PATERSON GROUP

Geotechnical Investigation

Proposed Elementary School

Jerome Jodoin Drive and Future Road 10
Ottawa, Ontario

Prepared for Ottawa Catholic School Board

Report PG7671-1 dated October 21, 2025

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Appendices

1.0 Introduction

Paterson Group (Paterson) was commissioned by the Ottawa Catholic School Board to conduct a geotechnical investigation for the proposed elementary school to be located at Jerome Jodoin Drive and Future Road 10 in the City of Ottawa (reference should be made to Figure 1 - Key Plan in Appendix 2 for the general site location).

The objectives of the geotechnical investigation were to:

- ❑ Determine the subsoil and groundwater conditions at this site by means of test holes.

- ❑ Provide geotechnical recommendations for the design of the proposed development including construction considerations which may affect the design.

The following report has been prepared specifically and solely for the aforementioned project which is described herein. It contains our findings and includes geotechnical recommendations pertaining to the design and construction of the subject development as they are understood at the time of writing this report.

Investigating the presence or potential presence of contamination on the subject site was not part of the scope of work of the present investigation. Therefore, the present report does not address environmental issues.

2.0 Proposed Development

Detailed plans were not available at the time of writing this report. However, it is anticipated that the proposed development will consist of a one-storey school building of slab-on-grade construction fronting on future Street 10.

It is further understood that associated asphalt-paved access lanes, parking areas, exterior play structures, and associated hardscaping will be located throughout the remainder of the subject site. It is understood the proposed building will be municipally serviced.

3.0 Method of Investigation

3.1 Field Investigation

Field Program

The current geotechnical investigation was carried out on September 3 to September 5 and September 8, 2024, and consisted of a total of sixteen (16) boreholes advanced to a maximum depth of 6.0 m below the existing grade and eleven (11) test pits advanced to a maximum depth of 1.9 m. A previous field investigation was undertaken by Paterson within the subject site on February 20 an February 21, 2018, which consisted of advancing two (2) boreholes to a maximum depth of 6.4 m below ground surface.

The test hole locations were distributed in a manner to provide general coverage of the subject site, taking into consideration underground services and available access. The locations of the test holes are shown on Drawing PG7671-1 - Test Hole Location Plan included in Appendix 2.

The boreholes were drilled using a track-mounted drill rig operated by a two-person crew and the test pit procedure consisted of excavating to the required depths at the selected locations and sampling the overburden using a backhoe. All fieldwork was conducted under the full-time supervision of Paterson personnel under the direction of a senior engineer.

Sampling and In Situ Testing

Soil samples were collected from the boreholes using a 50 mm diameter split-spoon (SS) sampler or from the drill auger flights. Test pit samples were collected at selected intervals from the test pit sidewalls. The samples were initially classified on site, placed in sealed plastic bags, and transported to our laboratory. The depths at which the drill auger, split-spoon and grab samples were recovered from the boreholes and test pits are shown as AU, SS and G, respectively, on the Soil Profile and Test Data sheets in Appendix 1.

A Standard Penetration Test (SPT) was conducted in conjunction with the recovery of the split spoon samples. The SPT results are recorded as "N" values on the Soil Profile and Test Data sheets. The "N" value is the number of blows required to drive the split spoon sampler 300 mm into the soil after a 150 mm initial penetration using a 63.5 kg hammer falling from a height of 760 mm.

Undrained shear strength testing was carried out in cohesive soils using a field vane apparatus.

The overburden thickness was evaluated by a dynamic cone penetration test (DCPT) completed at each borehole completed during the current field program. The DCPT consists of driving a steel drill rod, equipped with a 50 mm diameter cone at the tip, using a 63.5 kg hammer falling from a height of 760 mm. The number of blows required to drive the cone into the soil is recorded for each 300 mm increment. Due to the low resistance exerted by the silty clay in some boreholes, the cone was often pushed using the hydraulic head of the drill rig until resistance to penetration was encountered. The hammer was then used to further advance the cone to practical refusal.

The subsurface conditions observed in the test holes were recorded in detail in the field. The soil profiles are logged on the Soil Profile and Test Data Sheets in Appendix 1 of this report.

Groundwater

Flexible polyethylene standpipes were installed in BH 1-25, BH 2-25, BH 3-25, and BH 4-25, to permit monitoring of the groundwater levels subsequent to the completion of the sampling program. Open hole groundwater infiltration levels were observed at the time of excavation at each test pit location. The groundwater observations are discussed in Section 4.3 and presented in the Soil Profile and Test Data Sheets in Appendix 1.

3.2 Field Survey

The test hole locations were selected by Paterson to provide general coverage of the proposed development taking into consideration the existing site features and underground utilities.

The test hole locations, and the ground surface elevation at each test hole location, were surveyed by Paterson using a GPS unit with respect to a geodetic datum. The locations of the test holes, and ground surface elevation at each test hole location, are presented on Drawing PG7671-1 - Test Hole Location Plan in Appendix 2.

3.3 Laboratory Review

Soil samples were recovered from the subject site and visually examined in our laboratory to review the results of the field logging.

A total of one (1) grain-size distribution and hydrometer analysis, and two (2) Atterberg limit tests were completed on selected soil samples. Moisture content testing was completed on all recovered soil samples.

Paterson had also completed two (2) Atterberg limit tests and two (2) grain size distribution and hydrometer testing on selected soil samples retrieved on the previous field investigation.

The results are presented in Subsection 4.2 and on Grain Size Distribution and Hydrometer Testing, and Atterberg Limit Results presented in Appendix 1.

Sample Storage

All samples from the current investigation will be stored in the laboratory for a period of one month after issuance of this report. They will then be discarded unless indicated otherwise.

3.4 Analytical Testing

One (1) soil sample was submitted for analytical testing to assess the corrosion potential for exposed ferrous metals and the potential of sulphate attacks against subsurface concrete structures. The sample was submitted to determine the concentration of sulphate and chloride, the resistivity, and the pH of the samples. The results are presented in Appendix 1 and are discussed further in Section 6.7.

4.0 Observations

4.1 Surface Conditions

The subject site is currently undeveloped and generally vacant. The site is generally grass covered and being used for stockpiling soil fill during the construction phases for the subdivisions surrounding the subject site. A fill pile was encountered along the north portion of the subject site. A temporary access road is also observed along the west boundary of the subject site.

Based on historical information, the site was formerly used as agricultural lands. A dry shallow drainage ditch was observed on the southeast portion of the subject site and expected to have been used for agricultural purposes.

The site is bordered by residential dwellings to the north, and by vacant lands to the east, south and west. The ground surface across the site is relatively flat and approximately at grade with the surrounding properties.

4.2 Subsurface Profile

The subsurface profile at the subject site consists of topsoil and/or fill underlain by a deposit of brown to grey silty clay.

Generally, the topsoil was observed to consist of a 0.3 to 0.4 m thick layer, however, it was observed to extend up to 1.3 m at the location of TP 8-25 and TP 13-25. The fill material was observed to consist of brown silty clay or silty sand, variable amounts of gravel and/or crushed stone, and debris including wood, plastic, asphalt and Styrofoam. The fill layer was observed to extend to depths ranging from 0.1 to 2.6 m below ground surface. At the location of TP 14-25, the fill layer was underlain by a brown silty sand deposit.

The silty clay deposit generally consisted of an upper portion of very stiff to firm brown silty clay underlain by a deposit of soft grey silty clay. The brown silty clay layer extended to depths ranging from 2.3 to 3.7 m below the existing ground surface.

A DCPT was conducted at boreholes BH 1-25 through BH 15-25. Practical refusal to the DCPT was encountered at each borehole location ranging between 34.6 and 47.9 m below ground surface.

Reference should be made to the Soil Profile and Test Data Sheets in Appendix 1 for details of the soil profile encountered at each borehole location.

Bedrock

Based on available geological mapping, bedrock in the area of the subject site consists of Ordovician interbedded limestone and shale of the Lindsay Formation with a drift thickness ranging between 25 to 50 m.

Atterberg Limits Testing

Atterberg limits testing was completed on select silty clay samples recovered throughout the subject site during the current and previous investigations. The results of the Atterberg Limits testing are presented in Table 1 and on the Atterberg Limits Results sheet in Appendix 1.

Table 1 – Atterberg Limits Results

Borehole	Sample	Depth (m)	LL (%)	PL (%)	PI (%)	w (%)	Classification
BH 1-25	SS3	1.5 - 2.1	61	27	34	34.2	CH
BH 14-25	SS3	1.5 - 2.1	56	23	33	31.4	CH
Previous Investigation – PG4049							
BH 1-18	SS3	3.0-3.5	63	26	37	-	CH
BH 6-18	SS3	3.0-3.5	45	28	17	-	ML
BH 8-18	SS2	2.3-2.9	73	20	53	35.2	CH

Notes: LL: Liquid Limit; PL: Plastic Limit; PI: Plastic Index; CH: Inorganic Clay of Low Plasticity.

Grain-Size Distribution and Hydrometer Testing

Grain-size distribution and hydrometer testing was completed to classify selected soil samples according to the Unified Soil Classification System (USCS). The results of the current and previous investigations are summarized in Table 2.

Table 2 – Grain-Size Distribution and Hydrometer Testing Results

Sample	Depth (m)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)
BH 2-25 SS3	1.5 - 2.1	0.0	0.4	97.6	2.0
Previous Investigation – PG4049					
BH 6-18 SS2	2.3-2.9	0.0	0.3	25.2	74.5
BH 8-18 SS3	3.0-3.5	0.0	0.1	20.9	79.0

Note: The ground surface elevation at each borehole location was surveyed using a handheld GPS using a geodetic datum.

4.3 Groundwater

Groundwater levels were measured in the standpipe piezometers on September 11, 2025 for the boreholes completed during the current investigation. Depths of sidewall groundwater infiltration, as observed during the test pit investigation, were also recorded during the field program.

The majority of the test pits were dry upon completion with the exception of some minor infiltration noted as indicated in Table 3 below. The measured groundwater levels are presented on the Soil Profile and Test Data sheets in Appendix 1, and in Table 3 below.

Table 3 – Measured Groundwater Levels

Test Hole Number	Method	Ground Surface Elevation (m)	Measured Groundwater Level		Date
			Depth (m)	Elevation (m)	
BH 1-25	Piezometer	86.75	1.45	85.30	Sept 11, 2025
BH 2-25	Piezometer	86.84	2.00	84.84	Sept 11, 2025
BH 3-25	Piezometer	87.32	3.47	83.85	Sept 11, 2025
BH 4-25	Piezometer	87.24	2.10	85.14	Sept 11, 2025
TP 1-25	Infiltration	86.90	1.7	85.20	Sept 3, 2025
TP 3-25	Infiltration	86.89	1.9	84.99	Sept 3, 2025
TP 7-25	Infiltration	86.91	1.9	85.01	Sept 3, 2025
TP 14-25	Infiltration	86.83	1.8	85.03	Sept 4, 2025

NOTE: The ground surface elevations at the test hole location of the current investigation were surveyed by Paterson using a high precision GPS unit and was referenced to a geodetic datum.

It should be noted that groundwater levels are subject to seasonal fluctuations, therefore, the groundwater levels could vary at the time of construction.

5.0 Discussion

5.1 Geotechnical Assessment

From a geotechnical perspective, the subject site is suitable for the proposed elementary school. It is recommended that the proposed building be founded on conventional spread footings placed on an undisturbed, very stiff to hard silty clay bearing surface. If building design loads exceed the recommended bearing resistance values for conventional shallow foundations, consideration may alternatively be given to supporting the structure using an end-bearing deep foundation.

Due to the presence of a deposit of silty clay, the proposed development will be subject to grade raise restrictions.

The above and other considerations are further discussed in the following sections.

5.2 Site Grading and Preparation

Stripping Depth

Topsoil and fill, such as those containing organic or deleterious materials, should be stripped from under any buildings and other settlement sensitive structures. Existing fill is recommended to be removed below any settlement sensitive structures.

Care should be taken not to disturb adequate bearing soils below the founding level during site preparation activities. The in-situ clay soils are sensitive to disturbance by construction traffic and excavation work, over-wetting due to exposure to precipitation, drying to exposure to dryer and hotter ambient temperatures and freeze/thaw cycles. Disturbance of the subgrade may result in having to sub-excavate the disturbed material and the placement of additional suitable fill material.

Fill Placement

Fill placed for grading beneath the building footprint should consist, unless otherwise specified, of clean imported granular fill, such as Ontario Provincial Standard Specifications (OPSS) Granular A or Granular B Type II. The imported fill material should be tested and approved prior to delivery to the site. The fill should be placed in lifts with a maximum loose lift thickness of 300 mm and compacted by suitable compaction equipment.

Fill placed beneath the building should be compacted to a minimum of 98% of the standard Proctor maximum dry density (SPMDD).

Site-excavated soil could be placed as general landscaping fill and to build up areas that are to be paved. Workable site-excavated material, free of organics and deleterious materials should be spread in maximum 300 mm thick loose lifts and compacted by several passes of a suitably sized sheepsfoot vibratory roller and reviewed by Paterson personnel at the time of construction.

It is recommended that site-generated fill that may be used for raising the subgrade for settlement sensitive areas be reviewed and approved by Paterson personnel prior to re-use. The fill should be prepared by segregating all cobbles and boulders larger than 200 mm in diameter, significant amounts of organics (i.e., peat, topsoil, roots, stumps, logs, etc.) and inorganic debris (i.e., construction debris, plastics, PVC, metals, etc.). Sampling and testing of the fill material for grain-size distribution and standard proctor values should be completed by Paterson prior to re-use of the subject fill.

Frozen material may not be considered for this purpose. This process should be reviewed and approved by Paterson field personnel upon completion of each lift and who are experienced in reviewing the placement of soil fill in this manner.

Compacted Granular Fill Working Platform (Piled Foundation)

If consideration is given to supporting the proposed school building on a pile foundation, the use of heavy equipment would be required to install the piles (i.e., pile driving crane). It is conventional practice to install a compacted granular fill layer, at a convenient elevation, to allow the equipment to access the site without getting stuck and causing significant disturbance to the underlying soil.

It is recommended that a minimum 600 mm thick layer of OPSS Granular B Type II crushed stone be placed as working platform throughout the building footprint which will be supported by piles. The working pad granular should be compacted to a minimum of 98% of its standard Proctor maximum dry density (SPMDD) in maximum 300 mm thick lifts. The existing stone fill surface can be used as the subgrade for this purpose provided it is re-compacted in place using a smooth-drum roller.

Once the piles have been driven and cut off, the working platform can be re-graded, and soil tracked in, or soil pumping up from the pile installation locations, can be bladed off and the surface can be topped up, if necessary, and re-compacted to act as the substrate for further fill placement for the slab structure.

5.3 Foundation Design

Bearing Resistance Values – Conventional Spread Footings

Using continuously applied loads, footings for the proposed building can be designed using the bearing resistance values presented in Table 4.

Table 4 – Bearing Resistance Values

Bearing Surface	Bearing Resistance Values at SLS (kPa)	Factored Bearing Resistance Values at ULS (kPa)
Brown Silty Clay*	75	140
Firm Silty Clay	60	125

NOTE: Strip footings up to 1.5 m wide, and pad footings, up to 3 m wide, can be designed using the above noted bearing resistance values

" * " – This bearing resistance value only applies for footings founded higher than an elevation of 85.5 m. Footings founded deeper than a geodetic elevation of 85.5 m should be designed using a firm silty clay bearing resistance value.

These values consider the permissible grade raise restriction information provided this is section of the Geotechnical Report.

The above-noted bearing resistance values at SLS for soil bearing surfaces will be subjected to potential post-construction total and differential settlements of 25 and 20 mm, respectively.

The bearing resistance values are provided on the assumption that the footings will be placed on undisturbed soil bearing surfaces. An undisturbed soil bearing surface consists of one from which all topsoil and deleterious materials, such as loose, frozen or disturbed soil, whether in situ or not, have been removed, in the dry, prior to the placement of concrete for footings.

Deep Foundation – End Bearing Piles

A deep foundation method, such as end bearing piles, may also be considered for the foundation support of the proposed building. For deep foundations, concrete-filled steel pipe piles are generally utilized in the Ottawa area. Applicable pile resistance at SLS values and factored pile resistance at ULS values are given in Table 5. A resistance factor of 0.4 has been incorporated into the factored ULS values. Note that these are all geotechnical axial resistance values.

The geotechnical pile resistance values were estimated using the Hiley dynamic formula, to be confirmed during pile installation with a program of dynamic monitoring which may be undertaken by Paterson. For this project, the dynamic monitoring of two (2) to four (4) piles would be recommended.

This is considered to be the minimum monitoring program, as the piles under shear walls may be required to be driven using the maximum recommended driving energy to achieve the greatest factored resistance at ULS values.

Re-striking of all piles, at least once, will also be required after at least 48 hours have elapsed since initial driving. A full-time field review program should be conducted by Paterson field personnel during the pile driving operations to record the pile lengths, ensure that the refusal criteria is met and that piles are driven within the location tolerances (within 75 mm of proper location and within 2% of vertical).

Table 5 - Pile Foundation Design Data

Pile Outside Diameter (mm)	Pile Wall Thickness (mm)	Geotechnical Axial Resistance		Final Set (blows/ 12 mm)	Transferred Hammer Energy (kJ)
		SLS (kN)	Factored at ULS (kN)		
245	9	925	1,100	9	27
245	11	1,050	1,250	9	31
245	13	1,200	1,400	9	35

The minimum recommended centre-to-centre pile spacing is 3 times the pile diameter. The closer the piles are spaced, however, the more potential that the driving of subsequent piles in a group could have influence on piles in the group that have already been driven. These effects, primarily consisting of uplift of previously driven piles, are checked as part of the field review of the pile driving operations.

Prior to the commencement of production pile driving, a limited number of indicator piles should be installed across the site. It is recommended that each indicator pile be dynamically load tested to evaluate pile stresses, hammer efficiency, pile load transfer, and end-of-driving criteria for end-bearing in the bedrock. It is recommended that Paterson undertake the associated pile testing efforts in conjunction with the piling subcontractor at the construction stage.

