at 21.0 ft.	G#847795 WC=18% LL=24% PL=14% PI=10%
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Remarks:	1. BGS = Below Existing Ground Surface. 2. SG = Specific Gravity. 3. Boring advanced from top of existing bridge deck. 4. Existing ground surface measured 23.5 ft below top of existing bridge deck surface. 5. CUDSS = Consolidated Undrained Direct Simple Shear test.												
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.													

Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: Green Point Road over Interstate 394, Bridge No. 1563 Location: Brewer, Maine				Boring No.: BB-BGPR-102 WIN: 029484.00																							
Driller: New England Boring Contractors				Elevation (ft.): 132.9				Auger ID/OD: SSA-5.0" OD																							
Operator: G. McDougal				Datum: NAVD88				Sampler: 24" Standard Split Spoon																							
Logged By: S. Butler				Rig Type: Mobile Drill B-53				Hammer Wt./Fall: 140#/30"																							
Date Start/Finish: 10/17/2025-10/20/2025				Drilling Method: Cased Wash Boring				Core Barrel: NQ-2.0" ID																							
Boring Location: N: 464,655; E: 1,738,853				Casing ID/OD: HW/NW-4.0/3.0" ID				Water Level*: 42.3 ft BGS																							
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Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N ₆₀	Casing																								
25	9D	24/4	25.0 - 27.0	11/13/13/8	26	34		107.9		25.0	Grey-brown, moist, hard, fine to coarse Sandy CLAY, little fine to coarse gravel, slightly plastic, moderately bonded, (Glacial Till).																				
30	10D	11/11	30.0 - 30.9	12/50(5")			NQ	102.9		30.0		Grey-brown, moist, hard, fine to coarse Gravelly SILT, little fine to coarse sand, nonplastic, moderately bonded, (Glacial Till). Note: SPT refusal at approximately 30.9 ft on bedrock.																			
	R1	48/44	32.0 - 36.0	RQD = 58%				102.0		30.9																					
35																															
	R2	56.4/56	36.0 - 40.7	RQD = 60%																											
40																															
	R3	15.6/15	40.7 - 42.0	RQD = 93%																											
45																															
50								90.9		42.0	Bottom of Exploration at 42.0 feet below ground surface.																				

Remarks: 1. BGS = Below Existing Ground Surface. 2. SG = Specific Gravity. 3. Boring advanced from top of existing bridge deck. 4. Existing ground surface measured 23.5 ft below top of existing bridge deck surface. 5. CUDSS = Consolidated Undrained Direct Simple Shear test.											
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.: BB-BGPR-102	

Maine Department of Transportation				Project: Green Point Road over Interstate 394, Bridge No. 1563 Location: Brewer, Maine		Boring No.: BB-BGPR-103					
Soil/Rock Exploration Log US CUSTOMARY UNITS				WIN: 029484.00							
Driller: New England Boring Contractors		Elevation (ft.): 157.4		Auger ID/OD: SSA-5.0" OD							
Operator: G. McDougal		Datum: NAVD88		Sampler: 24" Standard Split Spoon							
Logged By: S. Butler		Rig Type: Mobile Drill B-53		Hammer Wt./Fall: 140#/30"							
Date Start/Finish: 10/10/2025-10/13/2025		Drilling Method: Cased Wash Boring		Core Barrel: NQ-2.0" ID							
Boring Location: N: 464,761; E: 1,738,866		Casing ID/OD: HW/NW-4.0/3.0" ID		Water Level*: 32.0 ft BGS							
Hammer Efficiency Factor: 0.786		Hammer Type: Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/>									
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0							SSA	156.9		BITUMINOUS CONCRETE	
	1D	18/18	1.0 - 2.5	23/21/24/50(0")	45	59	↘	154.4		Brown, dry, very dense, fine to coarse SAND, little fine to coarse gravel, trace silt, (Fill).	
							45				
	2D	24/5	3.0 - 5.0	32/7/9/11	16	21	100	152.4		Light grey to brown, dry, medium dense, Silty fine to coarse SAND, little fine to coarse gravel, (Fill).	
							45				
5	3D	24/9	5.0 - 7.0	15/14/14/10	28	37	HW	150.4		Brown, moist, dense, Sandy fine to coarse GRAVEL, trace silt, (Fill).	
							↘				
	4D	24/12	7.0 - 9.0	8/11/10/12	21	28	33			Brown, moist, medium dense, fine to coarse SAND, well-graded, some fine to coarse gravel, little silt, (Fill).	G#847802 A-1-a, SM
							63				
	5D	24/11	9.0 - 11.0	12/13/15/17	28	37	HW			Brown, moist, dense, fine to coarse SAND, well-graded, some fine to coarse gravel, little silt, (Fill).	
10							↘				
	6D	24/11	11.0 - 13.0	16/14/10/12	24	31	↘			Brown, moist, dense, fine to coarse SAND, well-graded, some fine to coarse gravel, trace silt, (Fill).	
							21				
	7D	24/12	13.0 - 15.0	14/11/12/18	23	30	61			Brown, moist, medium dense, fine to coarse SAND, well-graded, some fine gravel, little silt, (Fill).	G#847803 A-1-a, SW-SM
							77				
15	8D	24/10	15.0 - 17.0	13/18/12/15	30	39	HW	142.4	Note: No recovery in standard spoon, so used 3 in. spoon. Blow counts from standard spoon. Brown, moist, dense, fine to coarse Sandy GRAVEL, (Fill).		
							↘				
	9D	24/11	17.0 - 19.0	12/16/12/19	28	37	19	140.4	Brown, moist, dense, fine to coarse SAND, well-graded, some fine to coarse gravel, trace silt, (Fill).		
							74				
20	10D	24/11	19.0 - 21.0	17/13/11/12	24	31	HW		Brown, moist, dense, fine to coarse SAND, some fine to coarse gravel, trace silt, (Fill).		
							↘				
	11D	24/12	21.0 - 23.0	11/8/6/12	14	18	↘	136.4	Note: Minimal recovery in standard spoon, used 3 in. spoon. Blow counts from standard spoon. Brown, moist, medium dense, fine to coarse GRAVEL, well-graded, some fine to coarse sand, trace silt, (Fill).	G#847804 A-1-a, GW-GM	
							21				
	12D	24/12	23.0 - 25.0	12/13/12/18	25	33	83	134.4	Olive-brown, moist, hard, Clayey SILT, trace fine gravel, little fine to coarse sand, slightly plastic, with wood particles, (Marine Deposit).	G#847796 WC=13% LL=21% PL=15%	
25							91				
Remarks: 1. BGS = Below Existing Ground Surface.											
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.										Page 1 of 3	
* 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.: BB-BGPR-103	

Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS				Project: Green Point Road over Interstate 394, Bridge No. 1563 Location: Brewer, Maine				Boring No.: BB-BGPR-103 WIN: 029484.00				
Driller: New England Boring Contractors				Elevation (ft.): 157.4				Auger ID/OD: SSA-5.0" OD				
Operator: G. McDougal				Datum: NAVD88				Sampler: 24" Standard Split Spoon				
Logged By: S. Butler				Rig Type: Mobile Drill B-53				Hammer Wt./Fall: 140#/30"				
Date Start/Finish: 10/10/2025-10/13/2025				Drilling Method: Cased Wash Boring				Core Barrel: NQ-2.0" ID				
Boring Location: N: 464,761; E: 1,738,866				Casing ID/OD: HW/NW-4.0/3.0" ID				Water Level*: 32.0 ft BGS				
Hammer Efficiency Factor: 0.786 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				Hammer Type: Automatic <input checked="" type="checkbox"/> Hydraulic <input type="checkbox"/> Rope & Cathead <input type="checkbox"/> 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 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				
25	13D	24/13	25.0 - 27.0	15/11/9/26	20	26	HW			Olive-brown, moist, very stiff, Clayey SILT, little fine to medium sand, trace fine gravel, slightly plastic, with wood particles, (Marine Deposit).	PI=6% G#847797 WC=15% LL=23% PL=16% PI=7%	
30	14D	24/18	30.0 - 32.0	5/4/5/7	9	12				Olive-brown, mottled, wet, stiff, Clayey SILT, trace fine gravel, little fine to medium sand, slightly plastic, (Marine Deposit).		
35	15D	24/24	35.0 - 37.0	2/2/3/4	5	7			122.4	Olive-brown to grey-brown, mottled, wet, medium stiff, CLAY, trace fine sand (occasional partings), moderately plastic, with trace wood particles, (Marine Deposit).	G#847798 WC=30% LL=37% PL=19% PI=18%	
40	16D	24/24	40.0 - 42.0	1/1/2/2	3	4				Similar to 15D, except grey and soft, (Marine Deposit).		
	17D	24/24	42.0 - 44.0	WOH/WOH/WOH/ WOH						Note: Vane refused at 42.3 ft. Grey, wet, very soft, CLAY, moderately plastic, (Marine Deposit).	G#847799 WC=34% LL=35% PL=18% PI=17%	
45	1U	24/17	44.0 - 46.0	PUSH								
	18D	24/18	46.0 - 48.0	WOR/8/30/28	38	50			110.9	Note: Vane refused at 46.5 ft. Note: Top similar to 17D, (Marine Deposit). Grey, wet, hard, Silty CLAY, some fine to coarse sand, little fine gravel, moderately bonded, (Glacial Till).	G#847805 A-4, CL-ML G#847800 WC=15% LL=21% PL=14% PI=7%	
50												
Remarks: 1. BGS = Below Existing Ground Surface.												
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.										Page 2 of 3 Boring No.: BB-BGPR-103		
* 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.												

<div>Maine Department of Transportation</div> <div>Soil/Rock Exploration Log US CUSTOMARY UNITS</div>						<div>Project: Green Point Road over Interstate 394, Bridge No. 1563</div> <div>Location: Brewer, Maine</div>				<div>Boring No.: BB-BGPR-103</div> <div>WIN: 029484.00</div>											
Driller: New England Boring Contractors						Elevation (ft.): 157.4				Auger ID/OD: SSA-5.0" OD											
Operator: G. McDougal						Datum: NAVD88				Sampler: 24" Standard Split Spoon											
Logged By: S. Butler						Rig Type: Mobile Drill B-53				Hammer Wt./Fall: 140#/30"											
Date Start/Finish: 10/10/2025-10/13/2025						Drilling Method: Cased Wash Boring				Core Barrel: NQ-2.0" ID											
Boring Location: N: 464,761; E: 1,738,866						Casing ID/OD: HW/NW-4.0/3.0" ID				Water Level*: 32.0 ft BGS											
Hammer Efficiency Factor: 0.786						Hammer Type: <div>Automatic<input checked="" type="checkbox"/>Hydraulic<input type="checkbox"/>Rope & Cathead<input type="checkbox"/></div>															
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 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.							
50	19D	24/18	50.0 - 52.0	7/12/12/16	24	31				Grey-brown, wet, hard, Silty CLAY, some fine to coarse sand, little fine gravel, moderately bonded, (Glacial Till).				G#847806 A-4, CL-ML G#847801 WC=13% LL=20% PL=13% PI=7%							
										Top of Bedrock Elev. 105.2 ft. R1: Dark grey, aphanitic, METASILSTONE, hard to moderately hard, fresh to slightly weathered. Primary joint sets are moderately dipping to steep, spaced very close to moderately close, smooth and planar to rough and undulating, slight discoloration, tight to open. Secondary joint sets are low angle, spaced very close to close, rough and undulating, slight discoloration, open. Quartz and calcite veins throughout. BREWER FORMATION. Recovery = 91% Rock Mass Quality = Fair R1 Core Times (min:sec) 53.0-54.0 ft (4:24) 54.0-55.0 ft (4:07) 55.0-56.0 ft (2:10) 56.0-57.0 ft (6:09) 57.0-58.0 ft (3:26) 58.0-59.2 ft (4:11) R2: Similar to R1, except with occasional slight brown silt infilling. BREWER FORMATION Recovery = 100% Rock Mass Quality = Poor R2 Core Times (min:sec) 59.2-60.2 ft (2:21) 60.2-61.2 ft (2:19) 61.2-62.2 ft (3:42) 62.2-63.2 ft (4:02)											
	R1	74.4/68	53.0 - 59.2	RQD = 51%			NQ														
										BREWER FORMATION Recovery = 100% Rock Mass Quality = Poor R2 Core Times (min:sec) 59.2-60.2 ft (2:21) 60.2-61.2 ft (2:19) 61.2-62.2 ft (3:42) 62.2-63.2 ft (4:02)											
55																					
										Bottom of Exploration at 63.2 feet below ground surface.											
	R2	48/48	59.2 - 63.2	RQD = 33%																	
60																					
65																					
70																					

APPENDIX B

Bedrock Core Photographs

**BEDROCK CORE PHOTOGRAPHS
GREEN POINT ROAD OVER INTERSTATE 395
BRIDGE NO. 1563, MAINEDOT WIN 029484.00
BREWER, MAINE**



Top Row: BB-BGPR-101A, Run No. R2: 56.0 ft (left) to 59.8 ft (middle-right), Run No. R3: 59.8 ft (middle-right) to 61.0 ft (right)
Top Middle Row: BB-BGPR-102, Run No. R1: 32.0 ft (left) to 36.0 ft (middle-right), Run No. R2: 36.0 ft (middle right) to 37.0 ft (right)
Bottom Middle Row: BB-BGPR-102, Run No. R2: 37.0 ft (left) to 40.7 ft (middle-right), Run No. R3: 40.7 ft (middle-right) to 41.0 ft (right)
Bottom Row: BB-BGPR-102, Run No. R3: 41.0 ft (left) to 42.0 (middle-left)

**BEDROCK CORE PHOTOGRAPHS
GREEN POINT ROAD OVER INTERSTATE 395
BRIDGE NO. 1563, MAINEDOT WIN 029484.00
BREWER, MAINE**



Top Row: BB-BGPR-103, Run No. R1: 53.0 ft (left) to 58.0 ft (right)

Top Middle Row: BB-BGPR-103, Run No. R1: 58.0 ft (left) to 59.2 ft (middle-left), Run No. R2: 59.2 ft (middle-left) to 63.0 ft (right)

Bottom Middle Row: BB-BGPR-103, Run No. R2: 63.0 ft (left) to 63.2 ft (middle-left), BB-BGPR-101, Run No. R1: 51.0 ft (middle-left) to 55.5 ft (right)

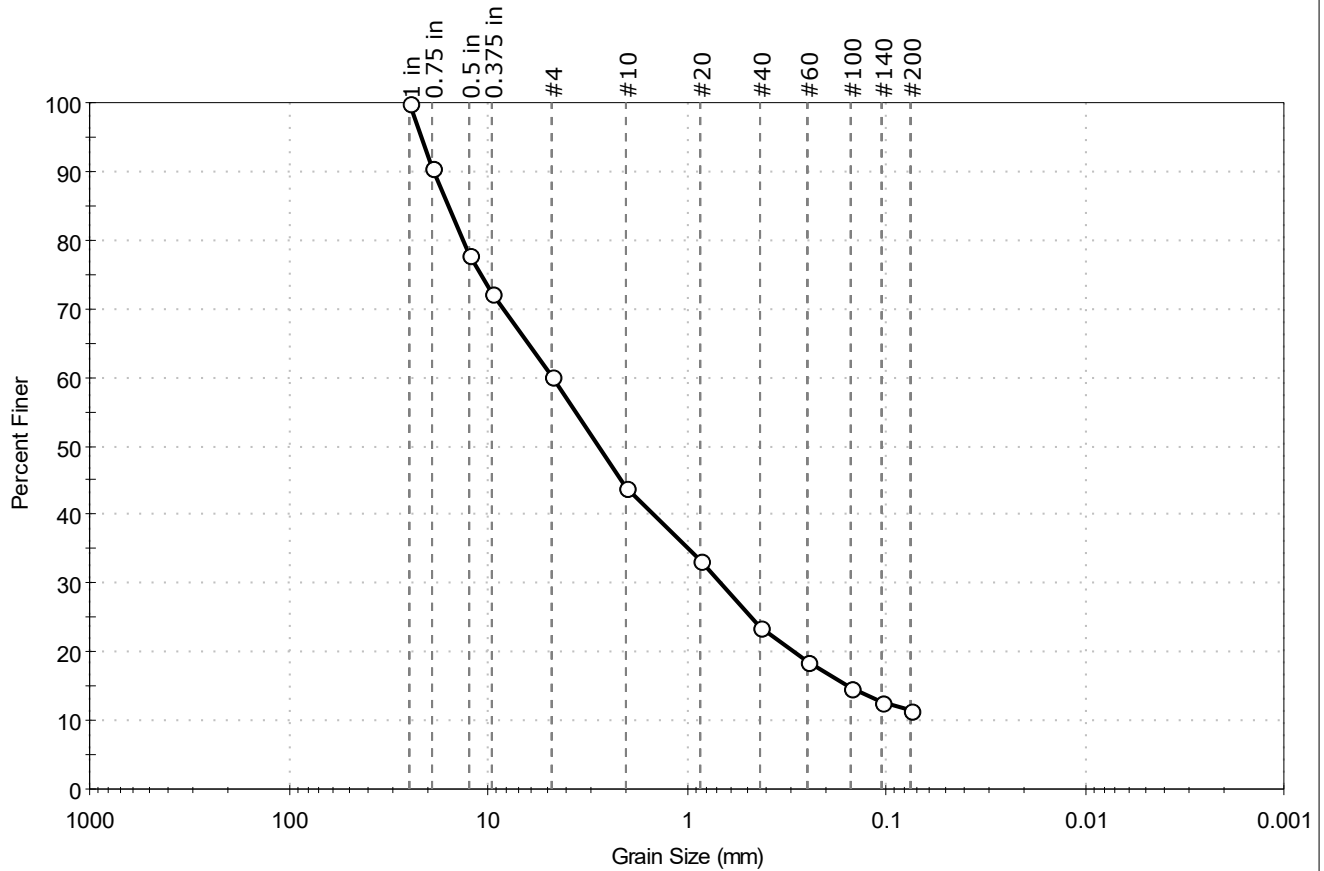
Bottom Row: BB-BGPR-101A, Run No. R1: 51.0 ft (left) to 56.0 ft (right)

APPENDIX C

Laboratory Test Results

Client:	Haley & Aldrich, Inc.		
Project:	I-395 - Green Point Bridge		
Location:	Brewer, ME	Project No:	GTX-322338
Boring ID:	BB-BGPR-101	Sample Type:	Bag
Sample ID:	2D	Test Date:	12/23/25
Depth :	2-4 ft	Test Id:	847788
Test Comment:	---		
Visual Description:	Moist, light brownish gray sand with silt and gravel		
Sample Comment:	---		

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	39.8	48.7	11.5

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 in	25.00	100		
0.75 in	19.00	91		
0.5 in	12.50	78		
0.375 in	9.50	72		
#4	4.75	60		
#10	2.00	44		
#20	0.85	33		
#40	0.42	24		
#60	0.25	18		
#100	0.15	15		
#140	0.11	13		
#200	0.075	12		

Coefficients

D₈₅ = 15.7981 mm D₃₀ = 0.6702 mm
 D₆₀ = 4.6998 mm D₁₅ = 0.1578 mm
 D₅₀ = 2.7521 mm D₁₀ = N/A
 C_u = N/A C_c = N/A

Classification

ASTM N/A

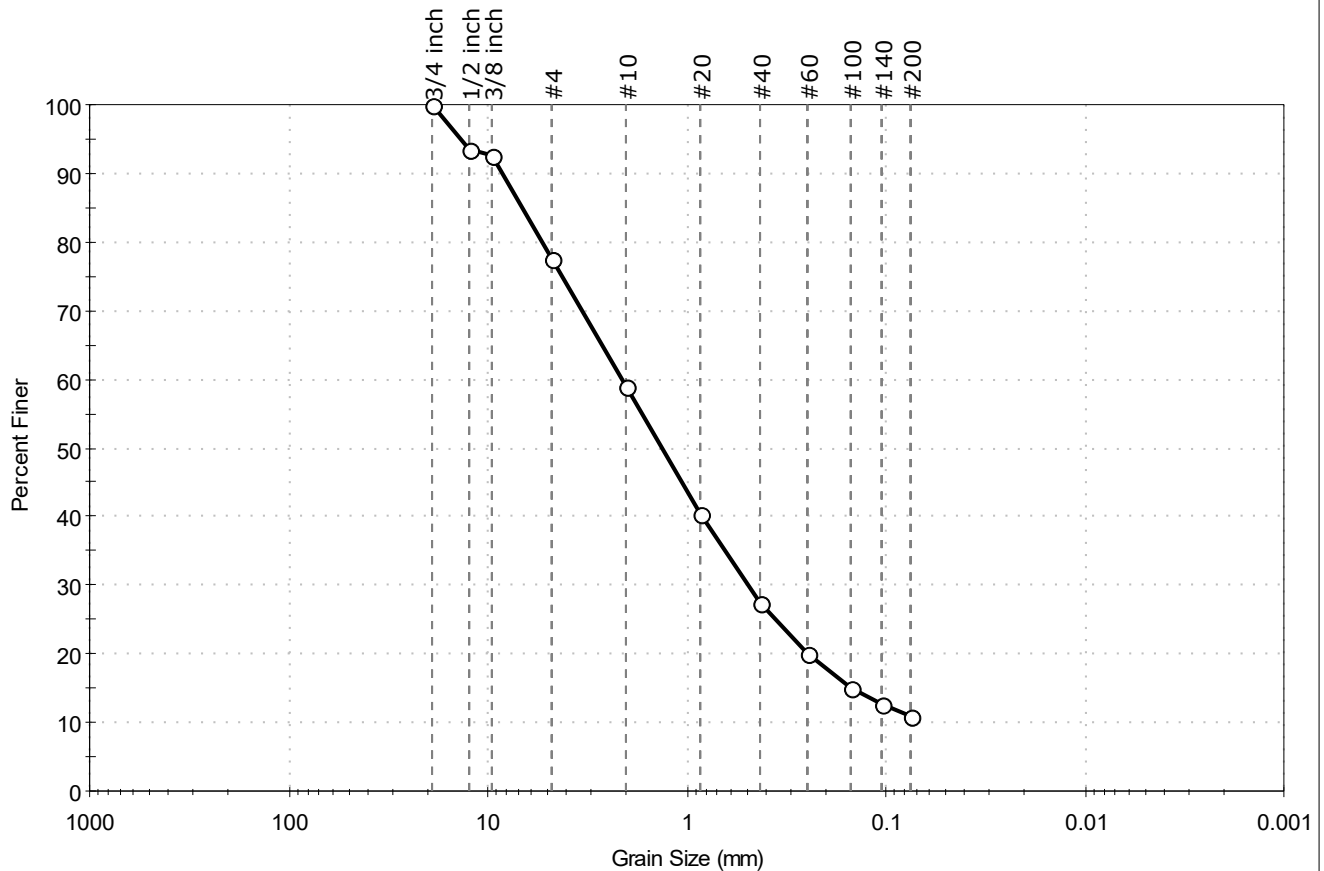
AASHTO Stone Fragments, Gravel and Sand (A-1-a (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR
 Sand/Gravel Hardness : HARD

Client:	Haley & Aldrich, Inc.		
Project:	I-395 - Green Point Bridge		
Location:	Brewer, ME	Project No:	GTX-322338
Boring ID:	BB-BGPR-101	Sample Type:	Bag
Sample ID:	5D	Test Date:	12/31/25
Depth :	9-11 ft	Test Id:	847789
Test Comment:	---		
Visual Description:	Moist, dark grayish brown sand with silt and gravel		
Sample Comment:	---		

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	22.3	66.8	10.9

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
3/4 inch	19.00	100		
1/2 inch	12.50	94		
3/8 inch	9.50	93		
#4	4.75	78		
#10	2.00	59		
#20	0.85	40		
#40	0.42	27		
#60	0.25	20		
#100	0.15	15		
#140	0.11	13		
#200	0.075	11		

Coefficients

D₈₅ = 6.6691 mm D₃₀ = 0.4893 mm
 D₆₀ = 2.1010 mm D₁₅ = 0.1476 mm
 D₅₀ = 1.3239 mm D₁₀ = N/A
 C_u = N/A C_c = N/A

Classification

ASTM N/A

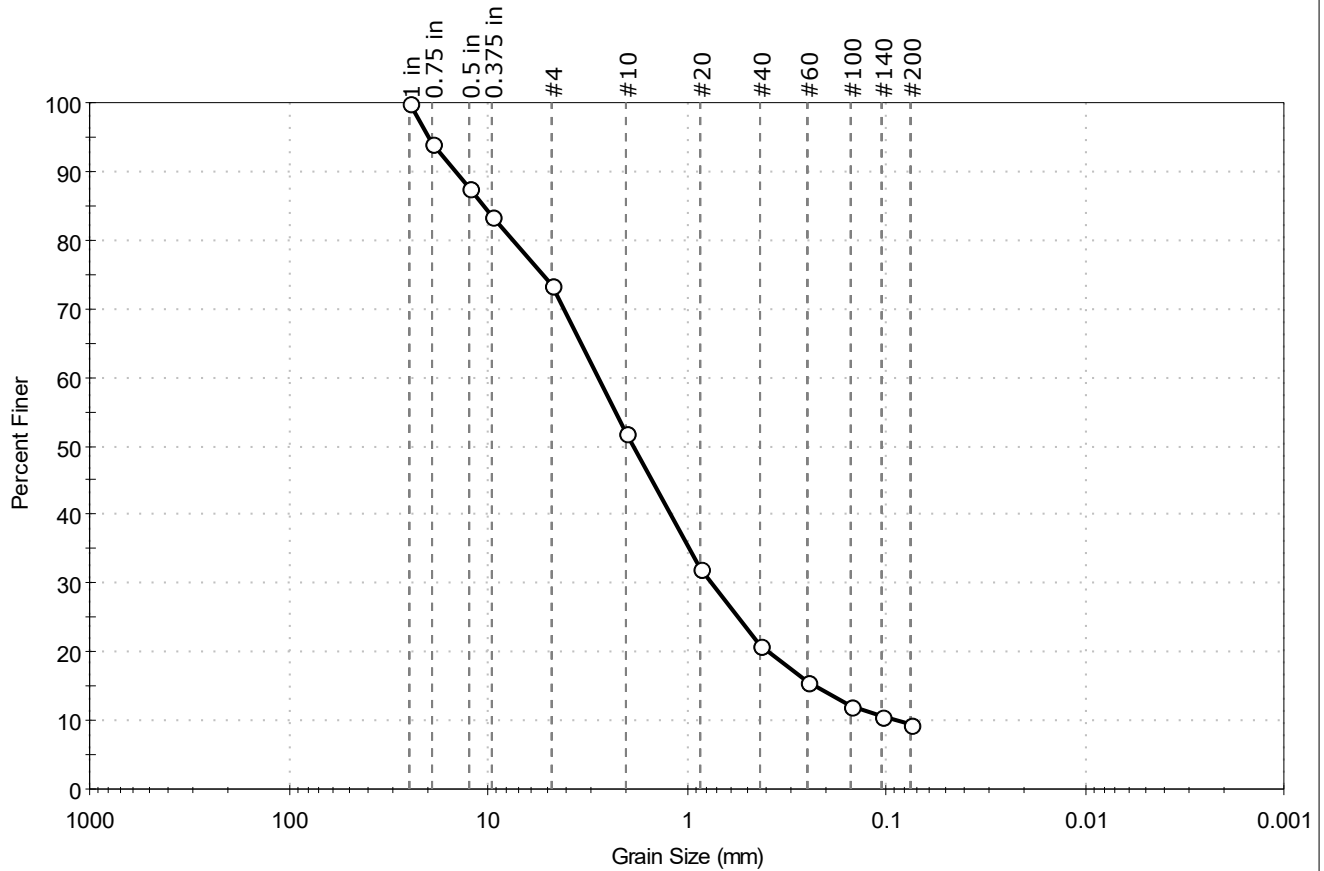
AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR
 Sand/Gravel Hardness : HARD

