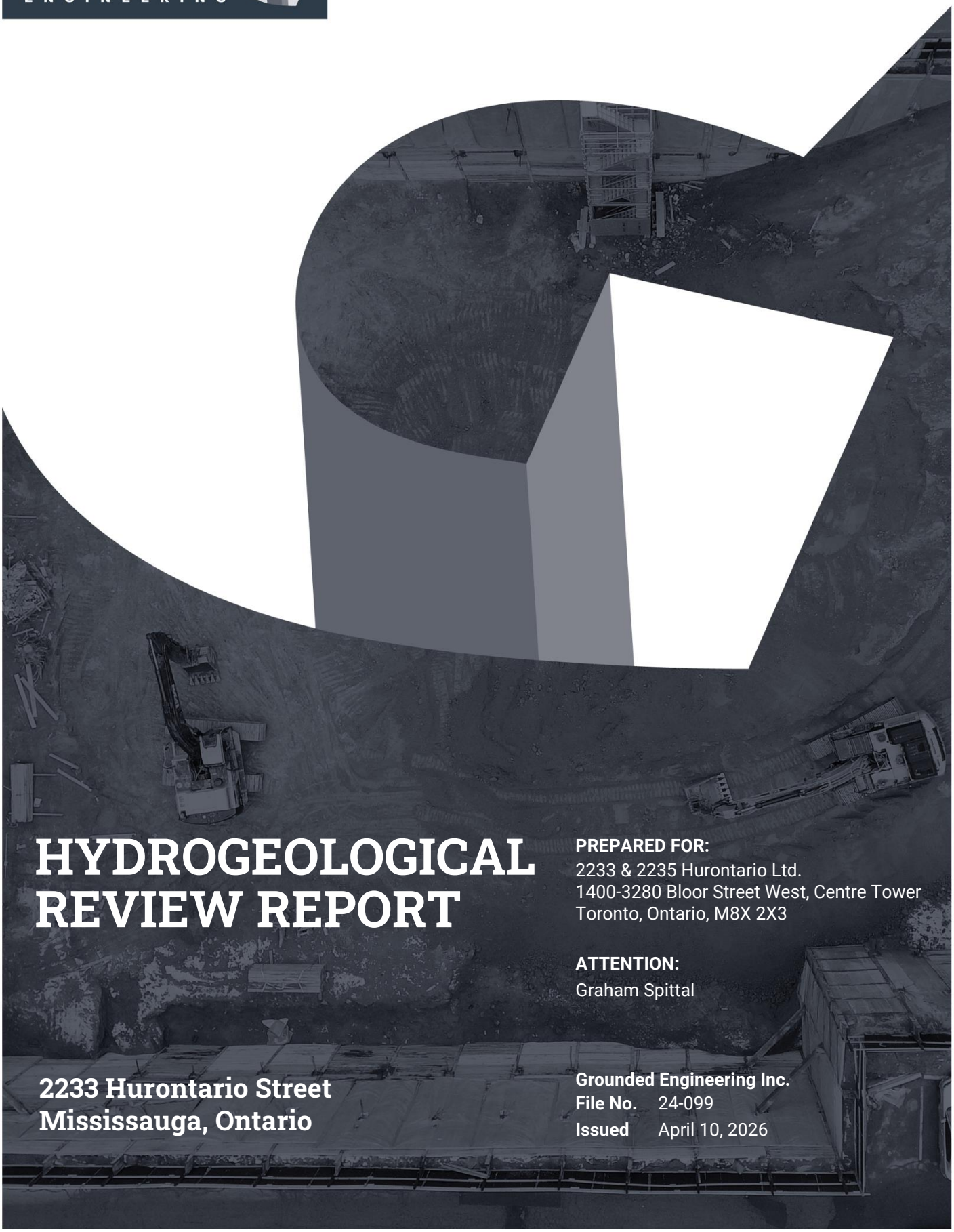
GROUNDED ENGINEERING



HYDROGEOLOGICAL REVIEW REPORT

PREPARED FOR:
2233 & 2235 Hurontario Ltd.
1400-3280 Bloor Street West, Centre Tower
Toronto, Ontario, M8X 2X3

ATTENTION:
Graham Spittal

2233 Hurontario Street
Mississauga, Ontario

Grounded Engineering Inc.
File No. 24-099
Issued April 10, 2026

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APPENDICES

Appendix A – Abbreviations and Terminology; Borehole Logs; Rock Core Logs; Rock Core Photographs
Appendix B – Aquifer Response Tests
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1 Introduction

2233 & 2235 Hurontario Ltd. has retained Grounded Engineering Inc. to provide hydrogeological engineering design advice for their proposed development at 2233 Hurontario Street, in Mississauga, Ontario.

The subject site is occupied by two (2) existing apartment buildings (13- and 12-storeys) and a 1-storey commercial building; the existing structures are resting on a single below-grade level consisting of basements (below the respective buildings) and underground parking across the site. The site is also surfaced with landscaped and asphalt parking areas. The proposed project includes demolishing the 1-storey building and constructing two (2) new infilled 35-storey residential towers extending from a low-rise podium structure. The new structures will rest on three levels of underground parking (P3), with a typical finished floor elevation (FFE) of 94.7± m.

Grounded has been provided with the following documents to assist in our geotechnical scope of work:

- Architectural Drawings, "2233 Hurontario Street"; dated April 1, 2026, prepared by BDP Quadrangle.
- Site Survey, “Part of Lot 15, Concession 1 South of Dundas Street”; dated July 29, 2024, prepared by J.D. Barnes Ltd.

Property Information	
Location of Site	2233 Hurontario Street, Mississauga, Ontario, L5A 2E9
Ownership of Site	2233 & 2235 Hurontario Ltd.
Site Dimensions (m)	171.5 x 130.0 ± m (irregular shape, see appendices)
Site Area (m^2)	22,000± m^2 (2.2 ha)

Existing Development	
Number of Building Structures	Three (3) (two residential towers and one commercial building)
Number of Above Grade Levels	12 – 13 (residential) 1 (commercial)
Number of Underground Levels	One (P1)
Sub-Grade Depth of Development (m)	4.5 m
Sub-Grade Area (m^2)	7,750
Land Use Classification	Mixed use

Proposed Development	
Number of Building Structures	Two (2)
Number of Underground Levels	35
Lowest Finished Floor Elevation (FFE)	Elev. 94.7 masl
Approx. Base of Foundations*	Elev. 93.7 masl
Sub-Grade Area (m^2)	5,515 m^2 (0.5515 ha)
Land Use Classification	Residential

* Assumed: spread footings

Hydrogeological Review Information	
Reviewer	Nick Ng, P.Eng.
Consulting Firm	Grounded Engineering Inc.
Date of Hydrogeological Review	April 10, 2026
Scope of Work	▪ Review of MECP Water Well Records for the area ▪ Review of geological information for the area ▪ Review of topographic information for the area ▪ Advancement of 5 boreholes to a maximum depth of 15.7 m, which were instrumented with five (5) monitoring wells. ▪ The level of study presented in this report is consistent with the requirements for a Zoning Bylaw Amendment or Site Plan Control application. ▪ Completion of slug tests in select available monitoring wells ▪ Ongoing groundwater elevation monitoring for three (3) months on a monthly basis ▪ Groundwater sampling and analysis to the City of Mississauga/Region of Peel Sewer Use Limits ▪ Assessment of groundwater controls and potential impacts ▪ Report preparation in accordance with Ontario Water Resources Act, Ontario Regulation 387/04

General Hydrogeological Characterization	
Site Topography	The site has an approximate ground surface elevation of 105.0± masl.
Local Physiographic Features	The site is composed of sands overlying glacial till and shallow bedrock of the Georgian Bay formation. It is located in the physiographic landform known as the Sand Plains.
Regional Physiographic Features	This site is located in the physiographic region known as the Iroquois Plain. The Iroquois Plain is an area over 310 km long and a few hundred meters to 13 km wide, extending around the western part of Lake Ontario from the Niagara River to the Trent River. The Iroquois Plain extends inland to also include a large portion of the Trent River Valley

General Hydrogeological Characterization	
Watershed	The site is located within the Lake Ontario Waterfront Watershed. Locally, groundwater is anticipated to flow West towards Cooksville Creek, which drains into Lake Ontario.
Surface Drainage	Surface water is expected to flow towards municipal catch basins located on or adjacent to the site, via Hurontario Street to the East.

2 Study Area Map

A map has been enclosed which shows the following information:

- All monitoring wells identified on site, and within the study area
- All boreholes identified on site
- All buildings identified on site and within the study area
- The site boundaries
- Any watercourses and drainage features within the study area

3 Geology and Physical Hydrogeology

The site stratigraphy, including soil materials, composition and texture are presented in detail on the borehole logs in Appendix A. A summary of stratigraphic units that were encountered at the site, as relevant to the current hydrogeological study, is as follows:

Site Stratigraphy

Stratum/Formation	Depth Range (mbgs)	Elevation Range (masl)	Hydraulic Conductivity (m/s)	Method of Determination
Fill	0.0 – 2.5	105.0 – 102.5	1.0×10^{-4}	literature[1]
Sands	2.5 – 4.5	102.5 – 100.5	1.5×10^{-5}	grain size
Glacial Till	4.5 – 11.0	100.5 – 94.0	1.1×10^{-7}	slug test
Bedrock	Below 11.0	Below 94.0	4.0×10^{-7}	slug test

*Sound bedrock observed at approximately 0.5 to 1.0 m below top of rock

**Ratio of horizontal (K2) to vertical (K1) flow: K2/K1 = 1.0 (weathered bedrock); K2/K1 = 0.1 (sound bedrock)

[1] Freeze and Cherry (1979)

Surface Water			
Surface Water Body	**Distance from site (m)**	**Direction from site**	**Hydraulically Connected to Site (yes/no)**
Cooksville Creek	On-site	North property edge	Yes

4 Groundwater Elevations

4.1 Monitoring Well Information

Well ID	Well Diameter (mm)	Ground Surface (masl)	Top of Screen (masl)	Bottom of Screen (masl)	Screened Geological Unit
BH1	50	105.5	92.9	89.8	Bedrock
BH2	50	105.1	97.5	94.4	Glacial Till
BH3	50	104.8	92.3	89.3	Bedrock
BH201	50	104.7	99.8	96.8	Glacial Till
BH202	50	101.5	98.8	95.7	Glacial Till

4.2 Well Observations

Well ID	Groundwater Elevation (masl)				
	July 4, 2024	**July 12, 2024**	**March 4, 2026**	**April 1, 2026**	**Maximum**
BH1	99.4	99.5	95.0	95.1	**99.5**
BH2	100.7	99.5	95.1	95.0	**100.7**
BH3	99.2	99.3	95.4	95.4	**99.3**
BH201	NA	NA	97.5	97.0	**97.5**
BH202	NA	NA	NA	95.8	**95.8**

For design purposes, the groundwater table is at Elev. 97.5± m in glacial till deposit. This deposit has a very low permeability and will yield only minor seepage in the long term.

There is also water within discrete fractures in the bedrock, and perched stormwater in the earth fill which is infiltrating down towards the groundwater table.

The anticipated groundwater flow direction at this site is to the west towards Cooksville Creek.

Groundwater levels fluctuate with time depending on the amount of precipitation and surface runoff and may be influenced by known or unknown dewatering activities at nearby sites.

5 Aquifer Testing

5.1 Pumping Test

A pumping test was not attempted at the site. Slug tests were conducted and are presented in the section below.