Lateral Support

The bearing medium under footing-supported structures is required to be provided with adequate lateral support with respect to excavations and different foundation levels. Adequate lateral support is provided to a silty clay bearing medium when a plane extending down and out from the bottom edge of the footing at a minimum of 1.5H:1V, passes only through in situ soil or engineered fill of the same or higher capacity as the bearing soil.

Permissible Grade Raise

Based on the field investigation results and the associated field investigation and testing undertaken in support of the larger development surrounding the propsoed school, a permissible grade raise restriction of 1.6 m above original ground surface is recommended for grading within 4 m of the proposed building and a permissible grade raise of 1.8 m is recommended for grading beyond 4 m of the proposed building, and in keeping with the recommendations for the area surrounding the subject site previously determined by paterson.

The total and differential settlements will be dependent on characteristics of the proposed buildings. For design purposes, the total and differential settlements are estimated to be 25 and 20 mm, respectively. A post-development groundwater lowering of 0.5 m below the grey clay layer was assumed.

5.4 Design for Earthquakes

Shear wave velocity testing was completed for the subject site to determine the applicable seismic site designation for the proposed building in accordance with the Ontario Building Code 2024. The shear wave velocity testing was completed by Paterson personnel. The results of the shear wave velocity test are provided in Figures 2 and 3 in Appendix 2 of the present report.

Field Program

The seismic array was located as presented in Drawing PG7671-1 - Test Hole Location Plan attached to the present report. Paterson field personnel placed 24 horizontal 4.5 Hz geophones mounted to the surface by means of two 75 mm ground spike attached to the geophone land case. The geophones were spaced at 3 m intervals and were connected by a geophone spread cable to a Geode 24 Channel seismograph.

The seismograph was also connected to a laptop computer and a hammer trigger switch attached to a 12-pound dead blow hammer. The hammer trigger switch sends a start signal to the seismograph.

The hammer is used to strike an I-Beam seated into the ground surface, which creates a polarized shear wave. The hammer shots are repeated between four (4) to eight (8) times at each shot location to improve signal to noise ratio. The shot locations are also completed in forward and reverse directions (i.e.- striking both sides of the I-Beam seated parallel to the geophone array).

The shot locations were 20, 4.5, and 3 m away from the first geophone, 20 and 3 m away from the last geophone, and at the centre of the geophone array.

Data Processing and Interpretation

Interpretation of the shear wave velocity results was completed by Paterson personnel. Shear wave velocity measurement was made using reflection/refraction methods. The interpretation is performed by recovering arrival times from direct, reflected, and refracted waves.

The interpretation is repeated at each shot location to provide an average shear wave velocity, Vs_{30}, of the upper 30 m soil profile. Under normal circumstances, the bedrock velocity is interpreted using the refraction, however, the bedrock is greater than 30m below the ground surface within the subject site.

Based on our testing results, the average overburden shear wave velocity is **162 m/s**. Further, the testing results indicate the average overburden thickness to be greater than 30 m deep.

The Vs_{30} was calculated using the standard equation for average shear wave velocity calculation from the Ontario Building Code (OBC) 2024.

$$V_{s30} = \frac{Depth_{of\ interest}(m)}{\left(\frac{Depth_{Layer1}(m)}{V_{S_{Layer1}}(m/s)} + \frac{Depth_{Layer2}(m)}{V_{S_{Layer2}}(m/s)}\right)}$$

$$V_{s30=} \frac{30\ m}{\left(\frac{30\ m}{156\ m/s}\right)}$$

$$V_{s30=}\ 162\ m/s$$

Based on the results of the seismic testing, the average shear wave velocity Vs_{30}, for the proposed building is **162 m/s**. Therefore, a **Site Designation X_{156}** is applicable for the design of the proposed building according to the Ontario Building Code 2024.

The soils underlying the subject site are not considered susceptible to liquefaction or cyclic softening based on the methods outlined in the current Canadian Foundation Engineering Manual.

5.5 Slab on Grade Construction

With the removal of all topsoil and fill as described in Section 5.2, containing significant amounts of deleterious or organic materials, the native soil subgrade approved by Paterson field personnel at the time of excavation will be considered an acceptable subgrade surface on which to commence backfilling for slab-on-grade construction. Consideration may be given to re-use suitable existing fill, however, it must be prepared, placed and reviewed and approved by Paterson personnel as described in Section 5.2 of this report.

In the piled foundation scenario, since the subgrade will consist of the pile equipment working mat, it is recommended to ensure the working mat is cleared of loose soil debris and contaminated granulars prior to the placement of additional granulars for raising the subgrade throughout the building footprint.

It is recommended that the upper 200 mm sub-floor fill consists of OPSS Granular A crushed stone. All backfill material within the footprint of the proposed building should be placed in maximum 300 mm thick loose layers and compacted to at least 98% of its SPMDD.

Any poor performing areas should be removed and reinstated with an engineered fill, such as OPSS Granular B Type II and compacted to a minimum of 98% of the materials SPMDD.

5.6 Pavement Design

Car only parking, bus turning areas and access lanes are expected at this site. The proposed pavement structures are presented in Table 6 and Table 7. It is anticipated the pavement structure provided in Table 8 would be adequate for use as a fire route.

Table 6 – Recommended Pavement Structure – Paved Playground Areas

Thickness (mm)	Material Description
50	**Wear Course –** HL-3 or Superpave 12.5 Asphaltic Concrete
400	**BASE –** OPSS Granular A Crushed Stone
SUBGRADE – Either fill, in-situ soil, or OPSS Granular B Type I or II material placed over fill or in-situ soil.	

Table 7 – Recommended Pavement Structure – Parking Stalls and Light-Duty Traffic Area	
Thickness (mm)	**Material Description**
50	**Wear Course –** HL-3 or Superpave 12.5 Asphaltic Concrete
150	**BASE –** OPSS Granular A Crushed Stone
350	**SUBBASE –** OPSS Granular B Type II
SUBGRADE – Either fill, in-situ soil, or OPSS Granular B Type I or II material placed over fill or in-situ soil.	

Table 8 – Recommended Pavement Structure – Heavy-Duty Traffic Areas, Bus Drop-Off Lanes, Garbage and Fire Truck Access Routes	
Thickness (mm)	**Material Description**
40	**Wear Course** - Superpave 12.5 Asphaltic Concrete
50	**Binder Course** - Superpave 19.0 Asphaltic Concrete
150	**BASE** - OPSS Granular A Crushed Stone
450	**SUBBASE** - OPSS Granular B Type II
SUBGRADE - Either fill, in situ soil, or OPSS Granular B Type I or II material placedover fill or in situ soil.	

If soft spots develop in the subgrade during compaction or due to construction traffic, the affected areas should be excavated and replaced with OPSS Granular B Type I or II material. Minimum Performance Graded (PG) 58-34 asphalt cement should be used for this project. The pavement granular base and subbase should be placed in maximum 300 mm thick lifts and compacted to a minimum of 100% of the material's SPMDD using suitable compaction equipment.

Hardscaping Surface Structures

The pavement structures provided in Table 9 are recommended where associated hardscaping will be located throughout the subject site.

Due to the low permeability of the subgrade materials consideration should be given to installing subdrains during at the subgrade level of the above-noted pavement structures. The subdrain inverts should be approximately 300 mm below subgrade level and consist of a minimum 100 mm diameter perforate drainage pipe fitted with a geosock and surrounded by a minimum of 100 mm of clear crushed stone on all of its sides.

Table 9 – Recommended Pavement Structure – Brick/Stone Pathways	
Thickness (mm)	**Material Description**
Specified by Others	**Wear Course** – Interlocking Stones/Brick Pavers
25 - 40	**Leveling Course** – Bedding Sand
450	**SUBBASE** – OPSS Granular A
SUBGRADE – Either fill, in situ soil or OPSS Granular B Type I or II material placed over in situ soil or fill.	

The pipe should discharge to either a catch-basins, connected to the drainage pipe, and/or become in contact with the geotextile face of the foundation drainage board that would be provided to the buried portions of the school structure. All remaining sidewalks and pathways provided throughout the subject site should be provided with a minimum 300 mm thick layer of OPSS Granular A and provided with a subdrain at the subgrade level as noted herein.

Temporary Access Roads and Construction Traffic

Paterson anticipates that the earthworks contractor will require several haul roads, staging areas and other temporary access lanes to facilitate construction traffic. Paterson also anticipates construction traffic will be directed over unpaved access paths constructed using the base and subbase layers identified in the above-noted tables and will be used throughout the duration of the construction phase.

Omitting the asphalt layer, the above-noted pavement designs are not considered suitable to support temporary construction traffic without requiring additional measures to remediate the proposed base and subbase layers to accommodate the placement of asphalt to complete the pavement design.

Therefore, provisions should be carried to either reinstate temporary construction access and haul roads prior to placing asphalt or improve the durability of the temporary unpaved construction access and haul roads to minimize additional efforts for preparing the base course for the placement of asphalt once construction traffic would no longer be required.

Examples of scenarios that would require these provisions would consist of areas which construction traffic results in rutting and compromising subgrade soils, placement of subbase layers directly over subgrade shortly following periods of spring thaw, snowmelt and rainfall events or over service trenches that may consist of poorly compacted backfill.

For planning purposes, temporary construction haul roads and working pads should be planned to be 600 mm of crushed stone consisting of a 500 mm of a combination of OPSS Granular B Type I or Type II crushed stone and/or blast-rock covered with a minimum 50 to 100 mm thick layer of OPSS Granular B Type II or OPSS Granular A crushed stone (to provide suitable surface for vehicle tires) over a Paterson-reviewed and -approved subgrade.

These types of roads should also be underlain by a non-woven geotextile layer, such as Terraifx 200R, where they would be integrated into the final pavement structure and accommodate the placement of asphalt to minimize pumping of fines into the subbase layer. Cow-pathing site-generated soil may also be considered to provide suitable haul and access roads.

Temporary access roads that will not support heavy truck traffic (i.e., conventional light-duty vehicles only) may be prepared using a minimum of 150 mm of OPSS Granular A and 400 mm of OPSS Granular B Type II crushed stone. However, provisions should be carried to provide a non-woven geotextile separation layer, such as Terrafix 200R, over the subgrade soils to lessen the amount of fines that migrate into the subbase layers in response to a combination of construction traffic and seasonal fluctuations in the subgrades performance.

Provisions should also be carried to scarify and replace the upper 100 to 150 mm of these areas with clean OPSS Granular A crushed stone prior to placing asphalt.

Provisions should also be carried by the earthworks contractor to suitably compact trench backfill placed over services when reinstating servicing trenches below areas proposed to support paved areas.

Since it is anticipated this material would consist of workable brown silty clay or silty sand fill (and not wet, non-workable grey silty clay) it would be recommended to place this material in maximum 400 mm thick loose lifts compacted using a suitably sized vibratory sheepsfoot roller making several passes under the supervision of Paterson field personnel. The subgrade surface is also recommended to be provided with a layer of bi-axial geogrid, such as Terrafix TBX2500, to improve the stiffness of the reinstated trench backfill subgrade for supporting the final pavement structures.

These efforts would be reviewed, approved and advised upon by Paterson field staff during the construction program. Further, Paterson should review design, tender and construction documents associated with temporary and permanent pavement design throughout those phases of the project.

Pavement Joint Tie-in

Where the proposed pavement structure meets an existing pavement structure, such as the existing road, the following recommendations should be followed:

- A 300 mm wide section of the existing asphalt roadway should be saw cut from the existing pavement edge to provide a sound surface to abut the proposed pavement structure.
- It is recommended to mill a 300 mm wide and 40 mm deep section of the existing asphalt at the saw cut edge.
- The proposed pavement structure subbase materials should be tapered no greater than 3H:1V to meet the existing subbase materials.
- Clean existing granular road subbase materials can be reused upon assessment by Paterson at the time of excavation (construction) as to its suitability.

Pavement Structure Drainage

Satisfactory performance of the pavement structure is largely dependent on keeping the contact zone between the subgrade material and the base stone in a dry condition. Failure to provide adequate drainage under conditions of heavy wheel loading can result in the fine subgrade soil being pumped into the voids in the stone subbase, thereby reducing its load carrying capacity.

For areas where silty clay is encountered at subgrade level, it is recommended that subdrains be installed during the pavement construction as per City of Ottawa standards. The subdrain inverts should be approximately 300 mm below subgrade level.

6.0 Design and Construction Precautions

6.1 Foundation Drainage and Backfill

Foundation Drainage

Since hardscaping is anticipated around the perimeter of the proposed slab-on-grade structure, it is recommended to implement a perimeter foundation drainage system around the entire building perimeter.

In areas where hard-scaping or pavement structures will abut the building footprint, the system should consist of a 100 to 150 mm diameter perforated corrugated plastic pipe wrapped in a geosock and surrounded by 150 mm of 10 mm clear crushed stone. The clear stone should be wrapped in a non-woven geotextile. The pipe should have a positive outlet, such as a gravity connection to the storm sewer.

The perimeter drainage pipe should be placed against the structure and with the invert of the pipe placed a minimum of 600 mm below proposed finished grade (i.e., within the subgrade layer and below the crushed stone fill for the hardscaping) and upon either in-situ soils and/or Paterson-reviewed and-approved compacted soil backfill to ensure adequate drainage of the overlying granular fill layer is provided from precipitation events and/or spring meltwater.

In this configuration, provided the backfill overlying the pipe consists of crushed stone fill associated with the hardscaping, a composite foundation drainage board will not be required. The installation of the perimeter drainage system should be reviewed by Paterson personnel at the time of construction.

Foundation Backfill

Backfill against the exterior sides of the foundation walls should consist of free draining non-frost susceptible granular materials (such as clean sand or OPSS Granular B Type I or Type II granular material) or site-generated workable soils placed in maximum 300 mm thick loose lifts and compacted using suitably sized compaction equipment as described in Subsection 5.2 of this report. The greater part of the site excavated materials will be frost susceptible and, as such, are recommended to be provided drainage as identified in the preceding paragraphs.

Soccer Field Drainage

If a soccer field with an irrigation system is considered as part of the project, it is recommended that drainage be provided for the field. The drainage system should consist of 10 m centre-to-centre spaced, 150 mm diameter, geotextile, corrugated perforated PVC pipe surrounded by a minimum of 150 mm of 19 mm clear crushed stone around all of its sides. The pipes are recommended to be placed 1 m below finished grade and have a positive outlet, such as a gravity connection, to the storm sewer.

Concrete Sidewalks Adjacent to Buildings

Building entrances and areas where the ground surface is sensitive to heave and settlement should be provided with adequate frost protection to mitigate the backfill from heaving in response to freezing conditions.

Paterson may advise on suitable combinations of insulation and backfill during the design stage, and prior to tendering, for these areas once they are known and able to be reviewed in further detail from a geotechnical perspective.

It is recommended that the upper 600 mm of backfill placed below the concrete sidewalks adjacent to the building footprints to consist of non-frost susceptible material such as OPSS Granular A or Granular B Type II. The sidewalks should be underlain by a layer of rigid insulation at entranceways to minimize the potential for the sidewalks to raise in response to frost migration within the subgrade soils.

The granular material should be placed in maximum 300 mm loose lifts and compacted to a minimum of 98% of the material's SPMDD using suitable compaction equipment. The subgrade material should be shaped to promote positive drainage towards the building's perimeter drainage system. Consideration should be given to placing a layer of rigid insulation below the granular fill layer, however, should be detailed by Paterson once design drawings are being complete by others.

6.2 Protection Against Frost Action

Foundation Structures

Perimeter footings and/or pile caps and grade beams of heated structures are required to be insulated against the deleterious effects of frost action. A minimum 1.5 m thick soil cover, or an equivalent thickness of soil cover and foundation insulation, should be provided for adequate frost protection of heated structures.

Exterior unheated footings, such as those for isolated exterior piers, are more prone to deleterious movement associated with frost action. These should be provided with a minimum 2.1 m thick soil cover, or an equivalent thickness of soil cover and foundation insulation.

6.3 Excavation Side Slopes

The side slopes of the excavations in the soil and fill overburden materials should either be cut back at acceptable slopes or should be retained by shoring systems from the start of the excavation until the structure is backfilled. It is expected that sufficient room will be available for the greater part of the excavation to be undertake by open-cut methods (i.e., unsupported excavations).

Unsupported Excavations

The excavation side slopes above the groundwater level extending to a maximum depth of 3 m should be cut back at 1H:1V or flatter. The flatter slope is required for excavation below groundwater level. The subsoil at this site is considered to be mainly Type 2 and Type 3 soil according to the Occupational Health and Safety Act and Regulations for Construction Projects.

It is recommended that a trench box be used at all times to protect personnel working in trenches. Based on this, trench boxes should be considered for all sewer pipe installations undertaken throughout the subject site.

Excavated soil should not be stockpiled directly at the top of excavations and heavy equipment should be kept away from the excavation sides. It is expected that services will be installed by “cut and cover” methods and excavations will not be left open for extended periods of time.

Slopes in excess of 3 m in height should be periodically inspected by Paterson field personnel in order to detect if the slopes are exhibiting signs of distress.

6.4 Pipe Bedding and Backfill

Bedding and backfill materials should be in accordance with the most recent Material Specifications and Standard Detail Drawings from the Department of Public Works and Services, Infrastructure Services Branch of the City of Ottawa. The pipe bedding for the sewer and water pipes should consist of at least 150 mm of OPSS Granular A.

The bedding layer thickness should be increased to a minimum of 300 mm where the subgrade will consist of grey silty clay. The material should be placed in a maximum 225 mm thick loose lifts and compacted to a minimum of 99% of its SPMDD. The bedding material should extend at least to the spring line of the pipe.

The cover material, which should consist of OPSS Granular A, should extend from the spring line of the pipe to at least 300 mm above the obvert of the pipe. The material should be placed in maximum 225 mm thick lifts and compacted to a minimum of 99% of its SPMDD.

Reinstatement of the trench located above the pipe cover layer should consist of placing site-generated workable soil fill (i.e., grey clay is not expected to be workable) in maximum 300 mm thick loose lifts and compacted using a suitably sized vibratory sheepsfoot roller to a minimum of 95% of the materials SPMDD. Each lift of soil fill placed within the service trenches should be reviewed and approved at the time of construction by Paterson personnel. Wet site-generated fill, such as the grey silty clay, will be difficult to re-use, as the high-water contents make compacting impractical without an extensive drying period.