Client: Haley & Aldrich, Inc.	Project No: GTX-322338	
Project: I-395 - Green Point Bridge		
Location: Brewer, ME	Sample Type: Bag	Tested By: ajl
Boring ID: BB-BGPR-101	Test Date: 12/23/25	Checked By: ank
Sample ID: 9D	Test Id: 847790	
Depth : 17-19 ft		
Test Comment: ---		
Visual Description: Moist, brown sand with silt and gravel		
Sample Comment: ---		

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	26.6	63.9	9.5

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 in	25.00	100		
0.75 in	19.00	94		
0.5 in	12.50	87		
0.375 in	9.50	83		
#4	4.75	73		
#10	2.00	52		
#20	0.85	32		
#40	0.42	21		
#60	0.25	16		
#100	0.15	12		
#140	0.11	11		
#200	0.075	9.5		

Coefficients

$D_{85} = 10.5398 \text{ mm}$ $D_{30} = 0.7442 \text{ mm}$
 $D_{60} = 2.7633 \text{ mm}$ $D_{15} = 0.2287 \text{ mm}$
 $D_{50} = 1.8308 \text{ mm}$ $D_{10} = 0.0896 \text{ mm}$
 $C_u = 30.840$ $C_c = 2.237$

Classification

ASTM N/A

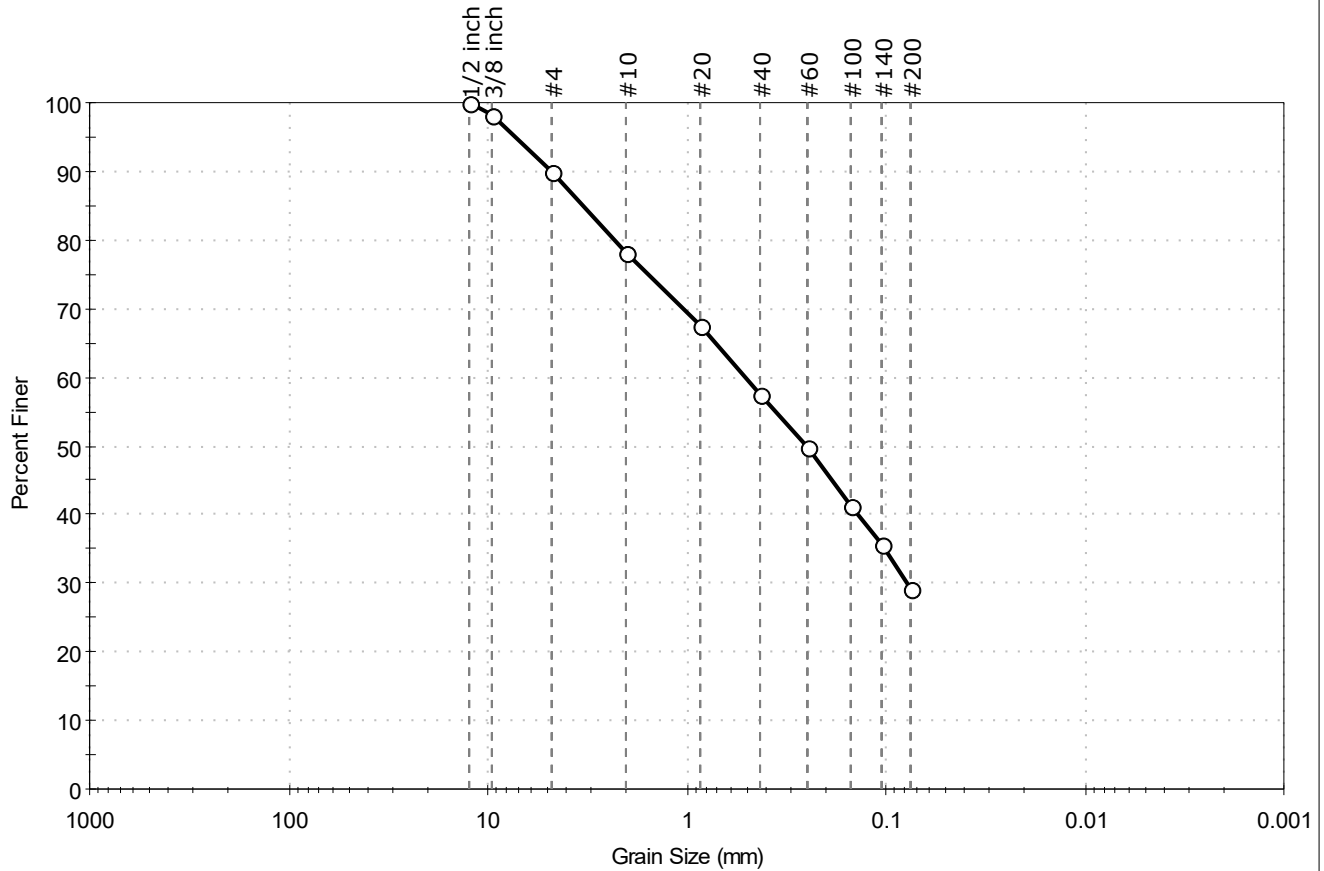
AASHTO Stone Fragments, Gravel and Sand (A-1-b (1))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR
 Sand/Gravel Hardness : HARD

Client: Haley & Aldrich, Inc.	Project No: GTX-322338	
Project: I-395 - Green Point Bridge		
Location: Brewer, ME	Sample Type: Bag	Tested By: ajl
Boring ID: BB-BGPR-101	Test Date: 12/31/25	Checked By: ank
Sample ID: 17D	Test Id: 847791	
Depth : 45-47 ft		
Test Comment: ---		
Visual Description: Moist, dark grayish brown silty sand		
Sample Comment: ---		

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	9.9	60.9	29.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1/2 inch	12.50	100		
3/8 inch	9.50	98		
#4	4.75	90		
#10	2.00	78		
#20	0.85	68		
#40	0.42	58		
#60	0.25	50		
#100	0.15	41		
#140	0.11	36		
#200	0.075	29		

Coefficients

$D_{85} = 3.2849 \text{ mm}$ $D_{30} = 0.0783 \text{ mm}$
 $D_{60} = 0.5014 \text{ mm}$ $D_{15} = \text{N/A}$
 $D_{50} = 0.2514 \text{ mm}$ $D_{10} = \text{N/A}$
 $C_u = \text{N/A}$ $C_c = \text{N/A}$

Classification

ASTM N/A

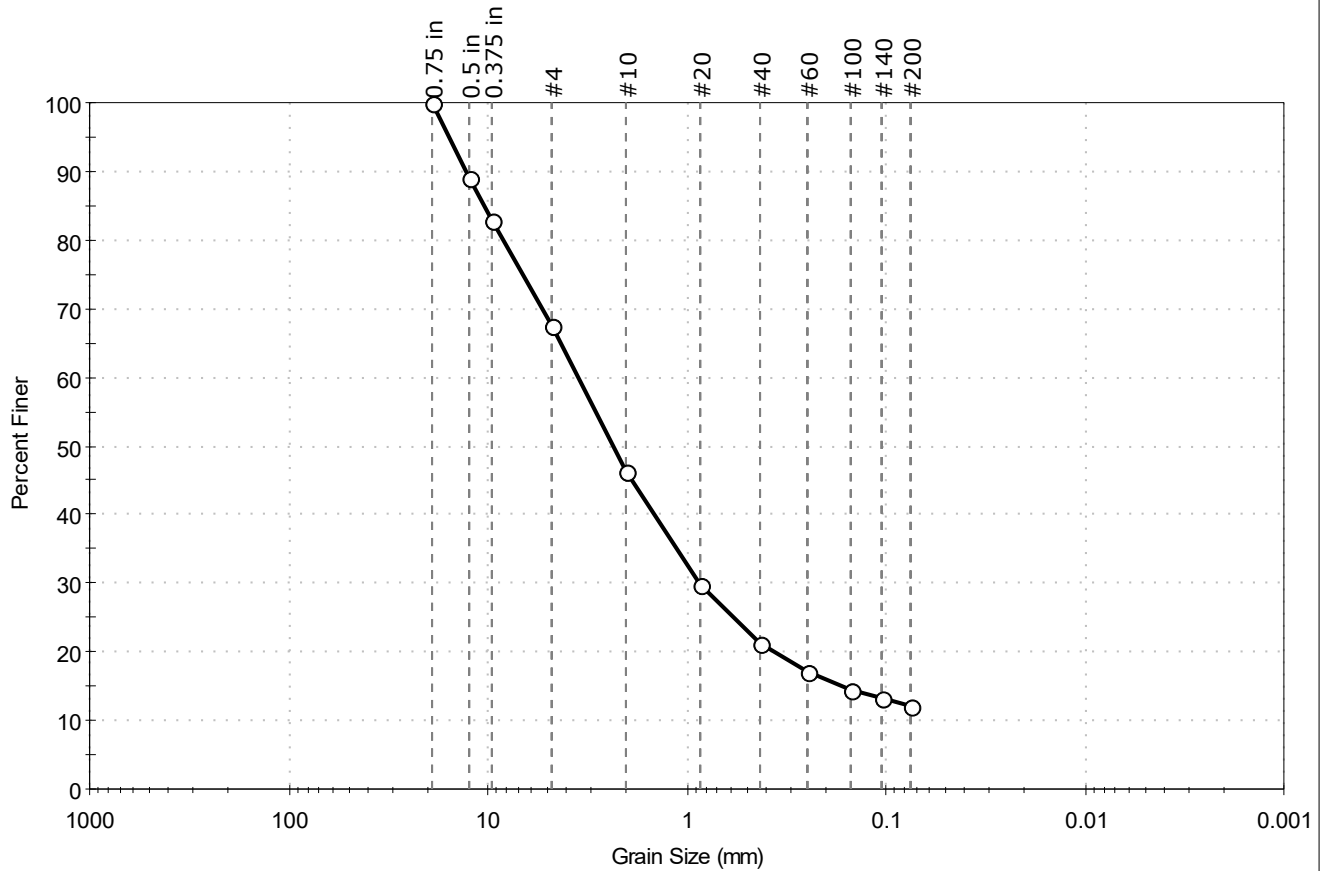
AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR
 Sand/Gravel Hardness : HARD

Client: Haley & Aldrich, Inc.	Project No: GTX-322338
Project: I-395 - Green Point Bridge	
Location: Brewer, ME	
Boring ID: BB-BGPR-102	Sample Type: Bag
Sample ID: 2D	Test Date: 12/30/25
Depth: 2-4 ft	Test Id: 847792
Test Comment: ---	Tested By: ajl
Visual Description: Moist, very dark grayish brown silty sand with gravel	Checked By: ank
Sample Comment: ---	

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	32.5	55.4	12.1

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	89		
0.375 in	9.50	83		
#4	4.75	68		
#10	2.00	46		
#20	0.85	30		
#40	0.42	21		
#60	0.25	17		
#100	0.15	14		
#140	0.11	13		
#200	0.075	12		

Coefficients

$D_{85} = 10.4095 \text{ mm}$ $D_{30} = 0.8608 \text{ mm}$
 $D_{60} = 3.4950 \text{ mm}$ $D_{15} = 0.1663 \text{ mm}$
 $D_{50} = 2.3271 \text{ mm}$ $D_{10} = \text{N/A}$
 $C_u = \text{N/A}$ $C_c = \text{N/A}$

Classification

ASTM N/A

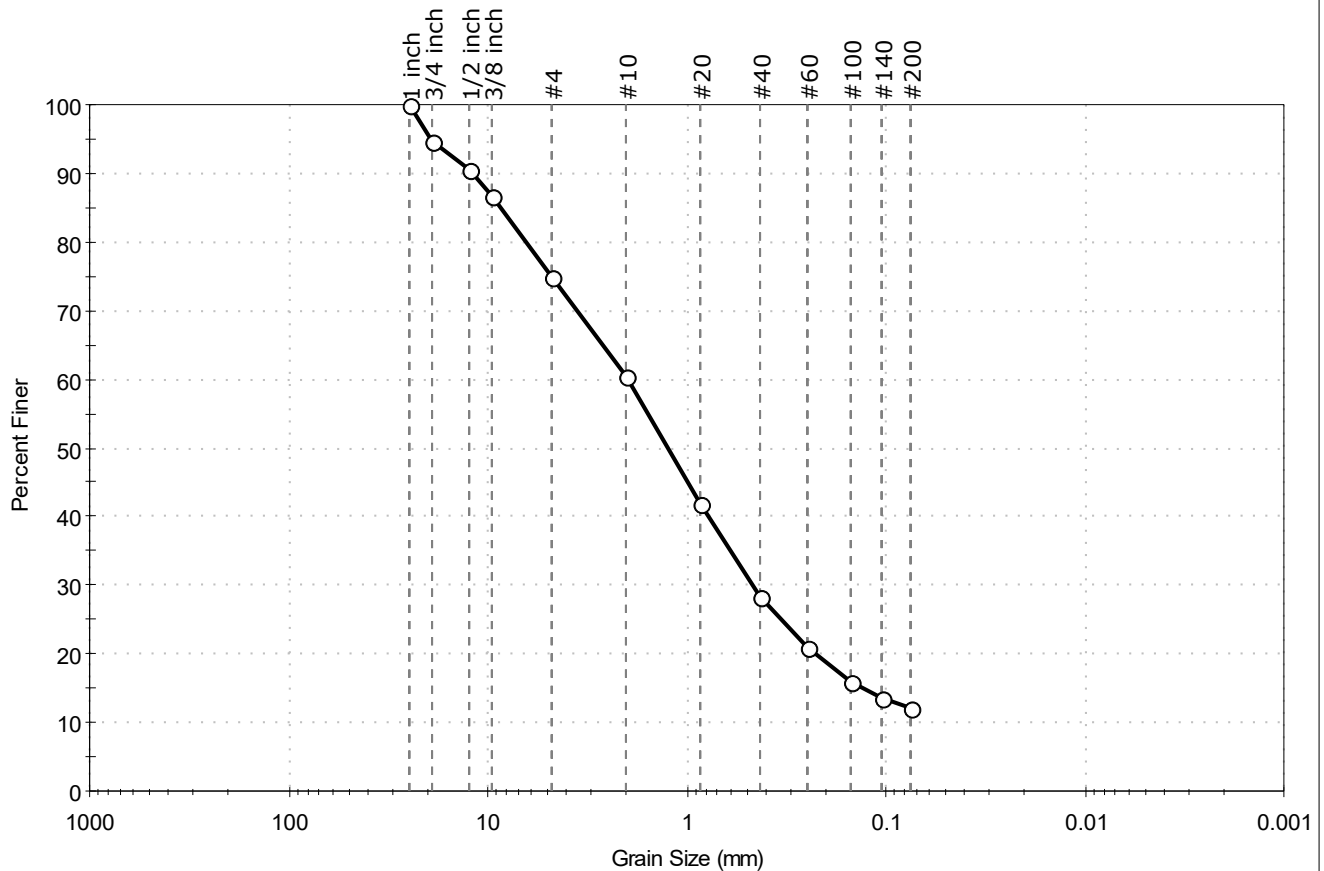
AASHTO Stone Fragments, Gravel and Sand (A-1-a (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR
 Sand/Gravel Hardness : HARD

Client: Haley & Aldrich, Inc.	Project No: GTX-322338
Project: I-395 - Green Point Bridge	
Location: Brewer, ME	
Boring ID: BB-BGPR-103	Sample Type: Bag
Sample ID: 4D	Test Date: 12/30/25
Depth: 7-9 ft	Test Id: 847802
Test Comment: ---	Tested By: ajl
Visual Description: Moist, dark grayish brown sand with silt and gravel	Checked By: ank
Sample Comment: ---	

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	25.0	63.0	12.0

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 inch	25.00	100		
3/4 inch	19.00	95		
1/2 inch	12.50	91		
3/8 inch	9.50	87		
#4	4.75	75		
#10	2.00	60		
#20	0.85	42		
#40	0.42	28		
#60	0.25	21		
#100	0.15	16		
#140	0.11	14		
#200	0.075	12		

Coefficients

$D_{85} = 8.5290$ mm $D_{30} = 0.4630$ mm
 $D_{60} = 1.9575$ mm $D_{15} = 0.1288$ mm
 $D_{50} = 1.2365$ mm $D_{10} = \text{N/A}$
 $C_u = \text{N/A}$ $C_c = \text{N/A}$

Classification

ASTM N/A

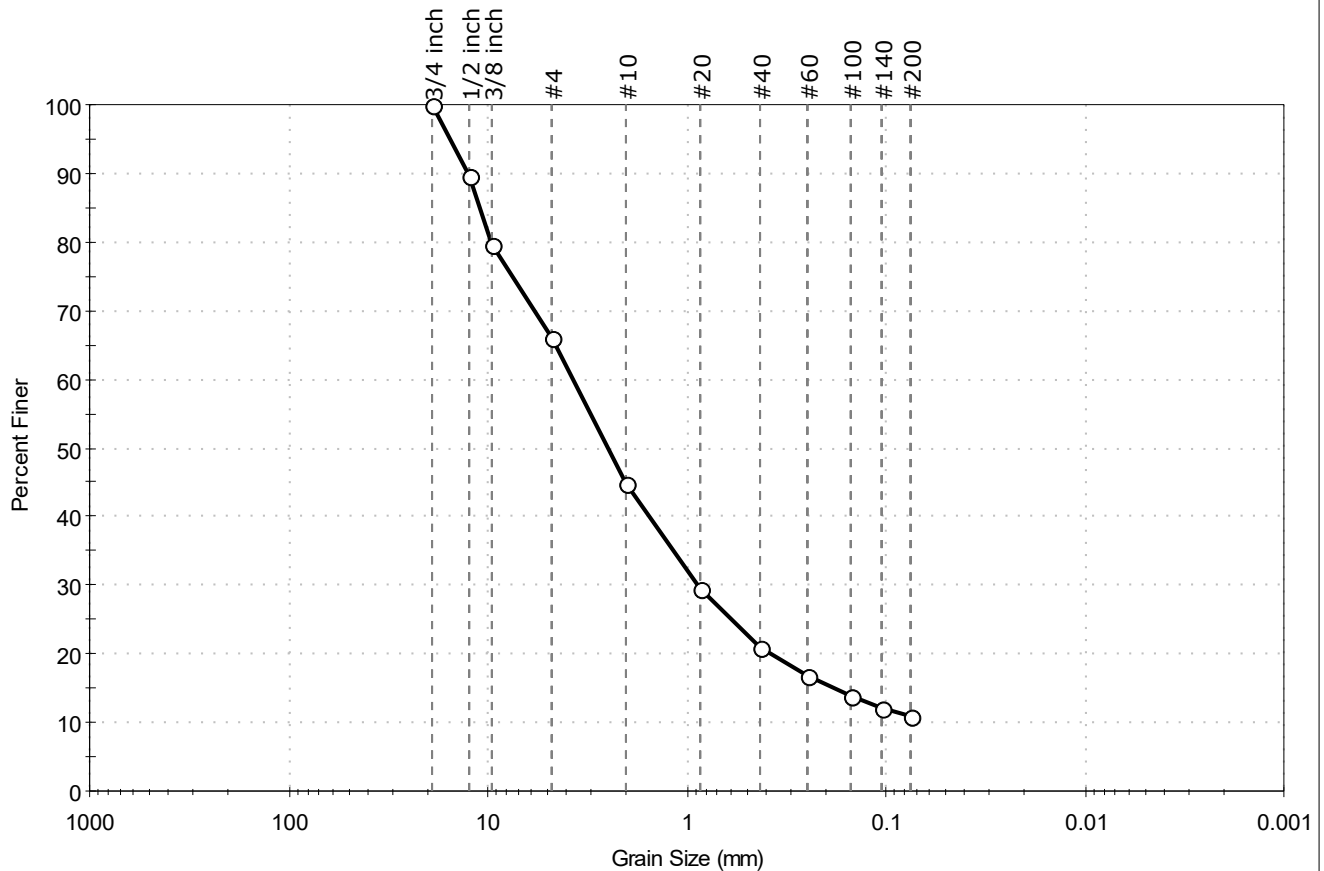
AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR
 Sand/Gravel Hardness : HARD

Client:	Haley & Aldrich, Inc.		
Project:	I-395 - Green Point Bridge		
Location:	Brewer, ME	Project No:	GTX-322338
Boring ID:	BB-BGPR-103	Sample Type:	Bag
Sample ID:	7D	Test Date:	12/30/25
Depth :	13-15 ft	Test Id:	847803
Test Comment:	---		
Visual Description:	Moist, brown sand with silt and gravel		
Sample Comment:	---		

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	34.0	55.0	11.0

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
3/4 inch	19.00	100		
1/2 inch	12.50	90		
3/8 inch	9.50	80		
#4	4.75	66		
#10	2.00	45		
#20	0.85	29		
#40	0.42	21		
#60	0.25	17		
#100	0.15	14		
#140	0.11	12		
#200	0.075	11		

Coefficients

$D_{85} = 11.0400$ mm $D_{30} = 0.8793$ mm
 $D_{60} = 3.7182$ mm $D_{15} = 0.1862$ mm
 $D_{50} = 2.4713$ mm $D_{10} = \text{N/A}$
 $C_u = \text{N/A}$ $C_c = \text{N/A}$

Classification

ASTM N/A

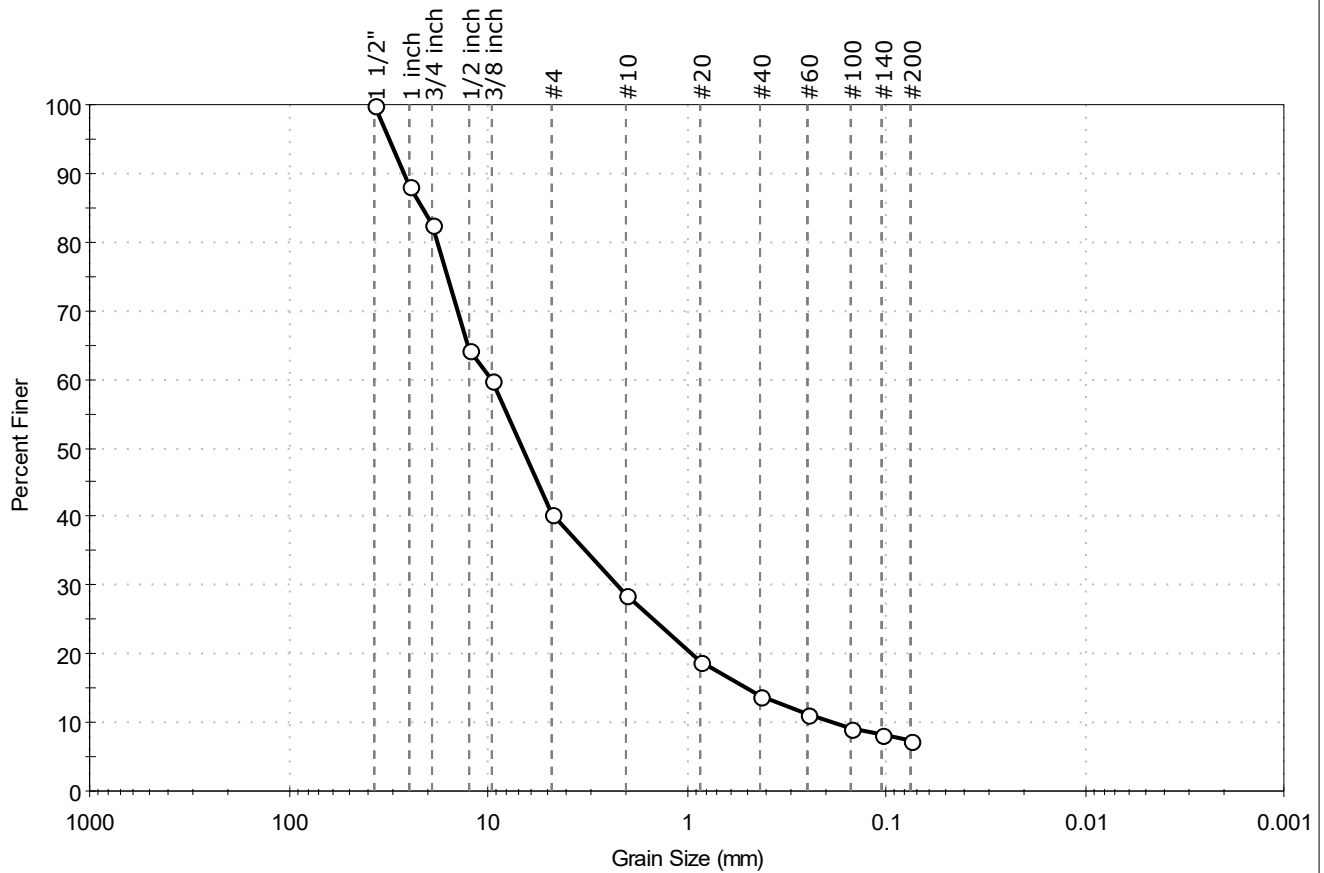
AASHTO Stone Fragments, Gravel and Sand (A-1-a (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR
 Sand/Gravel Hardness : HARD

Client: Haley & Aldrich, Inc.	Project No: GTX-322338
Project: I-395 - Green Point Bridge	
Location: Brewer, ME	
Boring ID: BB-BGPR-103	Sample Type: Bag
Sample ID: 11D	Test Date: 12/31/25
Depth: 21-23 ft	Test Id: 847804
Test Comment: ---	Tested By: ajl
Visual Description: Moist, dark grayish brown gravel with silt and sand	Checked By: ank
Sample Comment: ---	

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	59.5	33.0	7.5

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 1/2"	37.50	100		
1 inch	25.00	88		
3/4 inch	19.00	83		
1/2 inch	12.50	64		
3/8 inch	9.50	60		
#4	4.75	40		
#10	2.00	28		
#20	0.85	19		
#40	0.42	14		
#60	0.25	11		
#100	0.15	9		
#140	0.11	8		
#200	0.075	7.5		

Coefficients

$D_{85} = 21.2838$ mm $D_{30} = 2.2320$ mm
 $D_{60} = 9.6076$ mm $D_{15} = 0.4952$ mm
 $D_{50} = 6.6818$ mm $D_{10} = 0.1851$ mm
 $C_u = 51.905$ $C_c = 2.801$