5.2 Single Well Response Test (Slug Test)

The hydraulic conductivities from the monitoring wells were determined based on slug tests (single-well response tests). These tests involve rapid removal of water or addition of a "slug" which displaces a known volume of water from a single well and then monitoring the water level in the well until it recovers. The results of the slug tests were analyzed using the Bouwer and Rice method (1976).

The hydraulic properties of the strata applicable to the site are as follows:

Well ID	Well Screen Elevation (masl)	Screened Geological Unit	Hydraulic Conductivity (m/s)
BH1	92.9 – 89.8	Bedrock	4.0×10^{-7}
BH2	97.5 – 94.4	Glacial Till	1.1×10^{-7}
BH3	92.3 – 89.3	Bedrock	1.3×10^{-7}

Due to ongoing environmental groundwater quality sampling, hydraulic conductivity testing was not completed in the monitoring wells installed at Boreholes 201 and 202. The lower groundwater level measurements and low groundwater recovery observed in these monitoring wells are generally indicative of low-permeability soils.

5.3 Soil Grain Size Distribution

The hydraulic conductivities of various soil types can also be estimated from grain size analyses. An assessment of the grain sizes was conducted using the excel-based tool, HydrogeoSieve XL (*HydrogeoSieve XL ver.2.2, J.F. Devlin, University of Kansas, 2015*). HydrogeoSieve XL compares the results of the grain size analyses against fifteen (15) different analytical methods.

Given our experience in the area as well as published literature, some of the geometric means provided for the soil were biased low by one or more methods. In these instances, the values determined by these methods were excluded from the mean. The table below illustrates the

hydraulic conductivity values estimated from the mean of the analytical methods where the soil met the applicable analysis criteria.

Sample ID	Soil Description	Applicable Analysis Methods	Hydraulic Conductivity (m/s)
BH1 SS5	Silty Sand	Alyamani and Sen, Barr, Sauerbrei, Krumbein and Monk	1.5×10^{-5}
BH1 SS8	Sandy Silt, Clayey Till	Alyamani and Sen, Barr, Sauerbrei	8.7×10^{-9}
BH2 SS10B	Sand and Gravel, Silty Till	Alyamani and Sen, Barr, Sauerbrei, Krumbein and Monk, Kruger	5.0×10^{-7}
BH3 SS5	Sand and Silt	Alyamani and Sen, Barr, Sauerbrei, Krumbein and Monk	2.7×10^{-6}
BH3 SS9	Sand and Silt, Gravelly Till	Alyamani and Sen, Barr, Sauerbrei, Krumbein and Monk	2.6×10^{-7}
BH201 SS5	Silty Sand	Alyamani and Sen, Barr, Sauerbrei, Krumbein and Monk	7.3×10^{-7}
BH201 SS8	Sandy Silt Till, Clayey	Alyamani and Sen, Barr, Sauerbrei	9.6×10^{-9}

The results of the analyses are presented in Appendix D.

5.4 Literature

According to Freeze and Cherry (1979), the typical hydraulic conductivity of the strata investigated at the site are:

Stratum/Formation	Hydraulic Conductivity (m/s)
Earth Fill	10^{-2} to 10^{-6}
Sands	10^{-2} to 10^{-7}
Glacial Tills	10^{-6} to 10^{-12}
Bedrock (Shale)	10^{-6} to 10^{-13}

6 Sump Monitoring

A new basement structure is proposed for the site. The monitoring of the existing sumps (where present) is excluded from the present scope.

7 Water Quality

One (1) unfiltered groundwater sample was collected and analyzed by a Canadian laboratory accredited and licensed by Standards Council of Canada and or Canadian Association for Laboratory Accreditation.

The sample was collected directly from the monitoring well at Borehole 3 on March 9th, 2026.

The sample was analyzed for the following parameters:

- City of Mississauga Sewer Use Bylaw (BL_0046_2022) – Storm Sewer Discharge
- Region of Peel Sewer Use Bylaw (BL_53_2010) – Sanitary Sewer Discharge

The groundwater sample **exceeded** the **Limits for Storm Sewer Discharge** for the following parameters:

- Total Suspended Solids (Limit 15 mg/L, Result 44 mg/L)

The groundwater sample **met** the **Limits for Sanitary and Combined Sewer Discharge** for all parameters analyzed.

A true copy of the analysis report, Certificate of Analysis and a chain of custody record for the sample are enclosed.

8 Proposed Construction Method

For design purposes, the stabilized groundwater table is at Elev. 97.5± m. The groundwater table is present in glacial till deposit. The lowest (P3) FFE is at about Elev. 94.7 m. Bulk and foundation excavations will extend below the design groundwater table.

Shoring design is typically conducted at detailed design and has not yet been conducted at this site. For the purposes of this report, numerical analyses were conducted employing conventional soldier piling and lagging in order to determine a “worst-case scenario” with respect to dewatering

Excavations will generally be made below the groundwater table, in relatively low permeability native soils that preclude the free flow of water into excavations.

Cohesionless wet zones were encountered in several of the boreholes. If these cohesionless zones are penetrated, some seepage from these wet zones should be anticipated. However, these zones are likely of limited extent and are not horizontally continuous layers.

On this basis, seepage into excavations may be allowed to drain into the excavation and then controlled by a conventional sump pump arrangement. Nevertheless, delays in excavation will occur as the seepage is controlled and these delays should be anticipated in the construction schedule.

Dewatering will take some time to accomplish prior to the start of excavation. Stored water within the excavation will need to be considered prior to excavation/dewatering.

The proposed underground structure will be designed as a fully drained structure at this site.

9 Private Water Drainage System (PWDS)

If the proposed development consists of drained foundations, then a private water drainage system will be required. The total sub-floor drain area will be approximately 5515± m^2 based on the drawings which have been provided.

If the development is designed with a private water drainage system, the drainage system is a critical structural element since it keeps water pressure from acting on the basement walls and floor slab. As such, the sump that ensures the performance of this system must have a duplexed pump arrangement for 100% pumping redundancy and these pumps must be on emergency power. The size of the sump should be adequate to accommodate the estimated groundwater seepage. It is anticipated that the groundwater seepage can be controlled with typical, widely available, commercial/residential sump pumps.

10 Groundwater Extraction and Discharge

Numerical analyses were conducted for both short term and long-term dewatering scenarios by finite element modelling using the *Slide2* software package by Rocscience. The Finite Element Model (FEM) for groundwater seepage indicates the short term (construction) and long term (permanent) dewatering requirements as provided below. The finite element model results are appended.

The groundwater seepage estimates provided below represent the steady state groundwater seepage. There will also be an initial drawdown of the groundwater before a steady state condition is reached. The rate of the initial drawdown, and therefore discharge, is dependent on the dewatering contractor and how the groundwater is being dealt with at the site.

An estimated initial volume of stored groundwater has been provided below, which will require removal before steady state is reached. In addition to the stored groundwater, there will also be additional transient groundwater flow during the initial drawdown. Transient flow volumes (and therefore discharge volumes) are a function of the rate of drawdown and will need to be accounted for in the dewatering plan for this site.

If the excavation is exposed to the elements, stormwater will have to be managed. The short-term control of groundwater should consider stormwater management from rainfall events. A dewatering system should be designed to consider the removal of rainfall from excavation. A design storm of 25 mm has been used in the quantity estimates.

As required by Ontario Regulation 63/16, a plan for discharge must consider the conveyance of stormwater from a 100-year storm. The additional volume that will be generated in the occurrence of a 100-year storm event is approximately 519,000 L.

The following design considerations and values have been incorporated into the numerical modelling / dewatering estimates:

- A Factor of Safety of 1.5 was used for all groundwater seepage volume calculations.

The design hydraulic conductivities for the site are:

Design Hydraulic Conductivity	
Stratum/Formation	**K (m/s)**
Earth Fill	1.0×10^{-4}
Sands	1.5×10^{-5}
Glacial Till	1.1×10^{-7}
Bedrock*	4.0×10^{-7}**

*Sound bedrock observed at approximately 0.5 to 1.0 m below top of rock
**Ratio of horizontal (K2) to vertical (K1) flow: K2/K1 = 1.0 (weathered bedrock); K2/K1 = 0.1 (sound bedrock)

Stored Groundwater (pre-excavation/dewatering)					
Volume of Excavation (m^3)	**Volume of Excavation Below Water Table (m^3)**	**Estimated Volume of Stored Groundwater**		**Estimated Volume of Available Groundwater**	
		m^3	**L**	**m^3**	**L**
59,560	18,200	4,500	4,500,000	2,200	2,200,000

The quantity estimates for both short- and long-term conditions are presented below and in the appendices.

Short Term (Construction) Steady State Groundwater Quantity					
Estimated Groundwater Seepage		**Design Rainfall Event (25mm)**		**Estimated Total Daily Water Takings**	
L/day	**L/min**	**L/day**	**L/min**	**L/day**	**L/min**
75,000	52.1	138,000	95.8	213,000	147.9

Long Term (Permanent) Steady State Groundwater Quantity					
Estimated Groundwater Seepage		**Estimated Infiltrated Stormwater – Design Rainfall Event (25mm)**		**Estimated Total Daily Water Takings**	
L/day	**L/min**	**L/day**	**L/min**	**L/day**	**L/min**
85,000	59.0	2,000	1.4	87,000	50.0

Regulatory Requirements	
Environmental Activity and Sector Registry (EASR) Posting	Required
Short Term Permit to Take Water (PTTW)	Not Required*
Long Term Permit to Take Water (PTTW)	Not Required
Short Term Discharge Agreement City of Mississauga/Region of Peel	Required
Long Term Discharge Agreement City of Mississauga/Region of Peel	Required

**Per amendments to O.Reg. 63/16 effective July 1st, 2025, a short term PTTW will not be required for construction dewatering above 400,000 L/day. An EASR will be required.*

The City of Mississauga/Region of Peel will require Discharge Agreements in the short and long terms, if any water is to be discharged to the storm or sanitary sewers.

Please note:

- The proposed pump schedules for short- and long-term dewatering have not been completed. As such, the actual peak discharge rates are not available at the time of writing this report. The pump schedule must be specified by either the dewatering contractor retained or the mechanical consultant.
- On-site containment (infiltration gallery/dry well etc.) has not been considered as part of the proposed development at this time. If this option is considered, additional work will have to be conducted (i.e. infiltration testing).

11 Evaluation of Impact

11.1 Zone of Influence

Localized dewatering of an aquifer produces a cone-shaped depression in the groundwater table that extends some distance away from the dewatering point. The lateral distance which the cone of depression extends (i.e., the distance to where drawdown is effectively zero) is known as the Zone of Influence (ZOI).

The ZOI was calculated using the Sichardt equation below.

$$R_0 = 3000(\Delta H)\sqrt{K}$$

ΔH	=	dewatering thickness (m)
K	=	hydraulic conductivity (m/s)
R_0	=	radius of influence (m)

The ZOI with respect to groundwater seepage at the site is summarized as follows.

Zone of Influence (ZOI)		
	Short Term (Construction), m	**Long Term (Permanent), m**
Pile and Lagging Scenario	5.0	4.0

11.2 Land Stability

The impacts to land stability on adjacent structures due to the proposed short- and long-term dewatering at the site are summarized as follows:

Land Stability		
	Short Term (Construction)	**Long Term (Permanent)**
Dewatering Thickness (m)	4.4	3.3
Increase in Effective Stress (kPa)	44	33
Maximum Theoretical Settlement due to Dewatering (mm)	3 – 5	3 – 5
Public Realm Theoretical Settlement due to Dewatering (mm)	<2	<2

The theoretical maximum induced settlement (estimated) occurs directly adjacent to the proposed excavation and decreases in a nonlinear fashion with distance away from the excavation.

On this basis, the impact of the proposed dewatering on the existing adjacent structures is considered by Grounded to be within acceptable limits.