To reduce long-term lowering of the groundwater level at this site, clay seals should be provided in the service trenches. The clay seals should be at least 1.5 m long in the trench direction and should extend from trench wall to trench wall. Generally, the clay seals should extend from the frost line and fully penetrate the bedding, sub-bedding and cover material.

The clay seals should consist of relatively dry and compatible brown silty clay placed in maximum 225 mm thick loose layers and compacted to a minimum of 95% of the material's SPMDD. The clay seals should be placed at the site boundaries and at strategic locations at no more than 60 m intervals in the service trenches. Paterson field personnel should review the placement of all clay seals undertaken at the time of construction.

Backfilling Within Trench Boxes

When the bedding and cover material is placed within the confines of a trench box and steel plates, it is recommended that the trench box be placed tightly against the outside of the trench walls and remains approximately 300 mm above the obvert level of the service pipe.

The vertical excavation sidewalls within the lower portion of the trench (below the obvert level of the pipe) can be supported using steel plates extended down to the bottom of the trench. The steel plates can be extended below the base of the excavation to prevent basal heave, in conjunction with adequate dewatering measures when located below the groundwater table.

To minimize the potential for disturbance of the bedding and cover material and subsequent settlement of the service pipe during the removal of the steel plates, it is recommended that the bedding layer be re-compacted tightly against the trench sidewalls upon removal/lifting of the steel plate up to the top of the bedding layer and prior to placing the pipe.

This is recommended to mitigate settlement of the pipe that would result from removing the plates without re-compacting the fill that would be left unconfined to the sides of the trench. This procedure would be repeated for the springling and cover layers until the steel plates are removed.

It is generally recommended that this procedure be reviewed by Paterson field personnel at the time of construction.

6.5 Groundwater Control

It is anticipated that groundwater infiltration into the excavations should be low to moderate and controllable using open sumps. The contractor should be prepared to direct water away from all subgrades, regardless of the source, to prevent disturbance to the founding medium.

Groundwater Control for Building Construction

Under the current regulations enacted by the Ministry of Environment, Conservation and Parks (MECP), any dewatering in excess of 50,000 L/day requires a registration on the Environmental Activity and Sector Registry (EASR), so long as that dewatering is related to construction. If the dewatering is not related to construction, a Permit to Take Water obtained from the MECP will be required.

In the event that an EASR is required to facilitate dewatering of the proposed development, a minimum of three to four weeks should be allotted for completion of the EASR registration and the Water Taking and Discharge Plan, to be prepared by a Qualified Person as stipulated under O.Reg. 63/16. Should a Permit to Take Water be required, a minimum of five to six months should be allotted for completion of the permit, due to the minimum review period imposed by the MECP.

6.6 Winter Construction

Precautions must be taken if winter construction is considered for this project. The subsoil conditions at this site consist of frost susceptible materials. In the presence of water and freezing conditions, ice could form within the soil mass. Heaving and settlement upon thawing could occur.

In the event of construction during below zero temperatures, the founding stratum should be protected from freezing temperatures using straw, propane heaters and tarpaulins or other suitable means. In this regard, the base of the excavations should be insulated from sub-zero temperatures immediately upon exposure and until such time as heat is adequately supplied to the building and the footings, pile caps and/or grade beams are protected with sufficient soil cover to prevent freezing at founding level.

Trench excavations and pavement construction are also difficult activities to complete during freezing conditions without introducing frost into the subgrade or in the excavation walls and bottoms. Precautions should be taken if such activities are to be carried out during freezing conditions. Additional information should be provided by Paterson for planning winter construction and pavement works.

Under winter conditions, if snow and ice is present within imported fill below future building slabs, or if fill is subject to freezing conditions, then settlement of the fill should be expected, and support of a future building slab will be negatively impacted and could undergo settlement during spring and summer time conditions. Paterson should complete periodic inspections during fill placement to ensure that snow and ice quantities do not impact fill placed in settlement-sensitive areas.

6.7 Corrosion Potential and Sulphate

The results of analytical testing show that the sulphate content is less than 0.1%. This result is indicative that Type 10 Portland cement (normal cement) would be appropriate for this site. The chloride content and the pH of the sample indicate that they are not significant factors in creating a corrosive environment for exposed ferrous metals at this site, whereas the resistivity is indicative of an aggressive to very aggressive corrosive environment.

6.8 Landscaping Considerations

Tree Planting Considerations

In accordance with the City of Ottawa Tree Planting in Sensitive Marine Clay Soils (2017 Guidelines), Paterson completed a soils review of the site to determine applicable tree planting setbacks. Atterberg limits testing was completed for the recovered silty clay samples at selected locations throughout the subject site. The soil samples were recovered from elevations below the anticipated design underside of footing elevation and 3.5 m depth below anticipated finished grade. The results of our testing are presented in Table 1 in Subsection 4.2 and in Appendix 1.

Based on the results of the Atterberg limit testing mentioned above, two tree planting setback areas have been identified. The two areas are identified below and have been outlined on Drawing PG7671-2 Tree Planting Setback Recommendations in Appendix 2.

Area 1 – Low to Medium Sensitivity Area

The plasticity index was found to be less than 40% in all the tested clay samples within this area. In addition, based on the clay content found in the clay samples from the grain size distribution test results, moisture level and consistency, the silty clay across this area is considered to be a clay of low to medium potential for soil volume change.

The following tree planting setbacks are recommended for the low to medium sensitivity silty clay deposit and where trees are located near buildings founded on cohesive soils. It should be noted that footings supported by a deep foundation consisting of end-bearing piles will not be subject to tree planting setbacks restrictions.

- Large trees (mature height over 14 m) can be planted within these areas provided that a tree to foundation setback equal to the full mature height of the tree can be provided.

- Tree planting setback limits may be reduced to 4.5 m for small (mature tree height up to 7.5m) and medium size trees (mature tree height 7.5 m to 14 m), provided that the conditions noted below are met.

- A small tree must be provided with a minimum of 25 m^3 of available soils volume while a medium tree must be provided with a minimum of 30 m^3 of available soil volume, as determined by the Landscape Architect. The developer is to ensure that the soil is generally un-compacted when backfilling in street tree planting locations.

- ❑ The tree species must be small (mature tree height up to 7.5 m) to medium size (mature tree height 7.5 m to 14 m) as confirmed by the Landscape Architect.

- ❑ Grading surrounding the tree must promote drainage to the tree root zone (in such a manner as not to be detrimental to the tree), as noted on the Grading Plan.

Area 2 – High Sensitivity Area

The plasticity index was found to be greater than 40% in tested clay samples within this area. Based on this, the silty clay across this area is considered to be a clay of high potential for soil volume change. Based on this, the setbacks would consist of 7.5 m for small (mature height up to 7.5 m) and medium size trees (mature tree height 7.5 to 14 m), provided the conditions noted below are met at the time of landscape design:

- ❑ A small tree must be provided with a minimum of 25 m^3 of available soils volume while a medium tree must be provided with a minimum of 30 m^3 of available soil volume, as determined by the Landscape Architect. The developer is to ensure that the soil is generally un-compacted when backfilling in street tree planting locations.

- ❑ The tree species must be small (mature tree height up to 7.5 m) to medium size (mature tree height 7.5 m to 14 m) as confirmed by the Landscape Architect.

- ❑ Grading surrounding the tree must promote drainage to the tree root zone (in such a manner as not to be detrimental to the tree), as noted on the Grading Plan.

It is well documented in the literature, and is our experience, that fast-growing trees located near buildings founded on cohesive soils that shrink on drying can result in long-term differential settlements of the structures. Tree varieties that have the most pronounced effect on foundations are seen to consist of poplars, willows and some maples (i.e., Manitoba Maples) and, as such, they should not be considered in the landscaping design.

6.9 Low-Impact Development Considerations

Due to the poor hydraulic properties of in-situ silty clay soils, infiltration-type LID practices are not considered suitable for the subject site from a geotechnical perspective.

7.0 Recommendations

It is recommended that the following be carried out by Paterson once preliminary and future details of the proposed building have been prepared:

- ❑ Review the grading, servicing and structural plans, from a geotechnical perspective.
- ❑ Review of architectural plans pertaining to foundation drainage systems and areas of foundation insulation.

It is a requirement for the foundation design data provided herein to be applicable that a material testing and observation program be performed by the geotechnical consultant. The following aspects of the program should be performed by Paterson:

- ❑ Observation of all bearing surfaces prior to the placement of concrete.
- ❑ Sampling and testing of the concrete and fill materials.
- ❑ Periodic observation of the condition of unsupported excavation side slopes in excess of 3 m in height, if applicable.
- ❑ Observation of all subgrades prior to backfilling and follow-up field density tests to determine the level of compaction achieved.
- ❑ Field density tests to determine the level of compaction achieved.
- ❑ Sampling and testing of the bituminous concrete including mix design reviews.

A report confirming that these works have been conducted in general accordance with our recommendations could be issued upon the completion of a satisfactory inspection program undertaken by Paterson.

All excess soil must be handled as per *Ontario Regulation 406/19: On-Site and Excess Soil Management*.

8.0 Statement of Limitations

The recommendations provided are in accordance with the present understanding of the project. Paterson requests permission to review the recommendations when the drawings and specifications are completed.

A soils investigation is a limited sampling of a site. Should any conditions at the site be encountered which differ from those at the test locations, Paterson requests immediate notification to permit reassessment of our recommendations.

The recommendations provided herein should only be used by the design professionals associated with this project. They are not intended for contractors bidding on or undertaking the work. The latter should evaluate the factual information provided in this report and determine the suitability and completeness for their intended construction schedule and methods. Additional testing may be required for their purposes.

The present report applies only to the project described in this document. Use of this report for purposes other than those described herein or by person(s) other than Ottawa Catholic School Board, or their agents, is not authorized without review by Paterson for the applicability of our recommendations to the alternative use of the report.

Paterson Group Inc.

Fernanda Carozzi, PhD. Geoph.

Drew Petahtegoose, P.Eng.

LICENSED PROFESSIONAL ENGINEER
October 21, 2025
D. J. PETAHTEGOOSE
100568013
PROVINCE OF ONTARIO

Report Distribution:

❑ Ottawa Catholic School Board
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APPENDIX 1

SOIL PROFILE AND TEST DATA SHEETS

SYMBOLS AND TERMS

ATTERBERG TESTING RESULTS

GRAIN SIZE DISTRIBUTION AND HYDROMETER TESTING RESULTS

ANALYTICAL TESTING RESULTS

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383908.51 **NORTHING:** 5033593.24 **ELEVATION:** 86.75

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

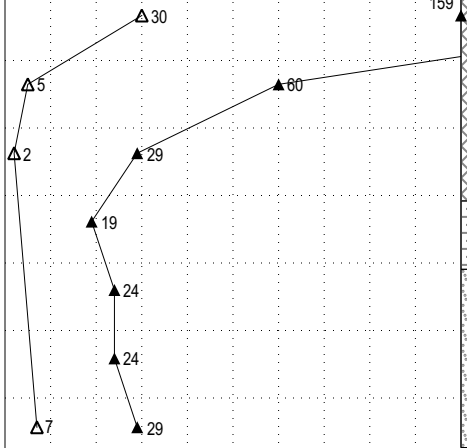
REMARKS:

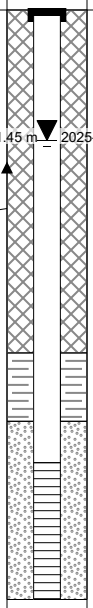
DATE: September 4, 2025

FILE NO. : PG7671

HOLE NO. : BH 1-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
FILL: Coarse granular crushed stone			AU 1						
0.10m [86.65m]									
Stiff to firm, brown **SILTY CLAY**		1	SS 2	50	3-4-5-6 9				
		2	SS 3	92	2-2-3-3 5				
3.66m [83.09m]		3							
Soft to firm, grey **SILTY CLAY**		4							
		5							
		6							
6.55m [80.20m]		7							
Dynamic Cone Penetration Test commenced at 6.55 m depth		8							
		9							
		10							
		11							
		12							
		13							
		14							
		15							





SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

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Dynamic Cone Penetration Test		15									71
		16									70
		17									69
		18									68
		19									67
		20									66
		21									65
		22									64
		23									63
		24					20				62
		25					19				61
		26					21				60
		27					20				59
		28					21				58
		29					20				57
		30					21				
							23				
							26				
							24				
							25				
							24				
							26				
							27				
							28				
							29				
							28				
							42				
							38				
							37				
							43				

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383908.51 **NORTHING:** 5033593.24 **ELEVATION:** 86.75

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SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	SAMPLE WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) ▲ UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
Dynamic Cone Penetration Test		30					37		56
		31					44 39		55
		32					50 48		54
		33					43 47		53
		34					51 47		52
		35					55 46 46		51
35.92m [50.83m]		36					44 48 47		50
End of Borehole		37					45 55 57		49
DCPT Pushed from 6.55 m to 23.47 m depth		38					53 100		48
Practical refusal to DCPT at 35.92 m depth		39							47
(GWL at 1.45 m depth - September 11, 2025)		40							46
		41							45
		42							44
		43							43
		44							42
		45							

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383938.79 **NORTHING:** 5033624.16 **ELEVATION:** 86.84

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 4, 2025

FILE NO. : PG7671

HOLE NO. : BH 2-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	SAMPLE WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
FILL: Brown silty clay, some crushed stone			AU 1						
1.45m [85.39m]		1	SS 2	58	2-5-6-9 11				
Very stiff to stiff, brown **SILTY CLAY**		2	SS 3		2-2-3-4 5		△35 ▲139 △5 ▲43 △2 ▲24 ▲24 ▲24 ▲24 ▲24	2.00 m 2025-09-11	86 85
2.90m [83.94m]		3							84
Soft, grey **SILTY CLAY**		4							83
		5							82
		6							81
6.55m [80.29m]		7							80
Dynamic Cone Penetration Test commenced at 6.55 m depth		8							79
		9							78
		10							77
		11							76
		12							75
		13							74
		14							73
		15							72

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383938.79 **NORTHING:** 5033624.16 **ELEVATION:** 86.84

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 4, 2025

FILE NO. : PG7671

HOLE NO. : BH 2-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE: TYPE AND NO.	SAMPLE: RECOVERY (%)	SAMPLE: N OR RQD	SAMPLE: WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80	REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80	PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
Dynamic Cone Penetration Test		15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30									71 70 69 68 67 66 65 64 63 62 61 60 59 58 57

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383938.79 **NORTHING:** 5033624.16 **ELEVATION:** 86.84

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 4, 2025

FILE NO. : PG7671

HOLE NO. : BH 2-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	SAMPLE WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80	REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80	PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
Dynamic Cone Penetration Test		30									56
		31									55
		32									54
		33									53
		34					32 49 44				52
34.65m [52.19m]							100				
End of Borehole		35									51
DCPT pushed from 6.55 m to 33.53 m depth		36									50
Practical refusal to DCPT at 34.65 m depth		37									49
(GWL at 2.00 m depth - September 11, 2025)		38									48
		39									47
		40									46
		41									45
		42									44
		43									43
		44									42
		45									

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383960.70 **NORTHING:** 5033596.10 **ELEVATION:** 87.32

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 4, 2025

FILE NO. : PG7671

HOLE NO. : BH 3-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	SAMPLE WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
TOPSOIL 0.36m [86.96m]		0	AU 1						87
FILL: Brown silty clay, with gravel		1	SS 2	33	4-4-6-5 10				86
1.45m [85.87m]									
Stiff, brown **SILTY CLAY**		2	SS 3	92	2-3-3-4 6				85
2.90m [84.42m]									
Soft to firm, grey **SILTY CLAY**		3						3.47 m 2025-09-11	84
		4							83
		5							82
		6							81
6.55m [80.77m]									
Dynamic Cone Penetration Test commenced at 6.55 m depth		7							80
		8							79
		9							78
		10							77
		11							76
		12							75
		13							74
		14							73
		15							

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383960.70 **NORTHING:** 5033596.10 **ELEVATION:** 87.32

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 4, 2025

FILE NO. : PG7671

HOLE NO. : BH 3-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE: TYPE AND NO.	SAMPLE: RECOVERY (%)	SAMPLE: N OR RQD	SAMPLE: WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
Dynamic Cone Penetration Test		15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30							72 71 70 69 68 67 66 65 64 63 62 61 60 59 58

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383960.70 **NORTHING:** 5033596.10 **ELEVATION:** 87.32

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 4, 2025

FILE NO. : PG7671

HOLE NO. : BH 3-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	SAMPLE WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) ▲ UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
Dynamic Cone Penetration Test		30							57
		31							56
		32							55
		33							54
		34					36, 56, 40, 61, 66, 49, 66, 66, 56		53
		35							52
		36							51
36.50m [50.82m]							100		
End of Borehole		37							50
DCPT pushed from 6.55 m to 33.53 m depth		38							49
Practical refusal to DCPT at 36.50 m depth		39							48
(GWL at 3.47 m depth - September 11, 2025)		40							47
		41							46
		42							45
		43							44
		44							43
		45							

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 384019.23 **NORTHING:** 5033629.45 **ELEVATION:** 87.24

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 4, 2025

FILE NO. : PG7671

HOLE NO. : BH 4-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	SAMPLE WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
FILL: Brown silty clay, with topsoil, trace gravel		0	AU 1						87
1.45m [85.79m]		1	SS 2	21	4-6-3-3 9				86
Very Stiff to stiff, brown **SILTY CLAY**		2	SS 3	33	2-4-6-6 10			2.10 m 2025-09-11	85
		3	G 4				△43 ▲121 △12 ▲48		84
3.66m [83.58m]									
Soft, grey **SILTY CLAY**		4					▲24		83
		5					▲24		82
		6					▲24		81
6.55m [80.69m]							▲24		
Dynamic Cone Penetration Test commenced at 6.55 m depth		7							80
		8							79
		9							78
		10							77
		11							76
		12							75
		13							74
		14							73
		15							

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 384019.23 **NORTHING:** 5033629.45 **ELEVATION:** 87.24

