Municipality of Magnetawan

Public Works Contract #: RFP 2025-05

REPLACEMENT OF BRIDGE #17 – MILLER ROAD

DATE: September 3rd, 2025

ADDENDUM #1 - FINAL

This addendum will become part of the Public Works Contract #: RFP 2025-05

Questions Received

Q1. - Please confirm that the intent is for Miller Road to be fully shut during construction. The current and proposed bridge configurations do not allow for staging of the work required to keep the bridge open during construction.

R1. Yes, the road will be fully shut down during construction.

Q2. Please confirm Item 17 Quantity. Currently reads as 20 LS

R2. Please see attached updated Itemized Bid Form

Q3. Please confirm quantities for Parapet Wall, currently reads as 18m3 and Concrete in Deck which is specified as 7m3. Both these quantities do not match our take offs for this structure**.**

R3. Please see attached updated Itemized Bid Form

Q4. As per Section #23 – Traffic Control, the specification is noted as “general.” Kindly confirm whether this refers to the standard traffic control outlined in the specifications, or if it is specific to this bridge.

We have concerns regarding the requirement that lane widths of no less than 4 metres must be maintained at all times. Upon reviewing the bridge dimensions, it is unclear whether this is feasible. Kindly advise.

R4. As per Question 1. The bridge shall be fully shut down. No will be no lane width requirements

Q5. - Please provide Geotechnical Report Referenced in the Contract Drawings. This is required by subcontractors so that they can bid the project.

R5. Geotechnical Report attached.

Q6. Given the unanswered questions we are requesting a 1-week extension to the closing date.

R6. No extension will be granted.

Clarification: The following Special Specifications have been modified as follows:

Item No. 3 Temporary Traffic Control

Applicable Item(s): A6

OPSS 706 shall govern except as amended and extended herein:

Scope of Work

The Scope of work for the Item 'Traffic Control' includes, but is not necessarily limited to, the following:

1. Vehicular traffic control and construction signing on all roads along the detour route (as identified on the Contract Drawings) and all other roads affected by construction activities.
2. All other provisions related to traffic control and traffic management including detour signage as required to carry out the construction and facilitate the Contractor's operations except where paid separately.
3. Contractor to submit Traffic Control Plan and Detour Plan prior to construction activity.
4. Separate provisions to positively restrain any errant vehicles entering open excavation.
5. The road will be fully closed to traffic during construction. Under this Item the Contractor will supply, install, maintain, and remove upon completion, all traffic detour control signs, delineators, barricades, etc., as required by the Ontario Traffic Manual, Book 7 -Temporary Condition to close the bridge to traffic and sign the detour route.
6. All signs and levels of reflectivity shall conform to the Ontario Traffic Manual, Book 7 (Temporary Conditions). Signs shall be installed in strict conformance with Book 7.
7. This item shall also include the supply and installation of a Physical Barrier at the limits of Contract on the roadway to prevent vehicles and pedestrians from entering the construction zone. The physical barrier shall be adequately illuminated to be clearly visible and distinguishable during night conditions. In

addition, construction fencing shall be installed around the construction area at all times.

8. The Contractor shall be responsible for ensuring that all construction signing is maintained in their specified location throughout the duration of the detour operation. The Contractor shall make two daily inspections and maintain a daily log of time of inspection to be submitted to Contract Administrator prior to final payment.
9. The Contractor shall note that local traffic (from both approaches) up to construction area shall be allowed on Bobs Lake Road for the duration of the construction works.
10. All costs associated with the placement of temporary fill material, temporary asphalt (as may be required) to accommodate vehicular and pedestrian access at affected properties shall also be included in the Item 'Traffic Control including Detour Route Signing'.
11. As part of the work under the 'Traffic Control including Detour Route Signing' Item, the Contractor shall circulate a notification letter to all local residents and businesses along the detour route. The letter shall inform the residents / businesses of the upcoming project including start dates, completion dates, Contractor's name and contact information. A copy of the letter shall be submitted to the Contract Administrator. The letter shall be circulated to all residents no later than 2 weeks prior to the start date of road closures.
12. The Contractor shall be responsible for ensuring that all construction signing is maintained in their specified location throughout the duration of the detour operation. The Contractor shall make two daily inspections and maintain a daily log of time of inspection to be submitted to Contract Administrator prior to final payment (refer to Daily Diary of Signs below for additional information).
13. Under this item the Contractor shall ensure that nuisance dust is controlled throughout the term of the project using Calcium Chloride Flake and Water in accordance with OPSS.MUNI. 506 (Nov 2017).