11.3 City's Sewage Works

Negative impacts to City's sewage works may occur in terms of the quantity or quality of the groundwater discharged. This report provided the estimated quantity of water discharge. However, this report does not speak to the sewer capacities. The sewer capacity analysis is provided by the civil consultant.

The quality of the proposed groundwater discharge is provided in Section 7. As noted in that section, the groundwater sample exceeded the Limits for Storm Sewer Discharge and met the Limits for Sanitary and Combined Sewer Discharge.

As such, treatment will be required before the groundwater can be discharged to the Storm Sewer to avoid impacts to the City's sewage works caused by groundwater quality. Treatment will not be required before the groundwater can be discharged to the Sanitary and Combined Sewer.

11.4 Natural Environment

There are no natural waterbodies within the ZOI that will be affected by the proposed construction dewatering or permanent drainage. Any groundwater which will be taken from the site will be discharged (if required) into the City's sewer systems and not into any natural waterbody. As such, there will be no impact to the natural environment caused by the water takings at the site.

11.5 Local Drinking Water Wells

The site is located within the municipal boundaries of the City of Mississauga. The site and surrounding area are provided with municipal piped water and sewer supply. There is no use of groundwater for water supply in this area of Mississauga. As such, there will be no impact to drinking water wells.

11.6 Contamination Source

The site and immediately surrounding area currently consist mostly of residential and commercial areas. These land uses may to be a source of potential contamination and could an Area of Potential Environmental Concern for the site. As such, the pumping of groundwater at the site may facilitate the movement of potential contaminants onto the site.

Evaluation of the environmental condition of the site has been completed by Grounded under separate cover.

12 Proposed Mitigation Measures and Monitoring Plan

As a result of dewatering and draining the soil, changes in groundwater level have the potential to cause settlement based on the change in the effective stresses within the ZOI. The extent of the negative impact identified in previous sections will be limited to the ZOI caused by the groundwater taking at the site.

The temporary construction dewatering system and the permanent building drainage system must be properly installed and screened to ensure sediments and fines will not be removed, which is typically a primary cause of dewatering related settlement.

13 Limitations

Natural occurrences, the passage of time, local construction, and other human activity all have the potential to directly or indirectly alter the subsurface conditions at or near the project site. Contractual obligations related to groundwater or stormwater control must be considered with attention and care as they relate this potential site alteration.

The hydrogeological engineering advice provided in this report is based on the factual observations made from the site investigations as reported. It is intended for use by the owner and their retained design team. If there are changes to the features of the development or to the scope, the interpreted subsurface information, geotechnical engineering design parameters, advice, and discussion on construction considerations may not be relevant or complete for the project. Grounded should be retained to review the implications of such changes with respect to the contents of this report.

Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. Grounded accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report, including consequential financial effects on transactions or property values, or requirements for follow-up actions and costs.

The authorized users of this report are 2233 & 2235 Hurontario Ltd. and their design team, for whom this report has been prepared. Grounded Engineering Inc. maintains the copyright and ownership of this document. Reproduction of this report in any format or medium requires explicit prior authorization from Grounded Engineering Inc. The City of Mississauga may also make use of and rely upon this report, subject to the limitations as stated.

14 Closure

If there are any questions regarding the discussion and advice provided, please do not hesitate to contact our office. We trust that this report meets your requirements at present.

For and on behalf of our team,

GROUNDED ENGINEERING

LICENSED PROFESSIONAL ENGINEER
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PROVINCE OF ONTARIO

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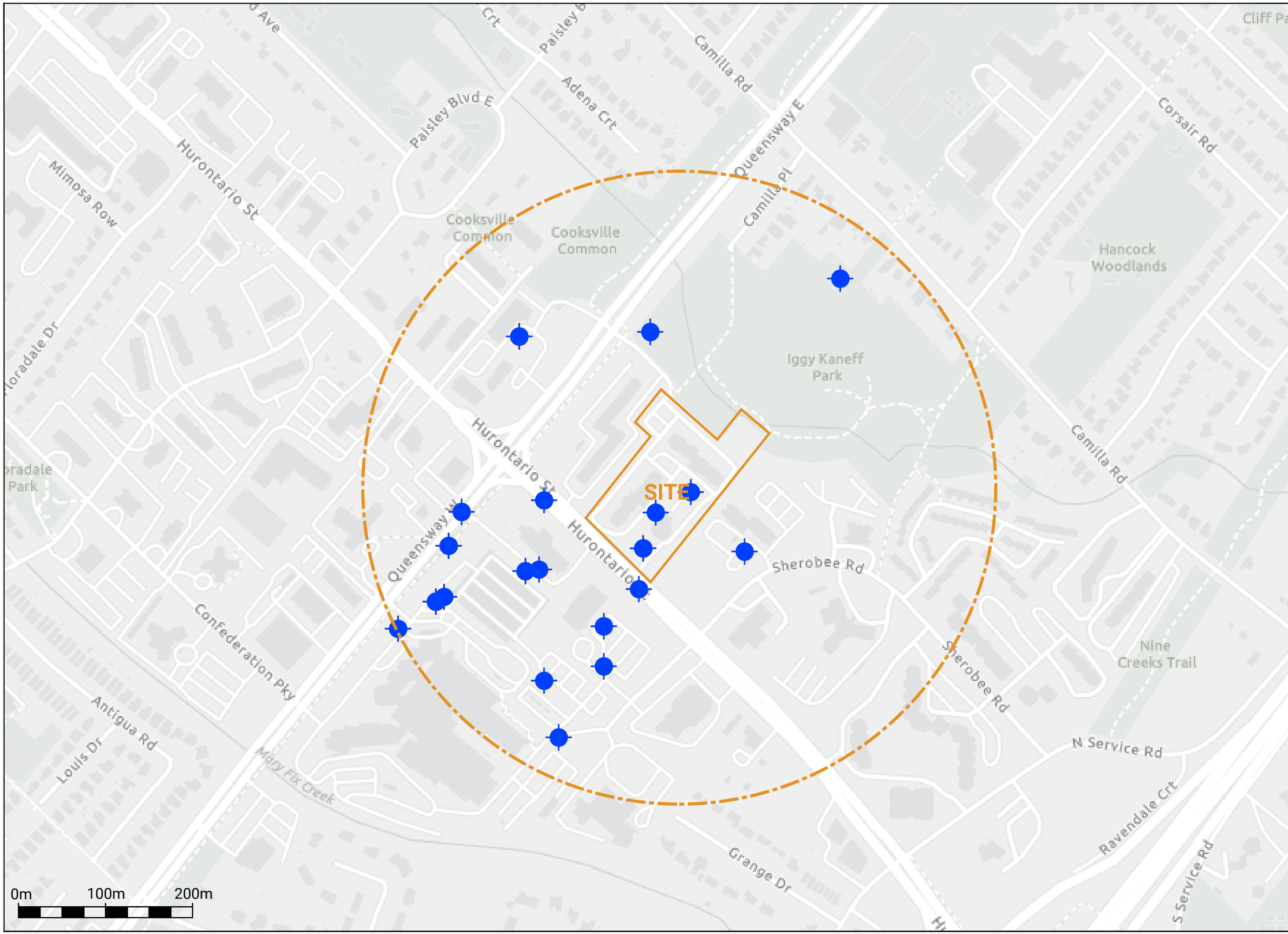
Principal

FIGURES



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LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- STUDY AREA (250 m RADIUS)
- MECP WELL LOCATION

Note

Reference

ArcGIS Online, 2026.

Project

2233 HURONTARIO ST, MISSISSAUGA, ONTARIO

Figure Title

STUDY AREA & SITE LOCATION PLAN

North

TRUE

PROJECT

Date

MARCH 2026

Scale

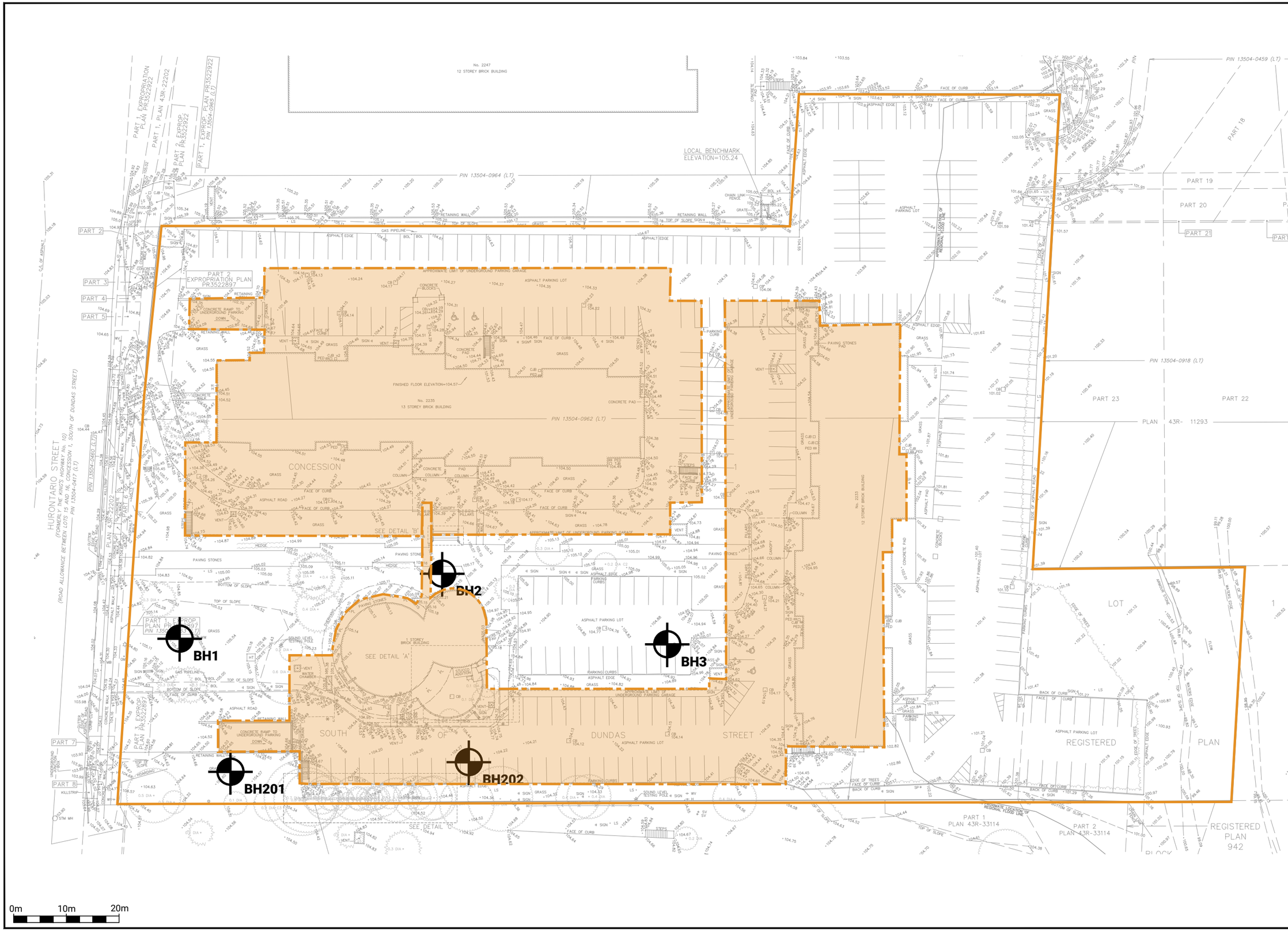
AS INDICATED

Job No

24-099

Figure No

FIGURE 1



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LEGEND

- APPROXIMATE SITE BOUNDARY
- APPROXIMATE EXTENT OF EXISTING BASEMENT AND UNDERGROUND PARKING LEVEL
- APPROXIMATE MONITORING WELL/BOREHOLE LOCATION BY GROUNDED

Note

Borehole 202 was advanced within the existing underground parking level.