Classification

ASTM N/A

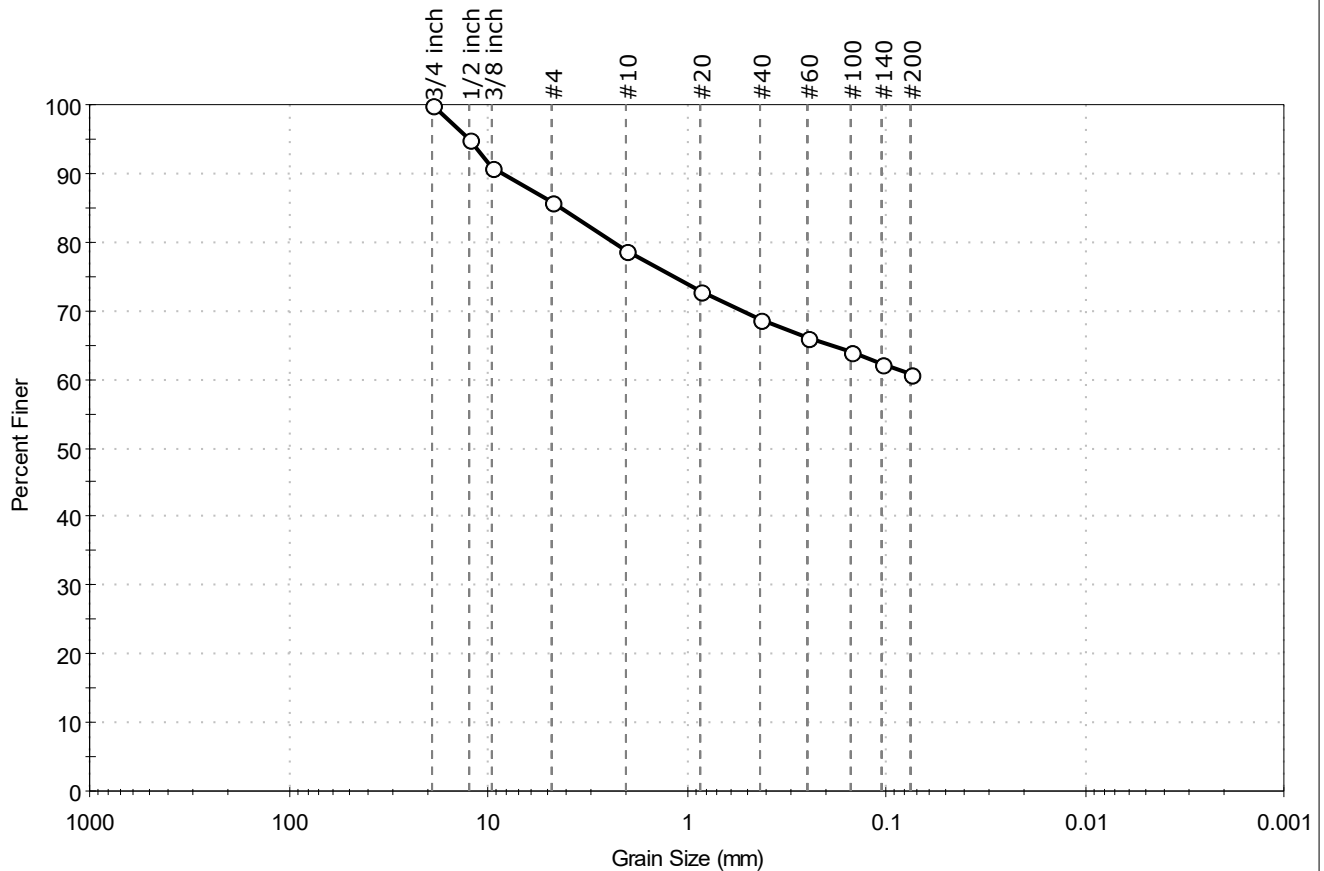
AASHTO Stone Fragments, Gravel and Sand (A-1-a (1))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR
 Sand/Gravel Hardness : HARD

Client:	Haley & Aldrich, Inc.		
Project:	I-395 - Green Point Bridge		
Location:	Brewer, ME	Project No:	GTX-322338
Boring ID:	BB-BGPR-103	Sample Type:	Bag
Sample ID:	18D	Test Date:	12/31/25
Depth :	46-48 ft	Test Id:	847805
Test Comment:	---		
Visual Description:	Moist, very dark gray sandy silty clay		
Sample Comment:	---		

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	14.2	25.2	60.6

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
3/4 inch	19.00	100		
1/2 inch	12.50	95		
3/8 inch	9.50	91		
#4	4.75	86		
#10	2.00	79		
#20	0.85	73		
#40	0.42	69		
#60	0.25	66		
#100	0.15	64		
#140	0.11	62		
#200	0.075	61		

Coefficients

$D_{85} = 4.2776 \text{ mm}$ $D_{30} = \text{N/A}$
 $D_{60} = \text{N/A}$ $D_{15} = \text{N/A}$
 $D_{50} = \text{N/A}$ $D_{10} = \text{N/A}$
 $C_u = \text{N/A}$ $C_c = \text{N/A}$

Classification

ASTM Sandy Silty CLAY (CL-ML)

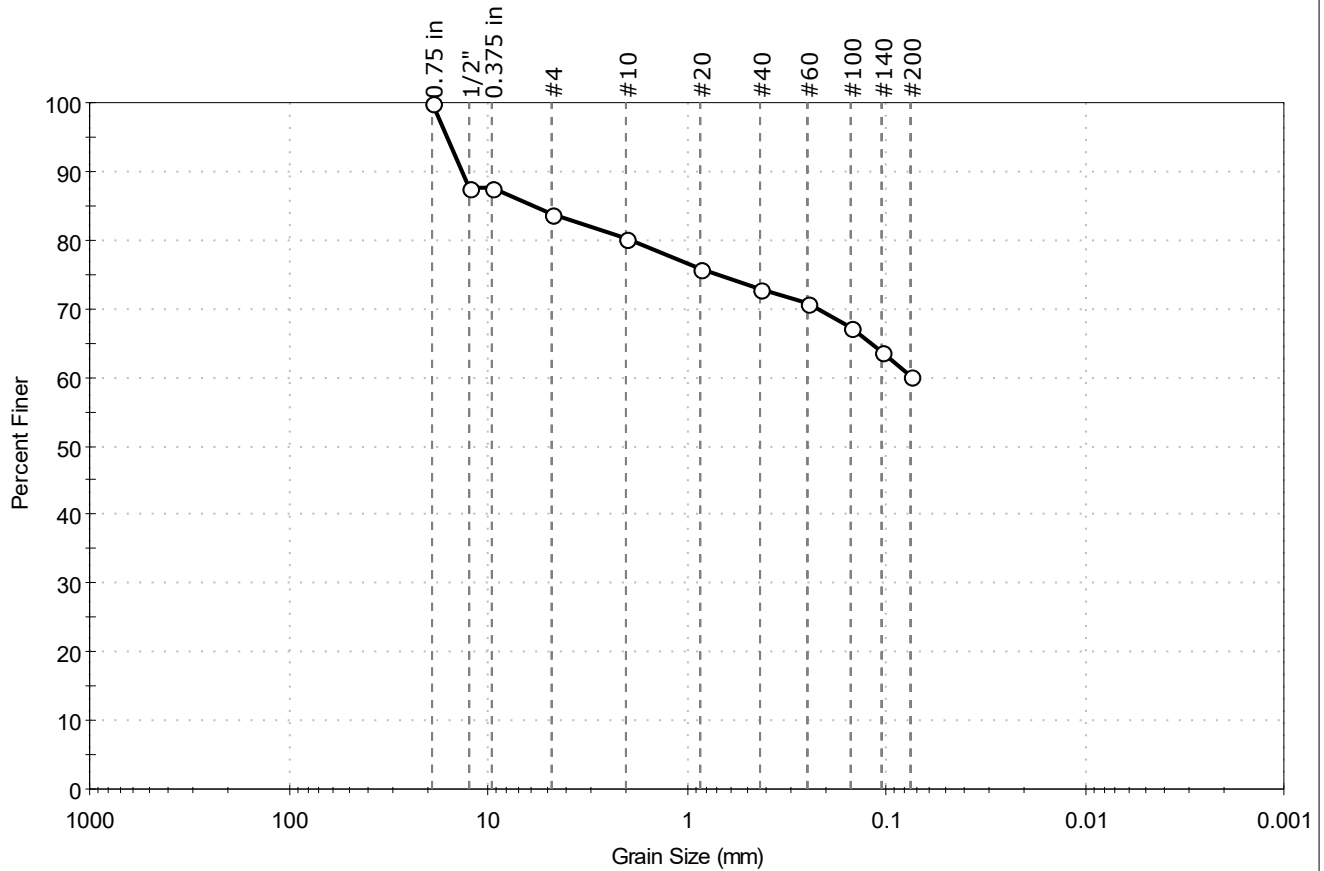
AASHTO Silty Soils (A-4 (1))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR
 Sand/Gravel Hardness : HARD

Client:	Haley & Aldrich, Inc.		
Project:	I-395 - Green Point Bridge		
Location:	Brewer, ME	Project No:	GTX-322338
Boring ID:	BB-BGPR-103	Sample Type:	Bag
Sample ID:	19D	Test Date:	12/30/25
Depth :	50-52 ft	Test Id:	847806
Test Comment:	---		
Visual Description:	Moist, dark grayish brown sandy silty clay with gravel		
Sample Comment:	---		

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	16.1	23.6	60.3

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
1/2"	12.50	88		
0.375 in	9.50	88		
#4	4.75	84		
#10	2.00	80		
#20	0.85	76		
#40	0.42	73		
#60	0.25	71		
#100	0.15	67		
#140	0.11	64		
#200	0.075	60		

Coefficients

$D_{85} = 5.8250 \text{ mm}$ $D_{30} = \text{N/A}$
 $D_{60} = \text{N/A}$ $D_{15} = \text{N/A}$
 $D_{50} = \text{N/A}$ $D_{10} = \text{N/A}$
 $C_u = \text{N/A}$ $C_c = \text{N/A}$

Classification

ASTM Sandy Silty CLAY with Gravel (CL-ML)

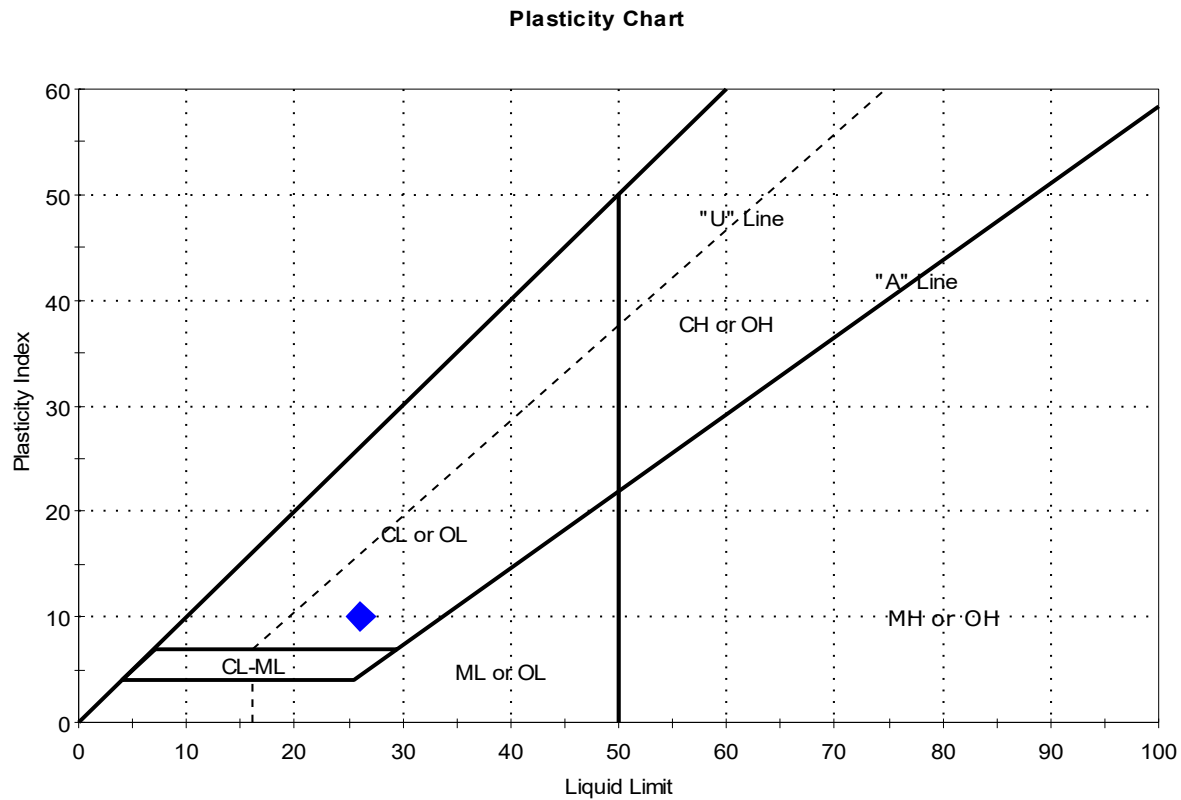
AASHTO Silty Soils (A-4 (1))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR
 Sand/Gravel Hardness : HARD

Client:	Haley & Aldrich, Inc.		
Project:	I-395 - Green Point Bridge		
Location:	Brewer, ME	Project No:	GTX-322338
Boring ID:	BB-BGPR-101	Sample Type:	Bag
Sample ID:	12D	Test Date:	12/30/25
Depth :	24-26 ft	Test Id:	847783
Test Comment:	---		
Visual Description:	Moist, dark grayish brown clay		
Sample Comment:	---		

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	12D	BB-BGPR-101	24-26 ft	13	26	16	10	-0.3	

Sample Prepared using the WET method

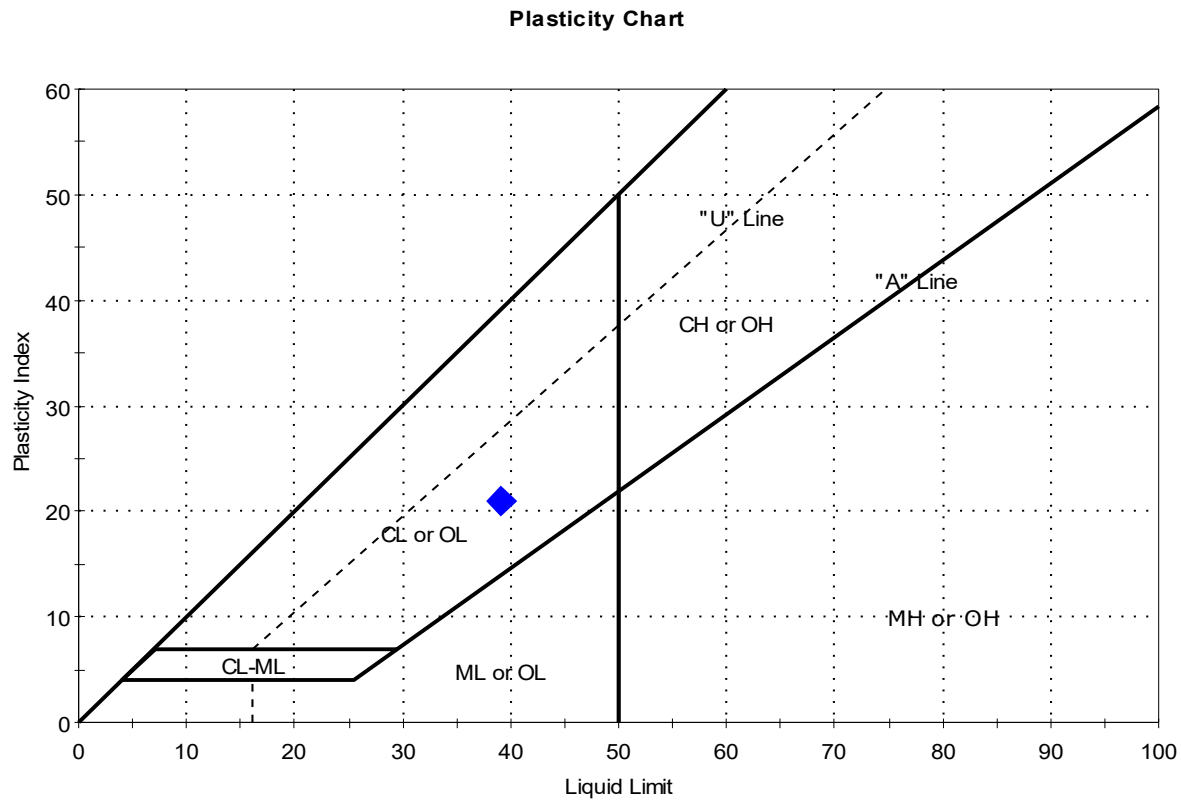
Dry Strength: VERY HIGH

Dilatancy: SLOW

Toughness: LOW

Client:	Haley & Aldrich, Inc.		
Project:	I-395 - Green Point Bridge		
Location:	Brewer, ME	Project No:	GTX-322338
Boring ID:	BB-BGPR-101	Sample Type:	Bag
Sample ID:	14D	Test Date:	12/23/25
Depth :	34-36 ft	Test Id:	847784
Test Comment:	---		
Visual Description:	Moist, dark grayish brown clay		
Sample Comment:	---		

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	14D	BB-BGPR-101	34-36 ft	30	39	18	21	0.6	

Sample Prepared using the WET method

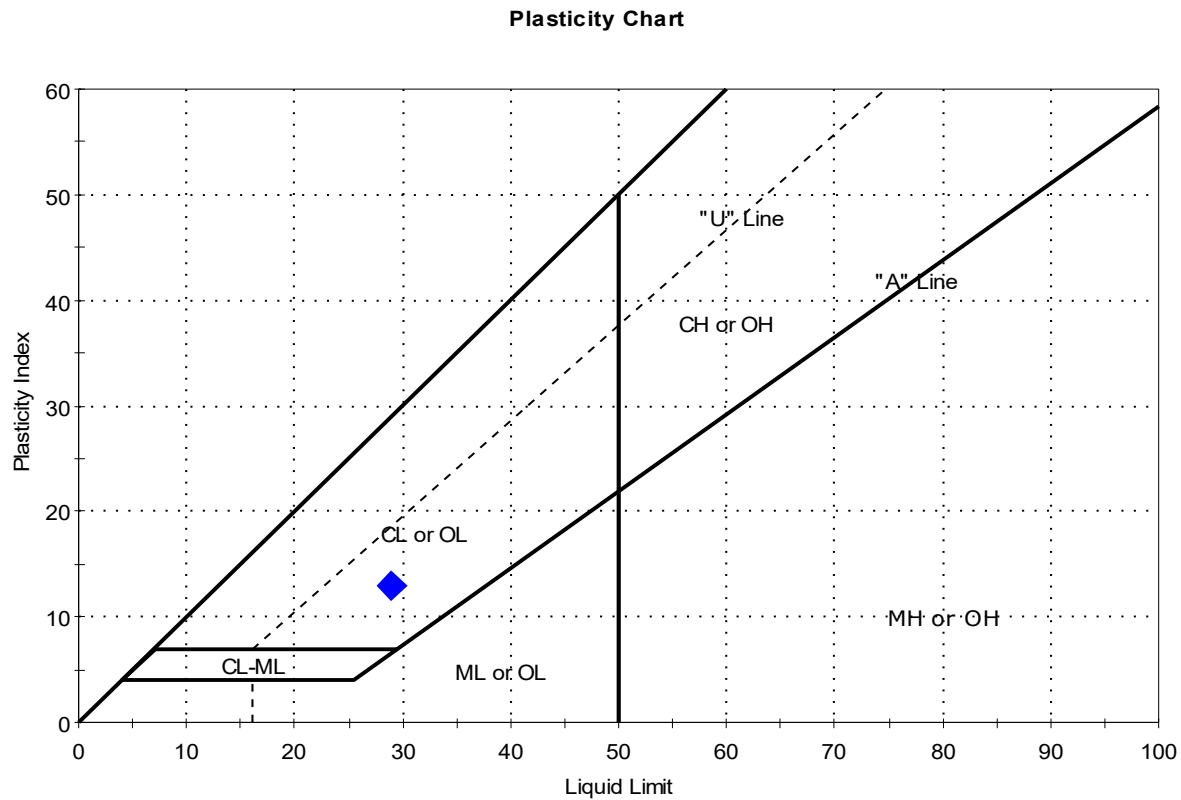
Dry Strength: VERY HIGH

Dilatancy: SLOW

Toughness: LOW

Client:	Haley & Aldrich, Inc.		
Project:	I-395 - Green Point Bridge		
Location:	Brewer, ME	Project No:	GTX-322338
Boring ID:	BB-BGPR-101	Sample Type:	Bag
Sample ID:	16D	Test Date:	12/24/25
Depth :	40-42 ft	Test Id:	847785
Test Comment:	---		
Visual Description:	Moist, dark grayish brown clay		
Sample Comment:	---		

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	16D	BB-BGPR-101	40-42 ft	28	29	16	13	0.9	

Sample Prepared using the WET method

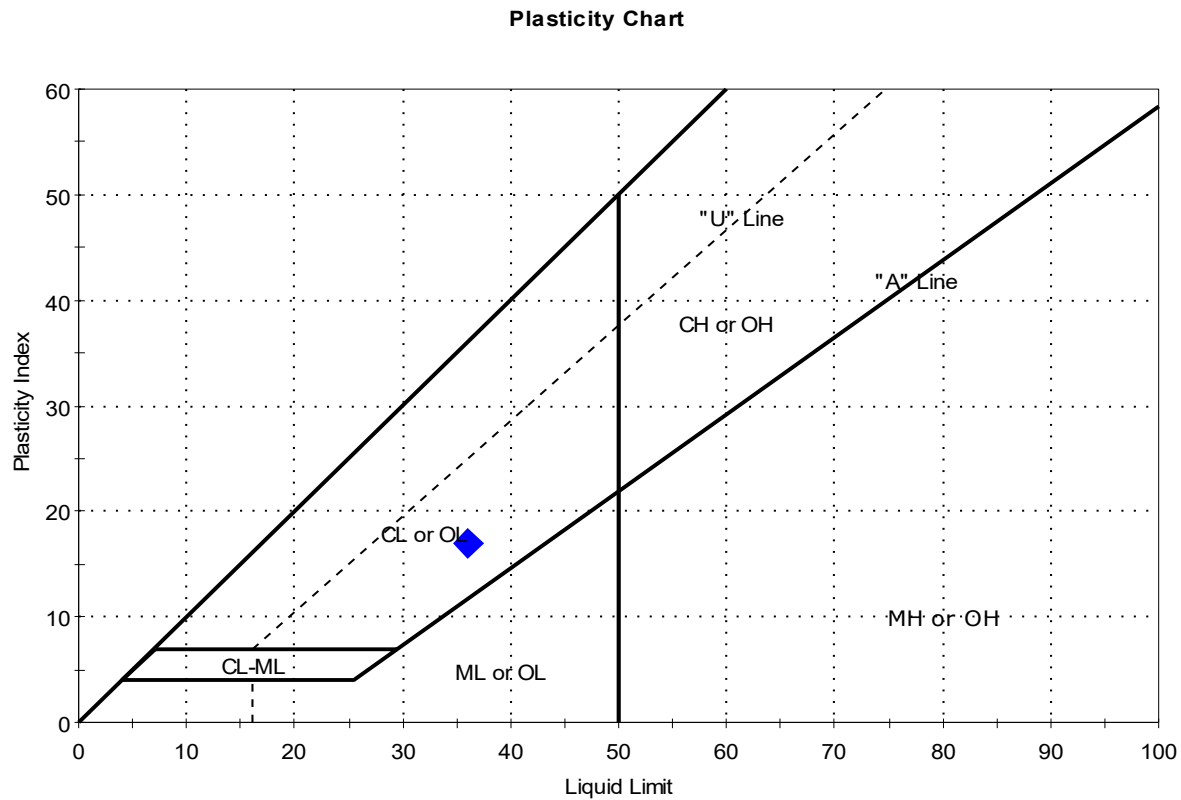
Dry Strength: VERY HIGH

Dilatancy: SLOW

Toughness: LOW

Client:	Haley & Aldrich, Inc.		
Project:	I-395 - Green Point Bridge		
Location:	Brewer, ME	Project No:	GTX-322338
Boring ID:	BB-BGPR-102	Sample Type:	Bag
Sample ID:	4D	Test Date:	12/23/25
Depth :	6-8 ft	Test Id:	847786
Test Comment:	---		
Visual Description:	Moist, olive brown clay		
Sample Comment:	---		

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	4D	BB-BGPR-1	6-8 ft	26	36	19	17	0.4	

Sample Prepared using the WET method

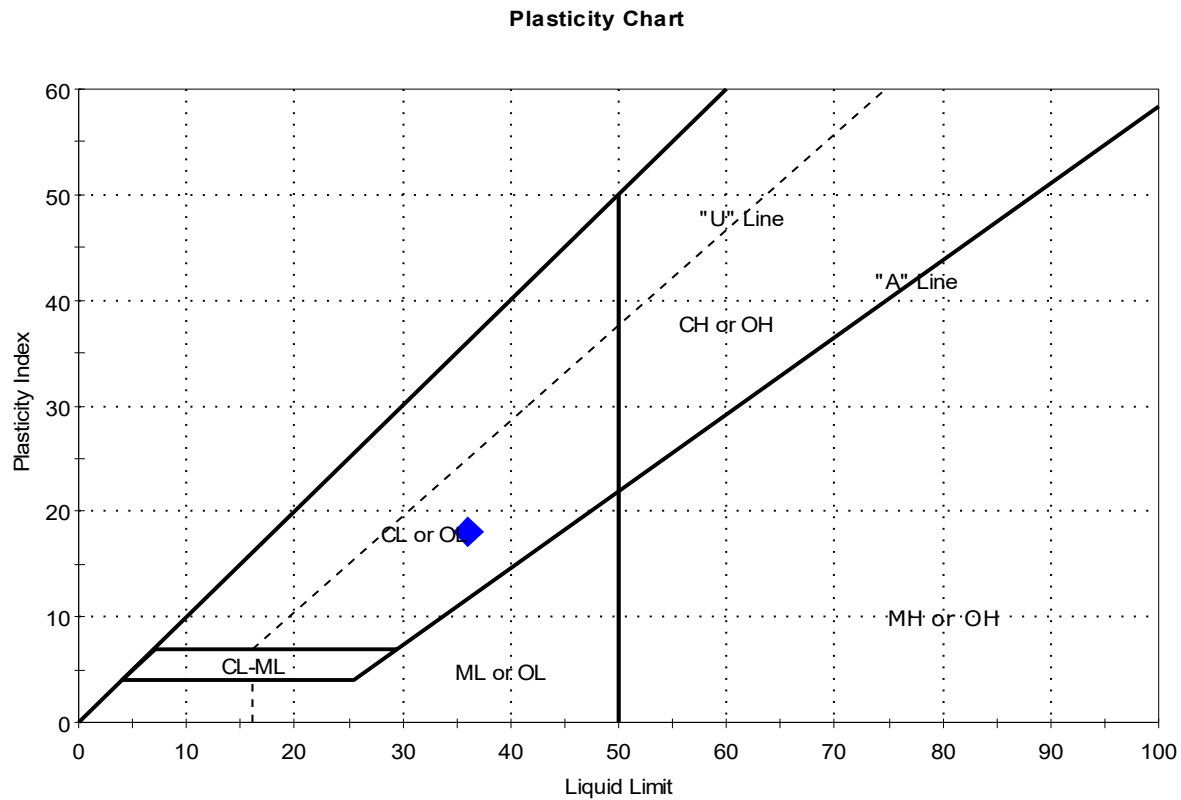
Dry Strength: VERY HIGH

Dilatancy: SLOW

Toughness: LOW

Client:	Haley & Aldrich, Inc.		
Project:	I-395 - Green Point Bridge		
Location:	Brewer, ME	Project No:	GTX-322338
Boring ID:	BB-BGPR-102	Sample Type:	Tube
Sample ID:	1U	Test Date:	12/23/25
Depth :	15-17 ft	Test Id:	847787
Test Comment:	---		
Visual Description:	Moist, gray clay		
Sample Comment:	---		