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 4, 2025

FILE NO. : PG7671

HOLE NO. : BH 4-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE: TYPE AND NO.	SAMPLE: RECOVERY (%)	SAMPLE: N OR RQD	SAMPLE: WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
Dynamic Cone Penetration Test		15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30							72 71 70 69 68 67 66 65 64 63 62 61 60 59 58

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 384019.23 **NORTHING:** 5033629.45 **ELEVATION:** 87.24

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 4, 2025

FILE NO. : PG7671

HOLE NO. : BH 4-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	SAMPLE WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80	REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80	PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
Dynamic Cone Penetration Test		30									57
		31									56
		32									55
		33									54
		34									53
		35									52
		36									51
		37					36				50
		38					61				49
38.30m [48.94m]							123/100				
End of Borehole		39									48
DCPT pushed from 6.55 m to 37.19 m depth		40									47
Practical refusal to DCPT at 38.30 m depth		41									46
(GWL at 2.10 m depth - September 11, 2025)		42									45
		43									44
		44									43
		45									

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 384044.38 **NORTHING:** 5033654.58 **ELEVATION:** 87.40

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

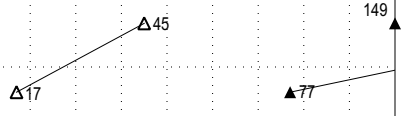
REMARKS:

DATE: September 4, 2025

FILE NO. : PG7671

HOLE NO. : BH 5-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	SAMPLE WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
FILL: Brown silty clay, trace gravel		0	AU 1						87
1.45m [85.95m]		1	SS 2	12	1-2-1-1 3				86
Very stiff to stiff, brown **SILTY CLAY**		2	SS 3	42	1-1-2-1 3				85
3.51m [83.89m]		3							84
Dynamic Cone Penetration Test commenced at 3.51 m depth		4							83
		5							82
		6							81
		7							80
		8							79
		9							78
		10							77
		11							76
		12							75
		13							74
		14							73
		15							



SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 384044.38 **NORTHING:** 5033654.58 **ELEVATION:** 87.40

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 4, 2025

FILE NO. : PG7671

HOLE NO. : BH 5-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE: TYPE AND NO.	SAMPLE: RECOVERY (%)	SAMPLE: N OR RQD	SAMPLE: WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80	REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80	PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
Dynamic Cone Penetration Test		15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30									72 71 70 69 68 67 66 65 64 63 62 61 60 59 58

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 384044.38 **NORTHING:** 5033654.58 **ELEVATION:** 87.40

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 4, 2025

FILE NO. : PG7671

HOLE NO. : BH 5-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	SAMPLE WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
Dynamic Cone Penetration Test		30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45					46 56 55 69 104 100		57 56 55 54 53 52 51 50 49 48 47 46 45 44 43
39.57m [47.83m]									
End of Borehole									
DCPT pushed from 3.51 m to 37.80 m depth									
Practical refusal to DCPT at 39.57 m depth									

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 384017.12 **NORTHING:** 5033661.20 **ELEVATION:** 87.16

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

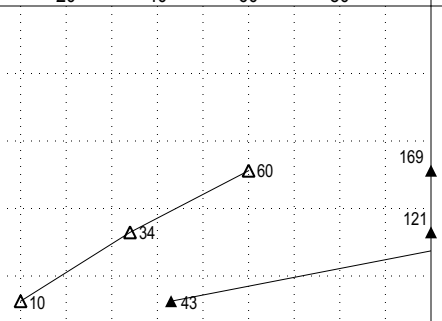
REMARKS:

DATE: September 4, 2025

FILE NO. : PG7671

HOLE NO. : BH 6-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	SAMPLE WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80	REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80	PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE											87
FILL: Brown silty clay, trace gravel		0	AU 1								
0.69m [86.47m]											
Very stiff to firm, brown **SILTY CLAY**		1	SS 2	33	1-1-3-4						86
					4						
		2	SS 3	83	2-2-5-5						85
					7						
3.51m [83.64m]		3									84
Dynamic Cone Penetration Test commenced at 3.51 m depth		4									83
		5									82
		6									81
		7									80
		8									79
		9									78
		10									77
		11									76
		12									75
		13									74
		14									73
		15									



SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 384017.12 **NORTHING:** 5033661.20 **ELEVATION:** 87.16

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 4, 2025

FILE NO. : PG7671

HOLE NO. : BH 6-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE: TYPE AND NO.	SAMPLE: RECOVERY (%)	SAMPLE: N OR RQD	SAMPLE: WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / △ REMOULDED SHEAR STRENGTH (kPa) / ▲ UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
Dynamic Cone Penetration Test		15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30							72 71 70 69 68 67 66 65 64 63 62 61 60 59 58

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 384017.12 **NORTHING:** 5033661.20 **ELEVATION:** 87.16

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 4, 2025

FILE NO. : PG7671

HOLE NO. : BH 6-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	SAMPLE WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80	REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80	PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
Dynamic Cone Penetration Test		30									57
		31									56
		32									55
		33									54
		34									53
		35									52
		36									51
		37									50
		38									49
		39									48
		40									47
40.72m [46.44m]							91 100				
End of Borehole		41									46
DCPT pushed from 3.51 m to 40.23 m depth		42									45
Practical refusal to DCPT at 40.72 m depth		43									44
		44									43
		45									

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 384003.00 **NORTHING:** 5033641.13 **ELEVATION:** 86.94

PROJECT: Proposed Elementary School
ADVANCED BY: Track Mounted Drill Rig
REMARKS:

DATE: September 4, 2025

FILE NO. : PG7671
HOLE NO. : BH 7-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	SAMPLE WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
FILL: Brown silty clay, with topsoil, trace gravel and styrofoam		0	AU 1						86
1.45m [85.49m]		1	SS 2	12	2-3-3-1 6				85
Stiff, brown **SILTY CLAY**		2	SS 3	83	2-4-5-5 9		△25 ▲99 △7 ▲43		84
3.51m [83.43m]		3							83
Dynamic Cone Penetration Test commenced at 3.51 m depth		4							82
		5							81
		6							80
		7							79
		8							78
		9							77
		10							76
		11							75
		12							74
		13							73
		14							72
		15							

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 384003.00 **NORTHING:** 5033641.13 **ELEVATION:** 86.94

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 4, 2025

FILE NO. : PG7671

HOLE NO. : BH 7-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE: TYPE AND NO.	SAMPLE: RECOVERY (%)	SAMPLE: N OR RQD	SAMPLE: WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80	REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80	PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
Dynamic Cone Penetration Test		15									71
		16									70
		17									69
		18									68
		19									67
		20									66
		21									65
		22									64
		23									63
		24									62
		25									61
		26									60
		27									59
		28									58
		29									57
		30									

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 384003.00 **NORTHING:** 5033641.13 **ELEVATION:** 86.94

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 4, 2025

FILE NO. : PG7671

HOLE NO. : BH 7-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	SAMPLE WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80	REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80	PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
Dynamic Cone Penetration Test		30									56
		31									55
		32									54
		33									53
		34									52
		35									51
		36									50
		37									49
		38									48
		39									47
		40									46
		41					68 66				45
42.16m [44.78m]		42					100 100				44
End of Borehole		43									43
DCPT pushed from 3.51 m to 41.15 m depth		44									42
Practical refusal to DCPT at 42.16 m depth		45									

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383923.70 **NORTHING:** 5033612.78 **ELEVATION:** 86.88

PROJECT: Proposed Elementary School
ADVANCED BY: Track Mounted Drill Rig
REMARKS:

DATE: September 5, 2025

FILE NO. : PG7671
HOLE NO. : BH 8-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	SAMPLE WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) ▲ UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
FILL: Brown silty clay, some crushed stone trace gravel		0	AU 1						86
1.07m [85.81m]		1	SS 2	50	2-8-5-7 13				85
Firm to stiff, brown **SILTY CLAY**		2	SS 3	100	2-3-3-4 6				84
3.51m [83.37m]		3					△2 ▲29		83
Dynamic Cone Penetration Test commenced at 3.51 m depth		4							82
		5							81
		6							80
		7							79
		8							78
		9							77
		10							76
		11							75
		12							74
		13							73
		14							72
		15							

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383923.70 **NORTHING:** 5033612.78 **ELEVATION:** 86.88

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 5, 2025

FILE NO. : PG7671

HOLE NO. : BH 8-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE: TYPE AND NO.	SAMPLE: RECOVERY (%)	SAMPLE: N OR RQD	SAMPLE: WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80	REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80	PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
Dynamic Cone Penetration Test		15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30									71 70 69 68 67 66 65 64 63 62 61 60 59 58 57

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383923.70 **NORTHING:** 5033612.78 **ELEVATION:** 86.88

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 5, 2025

FILE NO. : PG7671

HOLE NO. : BH 8-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE: TYPE AND NO.	SAMPLE: RECOVERY (%)	SAMPLE: N OR RQD	SAMPLE: WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80	REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80	PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
Dynamic Cone Penetration Test		30									56
		31									55
		32									54
		33									53
		34									52
		35									51
35.86m [51.02m]							100				
End of Borehole		36									50
DCPT pushed from 3.51 m to 35.66 m depth		37									49
Practical refusal to DCPT at 35.86 m depth		38									48
		39									47
		40									46
		41									45
		42									44
		43									43
		44									42
		45									

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383938.61 **NORTHING:** 5033601.26 **ELEVATION:** 87.09

PROJECT: Proposed Elementary School
ADVANCED BY: Track Mounted Drill Rig
REMARKS:

DATE: September 5, 2025

FILE NO. : PG7671
HOLE NO. : BH 9-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	SAMPLE WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / △ REMOULDED SHEAR STRENGTH (kPa) / ▲ UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									87
FILL: Brown silty sand, trace gravel - Sitly clay by 0.7 m depth		0	AU 1						
		1	SS 2	58	3-4-6-9 10				86
1.83m [85.26m]			SS 3	83	3-7-6-6 13				
Firm to stiff, brown **SILTY CLAY**		2							85
3.51m [83.58m]		3					△2 ▲29		84
Dynamic Cone Penetration Test commenced at 3.51 m depth		4							83
		5							82
		6							81
		7							80
		8							79
		9							78
		10							77
		11							76
		12							75
		13							74
		14							73
		15							

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383938.61 **NORTHING:** 5033601.26 **ELEVATION:** 87.09

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 5, 2025

FILE NO. : PG7671

HOLE NO. : BH 9-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE: TYPE AND NO.	SAMPLE: RECOVERY (%)	SAMPLE: N OR RQD	SAMPLE: WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80	REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80	PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
Dynamic Cone Penetration Test		15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30									72 71 70 69 68 67 66 65 64 63 62 61 60 59 58

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383938.61 **NORTHING:** 5033601.26 **ELEVATION:** 87.09

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 5, 2025

FILE NO. : PG7671

HOLE NO. : BH 9-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE: TYPE AND NO.	SAMPLE: RECOVERY (%)	SAMPLE: N OR RQD	SAMPLE: WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80	REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80	PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
Dynamic Cone Penetration Test		30									57
		31									56
		32									55
		33									54
		34									53
		35									52
35.81m [51.28m]							100				
End of Borehole		36									51
DCPT pushed from 3.51 m to 35.66 m depth		37									50
Practical refusal to DCPT at 35.81 m depth		38									49
		39									48
		40									47
		41									46
		42									45
		43									44
		44									43
		45									

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383974.62 **NORTHING:** 5033604.42 **ELEVATION:** 86.84

PROJECT: Proposed Elementary School
ADVANCED BY: Track Mounted Drill Rig
REMARKS:
DATE: September 5, 2025

FILE NO. : PG7671
HOLE NO. : BH10-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	SAMPLE WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) ▲ UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
FILL: Brown silty clay, some topsoil, trace gravel		0	AU 1						86
1.07m [85.78m]		1	SS 2	50	2-3-5-6 8				85
Stiff to firm, brown **SILTY CLAY**		2	SS 3	92	2-3-3-4 6				84
3.51m [83.33m]		3					△2 ▲24		83
Dynamic Cone Penetration Test commenced at 3.51 m depth		4							82
		5							81
		6							80
		7							79
		8							78
		9							77
		10							76
		11							75
		12							74
		13							73
		14							72
		15							

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383974.62 **NORTHING:** 5033604.42 **ELEVATION:** 86.84

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 5, 2025

FILE NO. : PG7671

HOLE NO. : BH10-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE: TYPE AND NO.	SAMPLE: RECOVERY (%)	SAMPLE: N OR RQD	SAMPLE: WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80	REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80	PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
Dynamic Cone Penetration Test		15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30									71 70 69 68 67 66 65 64 63 62 61 60 59 58 57

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383974.62 **NORTHING:** 5033604.42 **ELEVATION:** 86.84

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 5, 2025

FILE NO. : PG7671

HOLE NO. : BH10-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE: TYPE AND NO.	SAMPLE: RECOVERY (%)	SAMPLE: N OR RQD	SAMPLE: WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80	REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80	PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
Dynamic Cone Penetration Test		30									56
		31									55
		32									54
		33									53
		34					28				52
							37				
							39				
35.00m [51.84m]		35					100				51
End of Borehole											
DCPT pushed from 3.51 m to 33.83 m depth		36									50
Practical refusal to DCPT at 35.00 m depth		37									49
		38									48
		39									47
		40									46
		41									45
		42									44
		43									43
		44									42
		45									

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383942.40 **NORTHING:** 5033572.12 **ELEVATION:** 87.30

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 5, 2025

FILE NO. : PG7671

HOLE NO. : BH11-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	SAMPLE WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80	REMOULDED SHEAR STRENGTH (kPa) ▲ UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80	PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE											87
FILL: Brown silty clay and topsoil		0	AU 1								
		1	SS 2	46	4-3-5-8						86
1.78m [85.52m]			SS 3	50	8 3-5-5-8						
Stiff, brown **SILTY CLAY**		2			10						85
		3						△7 ▲48			84
3.51m [83.79m]											
Dynamic Cone Penetration Test commenced at 3.51 m depth		4									83
		5									82
		6									81
		7									80
		8									79
		9									78
		10									77
		11									76
		12									75
		13									74
		14									73
		15									

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383942.40 **NORTHING:** 5033572.12 **ELEVATION:** 87.30

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 5, 2025

FILE NO. : PG7671

HOLE NO. : BH11-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE: TYPE AND NO.	SAMPLE: RECOVERY (%)	SAMPLE: N OR RQD	SAMPLE: WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80	REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80	PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
Dynamic Cone Penetration Test		15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30									72 71 70 69 68 67 66 65 64 63 62 61 60 59 58

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383942.40 **NORTHING:** 5033572.12 **ELEVATION:** 87.30

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 5, 2025

FILE NO. : PG7671

HOLE NO. : BH11-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	SAMPLE WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
Dynamic Cone Penetration Test		30							57
		31							56
		32							55
		33							54
		34							53
		35							52
		36							51
		37							50
		38					75 100		49
38.58m [48.72m]									
End of Borehole		39							48
DCPT pushed from 3.51 m to 38.10 m depth		40							47
Practical refusal to DCPT at 38.58 m depth		41							46
		42							45
		43							44
		44							43
		45							

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383923.62 **NORTHING:** 5033576.71 **ELEVATION:** 86.51

PROJECT: Proposed Elementary School
ADVANCED BY: Track Mounted Drill Rig
REMARKS:
DATE: September 5, 2025

FILE NO. : PG7671
HOLE NO. : BH12-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80	REMOULDED SHEAR STRENGTH (kPa) ▲ UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80	PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE											
FILL: Crushed stone 0.10m [86.41m]			AU 1								86
FILL: Brown silty sand, with gravel and crushed stone 0.69m [85.82m]		1	SS 2	83	3-3-4-5 7						85
Firm, brown **SILTY CLAY**		2	SS 3	100	2-2-2-2 4						84
3.51m [83.00m]		3					△2 ▲24				83
Dynamic Cone Penetration Test commenced at 3.51 m depth		4									82
		5									81
		6									80
		7									79
		8									78
		9									77
		10									76
		11									75
		12									74
		13									73
		14									72
		15									

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383923.62 **NORTHING:** 5033576.71 **ELEVATION:** 86.51

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 5, 2025

FILE NO. : PG7671

HOLE NO. : BH12-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE: TYPE AND NO.	SAMPLE: RECOVERY (%)	SAMPLE: N OR RQD	SAMPLE: WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80	REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80	PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
Dynamic Cone Penetration Test		15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30									71 70 69 68 67 66 65 64 63 62 61 60 59 58 57

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383923.62 **NORTHING:** 5033576.71 **ELEVATION:** 86.51

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 5, 2025

FILE NO. : PG7671

HOLE NO. : BH12-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	SAMPLE WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) ▲ UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
Dynamic Cone Penetration Test		30							56
		31							55
		32							54
		33							53
		34							52
		35							51
		36							50
37.13m [49.38m]		37					70 100		49
End of Borehole		38							48
DCPT pushed from 3.51 m to 36.58 m depth		39							47
Practical refusal to DCPT at 37.13 m depth		40							46
		41							45
		42							44
		43							43
		44							42
		45							

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383950.53 **NORTHING:** 5033640.15 **ELEVATION:** 88.73

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 8, 2025

FILE NO. : PG7671

HOLE NO. : BH13-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	SAMPLE WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
FILL: Brown silty clay, trace gravel and organics		0	AU 1						88
		1	SS 2	50	1-1-2-4 3				
		2	SS 3	37	2-3-5-8 8				87
2.29m [86.44m]									
Very stiff, brown **SILTY CLAY**		3	G 4				△84 119▲		86
3.51m [85.22m]									
Dynamic Cone Penetration Test commenced at 3.51 m depth		4							85
		5							84
		6							83
		7							82
		8							81
		9							80
		10							79
		11							78
		12							77
		13							76
		14							75
		15							74

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383950.53 **NORTHING:** 5033640.15 **ELEVATION:** 88.73

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 8, 2025

FILE NO. : PG7671

HOLE NO. : BH13-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE: TYPE AND NO.	SAMPLE: RECOVERY (%)	SAMPLE: N OR RQD	SAMPLE: WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80	REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80	PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
Dynamic Cone Penetration Test		15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30									73 72 71 70 69 68 67 66 65 64 63 62 61 60 59

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383950.53 **NORTHING:** 5033640.15 **ELEVATION:** 88.73