Reference

Site Survey, "Part of Lot 15, Concession 1 South of Dundas Street", dated July 29, 2024, prepared by J.D. Barnes Ltd.

Project

2233 HURONTARIO ST, MISSISSAUGA, ONTARIO

Figure Title

BOREHOLE LOCATION PLAN - EXISTING CONDITION

North

TRUE
PROJECT

Date

MARCH 2026

Scale

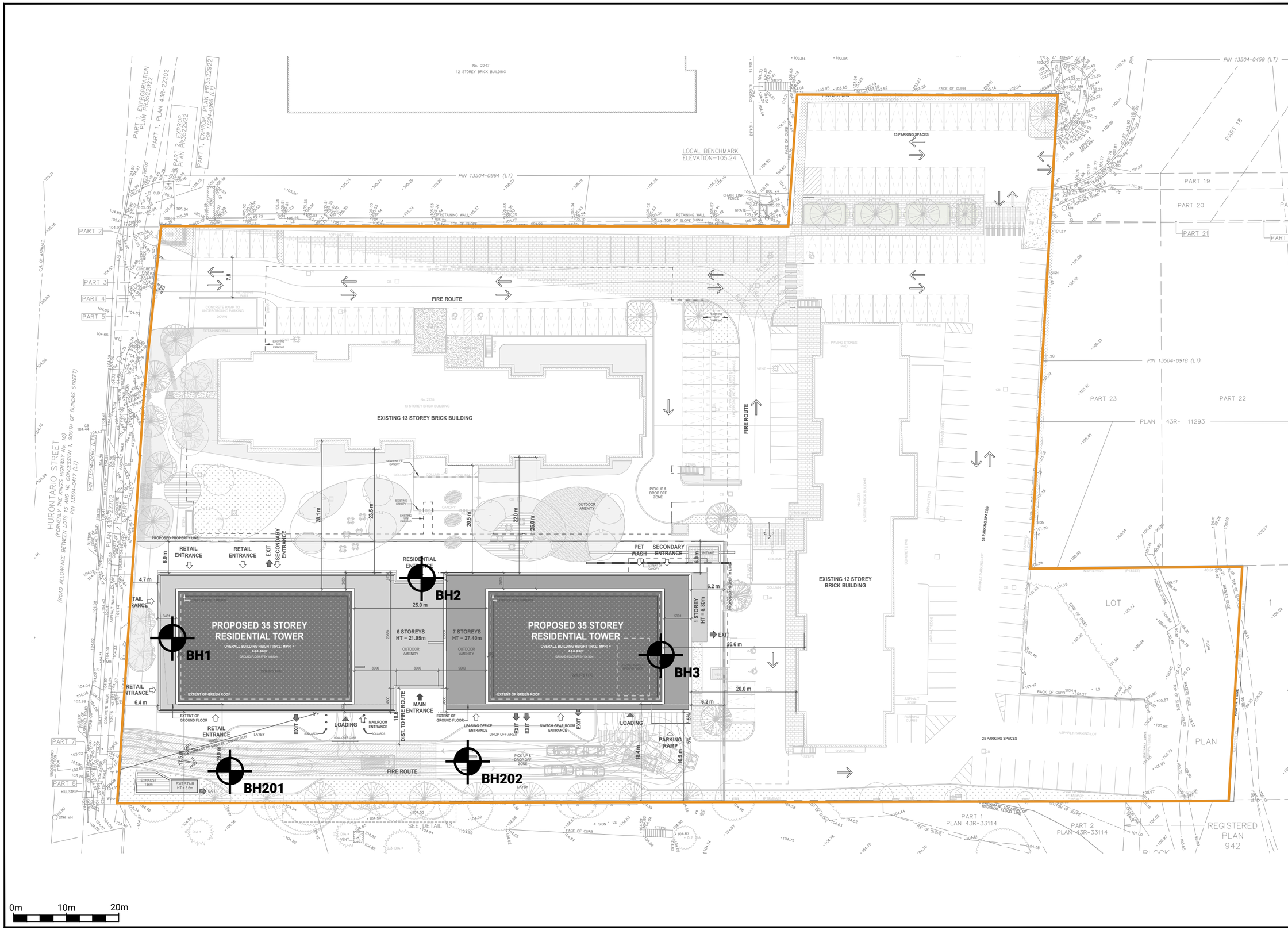
AS INDICATED

Job No

24-099

Figure No

FIGURE 2



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LEGEND

- APPROXIMATE SITE BOUNDARY
- APPROXIMATE MONITORING WELL/BOREHOLE LOCATION BY GROUNDED

Note

Reference

Architectural Drawings, "2233 Hurontario Street"; dated April 1, 2026, prepared by BDP Quadrangle.

Project

2233 HURONTARIO ST, MISSISSAUGA, ONTARIO

Figure Title

BOREHOLE LOCATION PLAN - PROPOSED CONDITION - SITE PLAN

North

PROJECT

TRUE

Date

MARCH 2026

Scale

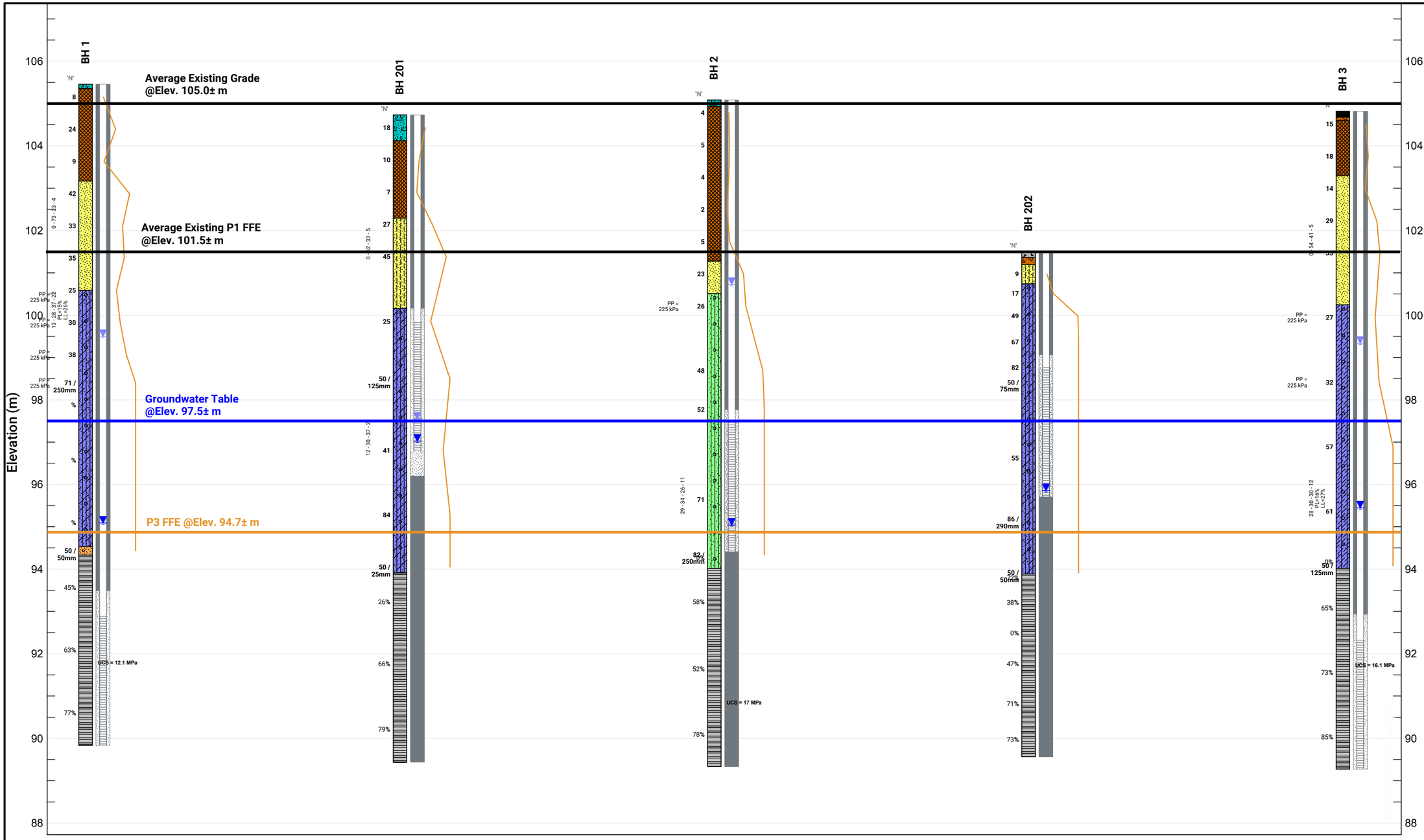
AS INDICATED

Job No

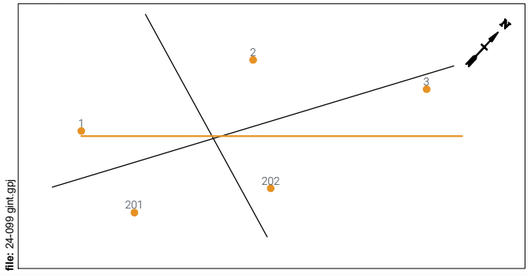
24-099

Figure No

FIGURE 3



SITE MAP



file: 24-099 grnt.gpj

Boreholes Equally Spaced

BOREHOLE STRATIGRAPHY LEGEND

Topsoil	Gravelly Sand	Aggregate
Fill	Bedrock (cored)	Clayey Silt Till
Sand	Sandy Silt Till	Silty Sand
Clayey Silt Till (sandy)	Asphalt	Concrete

GROUNDED ENGINEERING

49 Mobile Drive, Toronto ON, M4A 1H5
www.groundedeng.ca

LEGEND

- FILL
- GRAVELS (gravel to gravelly sand)
- SILT TO SAND (not till)
- COHESIONLESS TILLS
- COHESIVE SOILS (clayey silt to clay, incl. tills)
- DISTURBED/REWORKED/ORGANIC

BH 101 BOREHOLES BY GROUNDED
T-BH7 BOREHOLES BY OTHERS

- water level, unstabilized
- water level, stabilized (latest)
- water level, stabilized (highest)

Project
2233 & 2235 HURONTARIO ST MISSISSAUGA

Figure Title
SUBSURFACE PROFILE

Date
APRIL 2026

Scale
AS INDICATED

Job No
24-099

Figure No
FIGURE 4

APPENDIX A

BOREHOLE LOG TERMINOLOGY

GROUNDED ENGINEERING

SAMPLING/TESTING METHODS

SS: split spoon sample

AS: auger sample

GS: grab sample

FV: shear vane

DP: direct push

PMT: pressuremeter test

ST: shelby tube

CORE: soil coring

RUN: rock coring

SYMBOLS & ABBREVIATIONS

MC: moisture content

LL: liquid limit

PL: plastic limit

NP: non-plastic

γ: soil unit weight (bulk)

G_s: specific gravity

S_u: undrained shear strength

▽ unstabilized water level

▼ water level measurement

▼ highest water level measurement

ENVIRONMENTAL SAMPLES

M&I: metals and inorganic parameters

PAH: polycyclic aromatic hydrocarbon

PCB: polychlorinated biphenyl

VOC: volatile organic compound

PHC: petroleum hydrocarbon

BTEX: benzene, toluene, ethylbenzene and xylene

PPM: parts per million

FIELD MOISTURE (based on tactile inspection)

DRY: no observable pore water

MOIST: inferred pore water, not observable (i.e. grey, cool, etc.)