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	1U	BB-BGPR-1	15-17 ft	33	36	18	18	0.8	

Sample Prepared using the WET method

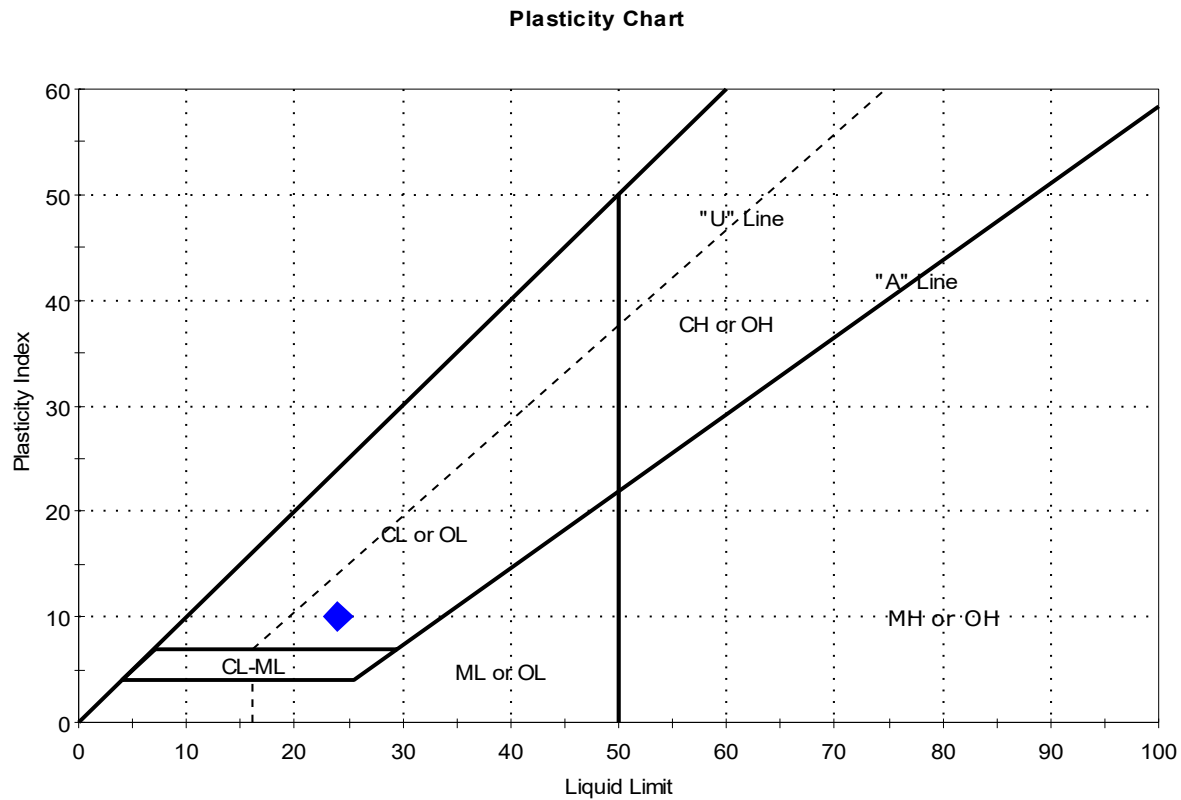
Dry Strength: VERY HIGH

Dilatancy: SLOW

Toughness: LOW

Client:	Haley & Aldrich, Inc.		
Project:	I-395 - Green Point Bridge		
Location:	Brewer, ME	Project No:	GTX-322338
Boring ID:	BB-BGPR-102	Sample Type:	Bag
Sample ID:	8D	Test Date:	12/24/25
Depth :	20-22 ft	Test Id:	847795
Test Comment:	---		
Visual Description:	Moist, dark gray clay		
Sample Comment:	---		

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	8D	BB-BGPR-102	20-22 ft	18	24	14	10	0.4	

Sample Prepared using the WET method

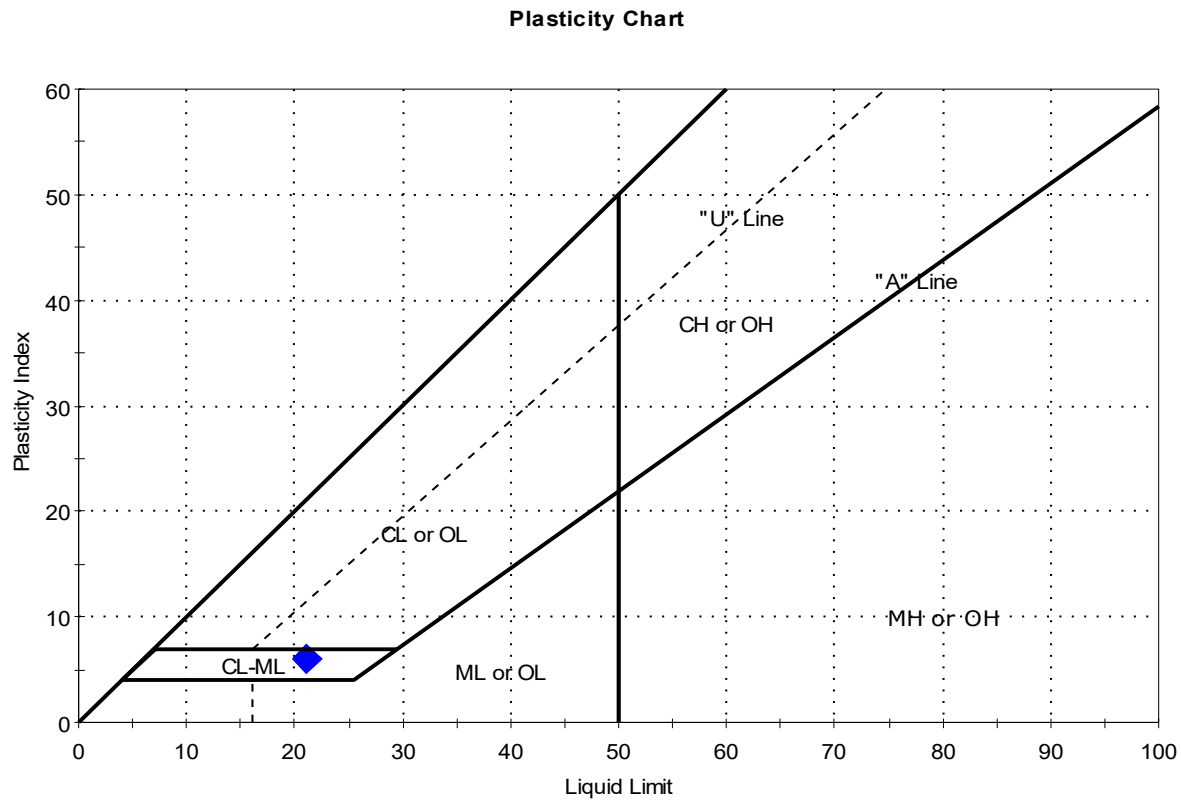
Dry Strength: VERY HIGH

Dilatancy: SLOW

Toughness: LOW

Client:	Haley & Aldrich, Inc.		
Project:	I-395 - Green Point Bridge		
Location:	Brewer, ME	Project No:	GTX-322338
Boring ID:	BB-BGPR-103	Sample Type:	Bag
Sample ID:	12D	Test Date:	12/31/25
Depth :	23-25 ft	Test Id:	847796
Test Comment:	---		
Visual Description:	Moist, very dark grayish brown silty clay		
Sample Comment:	---		

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	12D	BB-BGPR-1	23-25 ft	13	21	15	6	-0.3	

Sample Prepared using the WET method

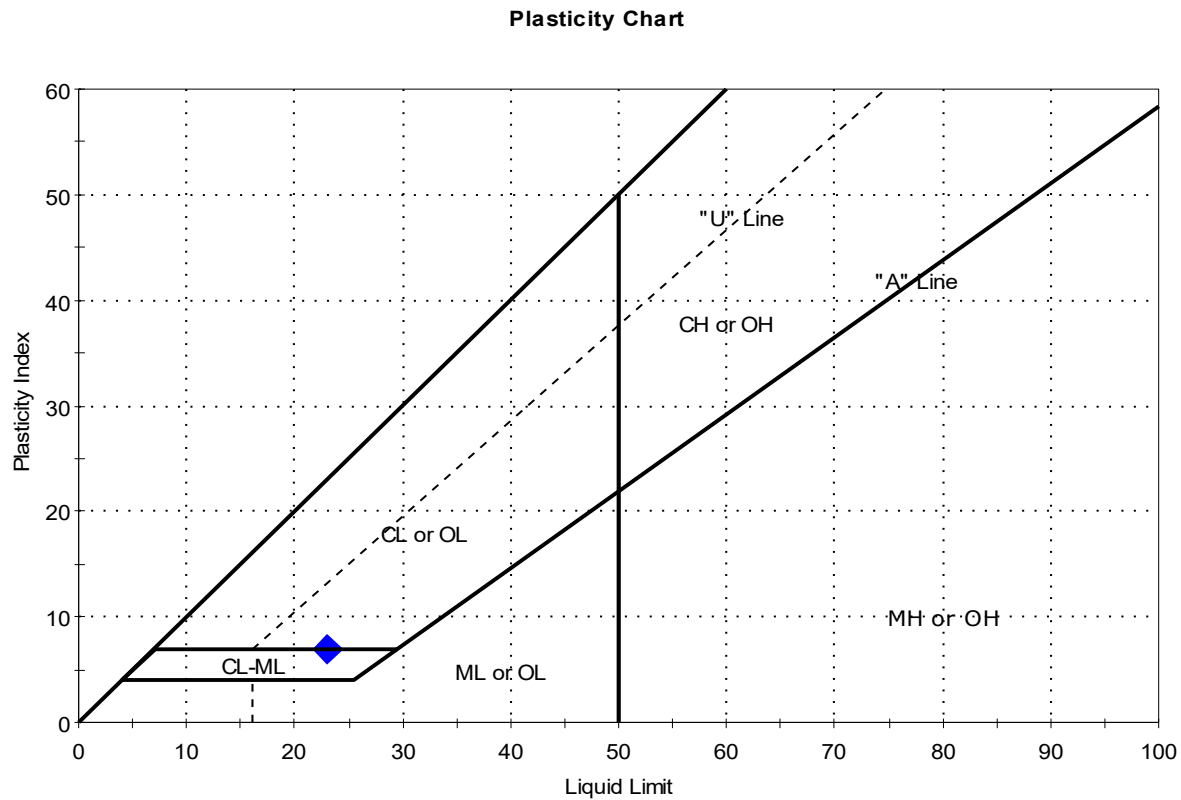
Dry Strength: VERY HIGH

Dilatancy: SLOW

Toughness: LOW

Client:	Haley & Aldrich, Inc.		
Project:	I-395 - Green Point Bridge		
Location:	Brewer, ME	Project No:	GTX-322338
Boring ID:	BB-BGPR-103	Sample Type:	Bag
Sample ID:	13D	Test Date:	12/24/25
Depth :	25-27 ft	Test Id:	847797
Test Comment:	---		
Visual Description:	Moist, very dark grayish brown silty clay with sand		
Sample Comment:	---		

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	13D	BB-BGPR-1	25-27 ft	15	23	16	7	-0.1	

Sample Prepared using the WET method

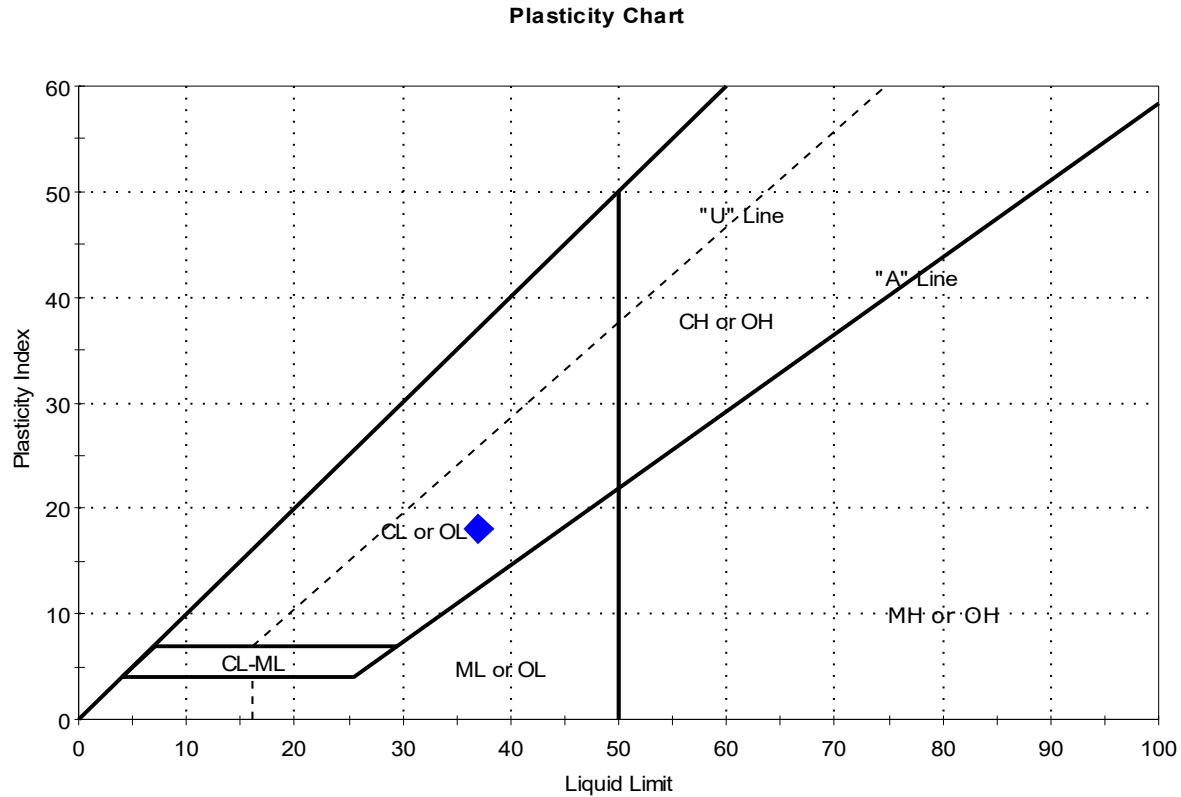
Dry Strength: VERY HIGH

Dilatancy: SLOW

Toughness: LOW

Client:	Haley & Aldrich, Inc.		
Project:	I-395 - Green Point Bridge		
Location:	Brewer, ME	Project No:	GTX-322338
Boring ID:	BB-BGPR-103	Sample Type:	Bag
Sample ID:	15D	Test Date:	12/23/25
Depth :	35-37 ft	Test Id:	847798
Test Comment:	---		
Visual Description:	Moist, olive brown clay		
Sample Comment:	---		

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	15D	BB-BGPR-103	35-37 ft	30	37	19	18	0.6	

Sample Prepared using the WET method

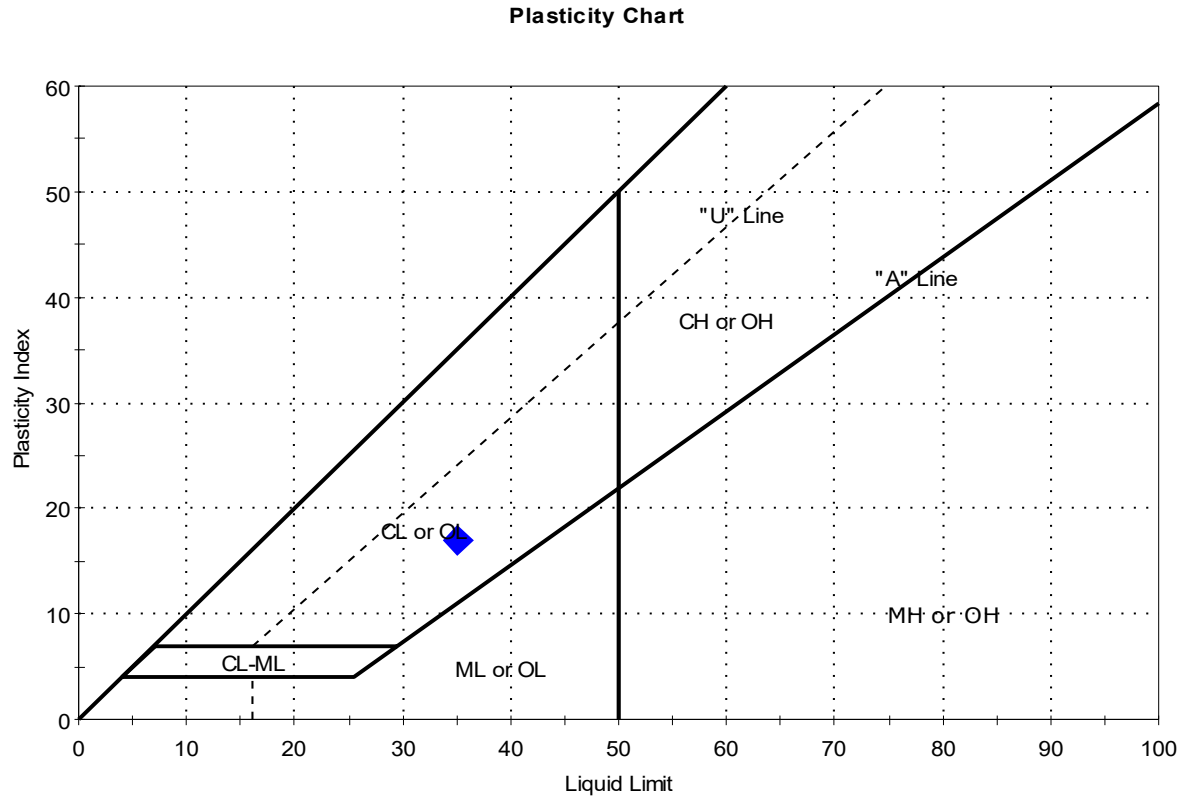
Dry Strength: VERY HIGH

Dilatancy: SLOW

Toughness: LOW

Client:	Haley & Aldrich, Inc.		
Project:	I-395 - Green Point Bridge		
Location:	Brewer, ME	Project No:	GTX-322338
Boring ID:	BB-BGPR-103	Sample Type:	Bag
Sample ID:	17D	Test Date:	12/23/25
Depth :	42-44 ft	Test Id:	847799
Test Comment:	---		
Visual Description:	Moist, dark grayish brown clay		
Sample Comment:	---		

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	17D	BB-BGPR-103	42-44 ft	34	35	18	17	0.9	

Sample Prepared using the WET method

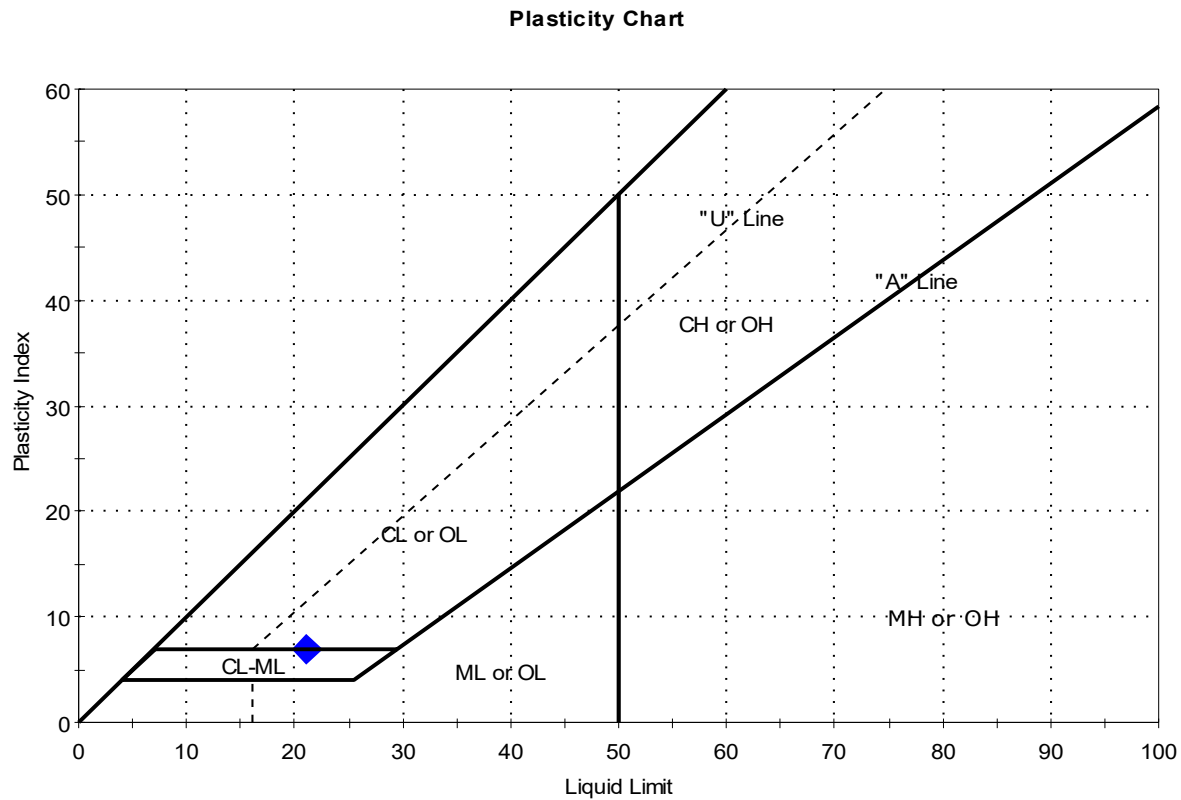
Dry Strength: VERY HIGH

Dilatancy: SLOW

Toughness: LOW

Client:	Haley & Aldrich, Inc.		
Project:	I-395 - Green Point Bridge		
Location:	Brewer, ME	Project No:	GTX-322338
Boring ID:	BB-BGPR-103	Sample Type:	Bag
Sample ID:	18D	Test Date:	12/30/25
Depth :	46-48 ft	Test Id:	847800
Test Comment:	---		
Visual Description:	Moist, very dark gray sandy silty clay		
Sample Comment:	---		

Atterberg Limits - ASTM D4318

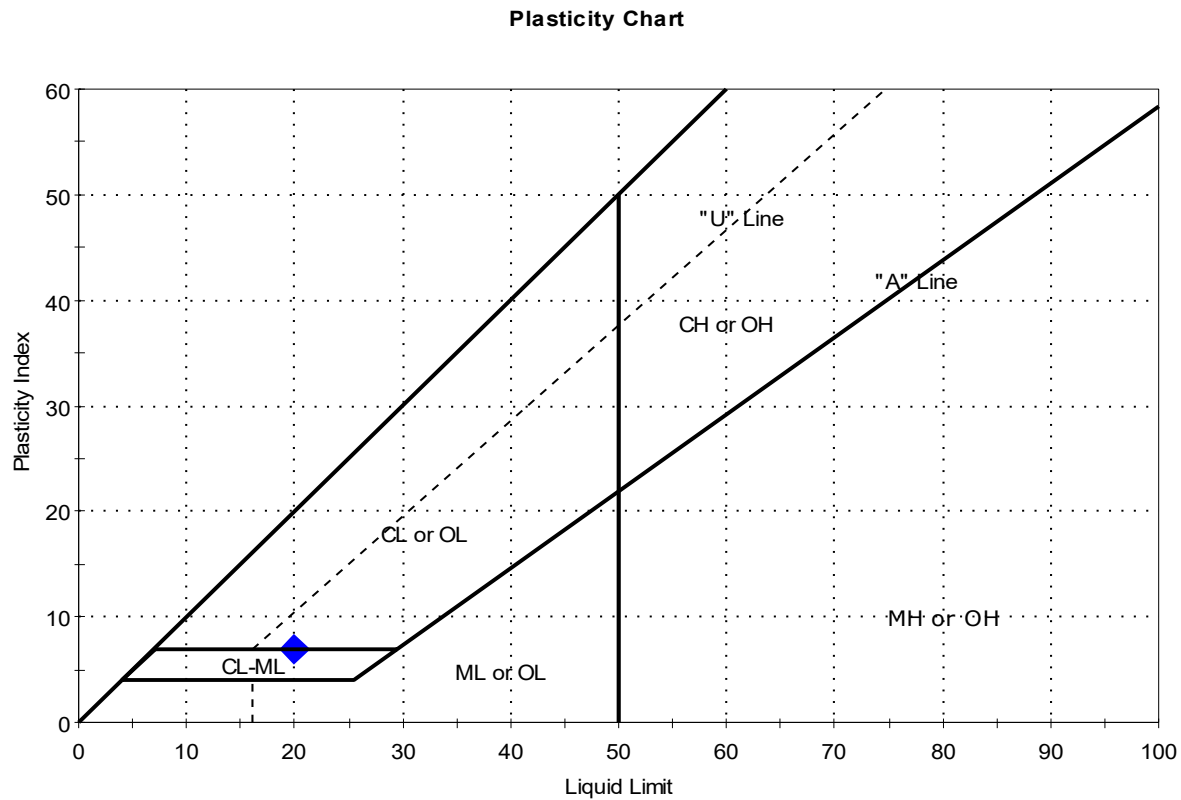


Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	18D	BB-BGPR-103	46-48 ft	15	21	14	7	0.2	Sandy Silty CLAY (CL-ML)

Sample Prepared using the WET method
 31% Retained on #40 Sieve
 Dry Strength: VERY HIGH
 Dilatancy: SLOW
 Toughness: LOW

Client:	Haley & Aldrich, Inc.		
Project:	I-395 - Green Point Bridge		
Location:	Brewer, ME	Project No:	GTX-322338
Boring ID:	BB-BGPR-103	Sample Type:	Bag
Sample ID:	19D	Test Date:	12/24/25
Depth :	50-52 ft	Test Id:	847801
Test Comment:	---		
Visual Description:	Moist, dark grayish brown sandy silty clay with gravel		
Sample Comment:	---		