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 8, 2025

FILE NO. : PG7671

HOLE NO. : BH13-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	SAMPLE WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80	REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80	PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
Dynamic Cone Penetration Test		30									58
		31									57
		32									56
		33									55
		34									54
		35									53
		36									52
		37									51
		38					50				50
		39					52 53 53				49
		40									48
		41					62				47
41.91m [46.83m]		42					77 100				46
End of Borehole											
DCPT pushed from 3.51 m to 38.10 m depth and 39.32 m to 41.15 m depth		43									45
Practical refusal to DCPT at 47.91 m depth		44									44
		45									

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383989.59 **NORTHING:** 5033594.32 **ELEVATION:** 87.38

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 8, 2025

FILE NO. : PG7671

HOLE NO. : BH14-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) △ / UNDRAINED SHEAR STRENGTH (kPa) ▲ 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
FILL: Brown silty clay		0	AU 1						87
1.45m [85.93m]		1	SS 2	50	3-3-5-7 8				86
Stiff to firm, brown **SILTY CLAY**		2	SS 3	54	2-4-6-7 10				85
3.51m [83.87m]		3					△5 ▲34		84
Dynamic Cone Penetration Test commenced at 3.51 m depth		4							83
		5							82
		6							81
		7							80
		8							79
		9							78
		10							77
		11							76
		12							75
		13							74
		14							73
		15							

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383989.59 **NORTHING:** 5033594.32 **ELEVATION:** 87.38

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 8, 2025

FILE NO. : PG7671

HOLE NO. : BH14-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE: TYPE AND NO.	SAMPLE: RECOVERY (%)	SAMPLE: N OR RQD	SAMPLE: WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80	REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80	PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
Dynamic Cone Penetration Test		15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30									72 71 70 69 68 67 66 65 64 63 62 61 60 59 58

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383989.59 **NORTHING:** 5033594.32 **ELEVATION:** 87.38

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 8, 2025

FILE NO. : PG7671

HOLE NO. : BH14-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE: TYPE AND NO.	SAMPLE: RECOVERY (%)	SAMPLE: N OR RQD	SAMPLE: WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80	REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80	PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
Dynamic Cone Penetration Test		30									57
		31									56
		32									55
		33									54
		34									53
		35					33		100		52
35.26m [52.12m]											
End of Borehole		36									51
DCPT pushed from 3.51 m to 34.75 m depth		37									50
Practical refusal to DCPT at 35.26 m depth		38									49
		39									48
		40									47
		41									46
		42									45
		43									44
		44									43
		45									

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 384028.02 **NORTHING:** 5033606.00 **ELEVATION:** 87.77

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 8, 2025

FILE NO. : PG7671

HOLE NO. : BH15-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80	REMOULDED SHEAR STRENGTH (kPa) ▲ UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80	PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE											
FILL: Brown silty clay, some topsoil, gravel and cobbles		0	AU 1								87
		1	SS 2	21	2-3-3-2 6						86
		2	SS 3	25	2-2-5-5 7						
2.59m [85.18m]											85
Stiff, brown **SILTY CLAY**		3						Δ17 ▲72			
3.51m [84.26m]											84
Dynamic Cone Penetration Test commenced at 3.51 m depth		4									83
		5									82
		6									81
		7									80
		8									79
		9									78
		10									77
		11									76
		12									75
		13									74
		14									73
		15									

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 384028.02 **NORTHING:** 5033606.00 **ELEVATION:** 87.77

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 8, 2025

FILE NO. : PG7671

HOLE NO. : BH15-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE: TYPE AND NO.	SAMPLE: RECOVERY (%)	SAMPLE: N OR RQD	SAMPLE: WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80	REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80	PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
Dynamic Cone Penetration Test		15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30									72 71 70 69 68 67 66 65 64 63 62 61 60 59 58

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 384028.02 **NORTHING:** 5033606.00 **ELEVATION:** 87.77

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 8, 2025

FILE NO. : PG7671

HOLE NO. : BH15-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	SAMPLE WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
Dynamic Cone Penetration Test		30							57
		31							56
		32							55
		33							54
		34							53
		35							52
		36							51
		37					48		50
		38					67 49		49
		39					72 82 81		48
39.50m [48.27m]							97 100		
End of Borehole		40							47
DCPT pushed from 3.51 m to 37.19 m depth		41							46
Practical refusal to DCPT at 39.50 m depth		42							45
		43							44
		44							43
		45							

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 384044.38 **NORTHING:** 5033631.24 **ELEVATION:** 87.43

PROJECT: Proposed Elementary School
ADVANCED BY: Track Mounted Drill Rig
REMARKS:

DATE: September 8, 2025

FILE NO. : PG7671
HOLE NO. : BH16-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	SAMPLE WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) ▲ UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
FILL: Brown silty clay, some gravel, crushed stone and organics		0	AU 1						87
1.65m [85.78m]		1	SS 2	29	3-4-3-3 7				86
Stiff to firm, brown **SILTY CLAY**		2	SS 3	54	3-4-6-6 10				85
3.51m [83.92m]		3					△7 ▲43		84
Dynamic Cone Penetration Test commenced at 3.51 m depth		4							83
		5							82
		6							81
		7							80
		8							79
		9							78
		10							77
		11							76
		12							75
		13							74
		14							73
		15							

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 384044.38 **NORTHING:** 5033631.24 **ELEVATION:** 87.43

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 8, 2025

FILE NO. : PG7671

HOLE NO. : BH16-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE: TYPE AND NO.	SAMPLE: RECOVERY (%)	SAMPLE: N OR RQD	SAMPLE: WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
Dynamic Cone Penetration Test		15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30							72 71 70 69 68 67 66 65 64 63 62 61 60 59 58

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 384044.38 **NORTHING:** 5033631.24 **ELEVATION:** 87.43

PROJECT: Proposed Elementary School

ADVANCED BY: Track Mounted Drill Rig

REMARKS:

DATE: September 8, 2025

FILE NO. : PG7671

HOLE NO. : BH16-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE: TYPE AND NO.	SAMPLE: RECOVERY (%)	SAMPLE: N OR RQD	SAMPLE: WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80	REMOULDED SHEAR STRENGTH (kPa) △ / UNDRAINED SHEAR STRENGTH (kPa) ▲ 20 40 60 80	PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
Dynamic Cone Penetration Test		30									57
		31									56
		32									55
		33									54
		34									53
		35					50 81 100				52
35.26m [52.17m]											
End of Borehole		36									51
DCPT pushed from 3.51 m to 34.44 m depth		37									50
		38									49
Practical refusal to DCPT at 35.26 m depth		39									48
		40									47
		41									46
		42									45
		43									44
		44									43
		45									

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383889.12 **NORTHING:** 5033617.11 **ELEVATION:** 86.90

PROJECT: Proposed Elementary School

ADVANCED BY: Back Hoe

REMARKS:

DATE: September 3, 2025

FILE NO. : PG7671

HOLE NO. : TP 1-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) ▲ UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
FILL: Brown silty sand and clay, with crushed stone and organics			G 1			3	○		
0.60m [86.30m]			G 2			12	○		
TOPSOIL			G 3			24	○		
0.85m [86.05m]			G 4			33	○ ▲31		86
Very stiff to firm, brown **SILTY CLAY**		1							
1.85m [85.05m]			G 5			41	○		
End of Test Pit		2							85
Groundwater infiltration observed at 1.7 m depth		3							84
		4							83
		5							82

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383918.18 **NORTHING:** 5033627.68 **ELEVATION:** 87.03

PROJECT: Proposed Elementary School

ADVANCED BY: Back Hoe

REMARKS:

DATE: September 3, 2025

FILE NO. : PG7671

HOLE NO. : TP 2-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) ▲ UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
TOPSOIL, trace sand			G 1			15			87
0.45m [86.58m]									
FILL: Brown silty clay, with topsoil			G 2			28			
1.10m [85.93m]		1							86
Very stiff, brown **SILTY CLAY**			G 3			32			
1.80m [85.23m]									
End of Test Pit		2							85
Test pit dry upon completion of excavation		3							84
		4							83
		5							

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383943.16 **NORTHING:** 5033613.91 **ELEVATION:** 86.89

PROJECT: Proposed Elementary School

ADVANCED BY: Back Hoe

REMARKS:

DATE: September 3, 2025

FILE NO. : PG7671

HOLE NO. : TP 3-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) ▲ UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
FILL: Brown silty clay, trace gravel			G 1			23			
		1	G 2			23			86
1.20m [85.69m]									
Stiff to firm, brown **SILTY CLAY**			G 3			38	55		
1.90m [84.99m]			G 4			39	35		85
End of Test Pit		2							
Groundwater infiltration observed at 1.9 m depth		3							84
		4							83
		5							82

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383922.80 **NORTHING:** 5033596.93 **ELEVATION:** 86.62

PROJECT: Proposed Elementary School

ADVANCED BY: Back Hoe

REMARKS:

DATE: September 3, 2025

FILE NO. : PG7671

HOLE NO. : TP 4-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) ▲ UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
TOPSOIL 0.40m [86.22m]			G 1			22			86
FILL: Brown silty clay, with debris (wood, plastic and asphalt), trace gravel 1.10m [85.52m]		1	G 2			28			
Very stiff, brown **SILTY CLAY** 1.90m [84.72m]			G 3			34			85
End of Test Pit Test pit dry upon completion of excavation		2	G 4			42			84
		3							83
		4							82
		5							

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383943.98 **NORTHING:** 5033585.37 **ELEVATION:** 87.01

PROJECT: Proposed Elementary School

ADVANCED BY: Back Hoe

REMARKS:

DATE: September 3, 2025

FILE NO. : PG7671

HOLE NO. : TP 5-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
TOPSOIL 0.30m [86.71m]			G 1			21			87
FILL: Brown silty clay, with crushed stone 0.80m [86.21m]			G 2			8			
Stiff to firm, brown **SILTY CLAY**			G 3			30	49		
		1							86
			G 4			38	33		
End of Test Pit		2							85
Test pit dry upon completion of excavation		3							84
		4							83
		5							

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383964.53 **NORTHING:** 5033607.63 **ELEVATION:** 86.89

PROJECT: Proposed Elementary School

ADVANCED BY: Back Hoe

REMARKS:

DATE: September 3, 2025

FILE NO. : PG7671

HOLE NO. : TP 6-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
FILL: Brown silty sand, with topsoil			G 1			28			
0.90m [85.99m]									
Very stiff, brown **SILTY CLAY**		1	G 2			34			86
1.80m [85.09m]			G 3			45			
End of Test Pit		2							85
Test pit dry upon completion of excavation		3							84
		4							83
		5							82

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383985.68 **NORTHING:** 5033605.29 **ELEVATION:** 86.91

PROJECT: Proposed Elementary School

ADVANCED BY: Back Hoe

REMARKS:

DATE: September 3, 2025

FILE NO. : PG7671

HOLE NO. : TP 7-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
TOPSOIL 0.35m [86.56m]			G 1			18			
FILL: Brown silty clay, with topsoil 1.10m [85.81m]		1	G 2			29			86
Very stiff, brown **SILTY CLAY** 1.90m [85.01m]			G 3			27			
		2	G 4			42			85
End of Test Pit Groundwater infiltration observed at 1.9 m depth		3							84
		4							83
		5							82

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 384011.21 **NORTHING:** 5033607.28 **ELEVATION:** 87.08

PROJECT: Proposed Elementary School

ADVANCED BY: Back Hoe

REMARKS:

DATE: September 3, 2025

FILE NO. : PG7671

HOLE NO. : TP 8-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
TOPSOIL			G 1			20			87
			G 2			31			
1.30m [85.78m]		1							86
Very stiff, brown **SILTY CLAY**			G 3			35			
1.90m [85.18m]			G 4			39			
End of Test Pit		2							85
Test pit dry upon completion of excavation		3							84
		4							83
		5							

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 384009.58 **NORTHING:** 5033627.45 **ELEVATION:** 87.21

PROJECT: Proposed Elementary School

ADVANCED BY: Back Hoe

REMARKS:

DATE: September 3, 2025

FILE NO. : PG7671

HOLE NO. : TP 9-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
TOPSOIL 0.40m [86.81m]			G 1			21			87
FILL: Brown silty clay, with topsoil, organics, plastic and wood 1.40m [85.81m]		1	G 2			31			86
Very stiff, brown **SILTY CLAY** 1.80m [85.41m]			G 3			35			
			G 4			34			
End of Test Pit Test pit dry upon completion of excavation		2							85
		3							84
		4							83
		5							

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 384029.50 **NORTHING:** 5033645.31 **ELEVATION:** 87.36

PROJECT: Proposed Elementary School
ADVANCED BY: Back Hoe
REMARKS:

DATE: September 3, 2025

FILE NO. : PG7671
HOLE NO. : TP10-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
TOPSOIL 0.30m [87.06m]			G 1			29			87
FILL: Brown silty clay, with crushed stone, plastic and organics			G 2			18			
		1	G 3			31			86
1.70m [85.66m] Very stiff, brown **SILTY CLAY** 1.90m [85.46m]			G 4			39			
End of Test Pit Test pit dry upon completion of excavation		2							85
		3							84
		4							83
		5							

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383995.14 **NORTHING:** 5033656.82 **ELEVATION:** 86.92

PROJECT: Proposed Elementary School

ADVANCED BY: Back Hoe

REMARKS:

DATE: September 3, 2025

FILE NO. : PG7671

HOLE NO. : TP11-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
FILL: Brown silty clay			G 1			29			
0.70m [86.22m]									
TOPSOIL			G 2			14			86
1.00m [85.92m]		1							
Very stiff, brown **SILTY CLAY**			G 3			31			
1.80m [85.12m]			G 4			34			
End of Test Pit		2							85
Test pit dry upon completion of excavation		3							84
		4							83
		5							82

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383922.20 **NORTHING:** 5033544.13 **ELEVATION:** 87.12

PROJECT: Proposed Elementary School

ADVANCED BY: Back Hoe

REMARKS:

DATE: September 3, 2025

FILE NO. : PG7671

HOLE NO. : TP12-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) ▲ UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
TOPSOIL 0.30m [86.82m]									87
FILL: Topsoil, trace crushed stone, wood and plastic			G 1			17	○		
		1	G 2			11	○		86
1.30m [85.82m]			G 3			29	○		
Very stiff, brown **SILTY CLAY**									
1.80m [85.32m]			G 4			31	○		
End of Test Pit		2							85
Test pit dry upon completion of excavation		3							84
		4							83
		5							

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383990.02 **NORTHING:** 5033568.30 **ELEVATION:** 87.14

PROJECT: Proposed Elementary School

ADVANCED BY: Back Hoe

REMARKS:

DATE: September 3, 2025

FILE NO. : PG7671

HOLE NO. : TP13-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
TOPSOIL			G 1			22			87
		1	G 2			29			86
1.30m [85.84m]									
Very stiff, brown **SILTY CLAY**			G 3			30			
1.90m [85.24m]			G 4			30			
End of Test Pit		2							85
Test pit dry upon completion of excavation		3							84
		4							83
		5							

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 384050.99 **NORTHING:** 5033587.58 **ELEVATION:** 86.83

PROJECT: Proposed Elementary School

ADVANCED BY: Back Hoe

REMARKS:

DATE: September 4, 2025

FILE NO. : PG7671

HOLE NO. : TP14-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) ▲ UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
TOPSOIL 0.40m [86.43m]			G 1			23			86
FILL: Brown silty sand, trace gravel 0.80m [86.03m]			G 2			10			
Brown **SILTY SAND** 1.80m [85.03m]		1	G 3			28			85
			G 4			32			
End of Test Pit		2							84
Groundwater infiltration observed at 1.8 m depth		3							83
		4							82
		5							

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 384069.65 **NORTHING:** 5033549.87 **ELEVATION:** 86.57

PROJECT: Proposed Elementary School

ADVANCED BY: Back Hoe

REMARKS:

DATE: September 4, 2025

FILE NO. : PG7671

HOLE NO. : TP15-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) ▲ UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
TOPSOIL 0.30m [86.27m]			G 1			25			86
FILL: Brown silty sand, with clay, some gravel and crushed stone			G 2			14			
1.00m [85.57m]		1	G 3			2			
Firm, brown **SILTY CLAY**			G 4			36	▲ 26		85
1.80m [84.77m]			G 5			42	▲ 35		
End of Test Pit		2							84
Test pit dry upon completion of excavation		3							83
		4							82
		5							

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 384029.40 **NORTHING:** 5033559.02 **ELEVATION:** 87.23

PROJECT: Proposed Elementary School

ADVANCED BY: Back Hoe

REMARKS:

DATE: September 4, 2025

FILE NO. : PG7671

HOLE NO. : TP16-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) ▲ UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
FILL: Brown silty clay, trace sand, gravel and organics		0	G 1			23	○		87
			G 2			15	○		
		1							86
1.70m [85.53m]			G 3			28	○ ▲40		
Firm, brown **SILTY CLAY** 1.80m [85.43m]		2							85
End of Test Pit									
Test pit dry upon completion of excavation		3							84
		4							83
		5							

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 384011.81 **NORTHING:** 5033529.67 **ELEVATION:** 87.12

PROJECT: Proposed Elementary School
ADVANCED BY: Back Hoe
REMARKS:
DATE: September 4, 2025

FILE NO. : PG7671
HOLE NO. : TP17-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
FILL: Brown silty clay, trace sand, gravel and organics			G 1			33			87
		1	G 2			24			86
1.40m [85.72m]									
Very stiff, brown **SILTY CLAY**			G 3			30			
1.80m [85.32m]									
End of Test Pit		2							85
Test pit dry upon completion of excavation		3							84
		4							83
		5							

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383974.77 **NORTHING:** 5033533.57 **ELEVATION:** 87.24

PROJECT: Proposed Elementary School
ADVANCED BY: Back Hoe
REMARKS:

DATE: September 4, 2025

FILE NO. : PG7671
HOLE NO. : TP18-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
FILL: Brown silty clay, trace sand, gravel and organics			G 1			24	○		87
		1	G 2			26	○		
1.40m [85.84m]									86
Firm, brown **SILTY CLAY**			G 3			35	▲33		
1.80m [85.44m]									
End of Test Pit		2							85
Test pit dry upon completion of excavation		3							84
		4							83
		5							

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Jerome Jodoin Drive and Future Road 10, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 383952.61 **NORTHING:** 5033489.42 **ELEVATION:** 87.01

PROJECT: Proposed Elementary School
ADVANCED BY: Back Hoe
REMARKS:

DATE: September 4, 2025

FILE NO. : PG7671
HOLE NO. : TP19-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) ▲ UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
FILL: Brown silty clay, trace sand, gravel, plastic and organics		0	G 1			25	○		87
			G 2			22	○		
		1							86
1.50m [85.51m]									
Very stiff brown to grey **SILTY CLAY**			G 3			29	○		
1.80m [85.21m]									
End of Test Pit		2							85
Test pit dry upon completion of excavation		3							84
		4							83
		5							

patersongroup Consulting Engineers

154 Colonnade Road South, Ottawa, Ontario K2E 7J5

SOIL PROFILE AND TEST DATA

Geotechnical Residential
Residential Development - Summerside West Ph. 4 & 5
Tenth Line Road, Ottawa, Ontario

DATUM Ground surface elevations provided by J.D. Barnes Limited.