WET: visible pore water

COHESIONLESS

Relative Density	N-Value
Very Loose	<4
Loose	4 - 10
Compact	10 - 30
Dense	30 - 50
Very Dense	>50

COHESIVE

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

COMPOSITION

Term	% by weight
trace silt	<10
some silt	10 - 20
silt***y***	20 - 35
sand ***and*** silt	>35

ASTM STANDARDS

ASTM D1586 Standard Penetration Test (SPT)
Driving a 51 mm O.D. split-barrel sampler ("split spoon") into soil with a 63.5 kg weight free falling 760 mm. The blows required to drive the split spoon 300 mm ("bpf") after an initial penetration of 150 mm is referred to as the N-Value.

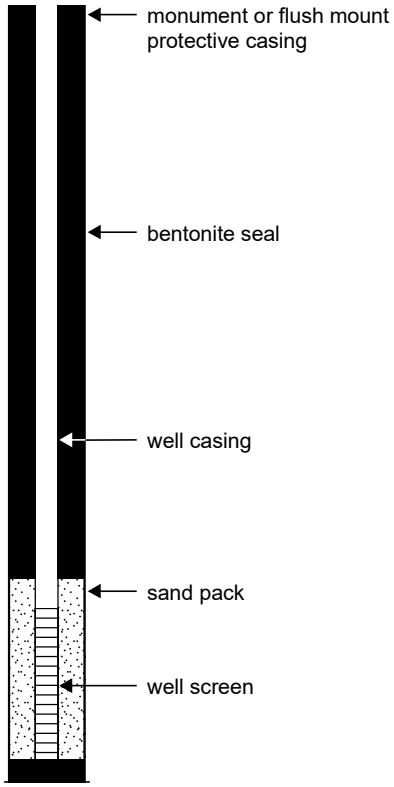
ASTM D3441 Cone Penetration Test (CPT)
Pushing an internal still rod with a outer hollow rod ("sleeve") tipped with a cone with an apex angle of 60° and a cross-sectional area of 1000 mm^2 into soil. The resistance is measured in the sleeve and at the tip to determine the skin friction and the tip resistance.

ASTM D2573 Field Vane Test (FVT)
Pushing a four blade vane into soil and rotating it from the surface to determine the torque required to shear a cylindrical surface with the vane. The torque is converted to the shear strength of the soil using a limit equilibrium analysis.

ASTM D1587 Shelby Tubes (ST)
Pushing a thin-walled metal tube into the in-situ soil at the bottom of a borehole, removing the tube and sealing the ends to prevent soil movement or changes in moisture content for the purposes of extracting a relatively undisturbed sample.

ASTM D4719 Pressuremeter Test (PMT)
Place an inflatable cylindrical probe into a pre-drilled hole and expanding it while measuring the change in volume and pressure in the probe. It is inflated under either equal pressure increments or equal volume increments. This provides the stress-strain response of the soil.

WELL LEGEND



ROCK CORE TERMINOLOGY (MTO SHALE)

TCR **Total Core Recovery** the total length of recovery (soil or rock) per run, as a percentage of the drilled length
SCR **Solid Core Recovery** the total length of sound full-diameter rock core pieces per run, as a percentage of the drilled length
RQD **Rock Quality Designation** the sum of all pieces of sound rock core in a run which are 10 cm or greater in length, as a percentage of the drilled length

Natural Fracture Frequency (typically per 0.3 m) The number of natural discontinuities (joints, faults, etc.) which are present per 0.3m. Ignores mechanical or drill-induced breaks, and closed discontinuities (e.g. bedding planes).

LOGGING DISCONTINUITIES

Discontinuity Type

BP bedding parting
CL cleavage
CS crushed seam
FZ fracture zone
MB mechanical break
IS infilled seam
JT Joint
SS shear surface
SZ shear zone
VN vein
VO void

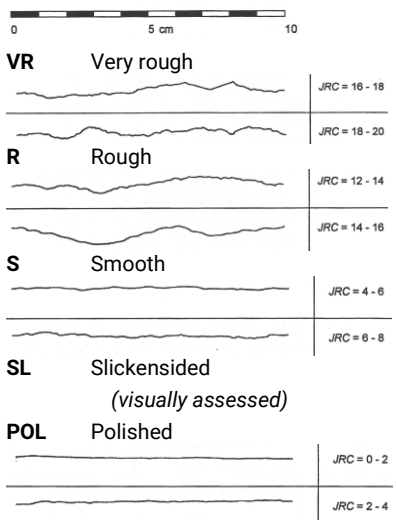
Coating

CN Clean
SN Stained
OX Oxidized
VN Veneer
CT Coating (>1 mm)

Dip Inclination

H	horizontal/flat	0 - 20°
D	dipping	20 - 50°
SV	sub-vertical	50 - 90°
V	vertical	90±°

Roughness (Barton et al.)



Spacing in Discontinuity Sets
(*ISRM 1981*)

VC	very close	< 60 mm
C	close	60 – 200 mm
M	mod. close	0.2 to 0.6 m
W	wide	0.6 to 2 m
VW	very wide	> 2 m

Aperture Size

T	closed / tight	< 0.5 mm
GA	gapped	0.5 to 10 mm
OP	open	> 10 mm

Planarity

PR Planar
UN Undulating
ST Stepped
IR Irregular
DIS Discontinuous
CU Curved

GENERAL

Degree of Weathering (*after MTO, RR229 Evaluation of Shales for Construction Projects*)

Zone	Degree	Description
Z1	unweathered	shale, regular jointing
Z2	partially weathered	angular blocks of unweathered shale, no matrix, with chemically weathered but intact shale
Z3		soil-like matrix with frequent angular shale fragments < 25mm diameter
Z4a		soil-like matrix with occasional shale fragments < 3mm diameter
Z4b	fully weathered	soil-like matrix only

Strength classification (*after Marinos and Hoek, 2001; ISRM 1981b*)

Grade		UCS (MPa)	Field Estimate (Description)
R6	extremely strong	> 250	can only be chipped by geological hammer
R5	very strong	100 - 250	requires many blows from geological hammer
R4	strong	50 - 100	requires more than one blow from geological hammer
R3	medium strong	25 - 50	can't be scraped, breaks under one blow from geological hammer
R2	weak	5 - 25	can be peeled / scraped with knife with difficulty
R1	very weak	1 - 5	easily scraped / peeled, crumbles under firm blow of geo. hammer
R0	extremely weak	< 1	indented by thumbnail

Bedding Thickness (*Q. J. Eng. Geology, Vol 3, 1970*)

Very thickly bedded	> 2 m
Thickly bedded	0.6 – 2m
Medium bedded	200 – 600mm
Thinly bedded	60 – 200mm
Very thinly bedded	20 – 60mm
Laminated	6 – 20mm
Thinly Laminated	< 6mm

BOREHOLE LOG 1

Date Started : Jun 26, 2024
Position : E: 612593, N: 4825406 (UTM 17T)
Elev. Datum : Geodetic

File No. : 24-099 **Project** : 2233 & 2235 Hurontario St, Mississauga **Client** : Starlight Development

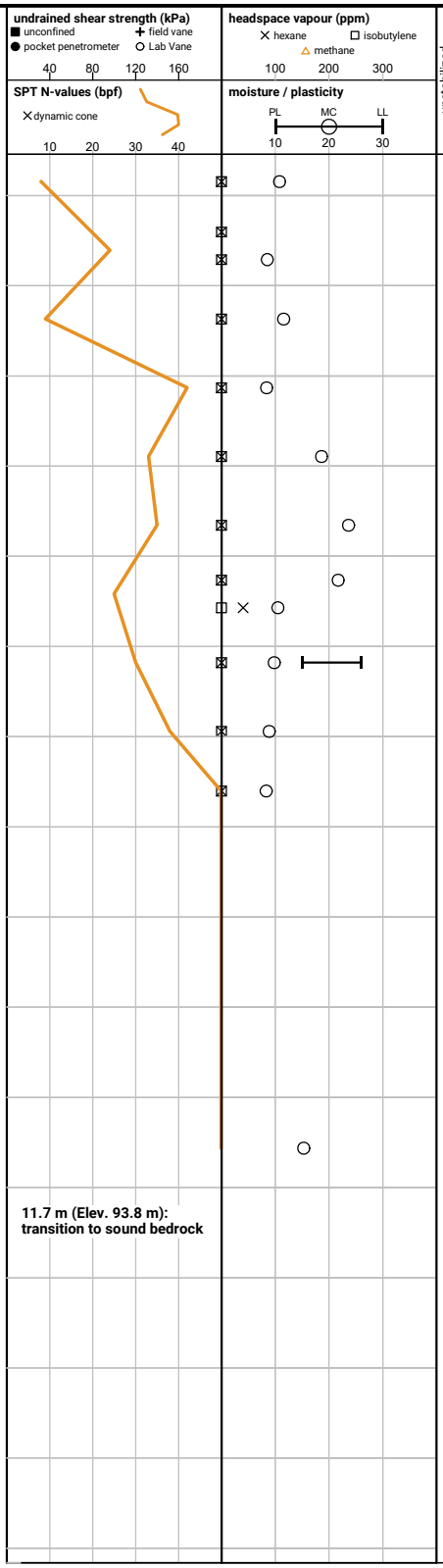
drill method : CME 75

hollow stem augers OD=215 mm

rock coring (HQ) OD=96 mm

elev / depth (m)	description	graphic log	samples: number	type	SPT N-value
105.5	**GROUND SURFACE**				
	100mm **TOPSOIL**		1	SS	8
	FILL, silty sand, trace clay, trace gravel, trace rootlets, loose to compact, brown, moist		2A, 2B	SS	24
	...at 1.0 m, trace wood fragments				
	...at 1.5 m, trace cinder, light brown and dark brown		3	SS	9
103.2 / 2.3	**SAND**, trace to some silt, trace clay, dense, brown, moist		4	SS	42
	...at 3.0 m, silty sand, greyish brown		5	SS	33
	...at 3.8 m, wet		6	SS	35
	...at 4.6 m, compact, grey		7A, 7B	SS	25
100.6 / 4.9	**SANDY SILT**, clayey, trace to some gravel, very stiff to hard, grey, moist (GLACIAL TILL)		8	SS	30
			9	SS	38
			10	SS	71 / 250mm
			1	RUN	
			2	RUN	
			3	RUN	
94.6 / 10.9	**GRAVELLY SAND**, trace silt, trace clay, very dense, grey, wet		11	SS	50 / 50mm
94.4 / 11.1	**GEORGIAN BAY FORMATION** (See rock core log for details)		4	RUN	
			5	RUN	
			6	RUN	
89.9 / 15.6					

depth scale (m) | well details | elevation (m)



unstabilized water level

lab data and comments

grain size distribution (%) (MIT) GR SA SI CL

SS1: H-Ms, Metals, ORPs, PCBs, OCs

2A: BTEX, PAHs, PHCs, VOCs

SS4: H-Ms, Metals, ORPs, PAHs, PCBs, OCs

0 73 23 4

7B: BTEX, PHCs, VOCs

13 28 37 22

6.9m: split-spoon sampler refusal, cobble/boulder inferred, started coring to penetrate through obstruction

END OF BOREHOLE

Borehole was filled with drill water upon completion of drilling.