Atterberg Limits - ASTM D4318

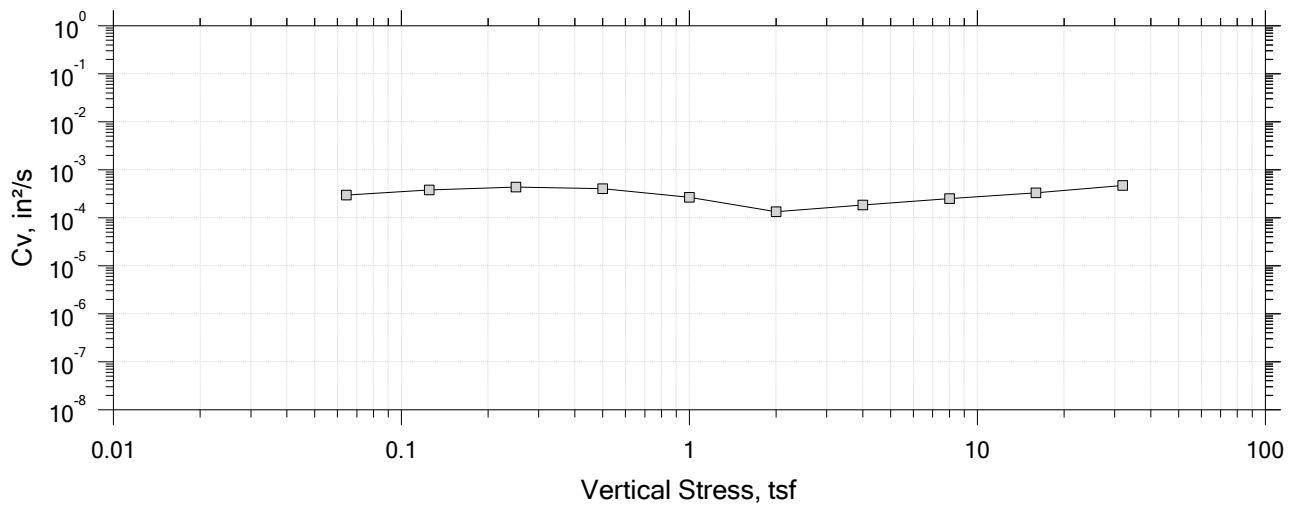
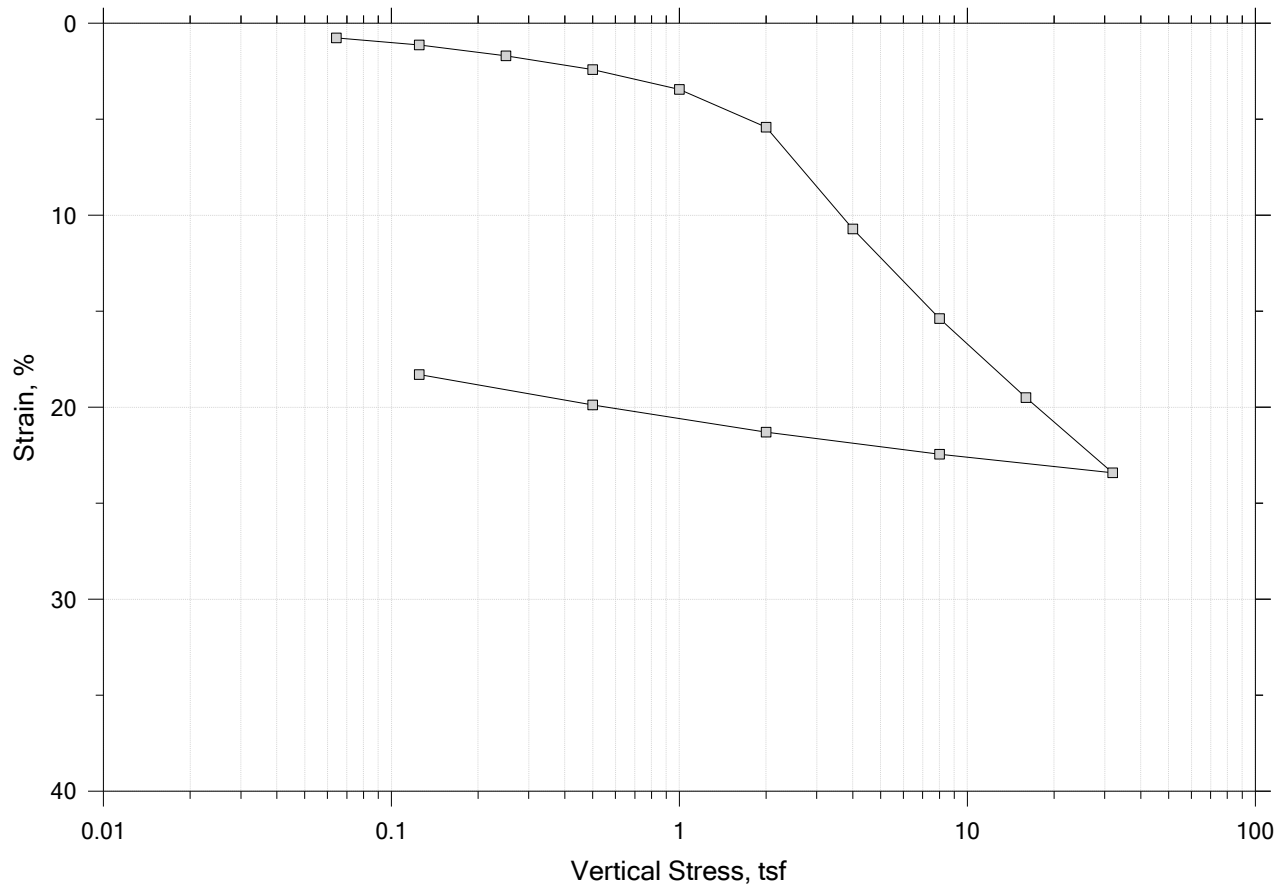



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	19D	BB-BGPR-103	50-52 ft	13	20	13	7	0	Sandy Silty CLAY with Gravel (CL-ML)

Sample Prepared using the WET method
 27% Retained on #40 Sieve
 Dry Strength: VERY HIGH
 Dilatancy: SLOW
 Toughness: LOW

One-Dimensional Consolidation by ASTM D2435 - Method B

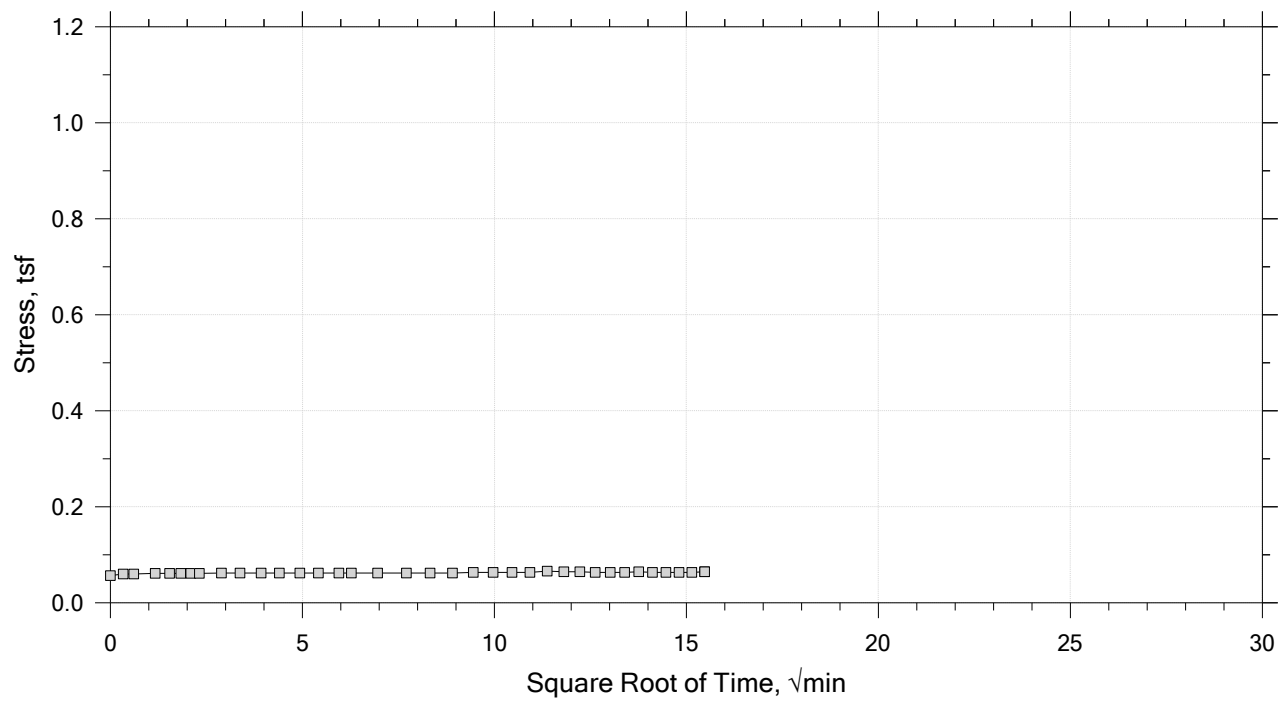
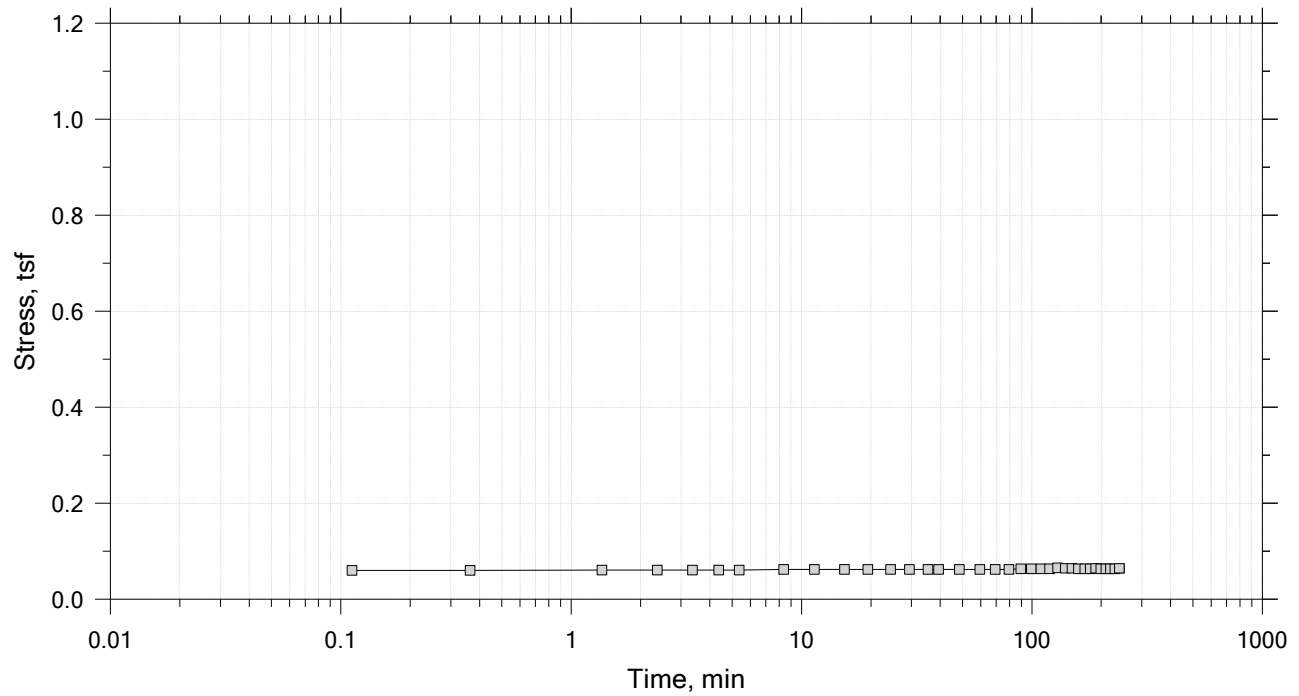
Summary Report




	Project: I-395 - Green Point Bridge	Location: Brewer, ME	Project No.: GTX-322338
	Boring No.: BB-BGPR-102	Tested By: sjt	Checked By: ab
	Sample No.: 1U	Test Date: 12/15/25	Depth: 15-17 ft
	Test No.: IP-1	Sample Type: intact	Elevation: ---
	Description: Moist, gray clay		
	Remarks: LTIII-B, Swell Pressure = 0.0644 tsf		
	Displacement at End of Increment		

One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 1 of 14
Constant Volume Step
Stress: 0.0644 tsf



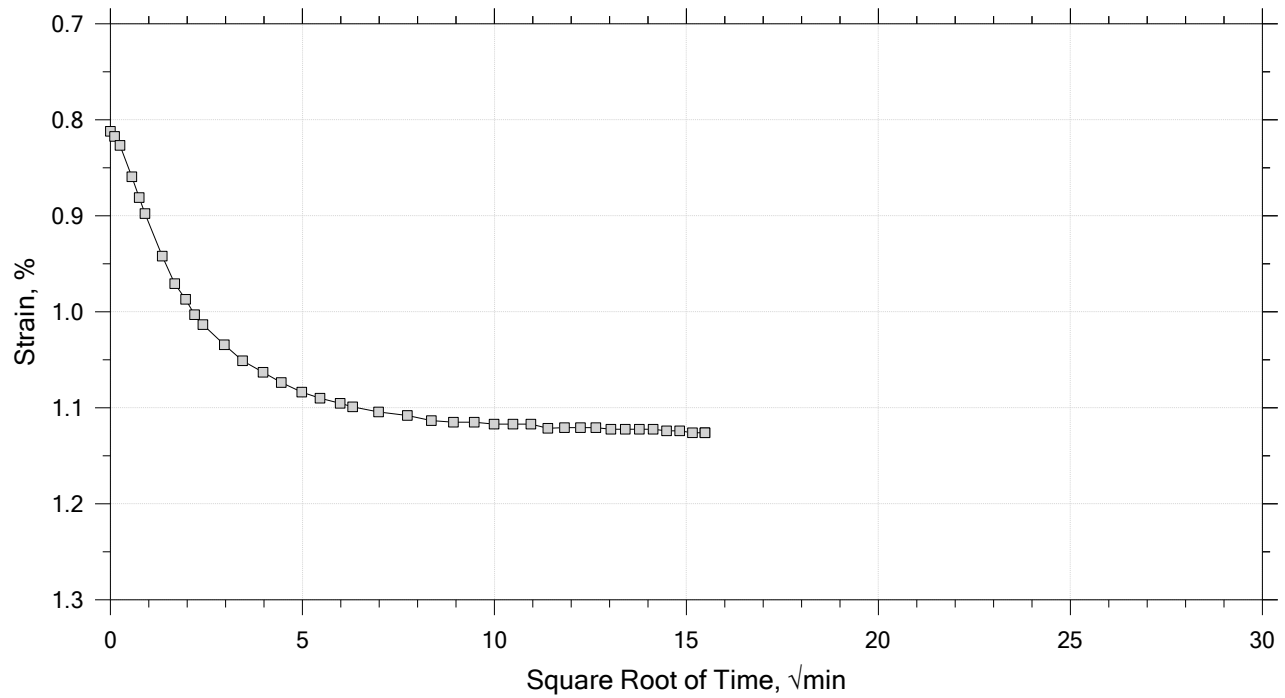
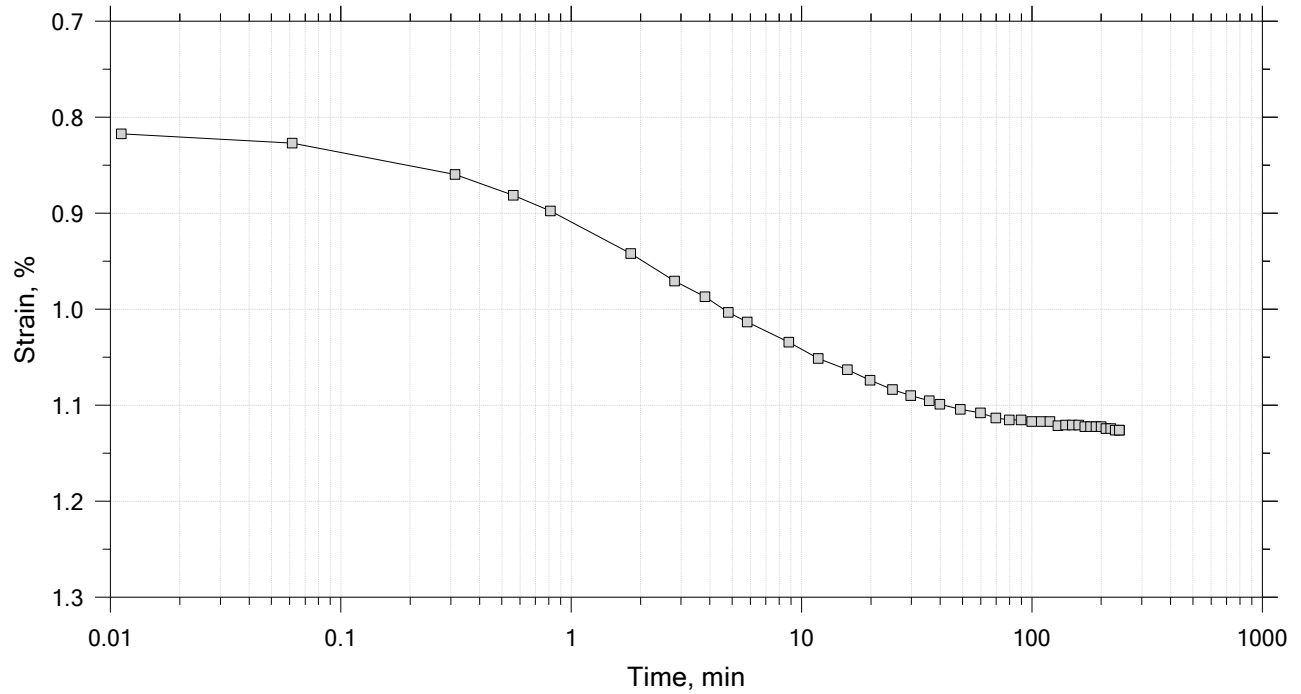
	Project: I-395 - Green Point Bridge	Location: Brewer, ME	Project No.: GTX-322338
	Boring No.: BB-BGPR-102	Tested By: sjt	Checked By: ab
	Sample No.: 1U	Test Date: 12/15/25	Depth: 15-17 ft
	Test No.: IP-1	Sample Type: intact	Elevation: ---
	Description: Moist, gray clay		
	Remarks: LTIII-B, Swell Pressure = 0.0644 tsf		


One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 2 of 14

Constant Load Step

Stress: 0.125 tsf



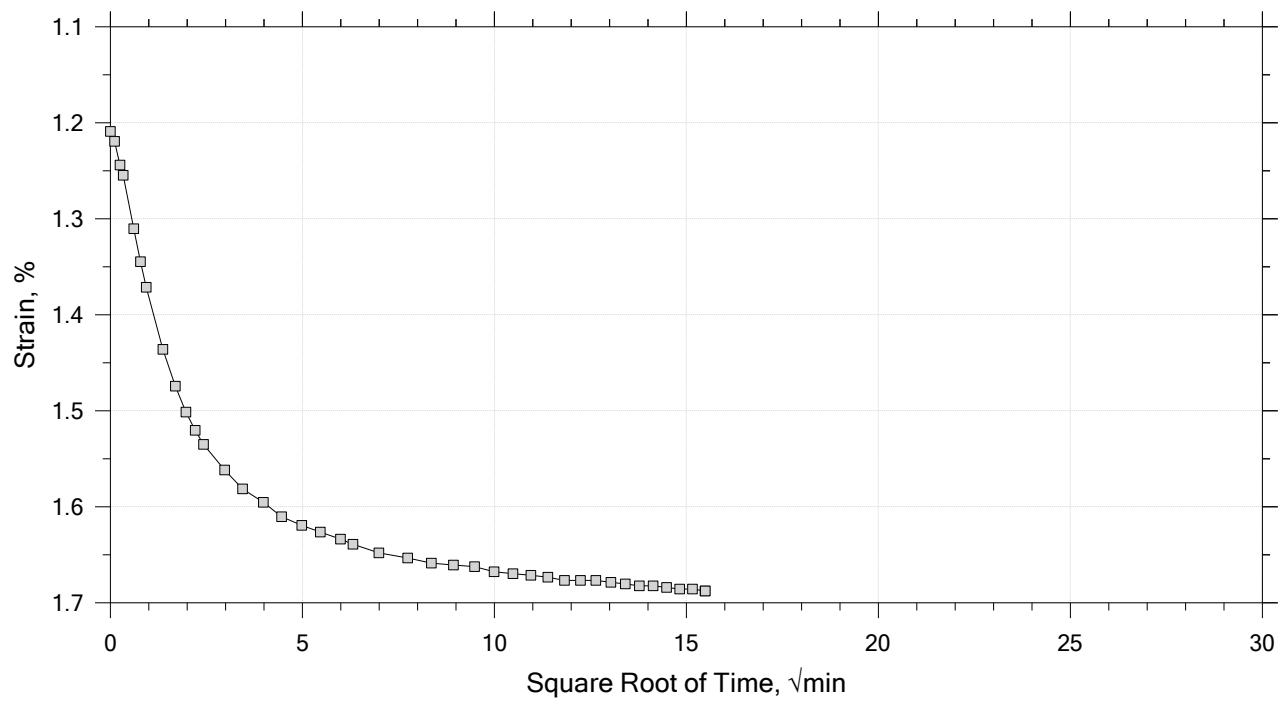
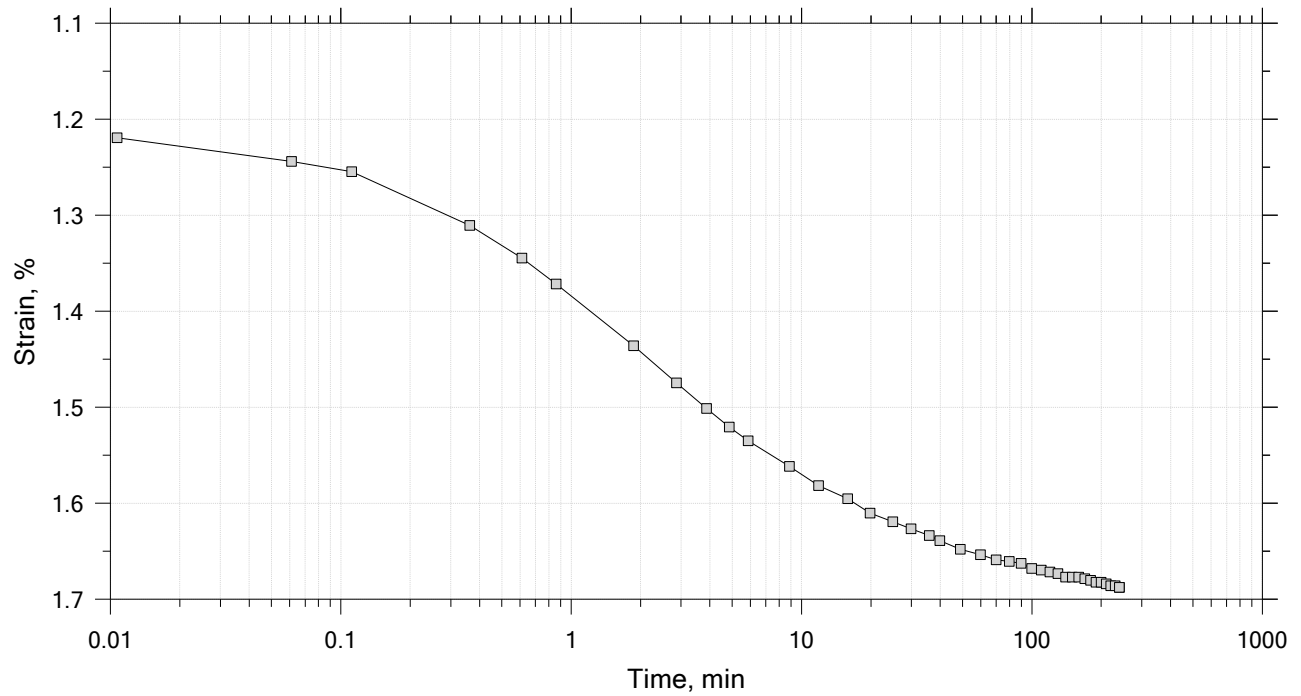
	Project: I-395 - Green Point Bridge	Location: Brewer, ME	Project No.: GTX-322338
	Boring No.: BB-BGPR-102	Tested By: sjt	Checked By: ab
	Sample No.: 1U	Test Date: 12/15/25	Depth: 15-17 ft
	Test No.: IP-1	Sample Type: intact	Elevation: ---
	Description: Moist, gray clay		
	Remarks: LTIII-B, Swell Pressure = 0.0644 tsf		


One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 3 of 14

Constant Load Step

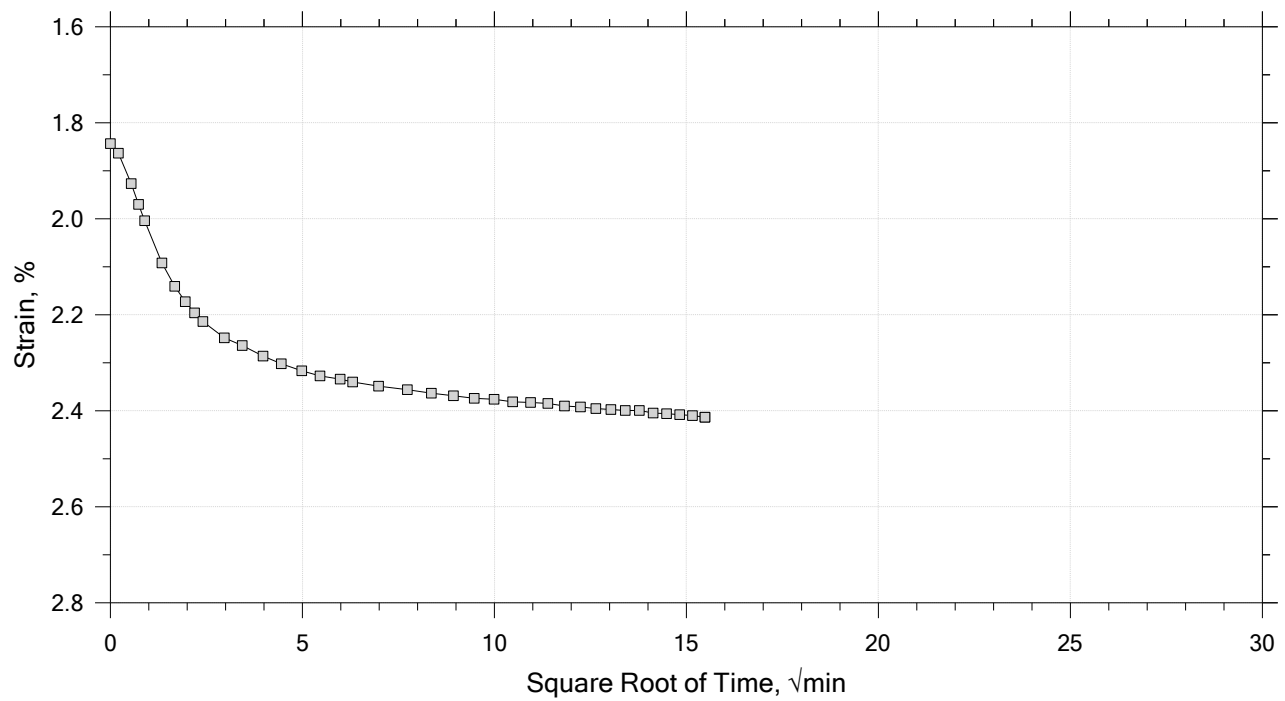
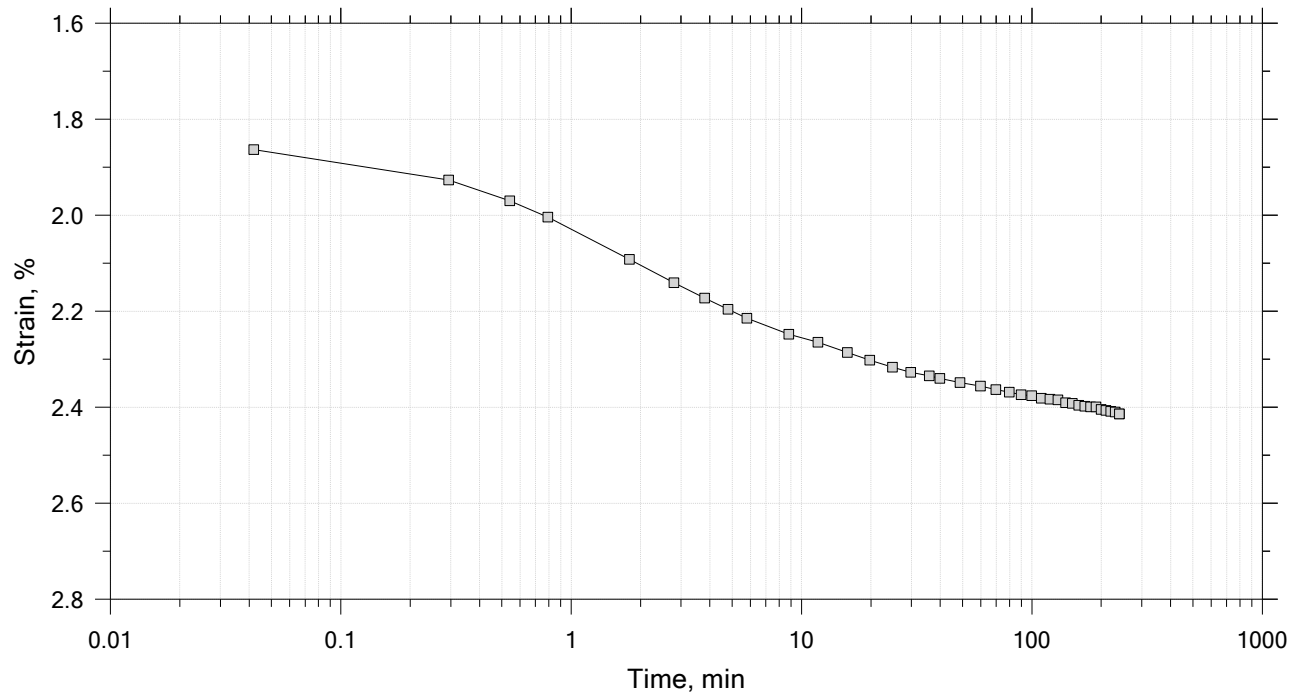
Stress: 0.25 tsf