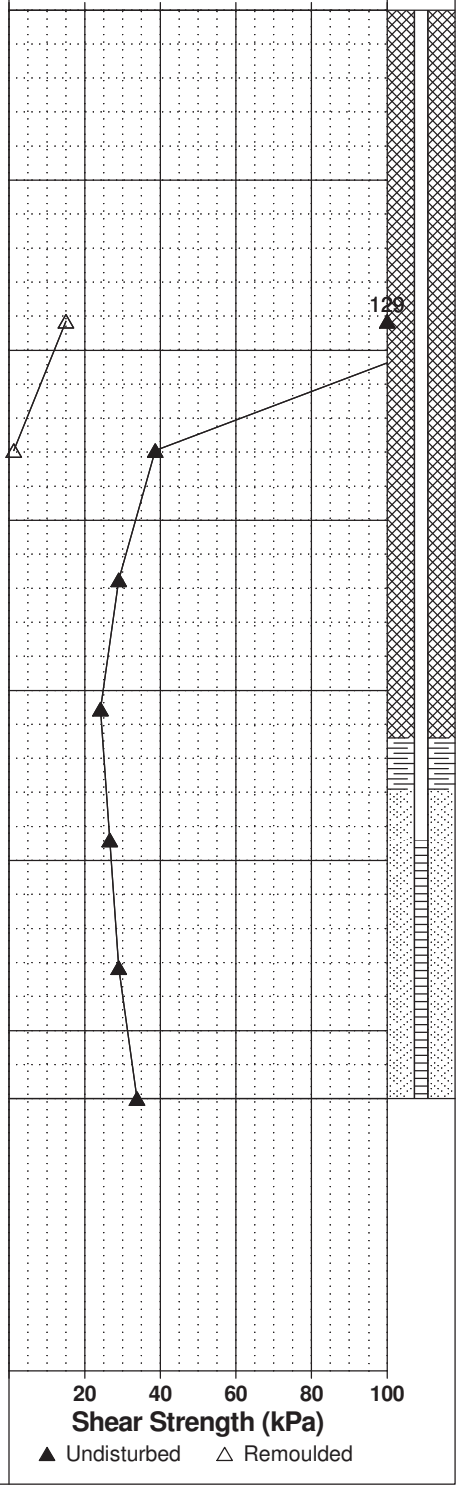
FILE NO. PG4049

REMARKS

HOLE NO. BH 1-18

BORINGS BY CME 55 Power Auger **DATE** February 20, 2018

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	86.26
TOPSOIL 0.38		AU	1				
		SS	2	67	5	1	85.26
Very stiff to stiff, brown **SILTY CLAY,** trace sand						2	84.26
- firm and grey by 2.3m depth						3	83.26
						4	82.26
						5	81.26
		SS	3	100	P	6	80.26
6.40 End of Borehole							



patersongroup Consulting Engineers

154 Colonnade Road South, Ottawa, Ontario K2E 7J5

SOIL PROFILE AND TEST DATA

Geotechnical Residential
Residential Development - Summerside West Ph. 4 & 5
Tenth Line Road, Ottawa, Ontario

DATUM Ground surface elevations provided by J.D. Barnes Limited.

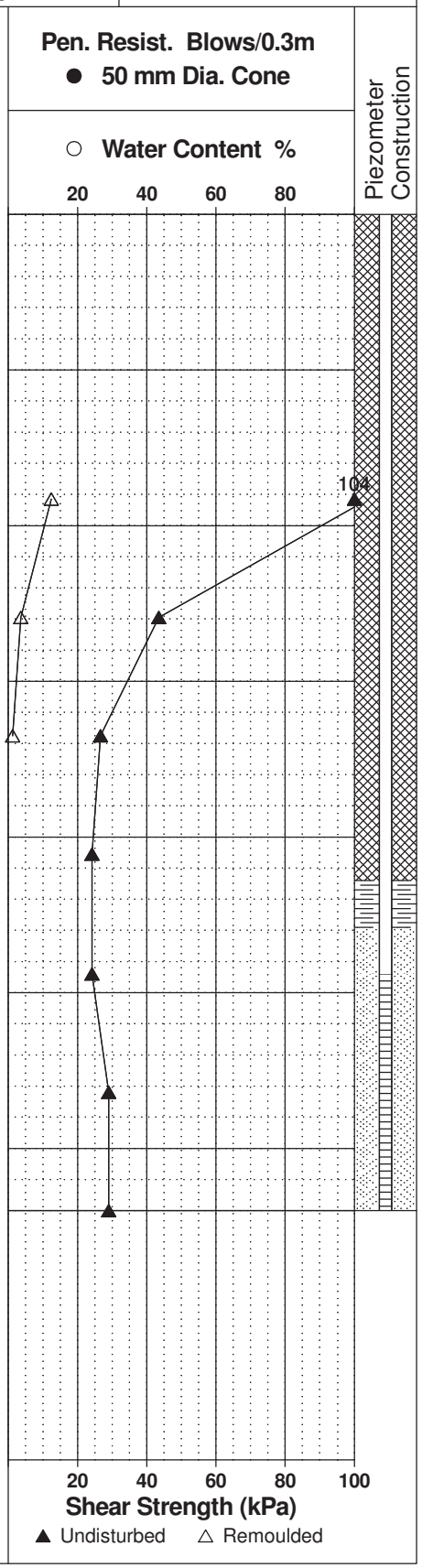
FILE NO. PG4049

REMARKS

HOLE NO. BH 6-18

BORINGS BY CME 55 Power Auger **DATE** February 21, 2018

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	86.36
TOPSOIL 0.25		AU	1				
		SS	2	88	4	1	85.36
Very stiff to stiff, brown **SILTY CLAY,** trace sand						2	84.36
- firm and grey by 2.3m depth		SS	3	100	P	3	83.36
						4	82.36
						5	81.36
						6	80.36
6.40 End of Borehole							



patersongroup Consulting Engineers

154 Colonnade Road South, Ottawa, Ontario K2E 7J5

SOIL PROFILE AND TEST DATA

Geotechnical Residential
Residential Development - Summerside West Ph. 4 & 5
Tenth Line Road, Ottawa, Ontario

DATUM Ground surface elevations provided by J.D. Barnes Limited.

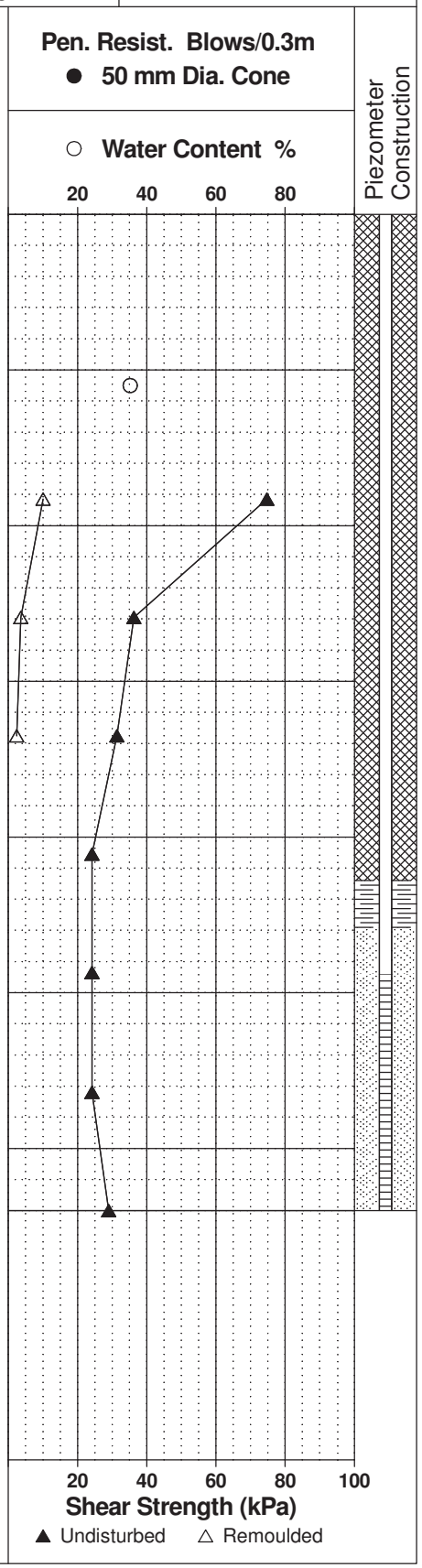
FILE NO. PG4049

REMARKS

HOLE NO. BH 8-18

BORINGS BY CME 55 Power Auger **DATE** February 21, 2018

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	86.42
TOPSOIL							
0.30		AU	1				
		SS	2	79	5	1	85.42
Very stiff to stiff, brown **SILTY CLAY,** trace sand						2	84.42
- firm and grey by 2.3m depth						3	83.42
						4	82.42
		SS	3	100	P	5	81.42
						6	80.42
6.40							
End of Borehole							



SYMBOLS AND TERMS

SOIL DESCRIPTION

Behavioural properties, such as structure and strength, take precedence over particle gradation in describing soils. Terminology describing soil structure are as follows:

Desiccated	-	having visible signs of weathering by oxidation of clay minerals, shrinkage cracks, etc.
Fissured	-	having cracks, and hence a blocky structure.
Varved	-	composed of regular alternating layers of silt and clay.
Stratified	-	composed of alternating layers of different soil types, e.g. silt and sand or silt and clay.
Well-Graded	-	Having wide range in grain sizes and substantial amounts of all intermediate particle sizes (see Grain Size Distribution).
Uniformly-Graded	-	Predominantly of one grain size (see Grain Size Distribution).

The standard terminology to describe the strength of cohesionless soils is the relative density, usually inferred from the results of the Standard Penetration Test (SPT) 'N' value. The SPT N value is the number of blows of a 63.5 kg hammer, falling 760 mm, required to drive a 51 mm O.D. split spoon sampler 300 mm into the soil after an initial penetration of 150 mm.

Relative Density	'N' Value	Relative Density %
Very Loose	<4	<15
Loose	4-10	15-35
Compact	10-30	35-65
Dense	30-50	65-85
Very Dense	>50	>85

The standard terminology to describe the strength of cohesive soils is the consistency, which is based on the undisturbed undrained shear strength as measured by the in situ or laboratory vane tests, penetrometer tests, unconfined compression tests, or occasionally by Standard Penetration Tests.

Consistency	Undrained Shear Strength (kPa)	'N' Value
Very Soft	<12	<2
Soft	12-25	2-4
Firm	25-50	4-8
Stiff	50-100	8-15
Very Stiff	100-200	15-30
Hard	>200	>30

SYMBOLS AND TERMS (continued)

SOIL DESCRIPTION (continued)

Cohesive soils can also be classified according to their “sensitivity”. The sensitivity is the ratio between the undisturbed undrained shear strength and the remoulded undrained shear strength of the soil.

Terminology used for describing soil strata based upon texture, or the proportion of individual particle sizes present is provided on the Textural Soil Classification Chart at the end of this information package.

ROCK DESCRIPTION

The structural description of the bedrock mass is based on the Rock Quality Designation (RQD).

The RQD classification is based on a modified core recovery percentage in which all pieces of sound core over 100 mm long are counted as recovery. The smaller pieces are considered to be a result of closely-spaced discontinuities (resulting from shearing, jointing, faulting, or weathering) in the rock mass and are not counted. RQD is ideally determined from NXL size core. However, it can be used on smaller core sizes, such as BX, if the bulk of the fractures caused by drilling stresses (called “mechanical breaks”) are easily distinguishable from the normal in situ fractures.

RQD %	ROCK QUALITY
90-100	Excellent, intact, very sound
75-90	Good, massive, moderately jointed or sound
50-75	Fair, blocky and seamy, fractured
25-50	Poor, shattered and very seamy or blocky, severely fractured
0-25	Very poor, crushed, very severely fractured

SAMPLE TYPES

SS	-	Split spoon sample (obtained in conjunction with the performing of the Standard Penetration Test (SPT))
TW	-	Thin wall tube or Shelby tube
PS	-	Piston sample
AU	-	Auger sample or bulk sample
WS	-	Wash sample
RC	-	Rock core sample (Core bit size AXT, BXL, etc.). Rock core samples are obtained with the use of standard diamond drilling bits.

SYMBOLS AND TERMS (continued)

GRAIN SIZE DISTRIBUTION

MC%	-	Natural moisture content or water content of sample, %
LL	-	Liquid Limit, % (water content above which soil behaves as a liquid)
PL	-	Plastic limit, % (water content above which soil behaves plastically)
PI	-	Plasticity index, % (difference between LL and PL)
Dxx	-	Grain size which xx% of the soil, by weight, is of finer grain sizes These grain size descriptions are not used below 0.075 mm grain size
D10	-	Grain size at which 10% of the soil is finer (effective grain size)
D60	-	Grain size at which 60% of the soil is finer
Cc	-	Concavity coefficient = $(D30)^2$ / (D10 x D60)
Cu	-	Uniformity coefficient = D60 / D10

Cc and Cu are used to assess the grading of sands and gravels:
Well-graded gravels have: $1 < Cc < 3$ and $Cu > 4$
Well-graded sands have: $1 < Cc < 3$ and $Cu > 6$
Sands and gravels not meeting the above requirements are poorly-graded or uniformly-graded.
Cc and Cu are not applicable for the description of soils with more than 10% silt and clay
(more than 10% finer than 0.075 mm or the #200 sieve)

CONSOLIDATION TEST

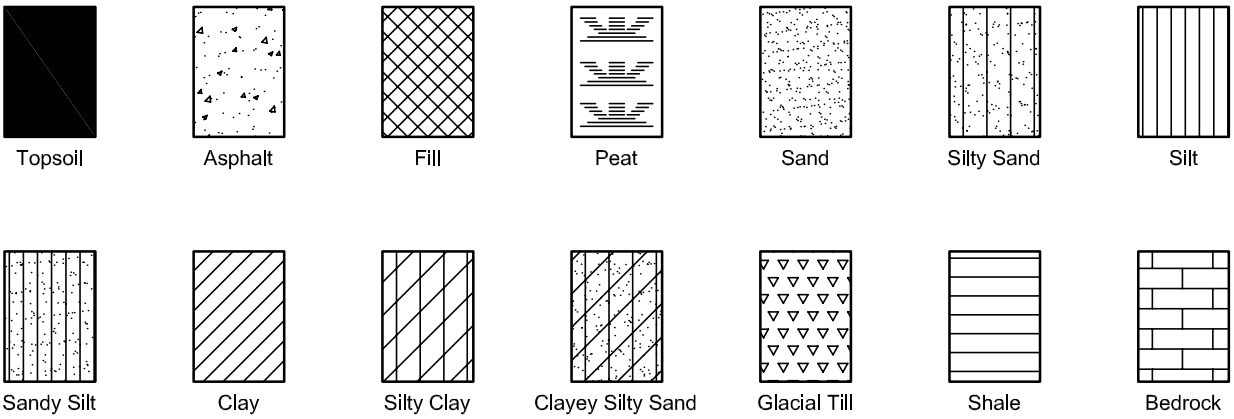
p'_o	-	Present effective overburden pressure at sample depth
p'_c	-	Preconsolidation pressure of (maximum past pressure on) sample
Ccr	-	Recompression index (in effect at pressures below p'_c)
Cc	-	Compression index (in effect at pressures above p'_c)
OC Ratio		Overconsolidaton ratio = p'_c / p'_o
Void Ratio		Initial sample void ratio = volume of voids / volume of solids
Wo	-	Initial water content (at start of consolidation test)

PERMEABILITY TEST

k	-	Coefficient of permeability or hydraulic conductivity is a measure of the ability of water to flow through the sample. The value of k is measured at a specified unit weight for (remoulded) cohesionless soil samples, because its value will vary with the unit weight or density of the sample during the test.