Submission Requirements

Section 706.04.01 is deleted and replaced with the following;

A detailed traffic control plan is to be submitted to the Contract Administrator for approval. The plan shall include the planned positions/arrangements/configurations of traffic control devices/signs, flaggers, or other materials for all lane closures, the full road closure of Miller road at the work zone, detour routes, construction access, and the accommodation for residential/commercial entrances where affected by the work zone. The plan shall include a standalone excerpt that can be distributed and posted for public information detailing the duration of construction, construction phasing, impacts

to vehicle traffic access, impacts to pedestrians traffic access, impacts to emergency vehicle access, product deliveries, garbage / recycling pickup, timeframes, and other relevant impacts/changes. The plan shall be detailed and site specific (generic references to OTM Book 7 or other resources will not suffice). The traffic control plan shall be submitted to the Contract Administrator for review and approval at least 2 weeks in advance of the scheduled closure.

Basis of Payment

Payment at the Contract price for the above item shall be full compensation for all labour, Equipment, and Material to do the work.

For progress payment, 50% of the Contract price shall be paid upon the supply and installation of the complete initial traffic control plan. The balance will be prorated over the balance of the Contract Time.

Item No. 4 Access to Work Area, Work Platform and Scaffolding

SCOPE

Section 928.01 of OPSS 928 is amended by the addition of the following:

As part of the work under the tender item **Access to Work Area, Work Platform and Scaffolding**, the Contractor shall also include the following:

- Provision of access/work platform/scaffolding for all work;
- Debris and work platform to contain demolition debris.

SUBMISSION AND DESIGN REQUIREMENTS

The requirements of section 928.04 of OPSS 928 are amended by the addition of the following:

928.04.03 Temporary Structures (Work Bridge, Debris Platform, Structure Support Platform, Walkway)

The Contractor shall submit the following to the Contract Administrator at least two weeks prior to the date that permissions are required to proceed, for information purposes only.

- 2 sets of design/shop drawings The submission shall include all construction details.
- sequence and method of control measures during:
    - Concrete sawcutting.
    - Structure removal.
    - Structure repair including concrete placement;
- details of any loads imposed on the existing structure by the control measures.

All design and checking of the work under this item shall be carried out by the Contractor. The design and checking Engineers shall affix their seals and signatures to the drawings verifying that the drawings are consistent with the Contract Documents and sound engineering practices.

A copy of each submission shall be returned as one of the following:

a) Stamped with the wording that allows for permission to construct. In this case, work can commence on receipt of the drawing by the Contractor.
b) Stamped with the wording that allows for permission to construct as noted. In this case, work can start on receipt of the drawings by the Contractor. The drawings shall be updated as noted and shall be sealed and signed by an Engineer stating the drawings have been revised according to the noted comments.
c) Showing only required changes. In this case, the drawings shall be updated as required and the submission process repeated.

The Contractor shall give the Contract Administrator written notice a minimum of two weeks prior to the date that permission is required to proceed with any of the following:

a) Concrete sawcutting for removals; and
b) Removal of existing bridge.

The notice shall include two (2) copies of written descriptions, working drawings and schedules that provide the following:

a) the sequence and method of control measures during:
    i. Concrete sawcutting.
    ii. Removal of concrete;
    iii. Structure repair including concrete placement;
b) The details of any construction loads imposed on the existing structure by the control measures.

Permission to proceed with the above will be provided if the Contract Administrator determines that the details of the notice meet the requirements of this Special Provision and OPSS 928.

Any protection system or working platform used for the above shall bear the seal and signature of a Professional Engineer licensed in the Province of Ontario.

CONSTRUCTION

The requirements of section 928.07 of OPSS 928 are amended by the addition of the following:

The Contractor shall take such measures and provide such protection system or systems to prevent entry of all materials into the river or onto the travelled portion of the highway, including:

a) materials resulting from the structure or concrete removal;
b) materials resulting from structure repair; and

c) effluent from sawcutting.

Provide a minimum vertical clearance, as indicated on the contract drawings, for all work platforms, scaffolding, etc. over the water.

At the conclusion of the work, the control measures shall be removed from the right-of-way.