50 mm dia. monitoring well installed.
No. 10 screen

GROUNDWATER LEVELS

date	depth (m)	elevation (m)
Jul 4, 2024	6.1	99.4
Jul 12, 2024	6.0	99.5
Mar 4, 2026	10.5	95.0
Apr 1, 2026	10.4	95.1

file: 24-099 gint.gpj

Tech : IH | **PM** : JAW/VT | **Rev** : NN

GROUNDED ENGINEERING

Date Started : Jun 26, 2024
Position : E: 612593, N: 4825406 (UTM 17T)
Elev. Datum : Geodetic

ROCK CORE LOG 1

File No. : 24-099 **Project** : 2233 & 2235 Hurontario St, Mississauga **Client** : Starlight Development

depth (m)	stratigraphy	Run	elev / depth (m)	recovery	natural fracture frequency	laboratory testing	notes and comments	elevation (m)
	Rock coring started at 7.0m below grade		**98.5**					
8, 9, 10, 11	**SANDY SILT**, clayey, trace to some gravel, very stiff to hard, grey, moist (GLACIAL TILL)	R1	7.0 / 97.3	TCR = **93%**				
		R2	8.2 / 95.9	TCR = **98%**				
		R3	9.6 / 94.4	TCR = **0%**			**9.6 / 95.9 - 10.9 / 94.5m:** core loss (no recovery)	98, 97, 96, 95
11	**GRAVELLY SAND**, trace silt, trace clay, very dense, grey, wet							
12	**GEORGIAN BAY FORMATION** **Shale**, dark grey, laminated to thinly bedded, weak; joints are horizontal, gapped, clean to unaltered;	R4	11.1 / 92.9	TCR = **100%** SCR = **83%** RQD = **45%**	2+RZ, 3+WZ, 1, 4, 4		**11.1 / 94.3 - 11.3 / 94.2m:** rubbilized zone; **11.4 / 94.1m:** 75mm weathered zone; **11.5 / 94.0m:** 25mm FC SV PR S GA CN; **11.6 / 93.8m:** 13mm IS clay	94, 93
13	interbedded with **limestone**, light grey, laminated to thinly bedded, strong; *Overall shale: 92%, limestone: 8%* **... at 11.7 m (Elev. 93.8 m), transition to sound rock**	R5	12.6 / 91.4	TCR = **100%** SCR = **95%** RQD = **63%**	4+WZ, 4, 1, 2, 3	**El. 91.8m:** UCS = 12.1 MPa, E = 2.90 GPa, γ = 25.4 kN/m³	**12.9 / 92.6m:** 38mm IS clay; **12.9 / 92.6 - 13.0 / 92.5m:** weathered zone; **13.1 / 92.4m:** 25mm IS clay; **13.9 / 91.6m:** 25mm weathered zone; **14.0 / 91.5m:** 38mm rubbilized zone	92
14, 15	Run 4 : 8% limestone, 92% shale; Run 5 : 6% limestone, 94% shale; Run 6 : 8% limestone, 92% shale	R6	14.1 / 89.9	TCR = **100%** SCR = **100%** RQD = **77%**	2, 2, 2, 2, 1		**15.5 / 90.0m:** 25mm FC SV PR S T CN	91, 90
			15.6m					

END OF COREHOLE

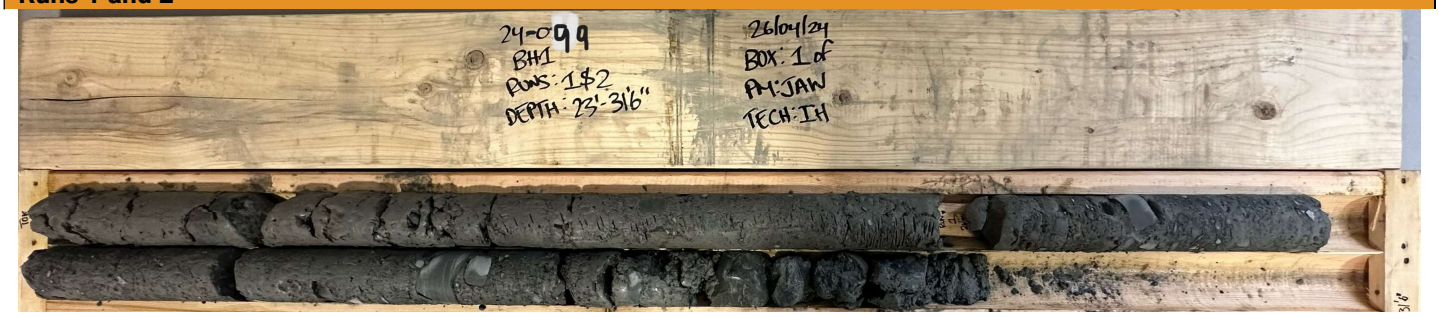
file: 24-099 gint.gpj

Tech : IH | **PM** : JAW/VT | **Rev** : NN

Borehole 1

Run #	Depth (m)	Elevation (m)
1	7.0 – 8.2	98.5 – 97.3
2	8.2 – 9.6	97.3 – 95.9
3	9.6 – 11.1	95.9 – 94.4
4	11.1 – 12.6	94.4 – 92.9
5	12.6 – 14.1	92.9 – 91.4
6	14.1 – 15.6	91.4 – 89.9

Runs 1 and 2



Runs 3 and 4

Runs 5 and 6

GROUNDED ENGINEERING

Date Started : Jun 27, 2024
Position : E: 612614, N: 4825451 (UTM 17T)
Elev. Datum : Geodetic

BOREHOLE LOG 2

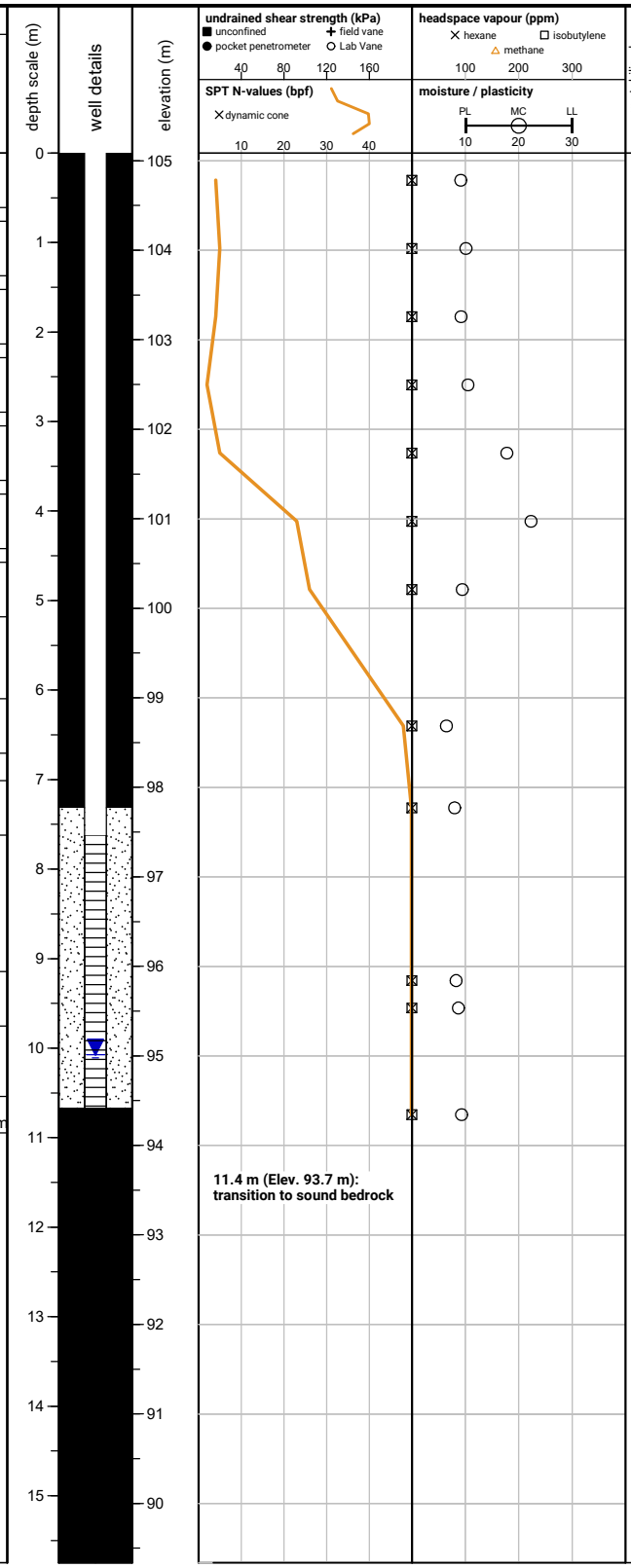
File No. : 24-099 **Project** : 2233 & 2235 Hurontario St, Mississauga **Client** : Starlight Development

drill method : CME 75

hollow stem augers OD=215 mm

rock coring (HQ) OD=96 mm

elev / depth (m)	description	number	type	SPT N-value
105.1	**GROUND SURFACE**			
	150mm **TOPSOIL**	1	SS	4
	FILL, silty sand, trace clay, trace gravel, trace rootlets, very loose to loose, dark brown and light brown, moist	2	SS	5
	...at 1.5 m, trace rock fragments	3	SS	4
	...at 2.3 m, trace wood fragments	4	SS	2
	...at 3.0 m, greyish brown	5	SS	5
101.3 / 3.8	**SAND**, trace silt, trace clay, compact, greyish brown, wet	6	SS	23
100.5 / 4.6	**SANDY SILT**, some clay, trace gravel, compact to dense, grey, moist (GLACIAL TILL)	7	SS	26
	...at 6.1 m, trace clay	8	SS	48
	...at 7.0 m, very dense below	9	SS	52
	...at 9.1 m, gravelly sand, silty, some clay, trace rock fragments, grey with orange, moist, very dense	10A / 10B	SS	71
	...at 10.7 m, trace shale fragments	11	SS	82 / 250mm
94.0 / 11.1	**GEORGIAN BAY FORMATION** (See rock core log for details)	2	RUN	
		3	RUN	
		4	RUN	
89.4 / 15.7				



unstabilized water level

lab data and comments

grain size distribution (%) (MIT) GR SA SI CL

SS1: H-Ms, Metals, ORPs, PAHs

SS6: BTEX, PHCs, VOCs

SS7: H-Ms, Metals, ORPs, PAHs

SS8: BTEX, PHCs, VOCs

7.0m: auger grinding

29 34 26 11

11.1m: Run 1 recovered possible caved material (refer to Rock Core Log)

END OF BOREHOLE

Borehole was filled with drill water upon completion of drilling.