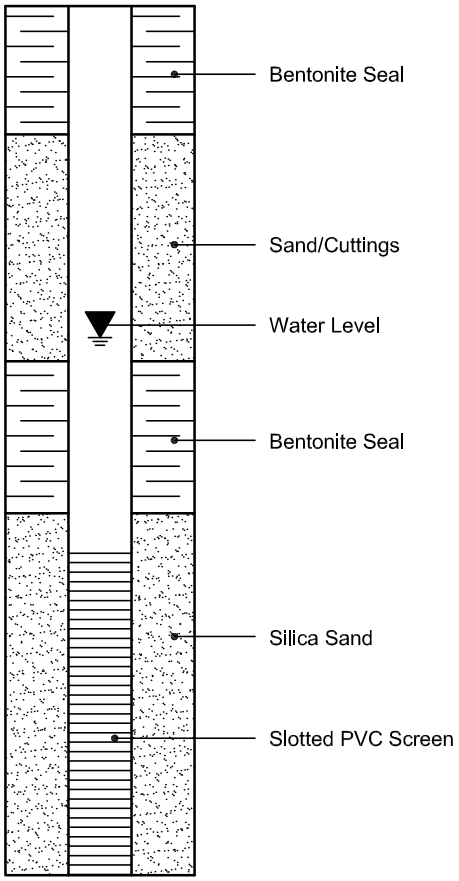
SYMBOLS AND TERMS (continued)

STRATA PLOT

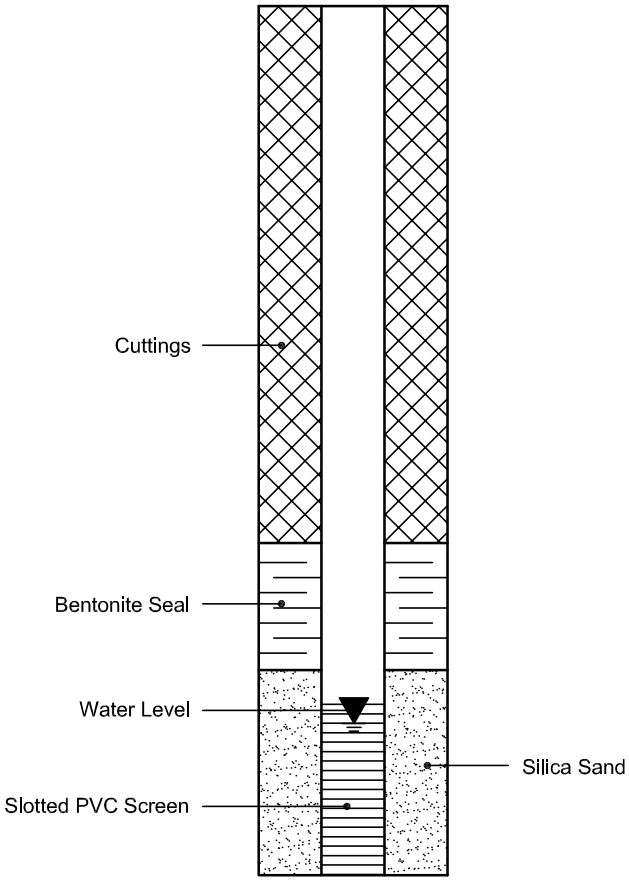


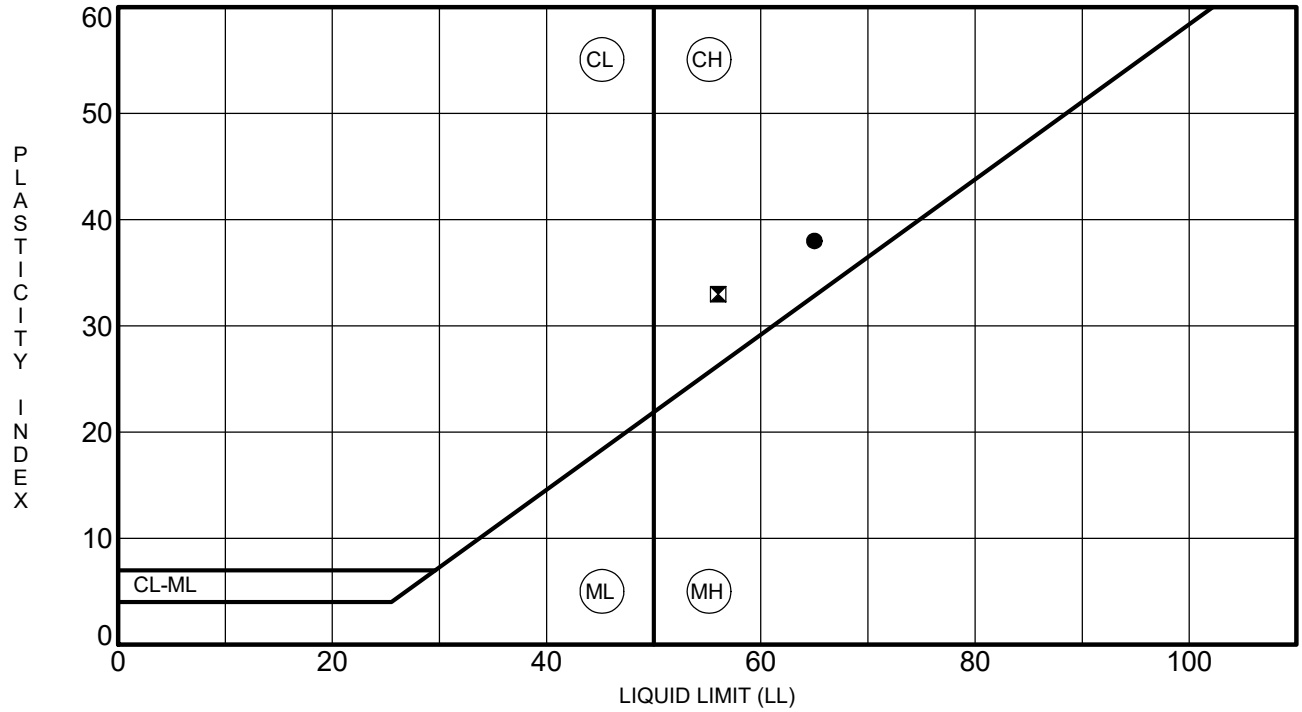
MONITORING WELL AND PIEZOMETER CONSTRUCTION

MONITORING WELL CONSTRUCTION



PIEZOMETER CONSTRUCTION





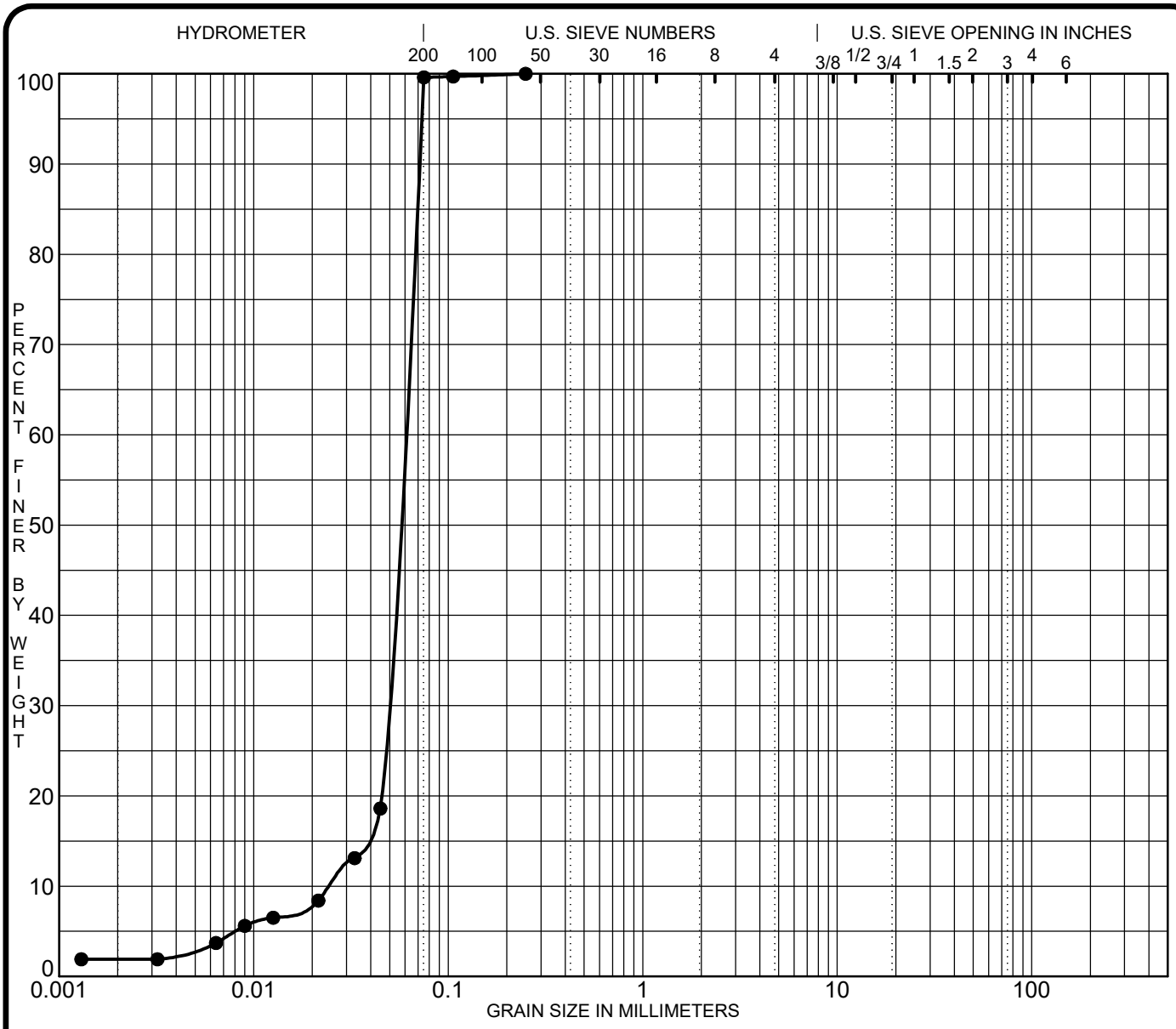
	Specimen Identification		LL	PL	PI	Fines	Classification
●	**BH 1-25**	**SS3**	**65**	**27**	**38**		**CH - Inorganic clays of high plasticity**
⊠	**BH 2-25**	**SS3**	**56**	**23**	**33**		**CH - Inorganic clays of high plasticity**

CLIENT **Ottawa Catholic School Board** FILE NO. **PG7671**

PROJECT **Geotechnical Investigation - Proposed Elementary School - Jerome Jodoin Drive and Future Street 10** DATE **16 Sep 25**

PATERSON GROUP
9 Auriga Drive
Ottawa, Ontario
K2E 7T9
TEL: (613) 226-7381

ATTERBERG LIMITS' RESULTS



CLAY	SILT	SAND			GRAVEL		COBBLES
		fine	medium	coarse	fine	coarse	

	Specimen Identification	Classification	MC%	LL	PL	PI	Cc	Cu
●	**BH 2-25 SS3**		**64.5**				**1.60**	**2.3**
⊠								
▲								
★								

	Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**BH 2-25 SS3**	**0.25**	**0.06**	**0.048**	**0.0249**	**0.0**	**0.4**	**97.6**	**2.0**
⊠									
▲									
★									

CLIENT **Ottawa Catholic School Board**

PROJECT **Geotechnical Investigation - Proposed Elementary School - Jerome Jodoin Drive and Future Street 10**

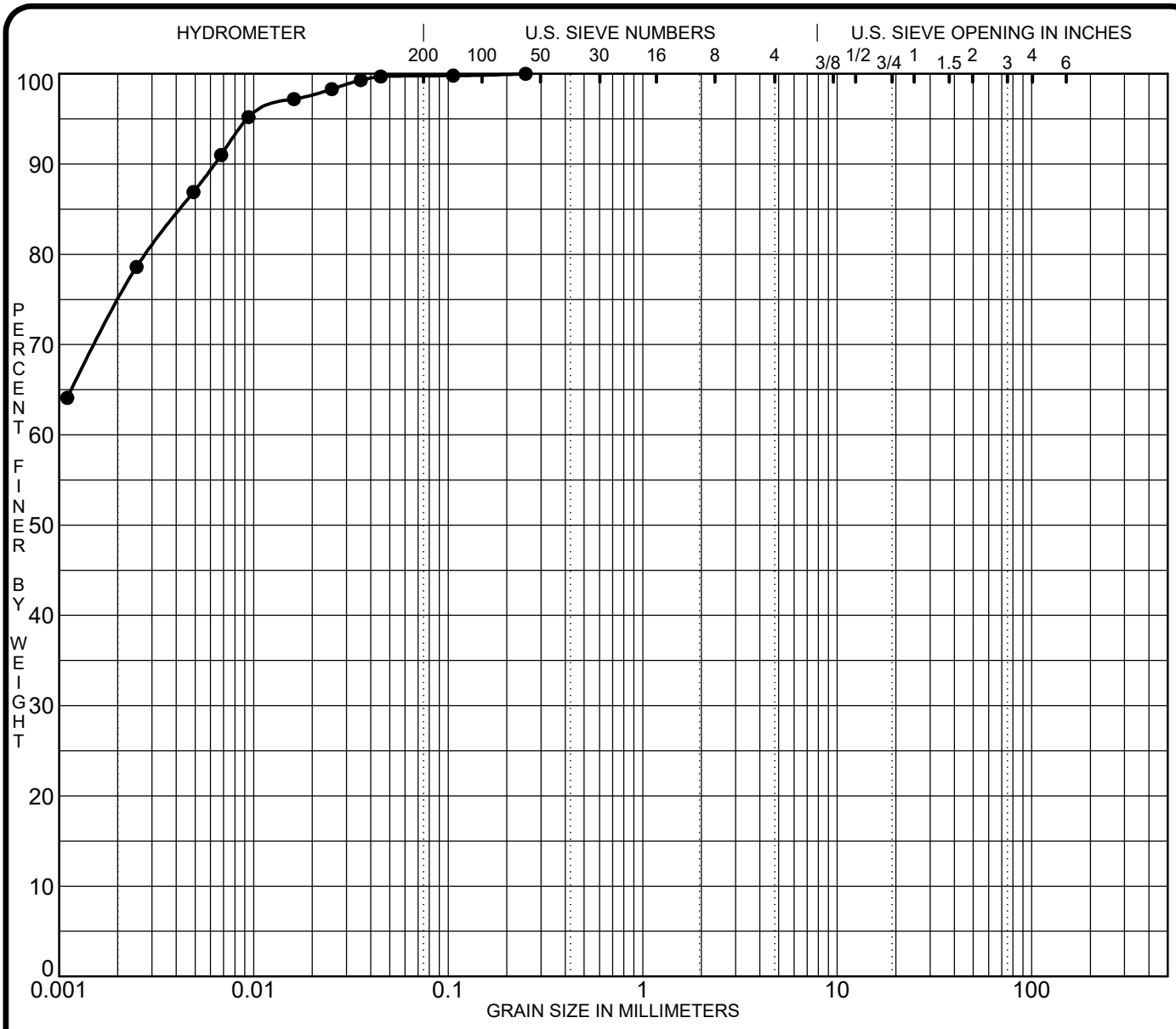
FILE NO. **PG7671**

DATE **16 Sep 25**

PATERSON GROUP

9 Auriga Drive
Ottawa, Ontario
K2E 7T9
TEL: (613) 226-7381

GRAIN SIZE DISTRIBUTION



CLAY	SILT	SAND			GRAVEL		COBBLES
		fine	medium	coarse	fine	coarse	

	Specimen Identification	Classification	MC%	LL	PL	PI	Cc	Cu
●	**BH 6-18 SS2**		**28.2**					
⊠								
▲								
★								

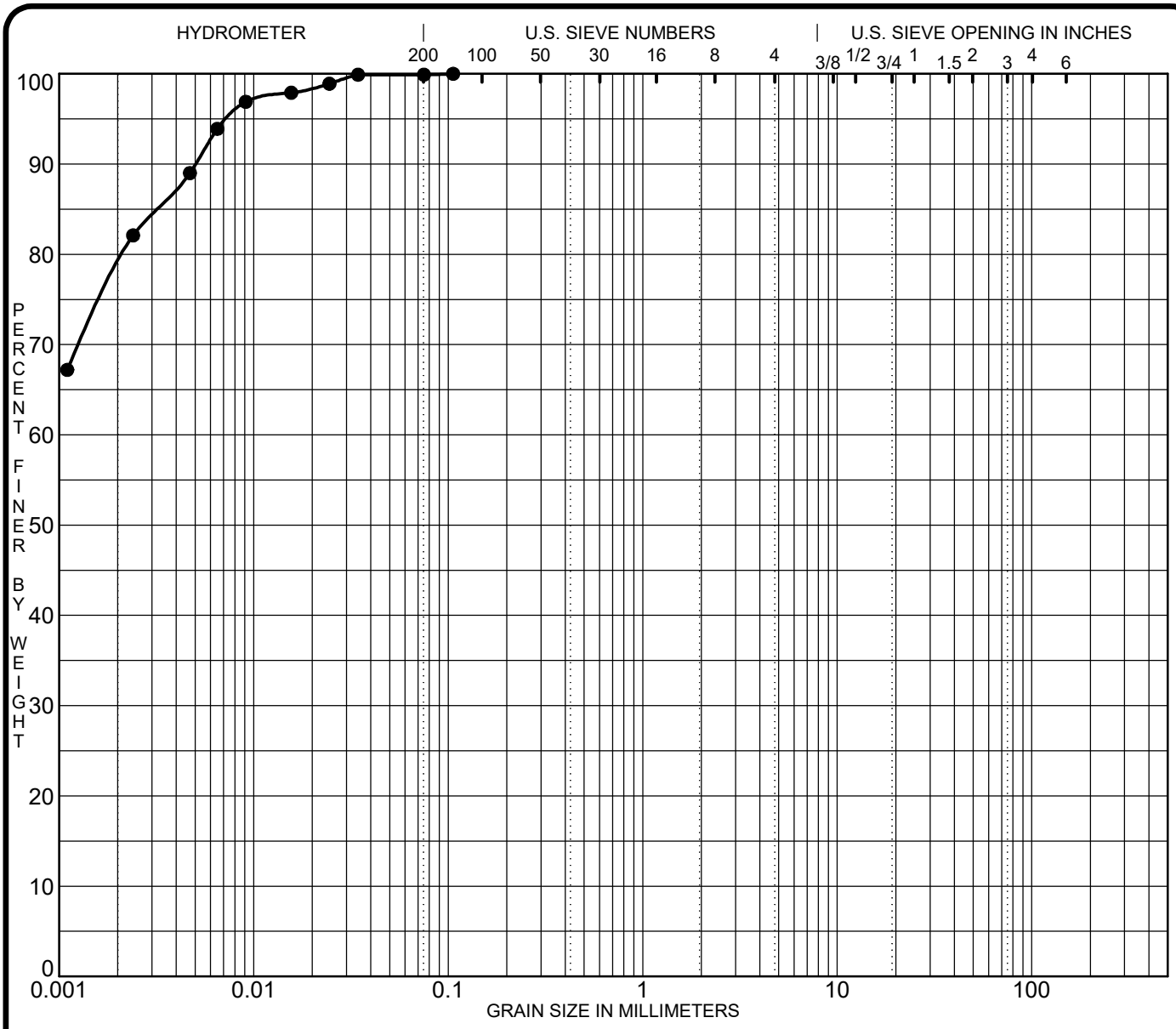
	Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**BH 6-18 SS2**	**0.25**				**0.0**	**0.3**	**25.2**	**74.5**
⊠									
▲									
★									