QUALITY CONTROL

The requirements of OPSS 928 are amended by the addition of the following:

928.08 Quality Control

928.08.1 Certificate of Conformance

A complete Certificate of Conformance shall be submitted to the Contract Administrator upon completion of each stage of work as listed below. The Qualification Verification Engineer shall affix his or her seal and signature to the completed Certificate of Conformance confirming that the following are in general conformance with the requirements of the design drawings, working drawings, product drawings, Contract Documents and good engineering practice:

- Installation or relocation of temporary debris/structure support platforms

BASIS OF PAYMENT

Payment at the contract price for the above tender item shall include all necessary labour, materials and equipment required to do the work.

(A signed copy of this addendum must be included in Tener submission.)

I /WE hereby acknowledge receipt of this addendum.

(*Signature of Contractor)* *(Company Name)*

PLEASE SIGN AND INSERT WITH TENDER SUBMISSION

Itemized Bid Form

Item	OPSS / OPSD	Description	UNIT	QTY.	Unit Cost $	Total Price $
1	SP	Mobilization and Demobilization	LS	1		
2	OPSS 805 SP	Environmental Protection	LS	1		
3	OPSS 909 SP	Temporary Traffic Control	LS	1		
4	OPSS 928 SP	Access to Work Area, Work Platform and Scaffolding	LS	1		
5	OPSS 902	Dewatering Structure Excavations	LS	1		
6	OPSS 510 SP	Removal of Bridge Structure	LS	1		
7	OPSS 902	Earth Excavation for Structure	m^3	750		
8	OPSS 904	Drilled in Tube Piles	m	60		
9	OPSS 904 SP	Concrete in Substructure	LS	1		
10	OPSS 922 SP	Bearings	ea	4		
11	OPSS 909	Prestressed Concrete Girders NU 1200 Fabrication	LS	1		
12	OPSS 909	Prestressed Concrete Girders NU 1200 Delivery	LS	1		
13	OPSS 909	Prestressed Concrete Girders NU 1200 Installation	LS	1		
14	OPSS 904	Concrete in Deck	m^3	33		
15	OPSS 904	Concrete in Parapet Walls	m^3	12.5		
16	OPSS1801 OPSD 3101.150 OPSD 3102.100	Subdrain	m	12		
17	OPSS 905	Reinforcing Steel Bar	LS	1		
18	OPSS 905	Stainless Steel Reinforcing Bar	LS	1		
19		Dowels	ea	4		
20	OPSS 914 SP	Bridge Deck Waterproofing	m^2	120		
21	OPSS 308	Tack Coat	m^2	425		

22	OPSS 310	HL3 - 40 mm Lift Thickness, Surface	m^2	425		
23	OPSS 310	HL 8 - 50 mm Lift Thickness, Binder	m^2	425		
24	OPSS 914 SP	Form and Fill Grooves	m	12		
25	OPSS 314	Granular A	t	180		
26	OPSS 721	Single Rail Steel Beam Guide Rail	m	30		
27	OPSS 721	Steel Energy Attenuator Treatment	ea	4		
28	OPSS 314	Granular B	t	2400		
					Sub-Total	
					HST	
					TOTAL COST	

The Municipality of Magnetawan has the right to eliminate any or all sections of the project (in the itemized bid form) at any time after Tender Closing without penalty.

The Tenderer hereby offers to complete the work specified for Tender No. RFP 2025-05 for the following prices:

Sub-Total	**$**
HST	**$**
TOTAL COST	**$**

HST REGISTRATION NO._____

Project No. 25-1045A

Miller Road Bridge
Geotech Report

Terraspec Engineering
a division of Jp2g Consultants Inc.
973 Crawford Drive
Peterborough, Ontario
K9J 3X1

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APPENDICES

terraspec engineering

a division of Jp2g Consultants Inc.

973 Crawford Drive
Peterborough, Ontario
K9J 3X1 **Phone: (705) 743-7880**

April 6, 2025

The Greer Galloway Group Inc.
640 Cataraqui Woods Drive, Unit 2A
Kingston, Ontario
K7P 2Y5

Re: Geotechnical Report for Miller Road Bridge
Project No. 25-1045A

General Data
The project is a concrete bridge structure located at 911 address #643 on Miller Road, near Magnetawan, Ontario, with coordinates 45.722503, -79.607744.
The structure number is Bridge 17, and the bridge was constructed in 1930.
The one-lane drivable concrete deck width is 4.11m, and the deck appeared to be 130mm thick.
The deck length was approximately 12m. It is anticipated that a new bridge structure or new widened structure will be completed for this site.