50 mm dia. monitoring well installed. No. 10 screen

GROUNDWATER LEVELS

date	depth (m)	elevation (m)
Jul 4, 2024	4.4	100.7
Jul 12, 2024	5.6	99.5
Mar 4, 2026	10.0	95.1
Apr 1, 2026	10.1	95.0

file: 24-099 gint.gpj

 Tech : IH | **PM** : JAW/VT | **Rev** : NN

GROUNDED ENGINEERING

Date Started : Jun 27, 2024
Position : E: 612614, N: 4825451 (UTM 17T)
Elev. Datum : Geodetic

ROCK CORE LOG 2

File No. : 24-099 **Project** : 2233 & 2235 Hurontario St, Mississauga **Client** : Starlight Development

depth (m)	stratigraphy	Run	elev / depth (m)	recovery	natural fracture frequency	laboratory testing	notes and comments
	Rock coring started at 10.6m below grade		**94.5**				
11	**SANDY SILT**, some clay, trace gravel, compact to dense, grey, moist (GLACIAL TILL)	R1	10.6 / 11.1	TCR = **45%** SCR = **0%** RQD = **0%**			**10.6 / 94.5 - 10.9 / 94.1m:** possible caved material **10.9 / 94.1 - 11.1 / 94.0m:** core loss (no recovery)
12	**GEORGIAN BAY FORMATION** **Shale**, dark grey, laminated to thinly bedded, weak; joints are horizontal, closed to gapped, clean to unaltered; interbedded with **limestone**, light grey, laminated to thinly bedded, strong	R2	11.1 / 92.5	TCR = **100%** SCR = **89%** RQD = **58%**	3+RZ, 2, 4, 2, 5		**11.3 / 93.8 - 11.4 / 93.7m:** rubbilized zone **12.0 / 93.1 - 12.0 / 93.0m:** 25mm rubbilized zone **12.6 / 92.4 - 12.7 / 92.4m:** 75mm rubbilized zone
13	*Overall shale: 90%, limestone: 10%* **... at 11.4 m (Elev. 93.7 m), transition to sound rock**	R3	12.6 / 90.9	TCR = **100%** SCR = **95%** RQD = **52%**	3+RZ, 4, 3, 0, 3		
14	Run 2 : 8% limestone 92% shale	R4	14.2 / 89.4	TCR = **100%** SCR = **100%** RQD = **78%**	4, 1, 2, 1, 3	**El. 90.8m**: UCS = 17 MPa E = 3.00 GPa γ = 25.7 kN/m^3	
15	Run 3 : 13% limestone 87% shale Run 4 : 11% limestone 89% shale		**15.7m**				

Elevation (m): 94, 93, 92, 91, 90

Shale weathering zones: Z1, Z2, Z3, Z4

UCS (MPa) / estimated strength: 5, 25, 50, 100, 250; R1, R2, R3, R4, R5, R6

END OF COREHOLE

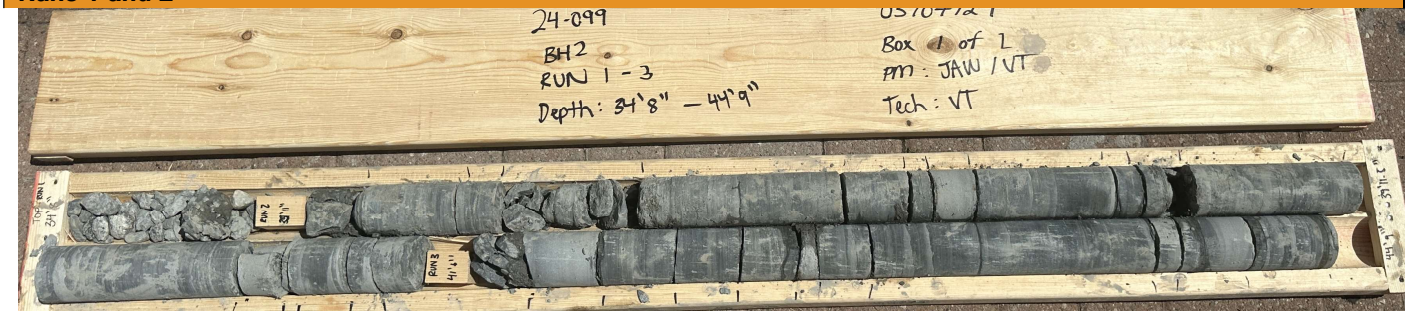
Tech : IH | **PM** : JAW/VT | **Rev** : NN

file: 24-099 gint.gpj

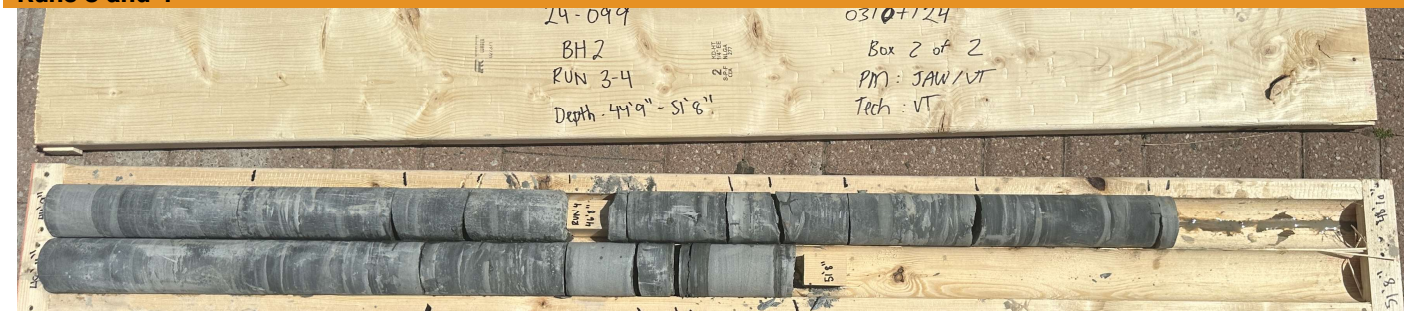
Borehole 2

Run #	Depth (m)	Elevation (m)
1	10.6 – 11.1	94.5 – 94.0
2	11.1 – 12.6	94.0 – 92.5
3	12.6 – 14.2	92.5 – 90.9
4	14.2 – 15.7	90.9 – 89.4

Runs 1 and 2



Runs 3 and 4



BOREHOLE LOG 3

Date Started : Jun 27, 2024
Position : E: 612652, N: 4825476 (UTM 17T)
Elev. Datum : Geodetic

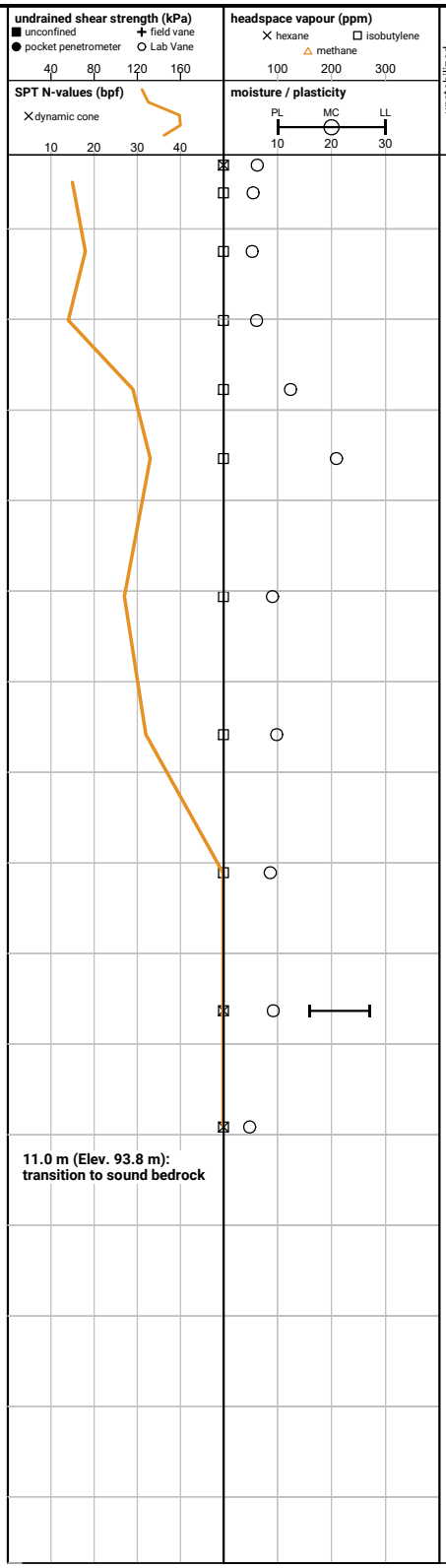
File No. : 24-099 **Project** : 2233 & 2235 Hurontario St, Mississauga **Client** : Starlight Development

drill method : CME 75

elev / depth (m)	description	number	type	SPT N-value	lab data and comments
104.8	**GROUND SURFACE**				
	140mm **ASPHALT**	1A	SS	15	
	125mm **AGGREGATE**	1B			1B: H-Ms, Metals, ORPs, PCBs, OCs
	FILL, sand, trace to some silt, trace gravel, trace asphalt, compact, brown with orange, moist	2	SS	18	SS2: BTEX, PAHs, PHCs, VOCs
103.3 / 1.5	...at 0.8 m, orangey brown				
	SAND, trace to some silt, trace clay, compact to dense, brown, moist	3	SS	14	SS3: PCBs, OCs
		4	SS	29	SS4: H-Ms, Metals, ORPs, PAHs
	...at 3.0 m, sand and silt, trace clay, grey, wet	5	SS	33	0 54 41 5 SS5: BTEX, PHCs, VOCs
100.2 / 4.6	**CLAYEY SILT**, sandy, trace gravel, very stiff to hard, grey (GLACIAL TILL)	6	SS	27	
		7	SS	32	
	...at 7.6 m, sandy silt, trace clay, very dense, grey, moist	8	SS	57	
	...at 9.1 m, sandy silt, gravelly, some clay, very dense, grey, moist	9	SS	61	28 30 30 12
94.0 / 10.8	...at 10.7 m, weathered shale, very dense, grey, moist	10	SS	50 / 125mm	**10.7m:** split spoon sampler bouncing **11.0m:** Run 1 recovered possible caved material (refer to Rock Core Log)
	GEORGIAN BAY FORMATION (See rock core log for details)	2	RUN		
		3	RUN		
		4	RUN		
89.3 / 15.5					

hollow stem augers OD=215 mm

rock coring (HQ) OD=96 mm



unstabilized water level

grain size distribution (%) (MIT) GR SA SI CL

END OF BOREHOLE

Borehole was filled with drill water upon completion of drilling.

50 mm dia. monitoring well installed.
No. 10 screen

GROUNDWATER LEVELS

date	depth (m)	elevation (m)
Jul 4, 2024	5.6	99.2
Jul 12, 2024	5.5	99.3
Mar 4, 2026	9.4	95.4
Apr 1, 2026	9.4	95.4

file: 24-099 gint.gpj

 Tech : IH | **PM** : JAW/VT | **Rev** : NN

GROUNDED ENGINEERING

Date Started : Jun 27, 2024
Position : E: 612652, N: 4825476 (UTM 17T)
Elev. Datum : Geodetic

ROCK CORE LOG 3

File No. : 24-099 **Project** : 2233 & 2235 Hurontario St, Mississauga **Client** : Starlight Development

depth (m)	stratigraphy	Run	elev / depth (m)	recovery	natural fracture frequency	laboratory testing	notes and comments	elevation (m)
	Rock coring started at 10.3m below grade		**94.5**					
	CLAYEY SILT, sandy, trace gravel, very stiff to hard, grey (GLACIAL TILL)	R1	10.3 / 93.8	TCR = **92%** SCR = **19%** RQD = **0%**	NA, 5		**10.3 / 94.5 - 10.8 / 94.0m:** possible caved material; **10.8 / 94.0 - 10.9 / 93.9m:** rubbilized zone	94
11	**GEORGIAN BAY FORMATION** **Shale**, dark grey, laminated to thinly bedded, weak; joints are horizontal, closed to gapped, clean to unaltered;	R2	11.0 / 92.3	TCR = **100%** SCR = **93%** RQD = **65%**	2, 4, 3+RZ, 3		**11.6 / 93.2 - 11.6 / 93.2m:** 50mm rubbilized zone	93
12	interbedded with **limestone**, light grey, laminated to thinly bedded, strong				2+RZ, 2+RZ		**12.2 / 92.6 - 12.2 / 92.6m:** 25mm FC SV PR S T CN; **12.3 / 92.5 - 12.3 / 92.5m:** 25mm rubbilized zone	
13	*Overall shale: 91%, limestone: 9%* **... at 11.0 m (Elev. 93.8 m), transition to sound rock**	R3	12.5 / 90.8	TCR = **98%** SCR = **95%** RQD = **73%**	6, 3, 1	**El. 91.7m**: UCS = 16.1 MPa E = 3.40 GPa γ = 25.7 kN/m^3	**12.5 / 92.3 - 12.6 / 92.3m:** 63mm rubbilized zone	92
14	Run 1 : 4% limestone 96% shale; Run 2 : 13% limestone 87% shale	R4	14.0 / 89.3	TCR = **100%** SCR = **100%** RQD = **85%**	0, 2, 1			91
15	Run 3 : 3% limestone 97% shale; Run 4 : 9% limestone 91% shale				2, 2, 1			90
			15.5m					