	Project: I-395 - Green Point Bridge	Location: Brewer, ME	Project No.: GTX-322338
	Boring No.: BB-BGPR-102	Tested By: sjt	Checked By: ab
	Sample No.: 1U	Test Date: 12/15/25	Depth: 15-17 ft
	Test No.: IP-1	Sample Type: intact	Elevation: ---
	Description: Moist, gray clay		
	Remarks: LTIII-B, Swell Pressure = 0.0644 tsf		

One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 4 of 14
Constant Load Step
Stress: 0.5 tsf



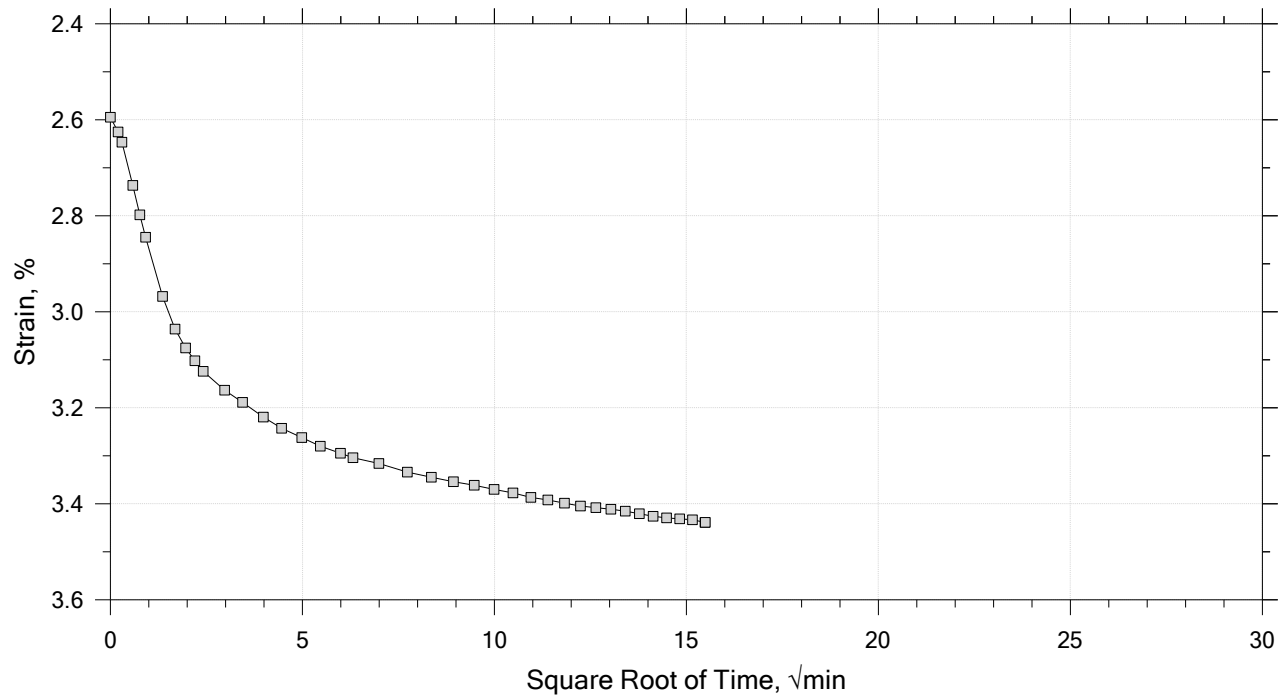
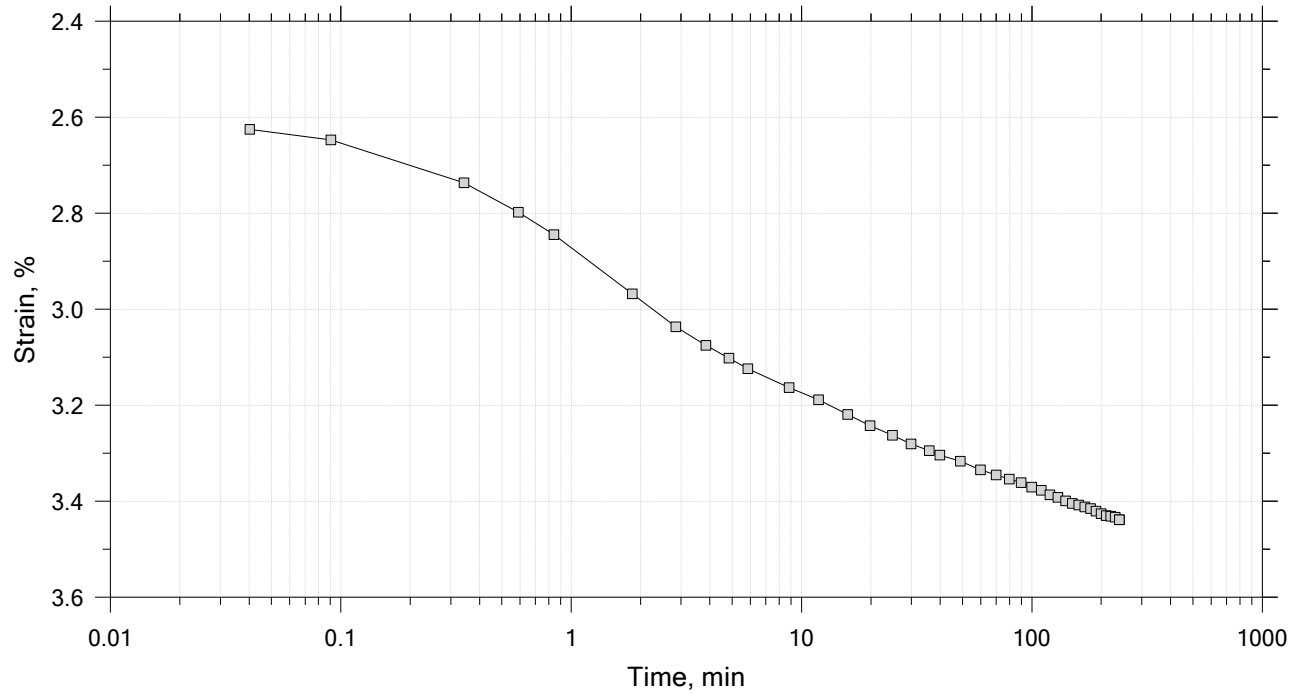
	Project: I-395 - Green Point Bridge	Location: Brewer, ME	Project No.: GTX-322338
	Boring No.: BB-BGPR-102	Tested By: sjt	Checked By: ab
	Sample No.: 1U	Test Date: 12/15/25	Depth: 15-17 ft
	Test No.: IP-1	Sample Type: intact	Elevation: ---
	Description: Moist, gray clay		
	Remarks: LTIII-B, Swell Pressure = 0.0644 tsf		


One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 5 of 14

Constant Load Step

Stress: 1 tsf



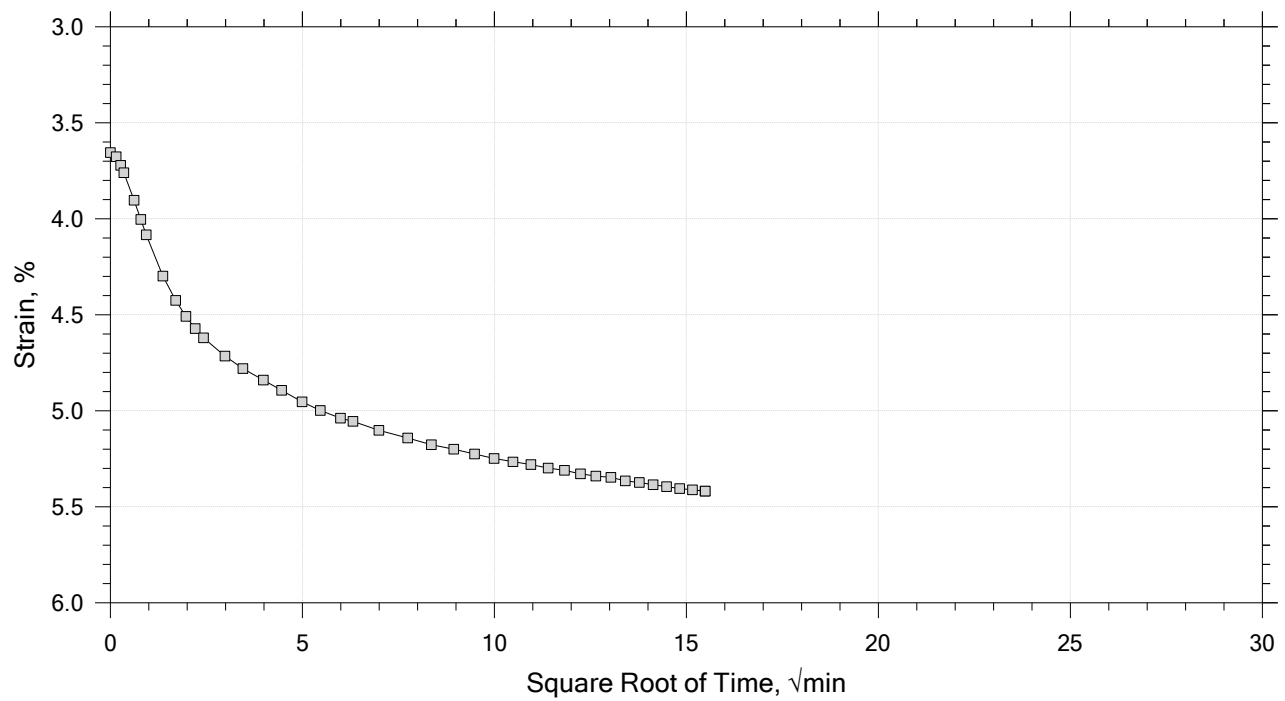
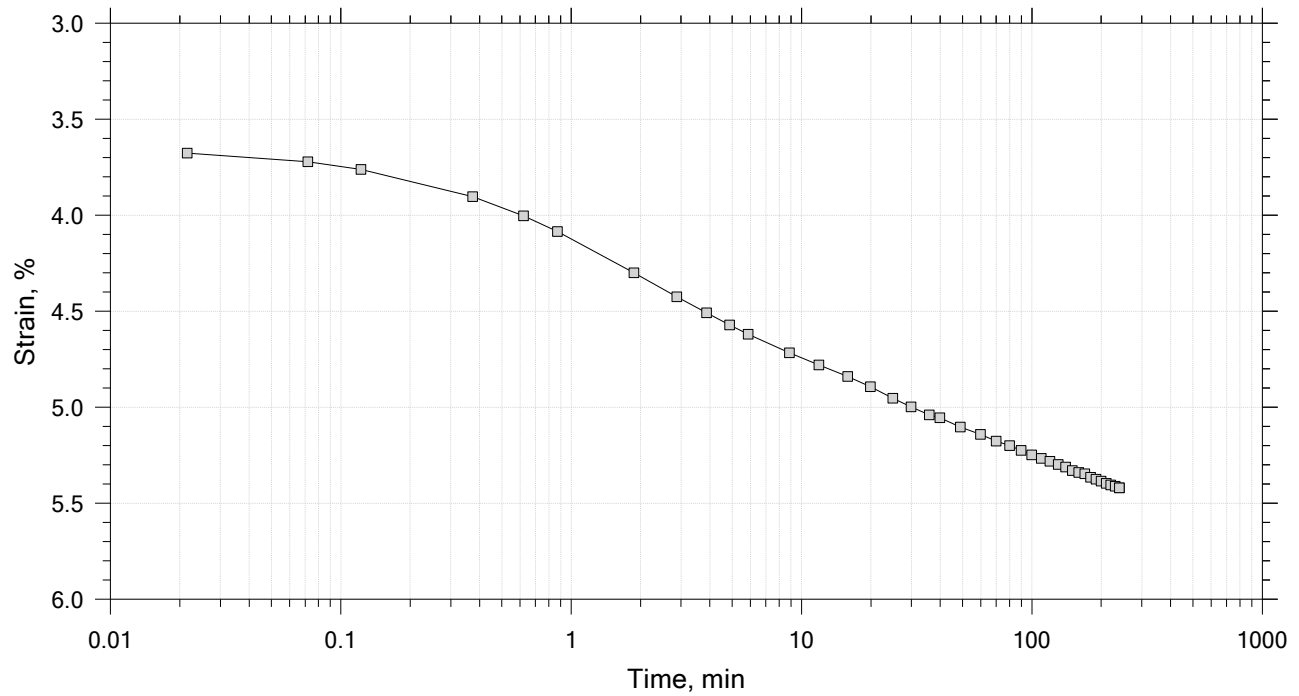
	Project: I-395 - Green Point Bridge	Location: Brewer, ME	Project No.: GTX-322338
	Boring No.: BB-BGPR-102	Tested By: sjt	Checked By: ab
	Sample No.: 1U	Test Date: 12/15/25	Depth: 15-17 ft
	Test No.: IP-1	Sample Type: intact	Elevation: ---
	Description: Moist, gray clay		
	Remarks: LTIII-B, Swell Pressure = 0.0644 tsf		


One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 6 of 14

Constant Load Step

Stress: 2 tsf



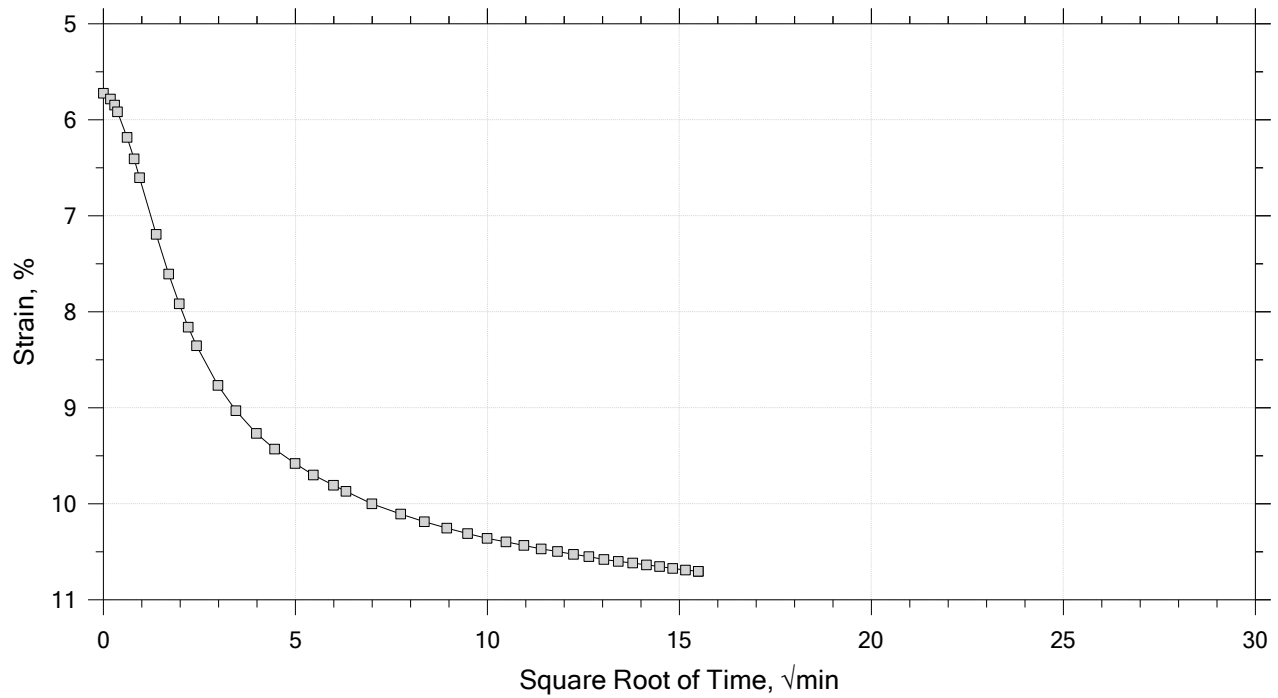
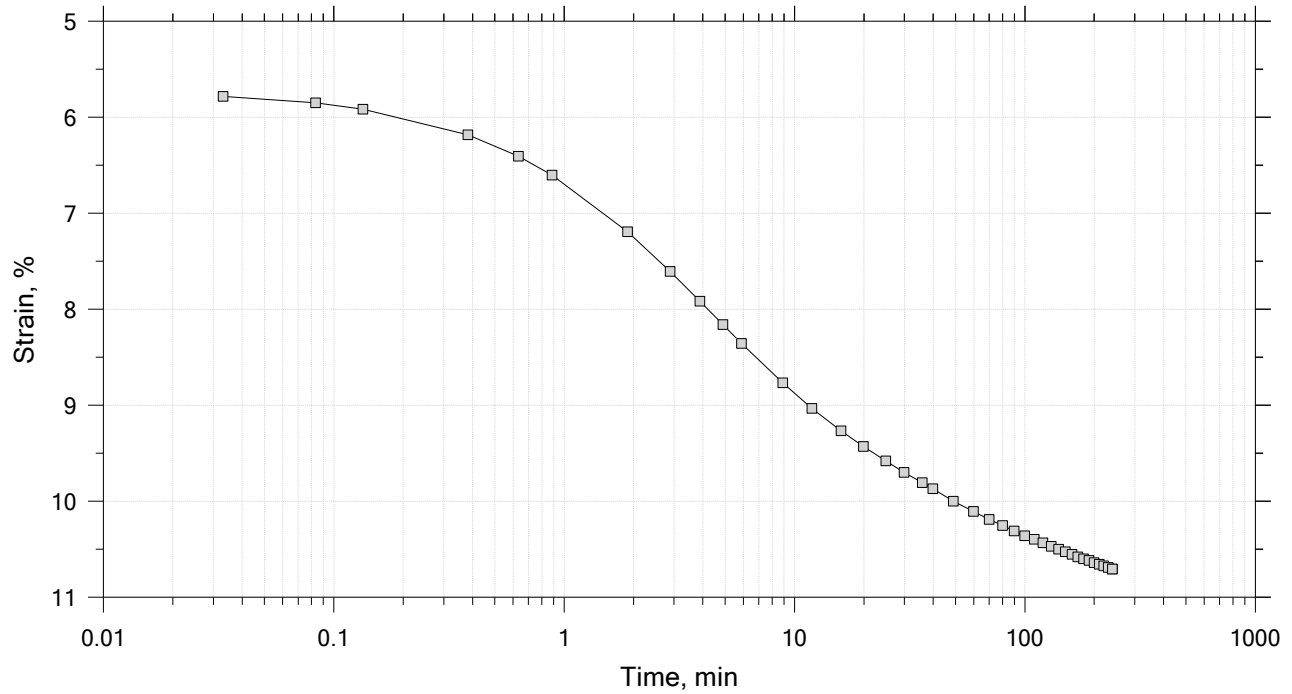
	Project: I-395 - Green Point Bridge	Location: Brewer, ME	Project No.: GTX-322338
	Boring No.: BB-BGPR-102	Tested By: sjt	Checked By: ab
	Sample No.: 1U	Test Date: 12/15/25	Depth: 15-17 ft
	Test No.: IP-1	Sample Type: intact	Elevation: ---
	Description: Moist, gray clay		
	Remarks: LTIII-B, Swell Pressure = 0.0644 tsf		


One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 7 of 14

Constant Load Step

Stress: 4 tsf



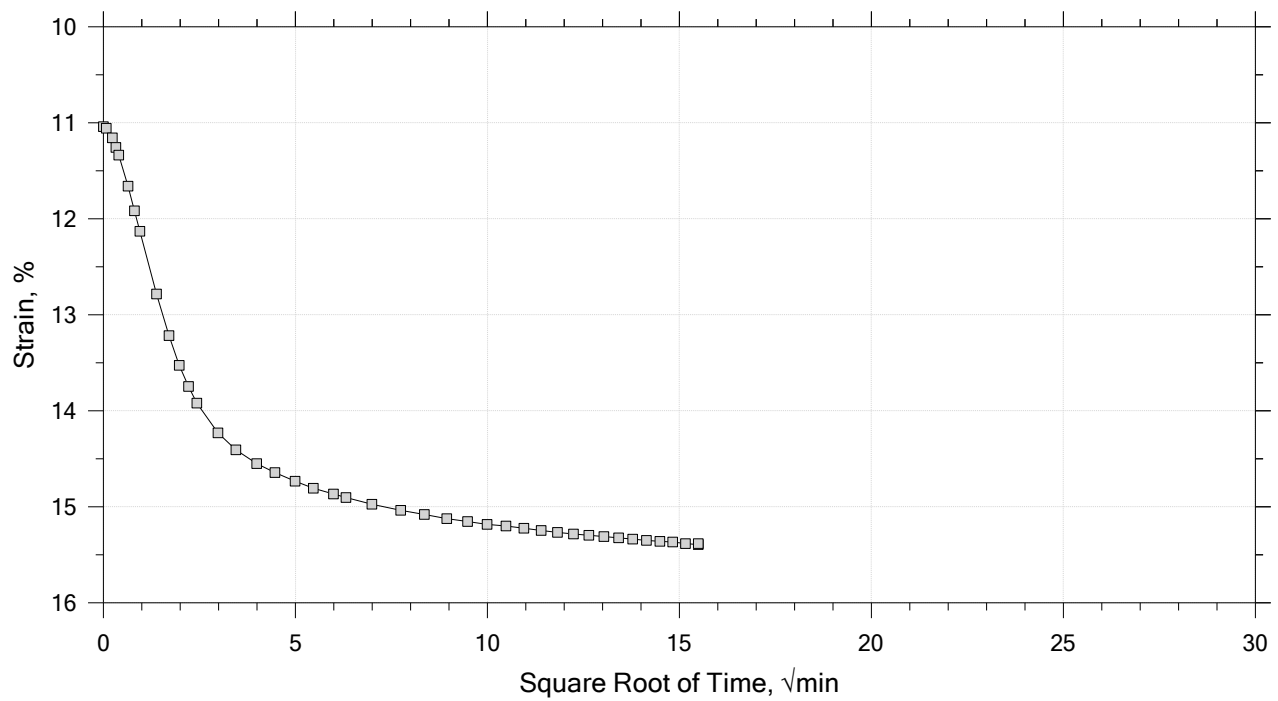
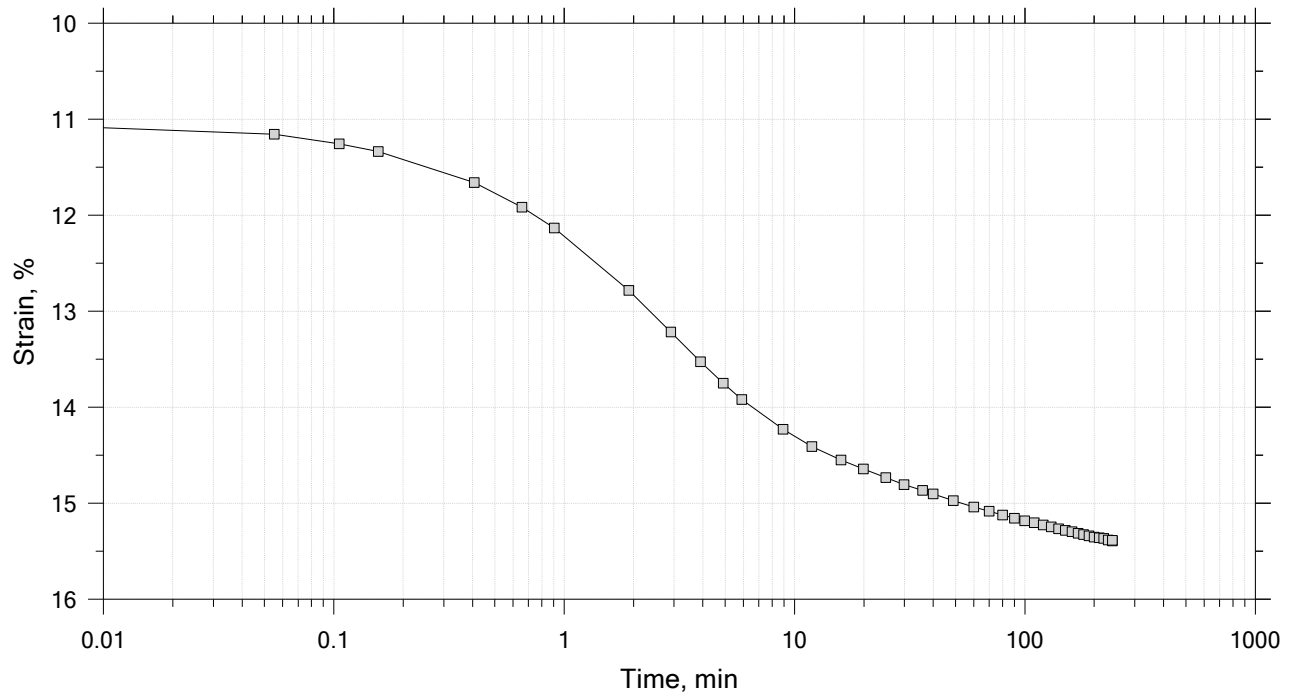
	Project: I-395 - Green Point Bridge	Location: Brewer, ME	Project No.: GTX-322338
	Boring No.: BB-BGPR-102	Tested By: sjt	Checked By: ab
	Sample No.: 1U	Test Date: 12/15/25	Depth: 15-17 ft
	Test No.: IP-1	Sample Type: intact	Elevation: ---
	Description: Moist, gray clay		
	Remarks: LTIII-B, Swell Pressure = 0.0644 tsf		