Investigation and Soil Conditions
Exploratory boreholes were placed on March 26, 2025. Two holes were placed at the bridge, one on either side. A tractor-mounted drilling rig with 130mm solid stem augers was utilized to place the holes. Downforce pressure was applied at various depths to determine soil compaction ratings. Soil types and depths were recorded, and selected samples of the subsoil materials were collected for laboratory analysis. Soil laboratory testing consisted of moisture content determination and grain size analysis. The borehole logs and laboratory testing data have been appended to this report. The borehole locations have been indicated on an appended site photo.

The soil physiography for this area is identified as shallow till and rock ridges.
The bedrock in this area is typically sillaminite garnet biotite gneiss.
The frost penetration depth for this area is 2.0m.

The typical layers encountered at the bridge were as follows:

Crushed gravel & silty sand	(road base)
Silty sand	(road subbase)
Silty sand trace clay	
Sandy silt	

Silt with sand
Silt with sand (till)
Refusal

The roadway had a crushed gravel surface and a silty sand subbase.
The crushed gravel base thickness was typically 200mm.
The silty sand subbase extended to a depth of 1m.
The silty sand trace clay soil extended to a depth of 1.5m.
These materials contained appreciable amounts of silt and were classified as ASTM SM, silty sand.
These materials were placed as fill to build the roadway.
The underlying soils consisted of silt and were typically moist to wet and were found to be in a soft to firm condition. These soils had little resistance to downforce pressure, and the shear strength ranged from 30 to 60 kPa. These soils were classified as ASTM ML.

For the silt soils, the silt content ranged from 36 to 57%, and the sand content ranged from 29 to 46%. The clay content was relatively low at 13%, hence the silt was only slightly plastic.
The silt with sand layer had a liquid limit of 18.7, plastic limit 15.3, and plastic index 3.4 %.
The silt soils were typically moist to wet, and saturated below the water table.

The sandy silt extended to a depth of 4.3m, the silt with sand layer extended to approximately 6.4m, then this layer became stiff and extended to a depth of 7.3m.
Hard auger refusal was encountered at a depth of 7.31m below deck surface. Grinding of the rock was attempted with the auger but no progress was made. As a result, bedrock was inferred.

The water flow in the river is to the south.
The water table can get very high in the river and was observed to be at 2.7m below the deck surface on March 18. The water level then receded by March 26 and was at 4.2m below the deck surface. The water level in the Borehole 2 was at 4.6m below the bridge deck surface.
Borehole 1 was placed at 14m west of the bridge deck, to avoid requiring a closure of the narrow roadway. The water level was higher at Borehole 1 as there is a deep drainage ditch on the north side that outlets into the river. It is anticipated that this drainage path should be maintained as part of the new construction.

The existing bridge footing may be resting on the silt with sand or silt till layer, rather than on the bedrock. The estimated depth of the existing foundation was 5.4m below deck, with bedrock refusal encountered at 7.31m, therefore, there may be as much as 1.9m of saturated soil between the footing and the bedrock.
The subsoils at the footing depth are relatively soft.
The footing pressure on the existing soil may only be 80-100 kPa.
Placing a new spread footing onto the underlying bedrock would be preferable at this site, however this would require extensive dewatering which may not be practical.

Conventional Excavation and Dewatering
An extensive continuous dewatering operation would be required for a conventional footing foundation. It would be necessary for the prime contractor to employ a dewatering expert to devise an effective dewatering method and to determine the viability of using EASR registration.

The subsoils above the water table were classified as OHSA Type 3 soils, however, the natural subsoils were typically in a soft condition. It is anticipated that all soils at and below the groundwater elevation will require treatment as Type 4 collapsing soils.

Stipulate in the construction contract that the integrity of all soil bearing surfaces and road subgrades must be preserved at all times. Therefore, all excavations on site must be protected from high moisture levels due to rainfall or accumulating groundwater, using appropriate dewatering techniques for the encountered site conditions.

Foundation
Rather than employing an extensive dewatering program and dealing with the problem of collapsing saturated soils, it is suggested that another foundation type be considered which would require much less dewatering.

Leave existing abutments in place undisturbed, and install micropiles behind the existing abutments. The micropiles will be drilled to and embedded in the bedrock, and grouted.
Pour reinforced concrete pile caps over the micropiles (the cap rebar will be fastened to the micropiles). This will allow placement of the pile caps above the water table, typically in the vicinity of 4.8m above the bedrock. Construct new abutments on the pile caps. Shorten the old existing abutment walls (partial removal) to allow clearance for the new bridge deck and to improve the aesthetics of the site.