CLIENT **2447591 Ontario Inc.** FILE NO. **PG4049**

PROJECT **Geotechnical Investigation - Restidential Development - Sumerside South Phases 1, 2 and 3** DATE **19 Mar 18**

PATERSON GROUP
9 Auriga Drive
Ottawa, Ontario
K2E 7T9
TEL: (613) 226-7381

GRAIN SIZE DISTRIBUTION



CLAY	SILT	SAND			GRAVEL		COBBLES
		fine	medium	coarse	fine	coarse	

	Specimen Identification	Classification	MC%	LL	PL	PI	Cc	Cu
●	**BH 8-18 SS3**		**45.4**					
⊠								
▲								
★								

	Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**BH 8-18 SS3**	**0.11**				**0.0**	**0.1**	**20.9**	**79.0**
⊠									
▲									
★									

CLIENT **2447591 Ontario Inc.** FILE NO. **PG4049**

PROJECT **Geotechnical Investigation - Restidential Development - Sumerside South Phases 1, 2 and 3** DATE **19 Mar 18**

PATERSON GROUP
9 Auriga Drive
Ottawa, Ontario
K2E 7T9
TEL: (613) 226-7381

GRAIN SIZE DISTRIBUTION

Certificate of Analysis

Report Date: 15-Sep-2025

Client: **Paterson Group Consulting Engineers (Ottawa)**

Order Date: 9-Sep-2025

Client PO: 63989

Project Description: PG7671

	Client ID:	BH8-25, SS3	-	-	-		
	Sample Date:	05-Sep-25 00:00	-	-	-	-	-
	Sample ID:	2537215-01	-	-	-		
	Matrix:	Soil	-	-	-		
	MDL/Units						
Physical Characteristics							
% Solids	0.1 % by Wt.	70.6	-	-	-	-	-
General Inorganics							
pH	0.05 pH Units	7.78	-	-	-	-	-
Resistivity	0.1 Ohm.m	7.6	-	-	-	-	-
Anions							
Chloride	10 ug/g	584	-	-	-	-	-
Sulphate	10 ug/g	119	-	-	-	-	-

APPENDIX 2

FIGURE 1 - KEY PLAN

FIGURES 2 & 3 - SEISMIC SHEAR WAVE VELOCITY PROFILES

DRAWING PG7671-1 - TEST HOLE LOCATION PLAN

DRAWING PG7671-2 - TREE PLANTING SETBACK RECOMMENDATIONS

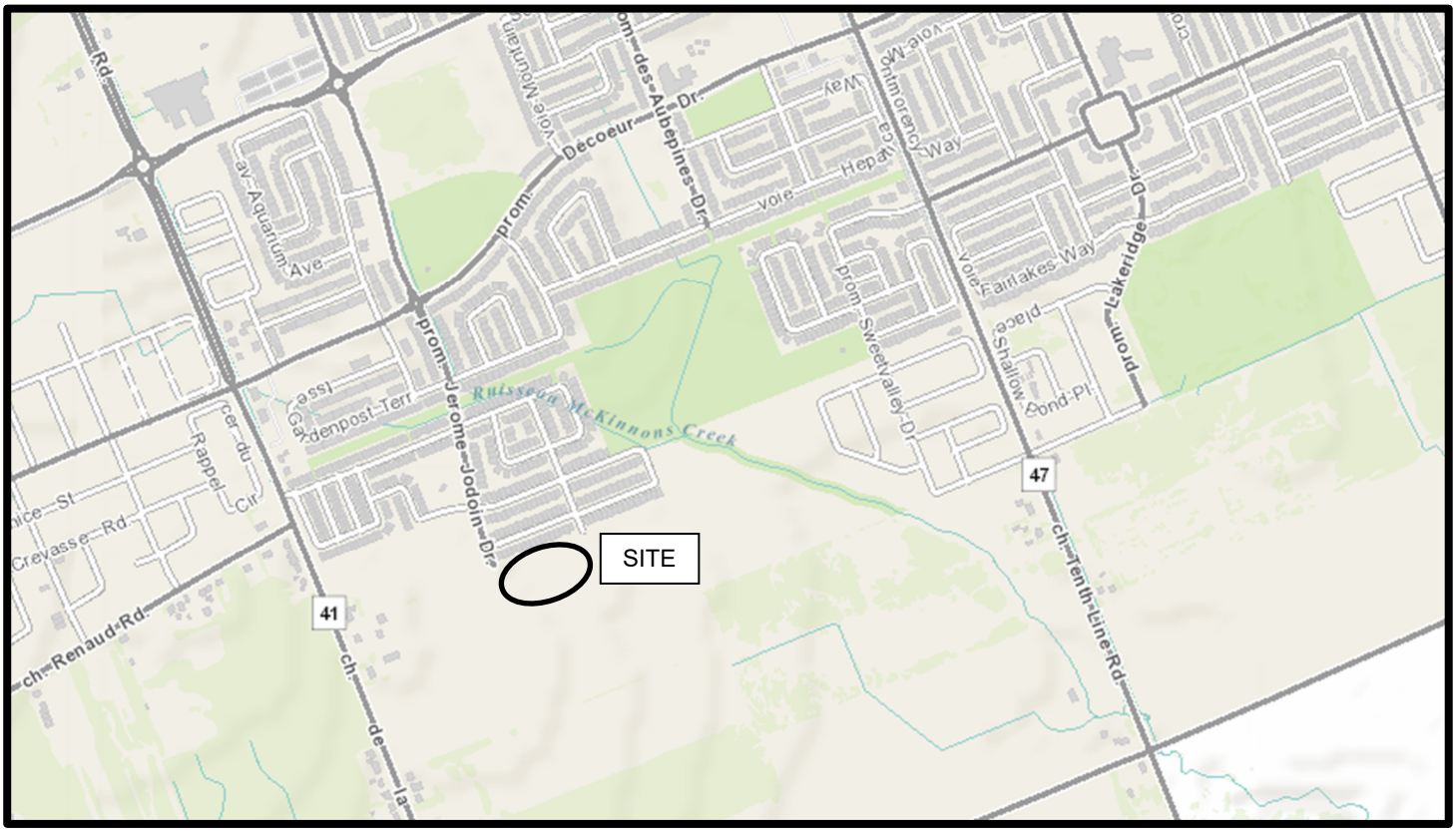


FIGURE 1

KEY PLAN

PATERSON GROUP

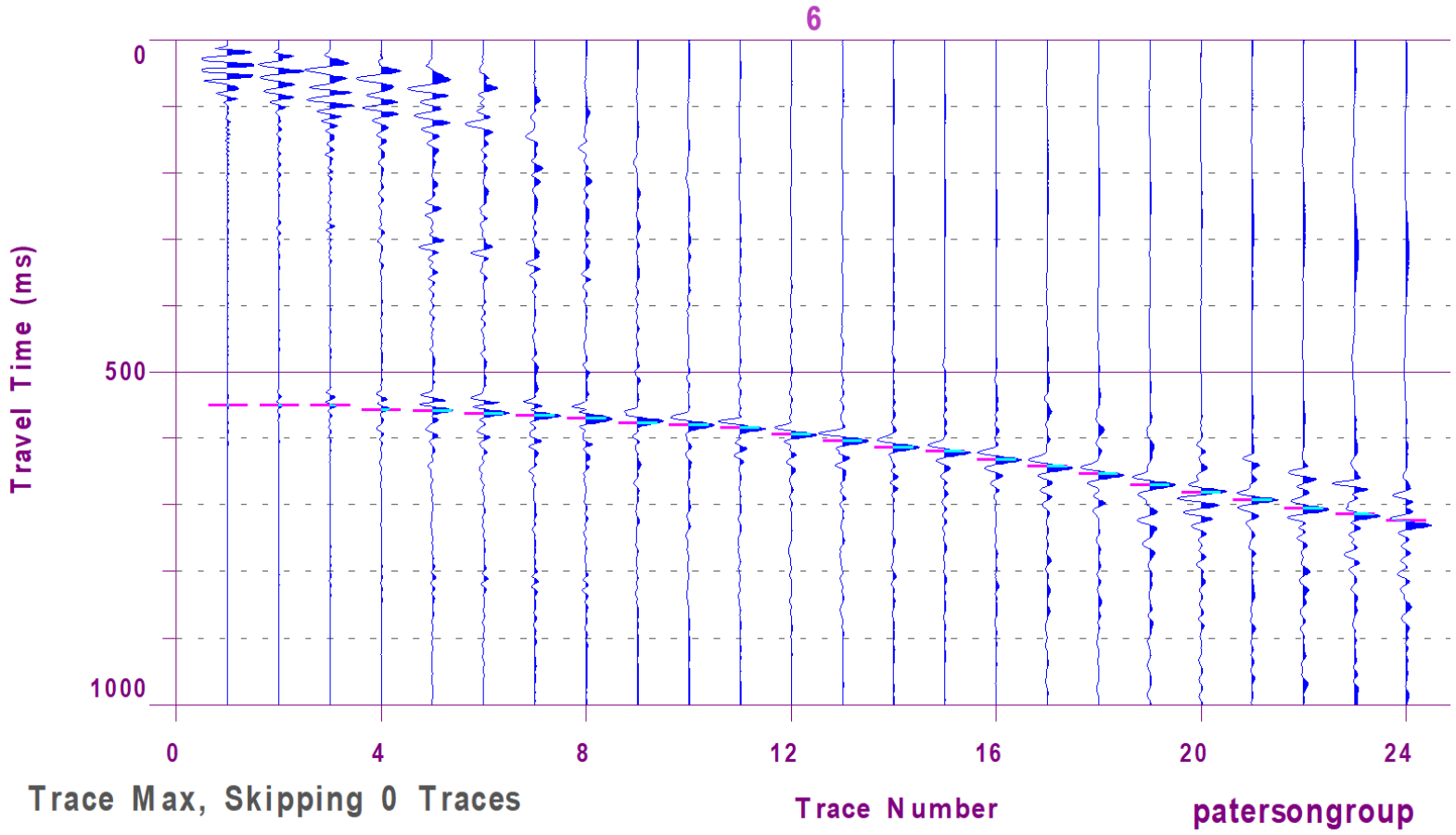
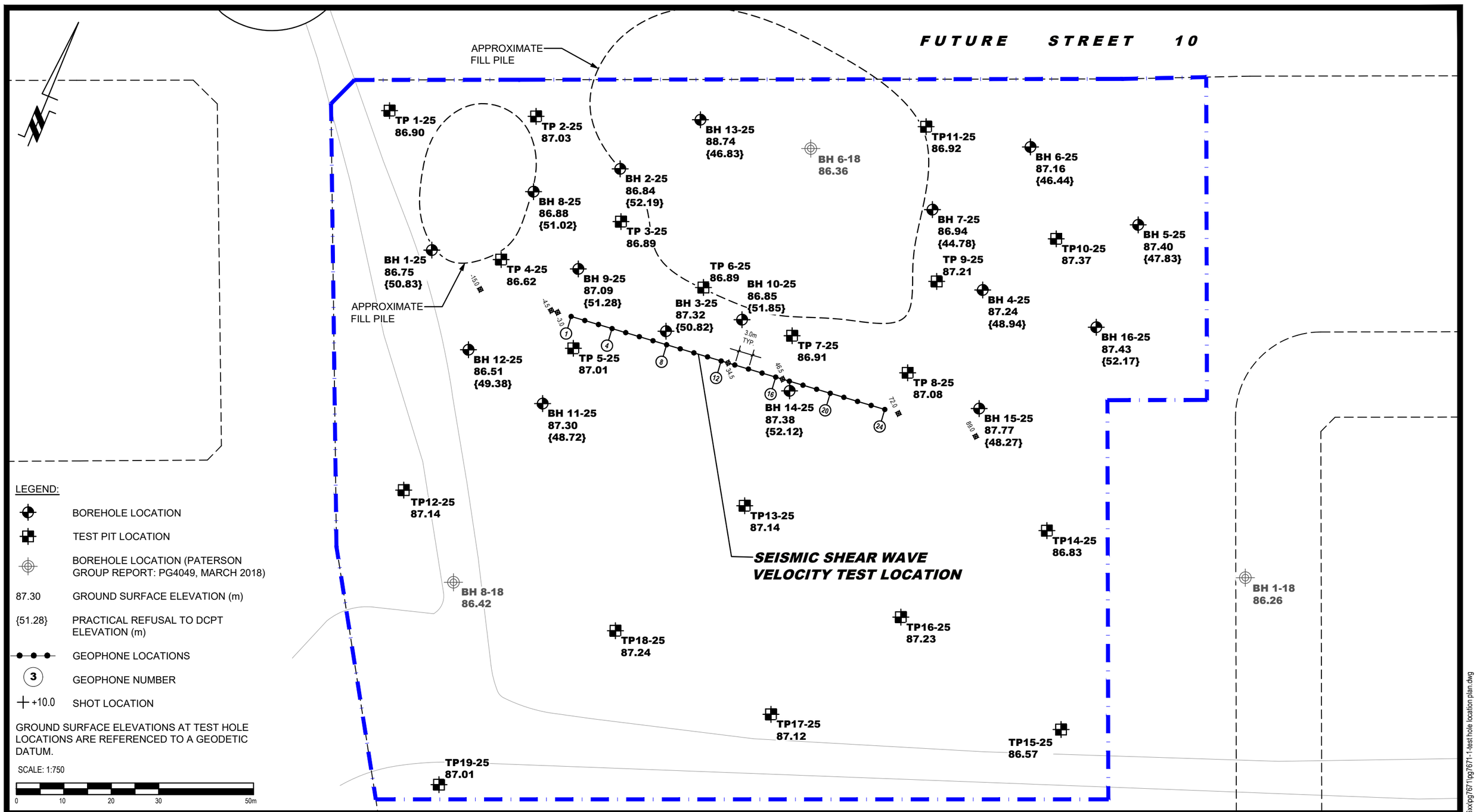


Figure 2 - Shear Wave Velocity Profile at Shot Location -3 m

Figure 3 - Shear Wave Velocity Profile at Shot Location 34.5 m



LEGEND:

- BOREHOLE LOCATION
- TEST PIT LOCATION
- BOREHOLE LOCATION (PATERSON GROUP REPORT: PG4049, MARCH 2018)
- 87.30 GROUND SURFACE ELEVATION (m)
- {51.28} PRACTICAL REFUSAL TO DCPT ELEVATION (m)
- GEOPHONE LOCATIONS
- (3) GEOPHONE NUMBER
- +10.0 SHOT LOCATION

GROUND SURFACE ELEVATIONS AT TEST HOLE LOCATIONS ARE REFERENCED TO A GEODETIC DATUM.

SCALE: 1:750

0 10 20 30 50m

PATERSON GROUP
9 AURIGA DRIVE
OTTAWA, ON
K2E 7T9
TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

OTTAWA CATHOLIC SCHOOL BOARD
GEOTECHNICAL INVESTIGATION
PROPOSED ELEMENTARY SCHOOL
JEROME JODOIN DRIVE AND FUTURE STREET 10
OTTAWA, ONTARIO

Title:

TEST HOLE LOCATION PLAN

Scale: 1:750	Date: 09/2025
Drawn by: ZS	Report No.: PG7671-1
Checked by: FC	Dwg. No.: PG7671-1
Approved by: DP	Revision No.:

11x17

p:\autocad drawings\geotechnical\pg7\6xx\pg7671\pg7671-1-test hole location plan.dwg

FUTURE STREET 10

FUTURE JEROME JODOIN DRIVE

APPROXIMATE FILL PILE

APPROXIMATE FILL PILE

TP 1-25
86.90

TP 2-25
87.03

BH 13-25
88.74
{46.83}

BH 6-18
86.36

TP11-25
86.92

BH 6-25
87.16
{46.44}

BH 2-25
86.84
{52.19}

BH 8-25
86.88
{51.02}

TP 3-25
86.89

BH 7-25
86.94
{44.78}

TP10-25
87.37

BH 5-25
87.40
{47.83}

BH 1-25
86.75
{50.83}

TP 4-25
86.62

BH 9-25
87.09
{51.28}

TP 6-25
86.89

TP 9-25
87.21

BH 10-25
86.85
{51.85}

BH 4-25
87.24
{48.94}

BH 3-25
87.32
{50.82}

TP 7-25
86.91

BH 16-25
87.43
{52.17}

BH 12-25
86.51
{49.38}

TP 5-25
87.01

TP 8-25
87.08

BH 14-25
87.38
{52.12}

BH 11-25
87.30
{48.72}

BH 15-25
87.77
{48.27}

TP12-25
87.14

TP13-25
87.14

TP14-25
86.83

BH 8-18
86.42

BH 1-18
86.26

TP18-25
87.24

TP16-25
87.23

TP17-25
87.12

TP15-25
86.57

TP19-25
87.01

TREE PLANTING SETBACK:

LOW TO MEDIUM SENSITIVITY AREA

HIGH SENSITIVITY AREA

LEGEND:

BOREHOLE LOCATION

TEST PIT LOCATION

BOREHOLE LOCATION (PATERSON GROUP REPORT: PG4049, MARCH 2018)

87.30 GROUND SURFACE ELEVATION (m)

{51.28} PRACTICAL REFUSAL TO DCPT ELEVATION (m)

GROUND SURFACE ELEVATIONS AT TEST HOLE LOCATIONS ARE REFERENCED TO A GEODETIC DATUM.

SCALE: 1:750

0 10 20 30 50m

PATERSON GROUP
9 AURIGA DRIVE
OTTAWA, ON
K2E 7T9
TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

OTTAWA CATHOLIC SCHOOL BOARD
GEOTECHNICAL INVESTIGATION
PROPOSED ELEMENTARY SCHOOL
JEROME JODOIN DRIVE AND FUTURE STREET 10
OTTAWA, ONTARIO

Title:

TREE PLANTING SETBACK PLAN

Scale: 1:750	Date: 09/2025
Drawn by: ZS	Report No.: PG7671-1
Checked by: FC	Dwg. No.: PG7671-2
Approved by: DP	Revision No.:

11x17

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