One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 8 of 14

Constant Load Step

Stress: 8 tsf



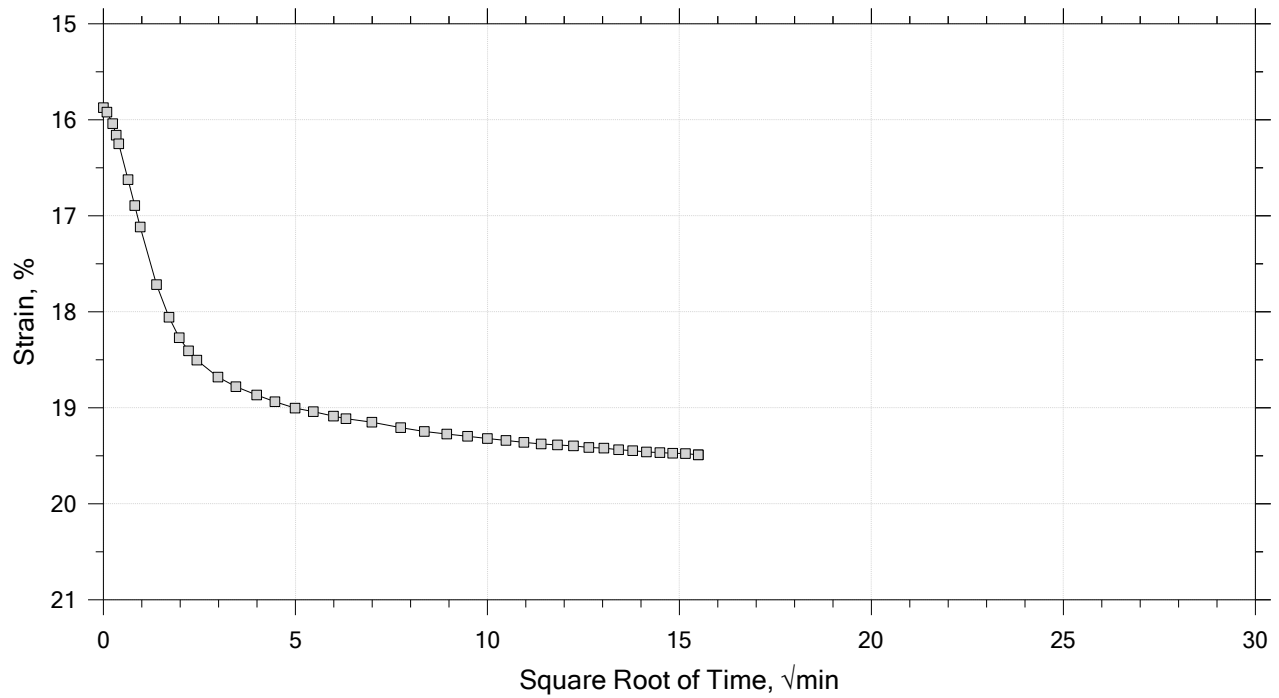
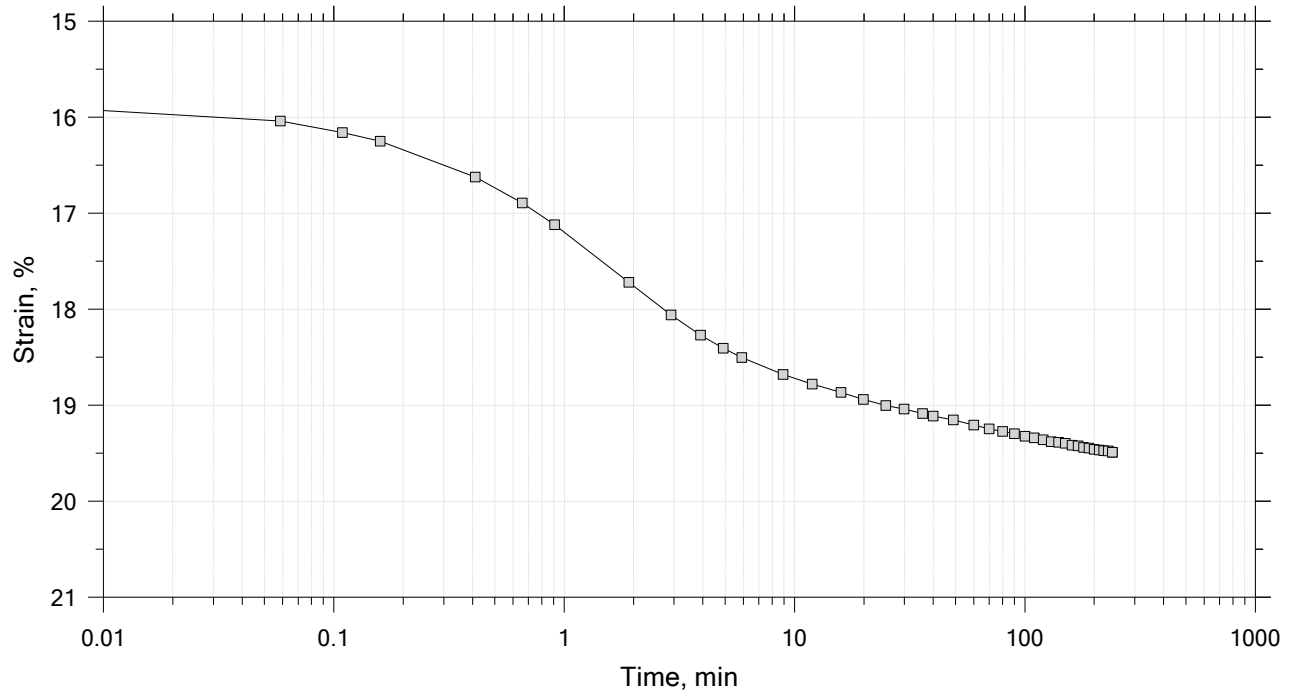
	Project: I-395 - Green Point Bridge	Location: Brewer, ME	Project No.: GTX-322338
	Boring No.: BB-BGPR-102	Tested By: sjt	Checked By: ab
	Sample No.: 1U	Test Date: 12/15/25	Depth: 15-17 ft
	Test No.: IP-1	Sample Type: intact	Elevation: ---
	Description: Moist, gray clay		
	Remarks: LTIII-B, Swell Pressure = 0.0644 tsf		


One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 9 of 14

Constant Load Step

Stress: 16 tsf



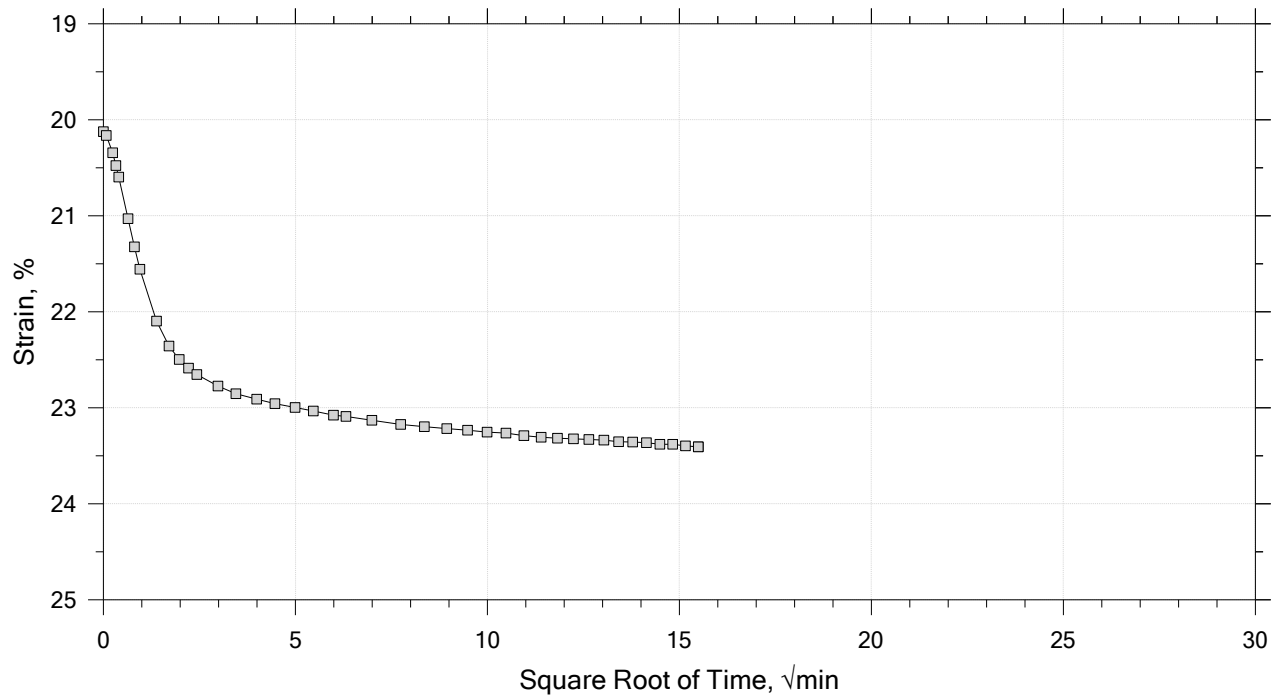
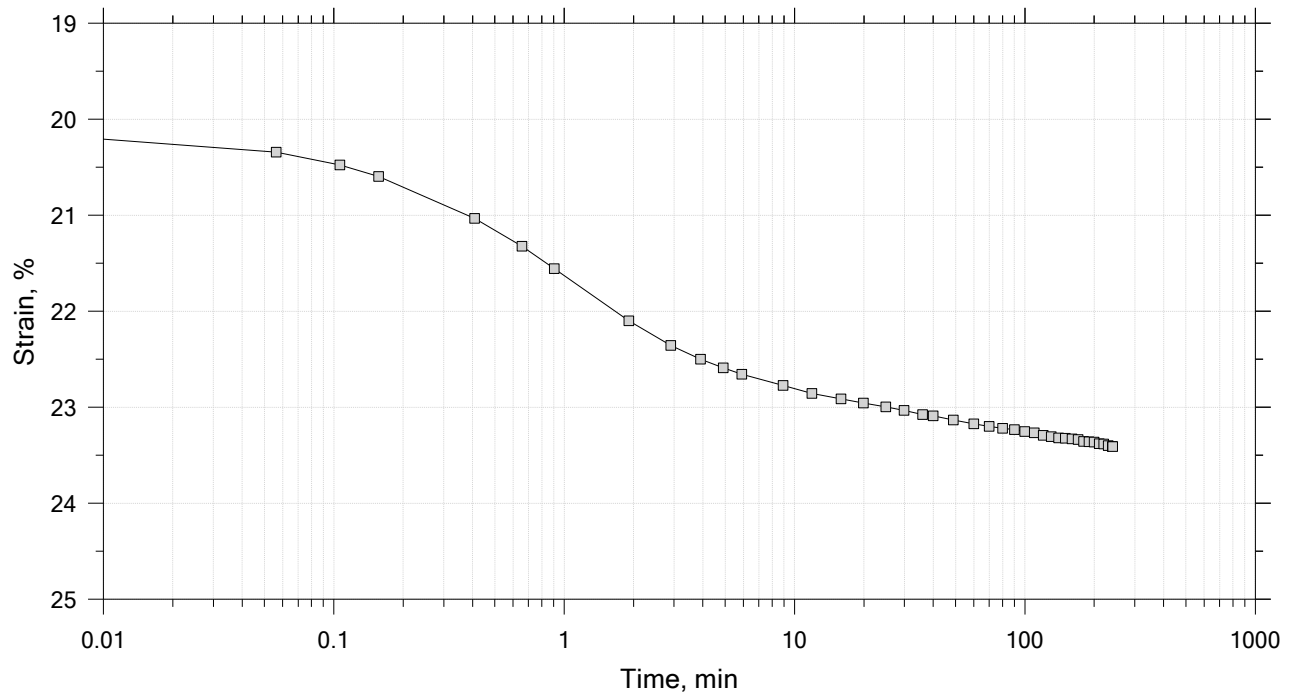
	Project: I-395 - Green Point Bridge	Location: Brewer, ME	Project No.: GTX-322338
	Boring No.: BB-BGPR-102	Tested By: sjt	Checked By: ab
	Sample No.: 1U	Test Date: 12/15/25	Depth: 15-17 ft
	Test No.: IP-1	Sample Type: intact	Elevation: ---
	Description: Moist, gray clay		
	Remarks: LTIII-B, Swell Pressure = 0.0644 tsf		


One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 10 of 14

Constant Load Step

Stress: 32 tsf



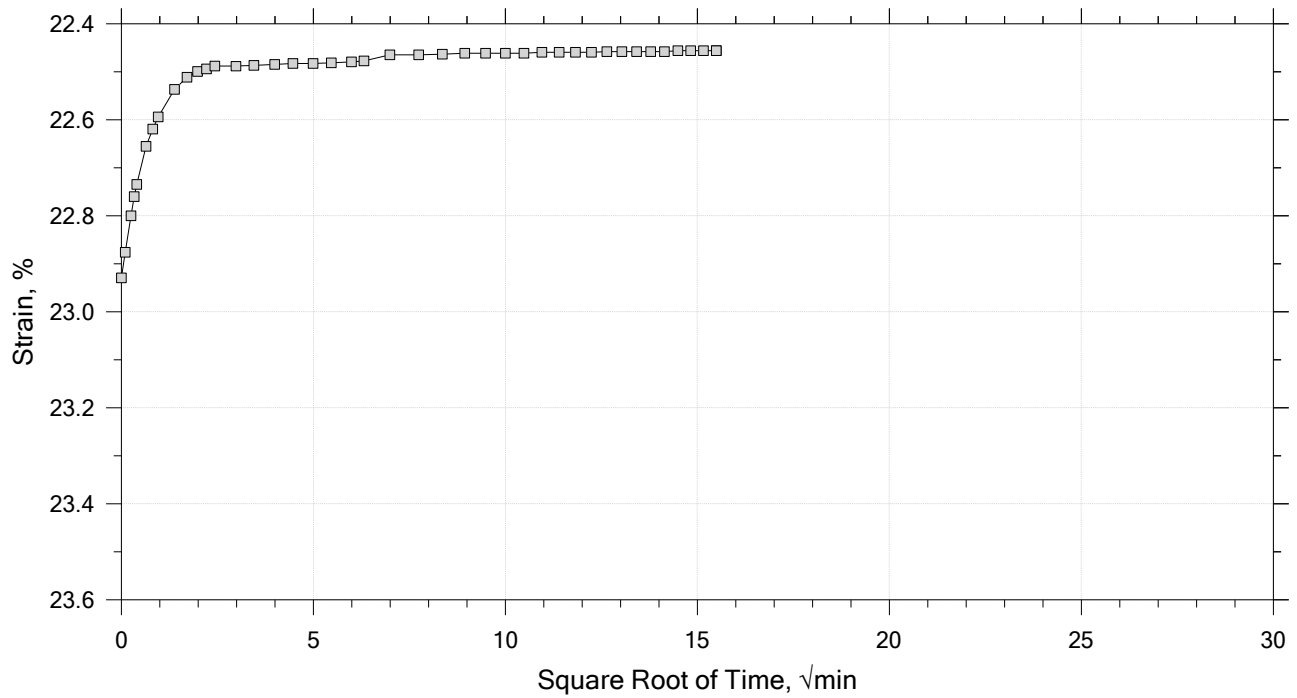
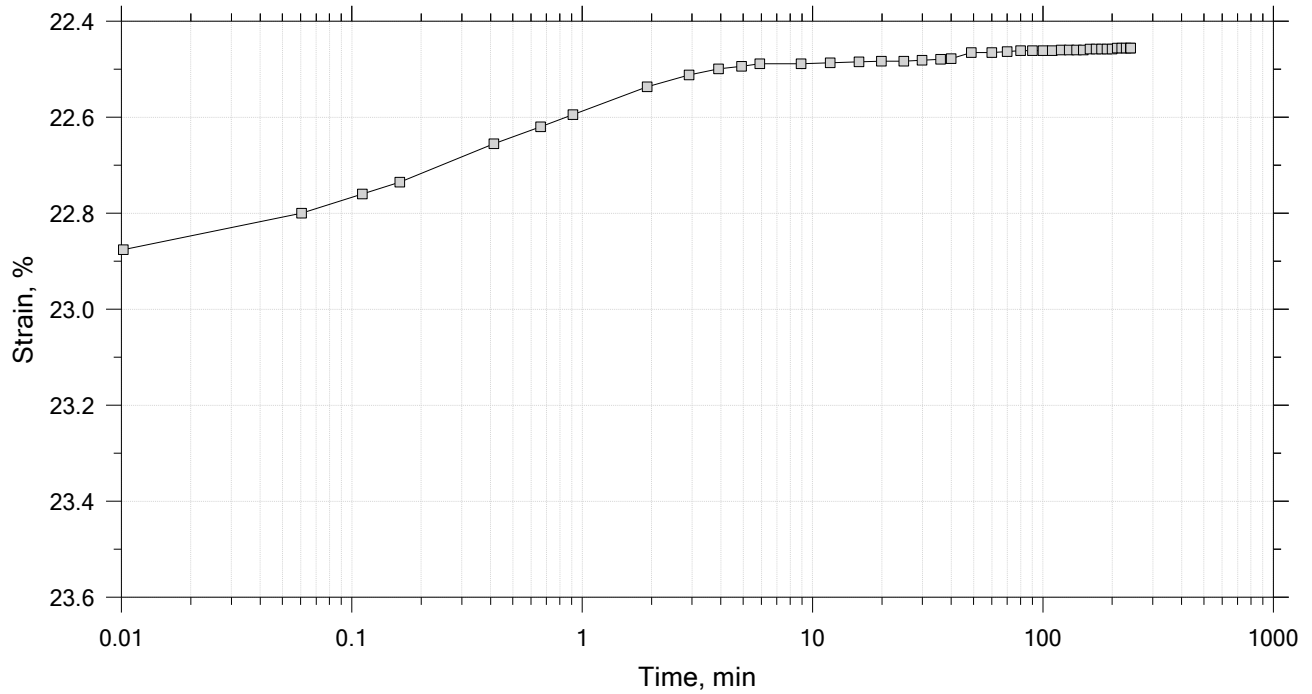
	Project: I-395 - Green Point Bridge	Location: Brewer, ME	Project No.: GTX-322338
	Boring No.: BB-BGPR-102	Tested By: sjt	Checked By: ab
	Sample No.: 1U	Test Date: 12/15/25	Depth: 15-17 ft
	Test No.: IP-1	Sample Type: intact	Elevation: ---
	Description: Moist, gray clay		
	Remarks: LTIII-B, Swell Pressure = 0.0644 tsf		


One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 11 of 14

Constant Load Step

Stress: 8 tsf



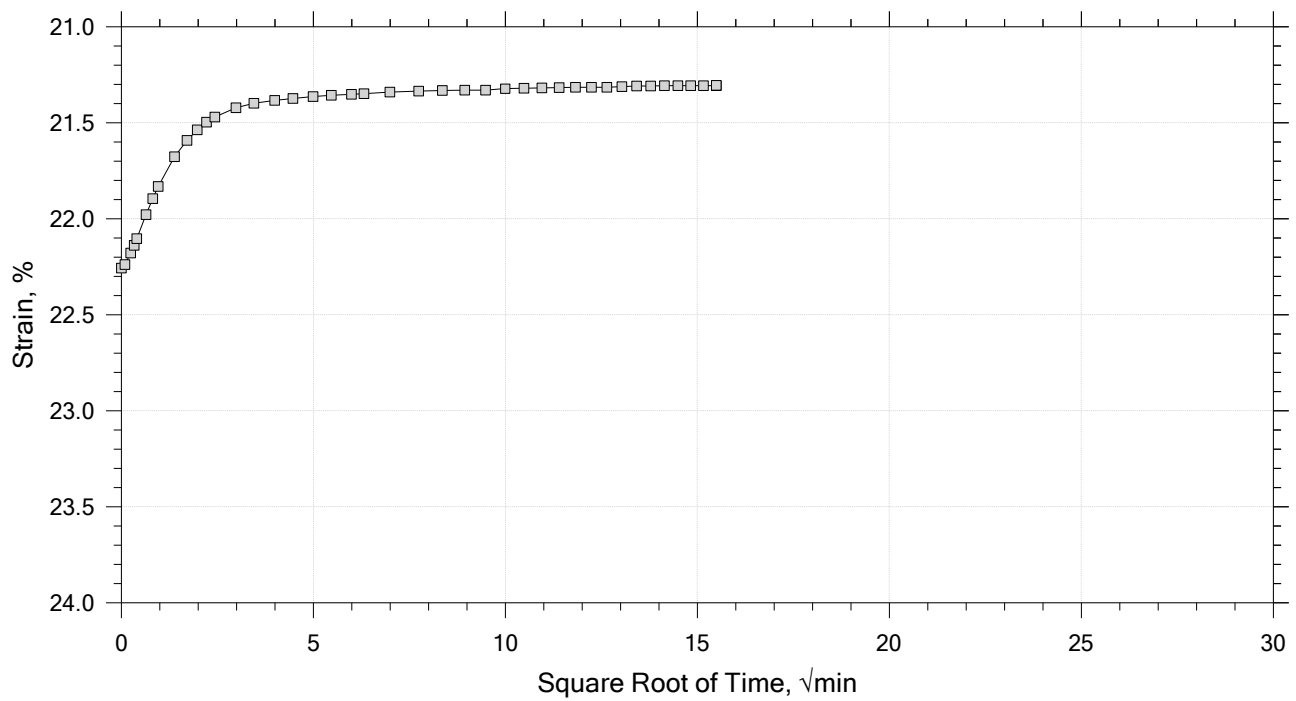
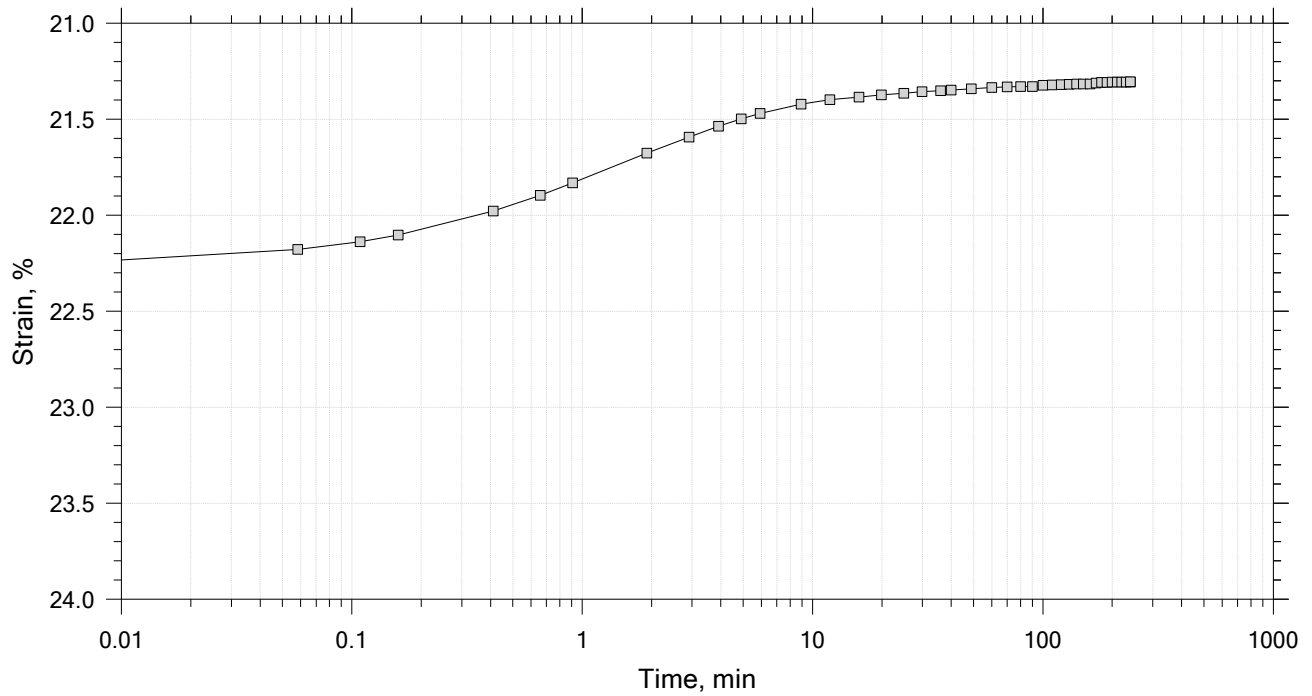
	Project: I-395 - Green Point Bridge	Location: Brewer, ME	Project No.: GTX-322338
	Boring No.: BB-BGPR-102	Tested By: sjt	Checked By: ab
	Sample No.: 1U	Test Date: 12/15/25	Depth: 15-17 ft
	Test No.: IP-1	Sample Type: intact	Elevation: ---
	Description: Moist, gray clay		
	Remarks: LTIII-B, Swell Pressure = 0.0644 tsf		