The pile length embedded in the overburden soils would be about 4.3m, plus the rock embedment depth. The micro piles will be drilled into the bedrock, with typical embedded depths of 1.8 to 3m into the rock. Therefore, the total length of each pile would be approximately 6.4 to 7.6m, plus the extra length needed to place any battered piles. Each micropile is installed with a permanent metal casing which allows placement through saturated/loose soils.

The suggested micropile diameter is 250mm.
The suggested micropile capacity for factored ULS and SLS is 594kN.

After installation, a compression test should be completed for at least one pile on each side of the bridge.

Since the subsoil surface directly below the new pile caps will consist of silt, tamp the surface of the existing soil to increase the compaction. Allow for placement of a compacted 100% crushed 2” minus rock fill to provide a compact surface below the new pile caps. Make the rock fill layer at least 300mm thick.

Backfill to the new bridge abutments may consist of OPSS1010 Granular B Type 1 aggregate, as per current bridge abutment standards.

Geotechnical Parameters
For calculating vertical and lateral earth pressures and other geotechnical parameters, the following unfactored coefficients may be utilized:

Existing sandy silt
phi = 27°
Ka = 0.38, Ko = 0.55, Kp = 2.66
Moist unit weight = 19.15 kN/m3

Existing silt with sand
phi = 27°
Ka = 0.38, Ko = 0.55, Kp = 2.66
Moist unit weight = 19.35 kN/m3

Typical imported 2" minus 100% crushed rock fill
phi = 39°
Ka = 0.23, Ko = 0.37, Kp = 4.40
Moist unit weight = 19.5 kN/m3

Typical imported sandy Granular B Type 1 backfill
phi = 32°
Ka = 0.31, Ko = 0.47, Kp = 3.25
Moist unit weight = 22.3 kN/m3

Concrete
Concrete placed within the frost penetration depth of 2m or exposed to outside temperature extremes should be as follows. Use CSA concrete classes as appropriate to the various structure elements, typically C1 or C2. C-class concrete should generally consist of a minimum 32MPa concrete mix, with adequate (typically 6 to 7%) air entrainment.

Pavement Design
To reinstate the roadway, use the following pavement design.
Provide grading and cross fall for the roadway as per OPSD 200.01.

Pavement Structure
150mm OPSS 1010 Granular A base
450mm OPSS 1010 Granular B Type 1 subbase
Over natural subgrade soil or approved subgrade fill

Re-use of Soils
The subsoils found on site cannot be used as fill beneath structures.
The crushed gravel & silty sand, and the silty sand may be used as general roadway subgrade fill.

The remaining soils such as the sandy silt and silt with sand are expected to be too loose and/or wet to be useful as subgrade fill.

Compaction Standards
All natural soil and all granular fill compaction requirements for the project should conform with OPSS 501, Subsection 501.08.02 - Method A, utilizing soil placement in maximum 300mm lifts and a compaction standard of 100% of Standard Proctor Maximum Dry Density.

Statement of Limitations
This report is intended for the guidance of the project design team. From a construction standpoint, contractors are required to make their own assessment of the soil, rock, and groundwater conditions and how these will affect their proposed construction techniques and schedules.

The recommendations in this report are based on information obtained from exploratory test holes. Soils, bedrock, and groundwater conditions may differ from those encountered at the time of investigation and conditions may become apparent during construction that could not be detected or anticipated at the time of the investigation. If this occurs, we recommend that Terraspec be contacted for further consultation and analysis.

We recommend that Terraspec be retained to ensure that all subgrade preparation requirements are met, and to confirm that the soil and rock conditions encountered during construction are acceptable as per the geotechnical design. Where pile installation is proposed, a contingency cost item should be included in the construction contract to allow for variable depth piles, in the case that there is an uneven bedrock surface or variations in the bedrock elevation.

Depths and elevations listed in the document are approximate.
This report is applicable only to this project in accordance with details quoted in the text.
The company retains ownership of the geotechnical design and this report.
The company's responsibility is limited to interpreting information from test hole data and the company's liability is limited to the invoiced value of this report.

~ ~ ~

TERRASPEC ENGINEERING
GEOTECHNICAL ENGINEERS

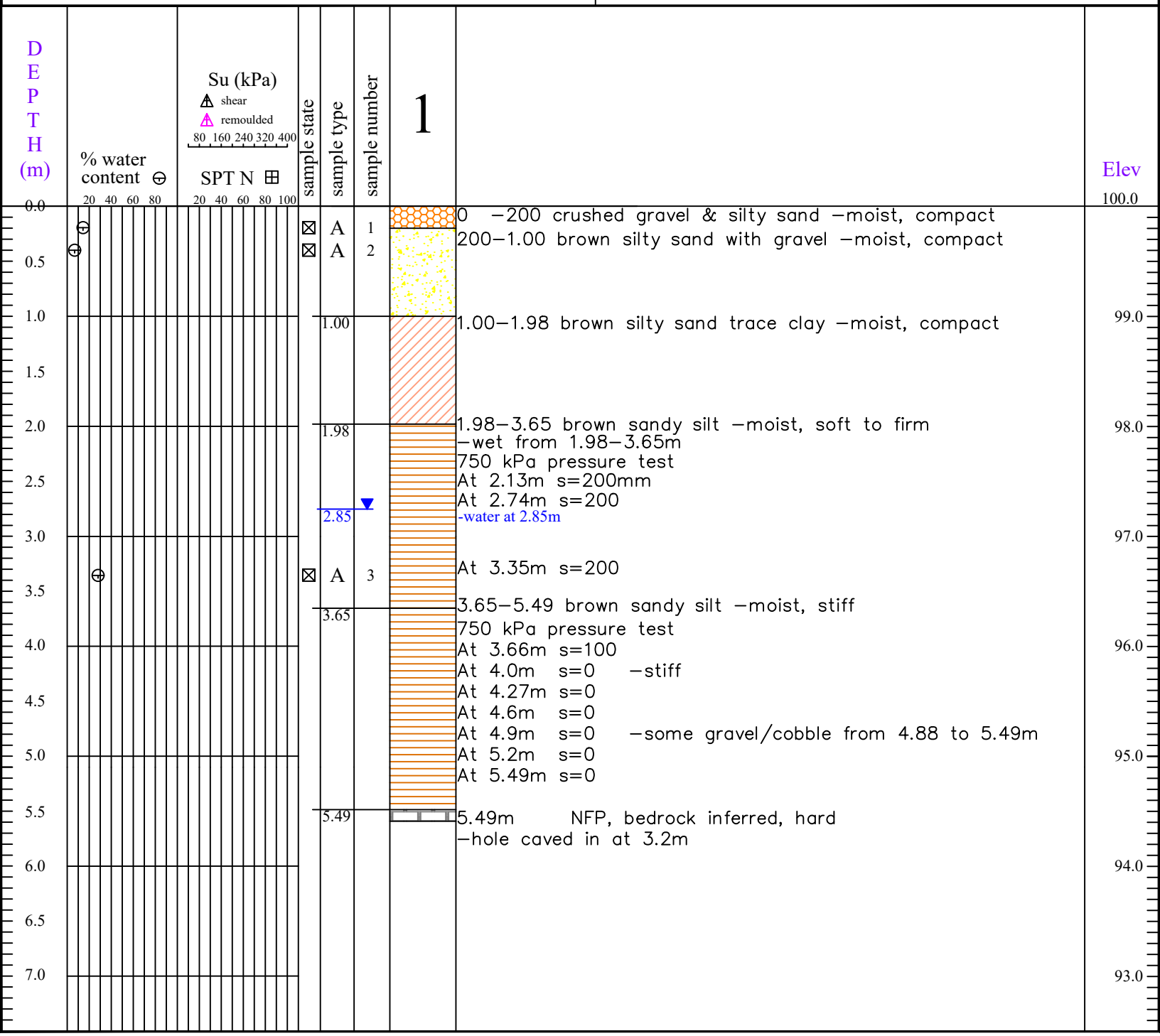
Shane Galloway, B.A.
Manager

N.A. MacKinnon, P.Eng.
Senior Engineer

Borehole Data

PROJECT: Miller Road Bridge
Project No. 25-5068A
DATE: March 26, 2025
Sample Type A: auger S: spoon
Sample State ⊠ remoulded ■ intact