One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 12 of 14

Constant Load Step

Stress: 2 tsf



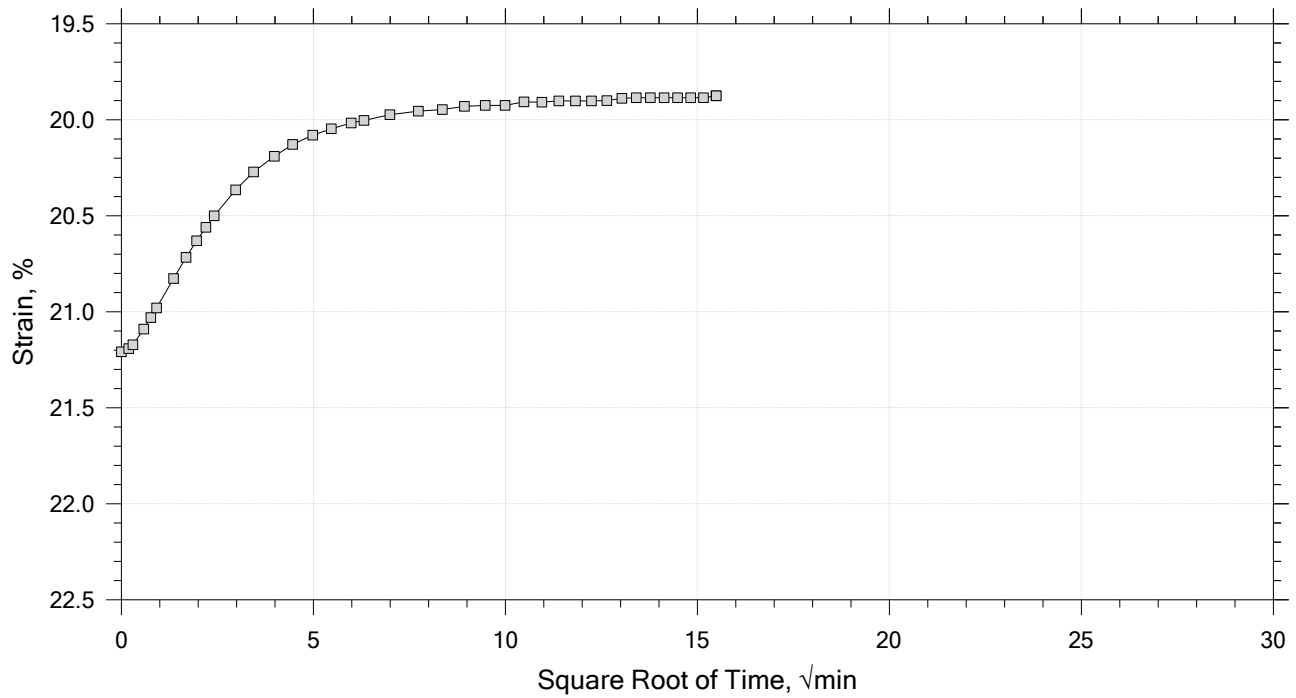
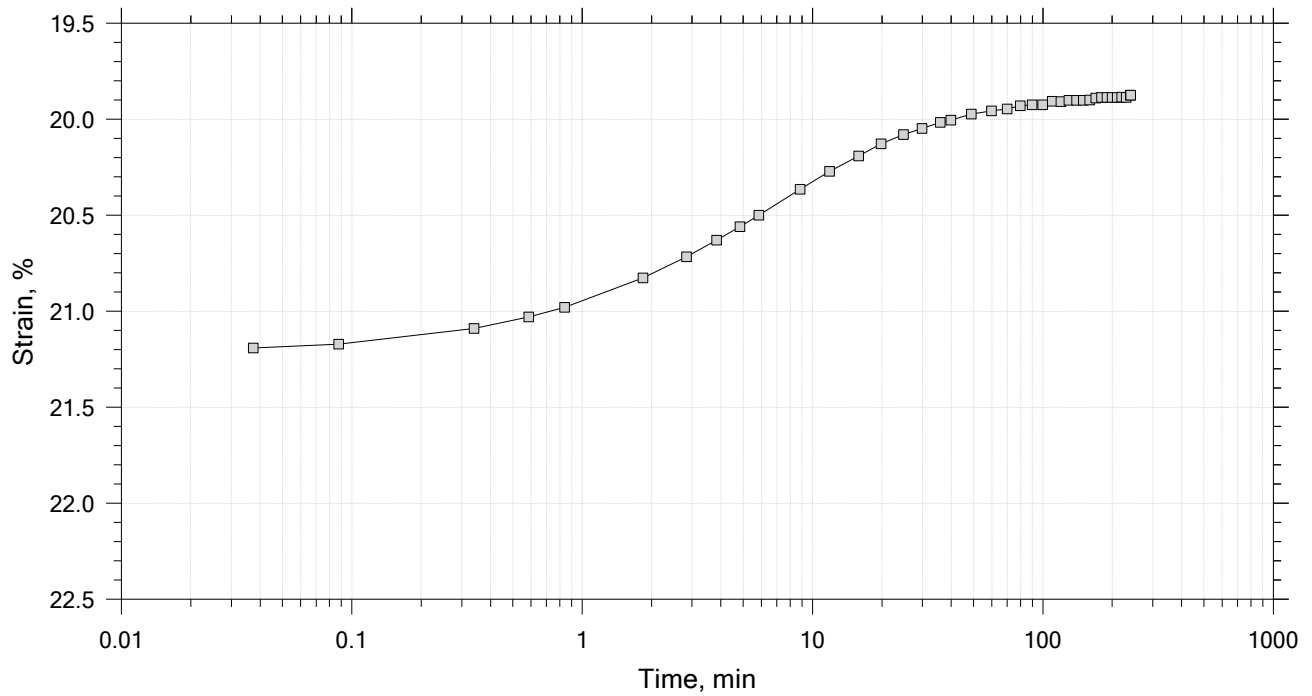
	Project: I-395 - Green Point Bridge	Location: Brewer, ME	Project No.: GTX-322338
	Boring No.: BB-BGPR-102	Tested By: sjt	Checked By: ab
	Sample No.: 1U	Test Date: 12/15/25	Depth: 15-17 ft
	Test No.: IP-1	Sample Type: intact	Elevation: ---
	Description: Moist, gray clay		
	Remarks: LTIII-B, Swell Pressure = 0.0644 tsf		


One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 13 of 14

Constant Load Step

Stress: 0.5 tsf



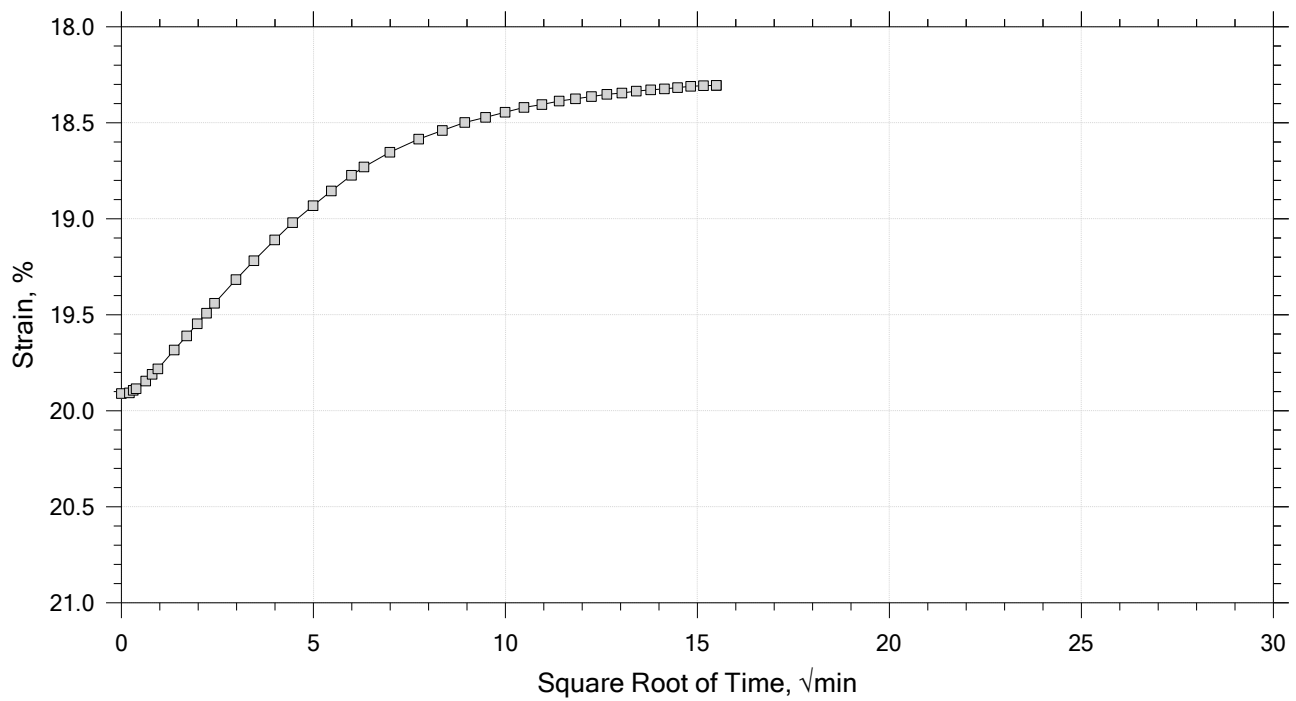
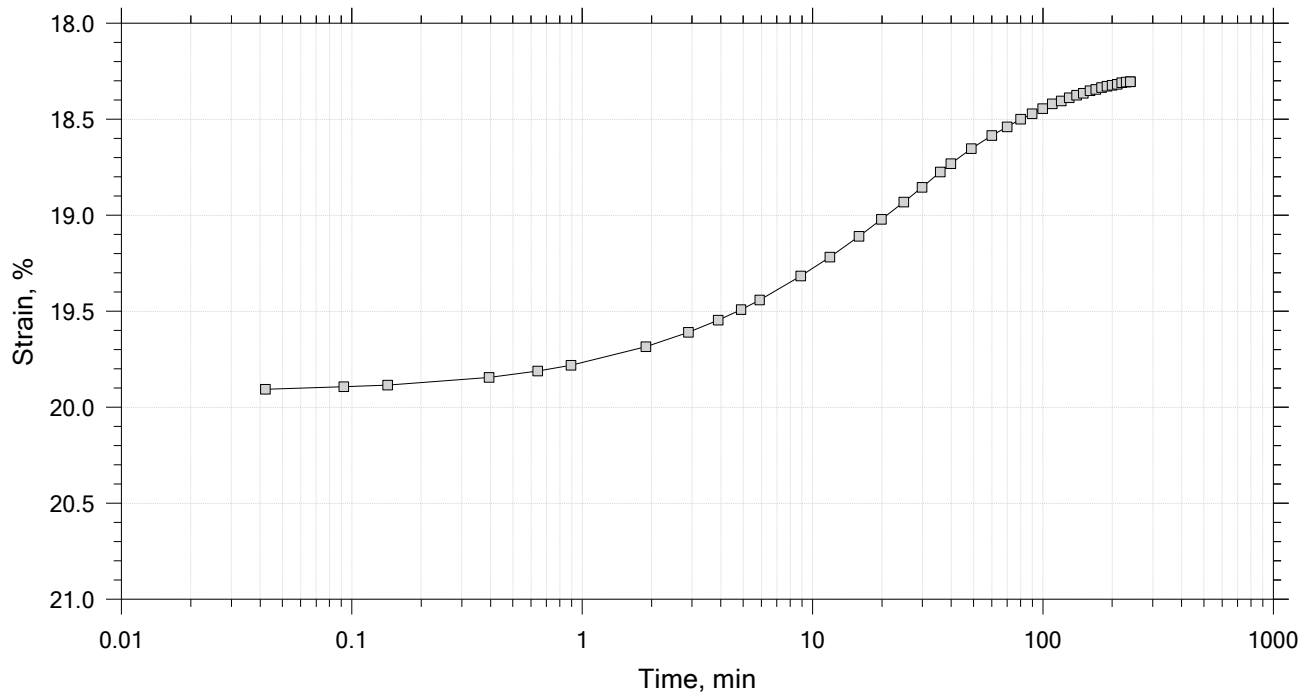
	Project: I-395 - Green Point Bridge	Location: Brewer, ME	Project No.: GTX-322338
	Boring No.: BB-BGPR-102	Tested By: sjt	Checked By: ab
	Sample No.: 1U	Test Date: 12/15/25	Depth: 15-17 ft
	Test No.: IP-1	Sample Type: intact	Elevation: ---
	Description: Moist, gray clay		
	Remarks: LTIII-B, Swell Pressure = 0.0644 tsf		


One-Dimensional Consolidation by ASTM D2435 - Method B

Time Curve 14 of 14

Constant Load Step

Stress: 0.125 tsf




	Project: I-395 - Green Point Bridge	Location: Brewer, ME	Project No.: GTX-322338
	Boring No.: BB-BGPR-102	Tested By: sjt	Checked By: ab
	Sample No.: 1U	Test Date: 12/15/25	Depth: 15-17 ft
	Test No.: IP-1	Sample Type: intact	Elevation: ---
	Description: Moist, gray clay		
	Remarks: LTIII-B, Swell Pressure = 0.0644 tsf		

One-Dimensional Consolidation by ASTM D2435 - Method B

Specimen Diameter: 2.50 in	Estimated Specific Gravity: 2.74	Liquid Limit: 36
Initial Height: 1.00 in	Initial Void Ratio: 0.864	Plastic Limit: 18
Final Height: 0.81 in	Final Void Ratio: 0.51	Plasticity Index: 18

	Before Test Trimmings	Before Test Specimen	After Test Specimen	After Test Trimmings
Container ID	E16114	RING		E16104
Mass Container, gm	8.33	111.31	111.31	8.39
Mass Container + Wet Soil, gm	118.46	264.96	251.56	144.01
Mass Container + Dry Soil, gm	91.14	229.55	229.55	122.73
Mass Dry Soil, gm	82.81	118.24	118.24	114.34
Water Content, %	32.99	29.94	18.61	18.61
Void Ratio	---	0.86	0.51	---
Degree of Saturation, %	---	94.95	100.00	---
Dry Unit Weight, pcf	---	91.767	113.29	---


Note: Specific Gravity and Void Ratios are calculated assuming the degree of saturation equals 100% at the end of the test. Therefore, values may not represent actual values for the specimen.

	Project: I-395 - Green Point Bridge	Location: Brewer, ME	Project No.: GTX-322338
	Boring No.: BB-BGPR-102	Tested By: sjt	Checked By: ab
	Sample No.: 1U	Test Date: 12/15/25	Depth: 15-17 ft
	Test No.: IP-1	Sample Type: intact	Elevation: ---
	Description: Moist, gray clay		
	Remarks: LTIII-B, Swell Pressure = 0.0644 tsf		

One-Dimensional Consolidation by ASTM D2435 - Method B

Square Root of Time Coefficients

[illegible]

 GeoTesting EXPRESS A Serco Business	Project: I-395 - Green Point Bridge	Location: Brewer, ME	Project No.: GTX-322338
	Boring No.: BB-BGPR-102	Tested By: sjt	Checked By: ab
	Sample No.: 1U	Test Date: 12/15/25	Depth: 15-17 ft
	Test No.: IP-1	Sample Type: intact	Elevation: ---
	Description: Moist, gray clay		
	Remarks: LTIII-B, Swell Pressure = 0.0644 tsf		
	Displacement at End of Increment		



Client:	Haley & Aldrich, Inc.
Project Name:	I-395 - Green Point Bridge
Project Location:	Brewer, ME
GTX #:	322338
Test Date:	1/23/2026
Tested By:	jlw
Checked By:	dgz
Boring ID:	BB-BGPR-102
Sample ID:	1U
Depth, ft:	15-17 ft
Location in sample, ft:	16.6-16.8
Visual Description:	Moist, gray clay

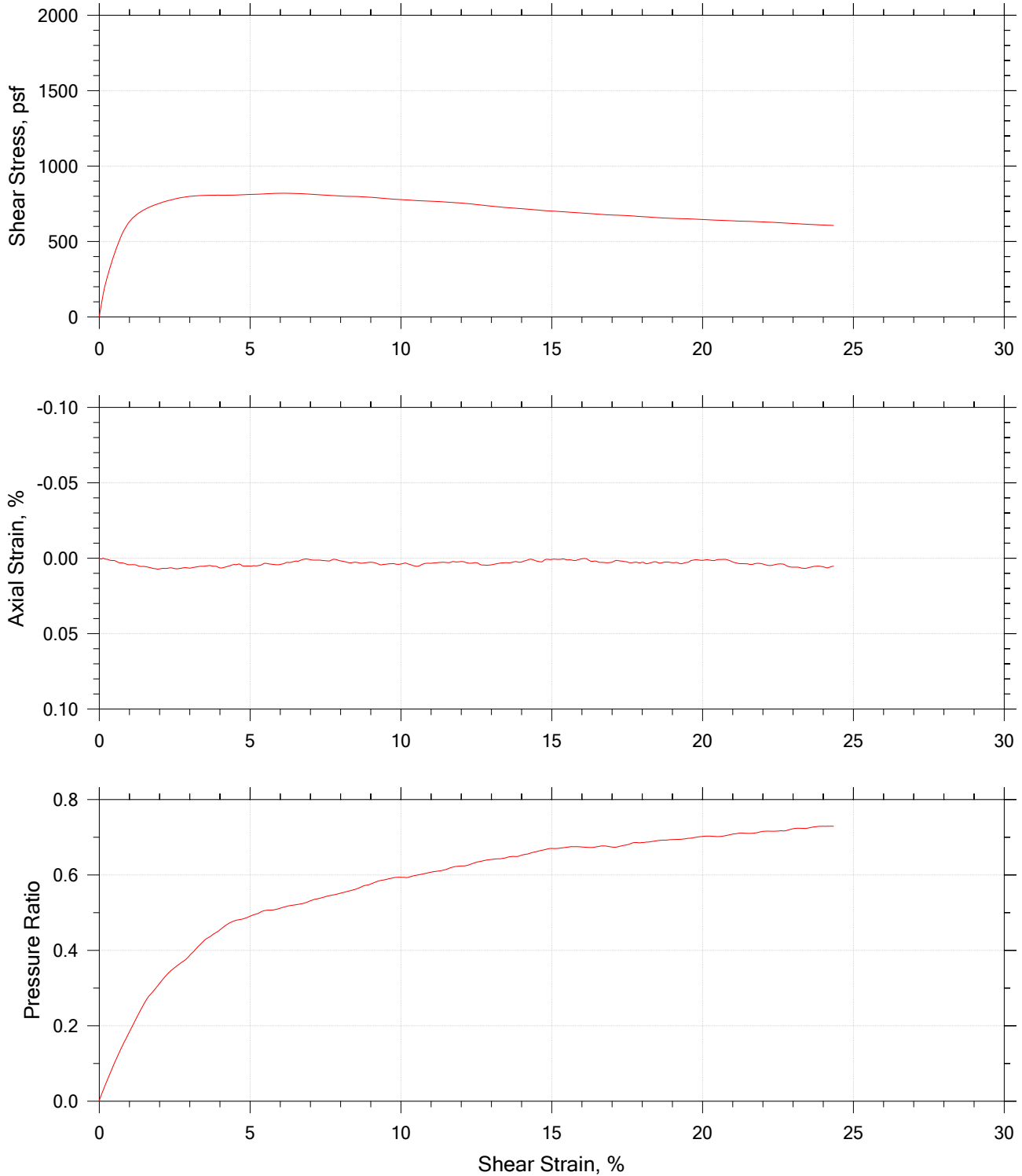
Consolidated Undrained Direct Simple shear Testing of Fine-Grained Soils by ASTM D6528


Test Condition:	Inundated prior to consolidation.		
Sample Preparation:	Extruded from tube, cut and trimmed. Tested at the as-received moisture and density.		
Sample Type:	---	Estimated Specific Gravity:	3.17
% Passing #200 sieve:	---	Liquid Limit:	36
Soil Classification:	---	Plastic Limit:	18
Group Symbol:	---	Plasticity Index:	18

Parameter	Point 1	Point 2	Point 3	Point 4
Test No.	DSS-1	---	---	---
Initial Diameter, in	2.50	---	---	---
Initial Height, in	1.00	---	---	---
Initial Area, in ²	4.91	---	---	---
Initial Mass, g	148.6	---	---	---
Initial Moisture Content, %	34.9	---	---	---
Initial Dry Density, pcf	85.5	---	---	---
Initial Void Ratio	1.31	---	---	---
Initial Degree of Saturation, %	95.6	---	---	---
Nominal Rate of Shear Strain, %/hour	5.0	---	---	---
Max. Vertical Consolidation Stress, psf	4,000	---	---	---
Vertical Consolidation Stress at shear, psf	4,000	---	---	---
Pre-shear Moisture Content, %	32.6	---	---	---
Pre-shear Void Ratio	1.03	---	---	---
Pre-shear Vertical Strain, %	12.3	---	---	---
Final Consolidation Loading Duration, min	362	---	---	---
Final Moisture Content, %	32.8	---	---	---
Measured Peak Shear Stress, psf	820	---	---	---
Shear Strain at Peak Shear Stress, %	6.2	---	---	---
Membrane Correction, psf	50	---	---	---
Corrected Peak Shear Stress, psf	770	---	---	---
S_u/σ'_{vc}	0.19	---	---	---

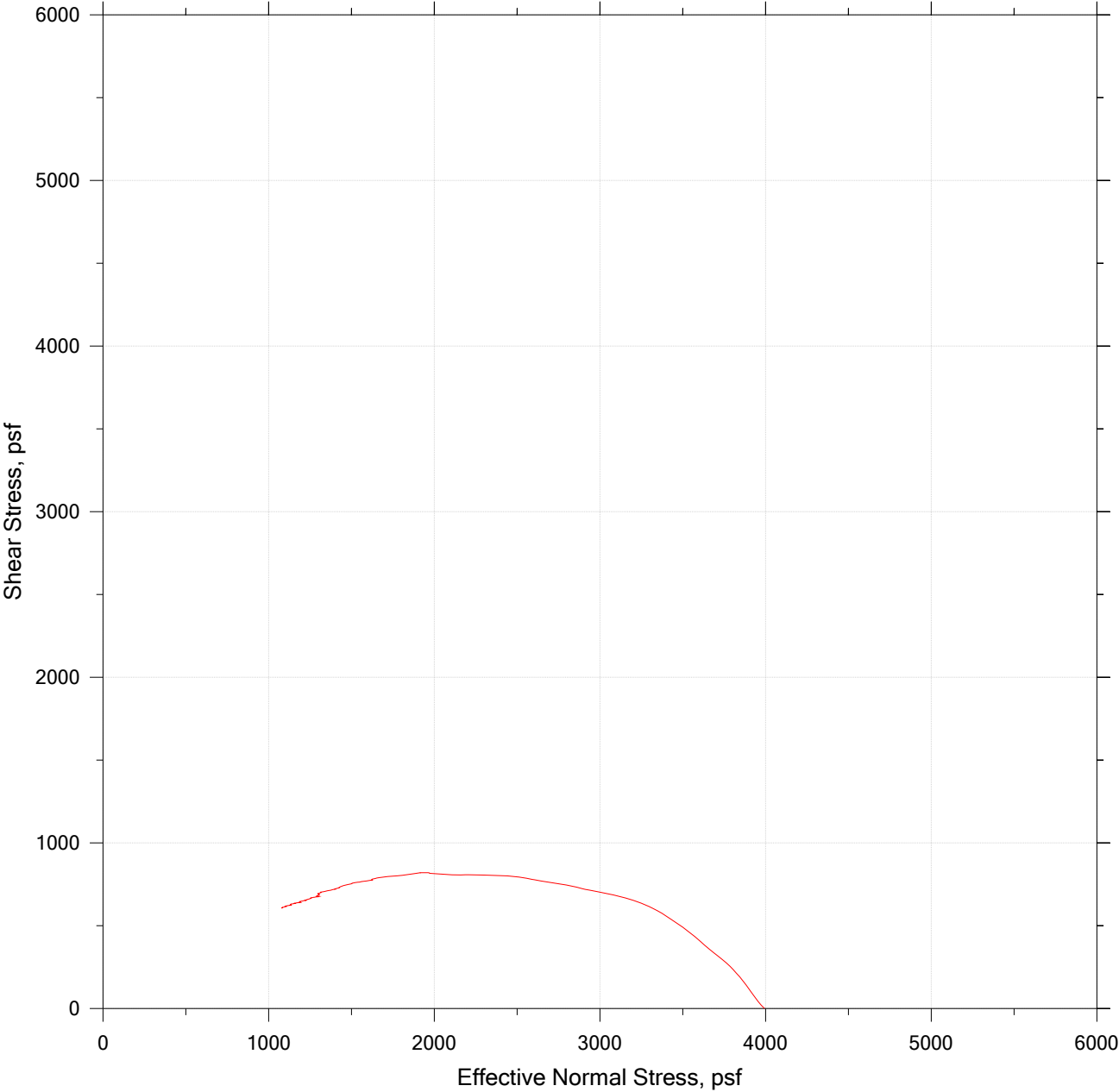
Comments:	Please see attached plots for additional information
Notes:	These results apply only to the sample tested for the specific test conditions. The test procedures employed follow accepted industry practice and the indicated test method. GeoTesting Express has no specific knowledge as to conditioning, origin, sampling procedure or intended use of the material.


Direct Simple Shear Test



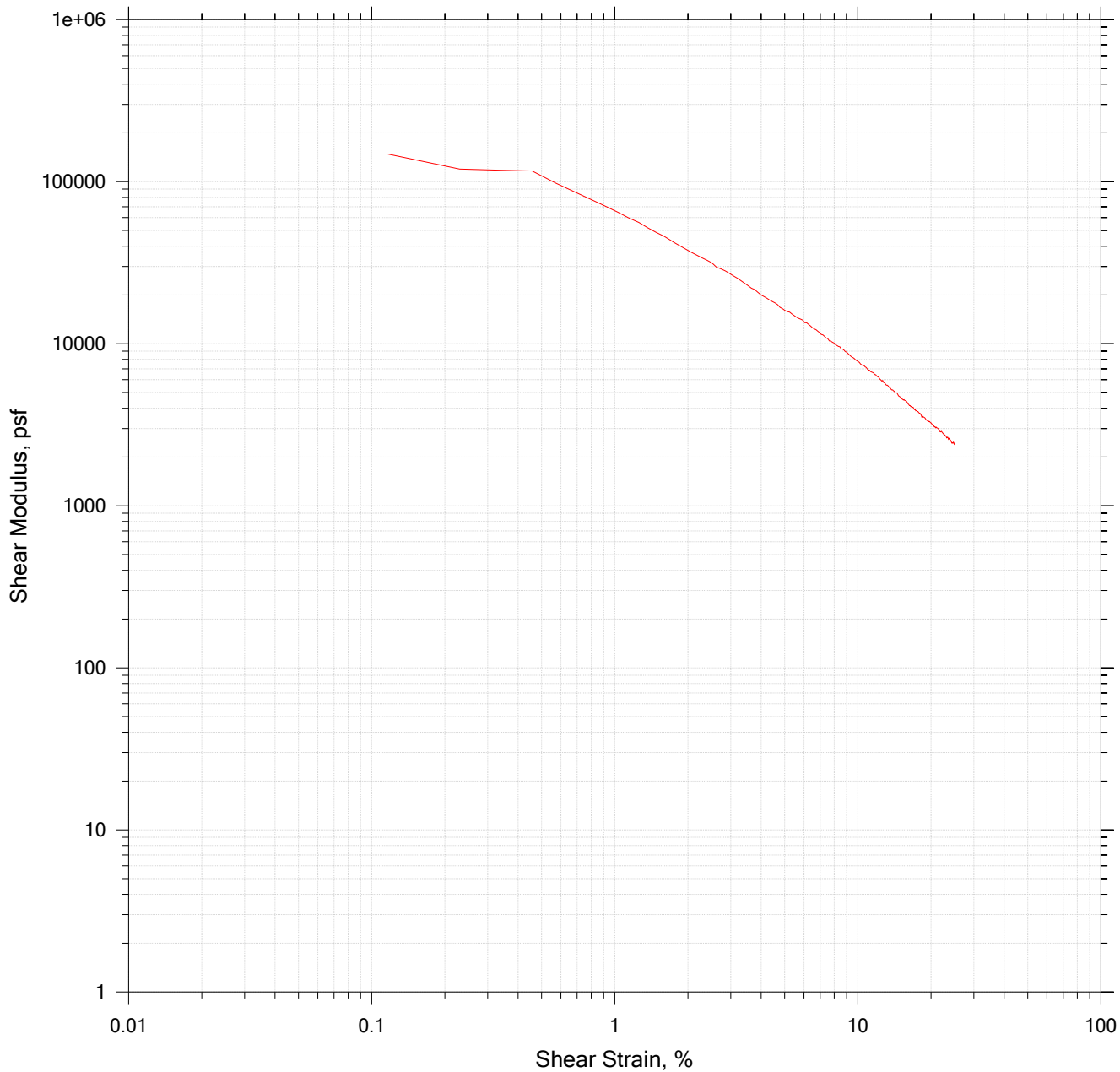
	Project Name: I-395 - Green Point Bridge	Location: Brewer, ME	Project Number: GTX-322338
	Boring Number: BB-BGPR-102	Tester: jlw	Checker: dgz
	Sample Number: 1U	Test Date: 1/23/26	Depth: 15-17 ft
	Test Number: DSS-1	Preparation: intact	Elevation: ---
	Description: Moist, gray clay		
	Remarks: DS-03		


Direct Simple Shear Test



	Project Name: I-395 - Green Point Bridge	Location: Brewer, ME	Project Number: GTX-322338
	Boring Number: BB-BGPR-102	Tester: jlw	Checker: dgz
	Sample Number: 1U	Test Date: 1/23/26	Depth: 15-17 ft
	Test Number: DSS-1	Preparation: intact	Elevation: ---
	Description: Moist, gray clay		
	Remarks: DS-03		

Direct Simple Shear Test



	Project Name: I-395 - Green Point Bridge	Location: Brewer, ME	Project Number: GTX-322338
	Boring Number: BB-BGPR-102	Tester: jlw	Checker: dgz
	Sample Number: 1U	Test Date: 1/23/26	Depth: 15-17 ft
	Test Number: DSS-1	Preparation: intact	Elevation: ---
	Description: Moist, gray clay		
	Remarks: DS-03		