Borehole Data
METHOD: 130mm Solid Stem Auger
▼ encountered water elevation



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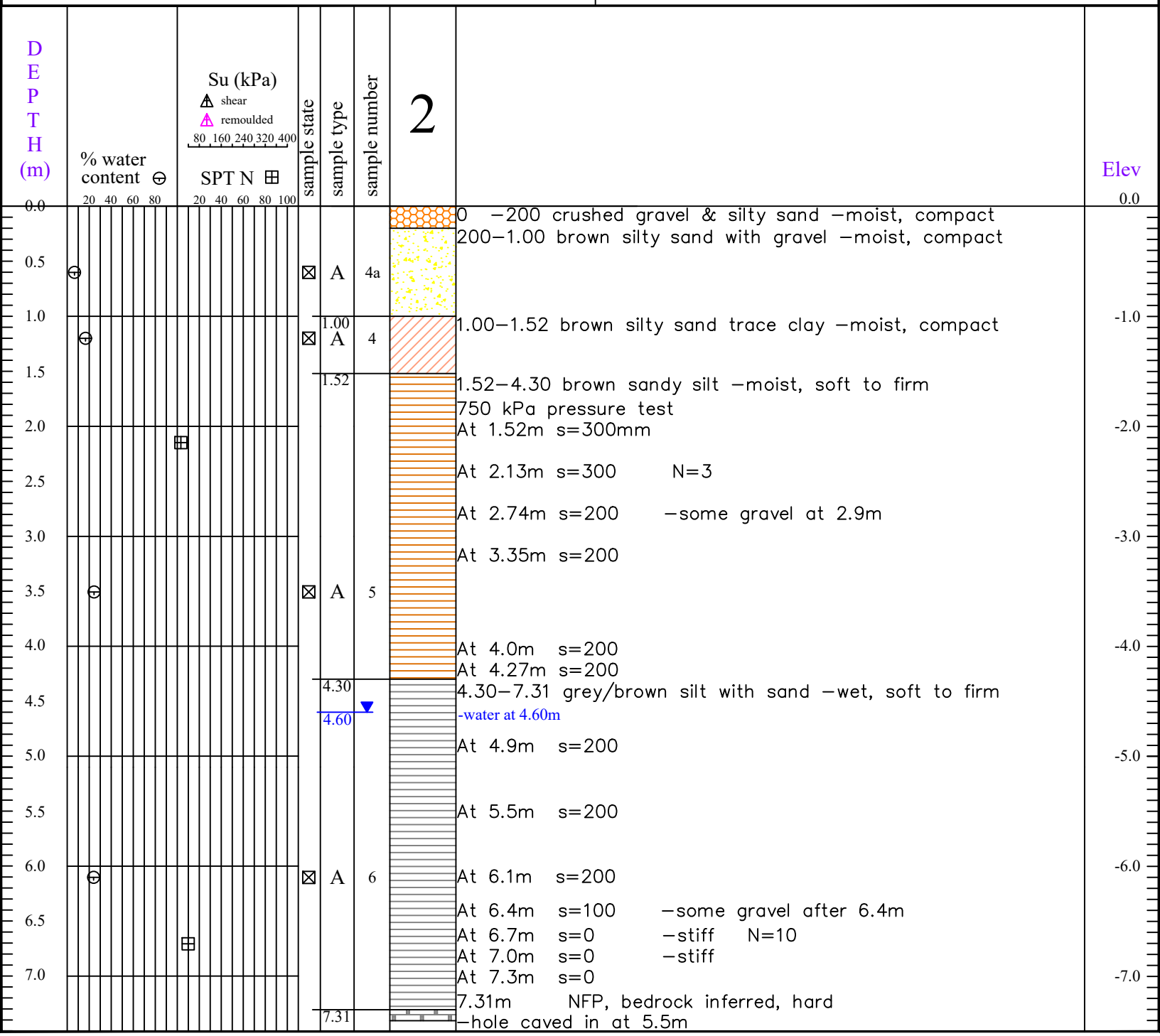

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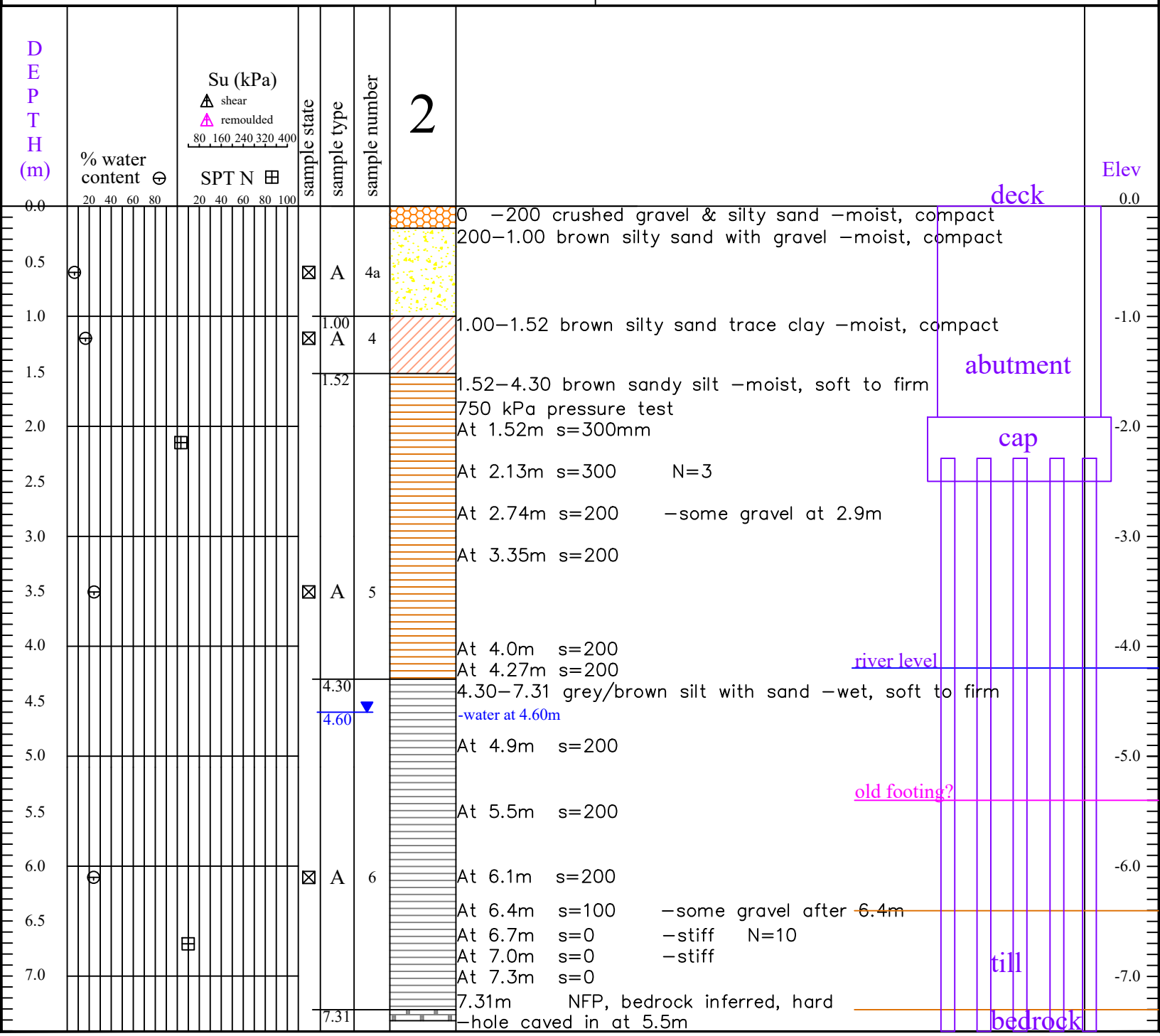

Laboratory Test Data

Soil Sample	**S1**	**S2**	**S4a**	**S4**	
Sieve	**% Passing**				
19.0mm	100	100	100	100	grain size
13.2mm	100	100	100	100	
9.50mm	95.6	96.5	95.7	94.5	
4.75mm	85.9	87.7	86.9	90.4	
2.13mm	77.2	82.0	80.8	86.7	
1.18mm	68.0	74.2	73.0	82.4	
600um	56.4	61.8	59.4	76.1	
300um	41.1	44.8	43.2	66.1	
150um	25.4	27.6	26.9	49.9	
75um	16.1	17.6	16.7	36.9	
ASTM	SM	SM	SM	SM	soil classification
frost rating	Low	Low	Low	Low	susceptibility to frost heave
% moisture	14.3	7.8	7.4	17.2	moisture content

Soil Sample	**S3**	**S5**	**S6**	
Sieve	**% Passing**			
19.0mm	100	100	100	grain size
13.2mm	100	98.7	100	
9.50mm	98.9	93.2	100	
4.75mm	98.3	91.6	99.5	
2.00mm	95.6	90.4	99.2	
850um	92.7	87.1	97.7	
425um	86.8	77.9	93.4	
250um	78.9	66.9	88.2	
106um	58.9	52.6	77.4	
75um	52.0	49.5	70.7	
% gravel	1.7	8.4	0.5	gravel content
% sand	46.3	42.1	28.8	sand content
% silt	35.7	36.6	57.5	silt content
% clay	16.4	12.9	13.3	clay content
ASTM	ML	ML	ML	soil classification
frost rating	Low	Low	High	susceptibility to frost heave
% moisture	28.2	24.2	23.2	moisture content

Google Image showing Borehole 1

Google Image showing Borehole 2

Looking West

East Abutment

East Abutment

West Abutment

West Abutment