END OF COREHOLE

shale weathering zones: Z1, Z2, Z3, Z4

UCS (MPa): 5, 25, 50, 100, 250

estimated strength: R1, R2, R3, R4, R5, R6

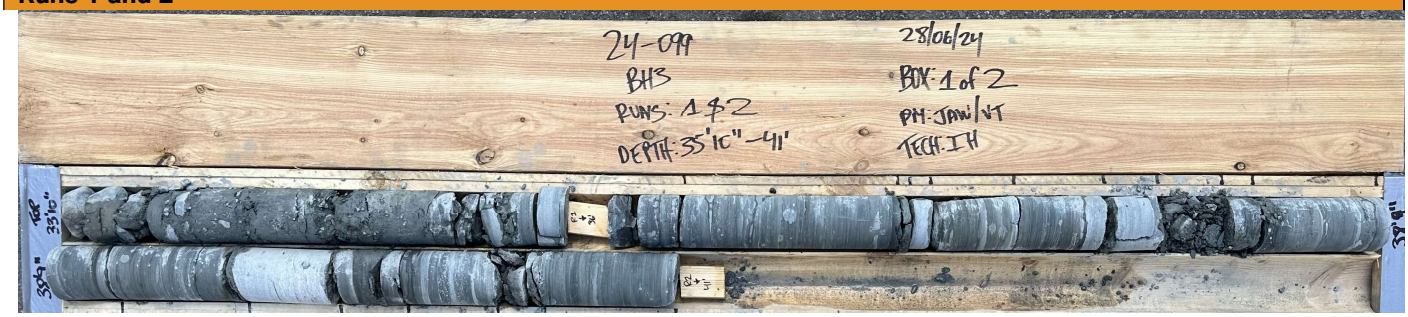
file: 24-099 gint.gpj

Tech : IH | **PM** : JAW/VT | **Rev** : NN

Borehole 3

Run #	Depth (m)	Elevation (m)
1	10.3 – 11.0	94.5 – 93.8
2	11.0 – 12.5	93.8 – 92.3
3	12.5 – 14.0	92.3 – 90.8
4	14.0 – 15.5	90.8 – 89.3

Runs 1 and 2



Runs 3 and 4

BOREHOLE LOG 201

Date Started : Feb 25, 2026
Position : E: 612618, N: 4825400 (UTM 17T)
Elev. Datum : Geodetic

File No. : 24-099 **Project** : 2233 & 2235 Hurontario St, Mississauga **Client** : Starlight Development

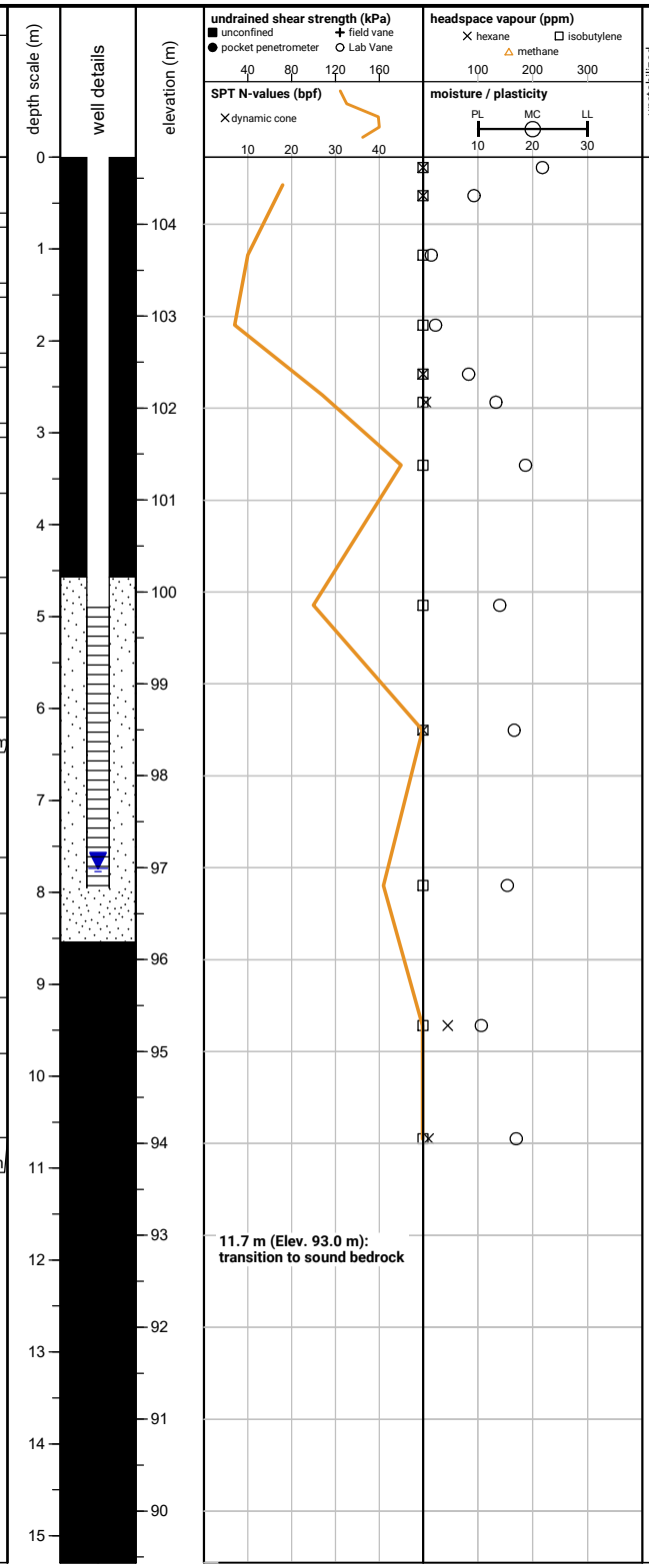
drill method : Geoprobe

elev / depth (m)	description	number	type	SPT N-value	lab data and comments
104.7	**GROUND SURFACE**				
	610mm **TOPSOIL**	1A, 1B	SS	18	1B: PAHs, PCBs, OCs
104.1 / 0.6	**FILL**, sand, trace silt, trace gravel, loose, brown, moist	2	SS	10	SS2: BTEX, PCBs, OCs, PHCs, VOCs
		3	SS	7	SS3: H-Ms, Metals, ORPs
102.3 / 2.4	...at 2.3 m, some silt, trace clay, trace rootlets	4A, 4B	SS	27	
	SILTY SAND, trace clay, compact to dense, brown, moist ...at 3.0 m, wet	5	SS	45	0 62 33 5 SS5: BTEX, PHCs
100.1 / 4.6	**SANDY SILT**, clayey, trace gravel, trace rock fragments, very stiff to compact, grey, moist (GLACIAL TILL)	6	SS	25	SS6: H-Ms, Metals, ORPs, PAHs, PCBs, OCs
	...at 6.1 m, some rock fragments	7	SS	50 / 125mm	6.9m: audible grinding
	...at 7.6 m, trace rock fragments	8	SS	41	12 30 37 21 SS8: VOCs
		9	SS	84	
93.9 / 10.8	...at 10.7 m, some rock fragments, shale	10	SS	50 / 25mm	10.7m: spoon bouncing
	GEORGIAN BAY FORMATION (See rock core log for details)	1	RUN		11.7 m (Elev. 93.0 m): transition to sound bedrock
		2	RUN		
89.4 / 15.3		3	RUN		

hollow stem augers OD=215 mm

mud rotary med OD=125 mm

Rock coring (HQ) OD=96 mm



unstabilized water level

grain size distribution (%) (MIT): GR SA SI CL

END OF BOREHOLE

Borehole was filled with drill water upon completion of drilling.

50 mm dia. monitoring well installed.
No. 10 screen

GROUNDWATER LEVELS

date	depth (m)	elevation (m)
Mar 4, 2026	7.2	97.5
Apr 1, 2026	7.7	97.0

file: 24-099 gint.gpj

 Tech : AJ | **PM** : RS | **Rev** : NN

GROUNDED ENGINEERING

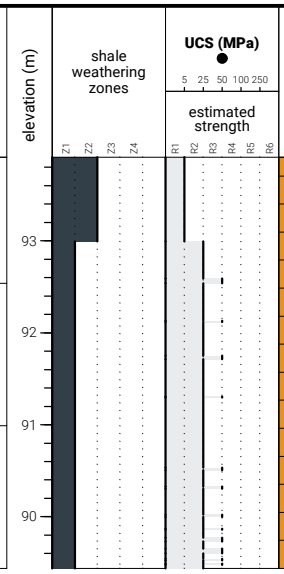
Date Started : Feb 25, 2026
Position : E: 612618, N: 4825400 (UTM 17T)
Elev. Datum : Geodetic

ROCK CORE LOG 201

File No. : 24-099 **Project** : 2233 & 2235 Hurontario St, Mississauga **Client** : Starlight Development

depth (m)	stratigraphy	Run	elev / depth (m)	recovery	natural fracture frequency	notes and comments
	Rock coring started at 10.8m below grade		**93.9**			
11	**GEORGIAN BAY FORMATION** **Shale**, dark grey, laminated to thinly bedded, weak; joints are horizontal, closed to gapped, clean to unaltered;	R1	10.8 92.5	TCR = **70%** SCR = **39%** RQD = **26%**	WZ RZ WZ WZ 4	**10.8 / 93.9 - 11.0 / 93.7m:** rubbilized zone **11.0 / 93.7 - 11.1 / 93.6m:** weathered zone **11.1 / 93.6 - 11.6 / 93.1m:** lost core
12	interbedded with **limestone**, light grey, laminated to thinly bedded, strong *Overall shale: 93%, limestone: 7%* **... at 11.7 m (Elev. 93.0 m), transition to sound rock**	R2	12.2 91.0	TCR = **100%** SCR = **97%** RQD = **66%**	3 1 5 2	**11.9 / 92.8m:** JT clay **12.1 / 92.6 - 12.1 / 92.6m:** IS clay **12.2 / 92.5 - 12.2 / 92.5m:** UN GA Cl; VF
13	Run 1 : 4% limestone, 96% shale Run 2 : 4% limestone, 96% shale Run 3 : 13% limestone, 87% shale	R3	13.7 89.4	TCR = **100%** SCR = **98%** RQD = **79%**	2 2 3 2 3 2	**13.7 / 91.0 - 13.8 / 91.0m:** weathered zone **15.1 / 89.6 - 15.2 / 89.6m:** rubbilized zone
14						
15			**15.3m**			

END OF COREHOLE



natural fracture frequency | laboratory testing | elevation (m)

file: 24-099 gint.gpj

 Tech : AJ | **PM** : RS | **Rev** :

Borehole 201

Run #	Depth (m)	Elevation (m)
1	10.8 – 12.2	93.9 – 92.5
2	12.2 – 13.7	92.5 – 91.0
3	13.7 – 15.3	91.5 – 89.4

Runs 1 and 2

Run 3

BOREHOLE LOG 202

Date Started : Mar 2, 2026
Position : E: 612640, N: 4825429 (UTM 17T)
Elev. Datum : Geodetic

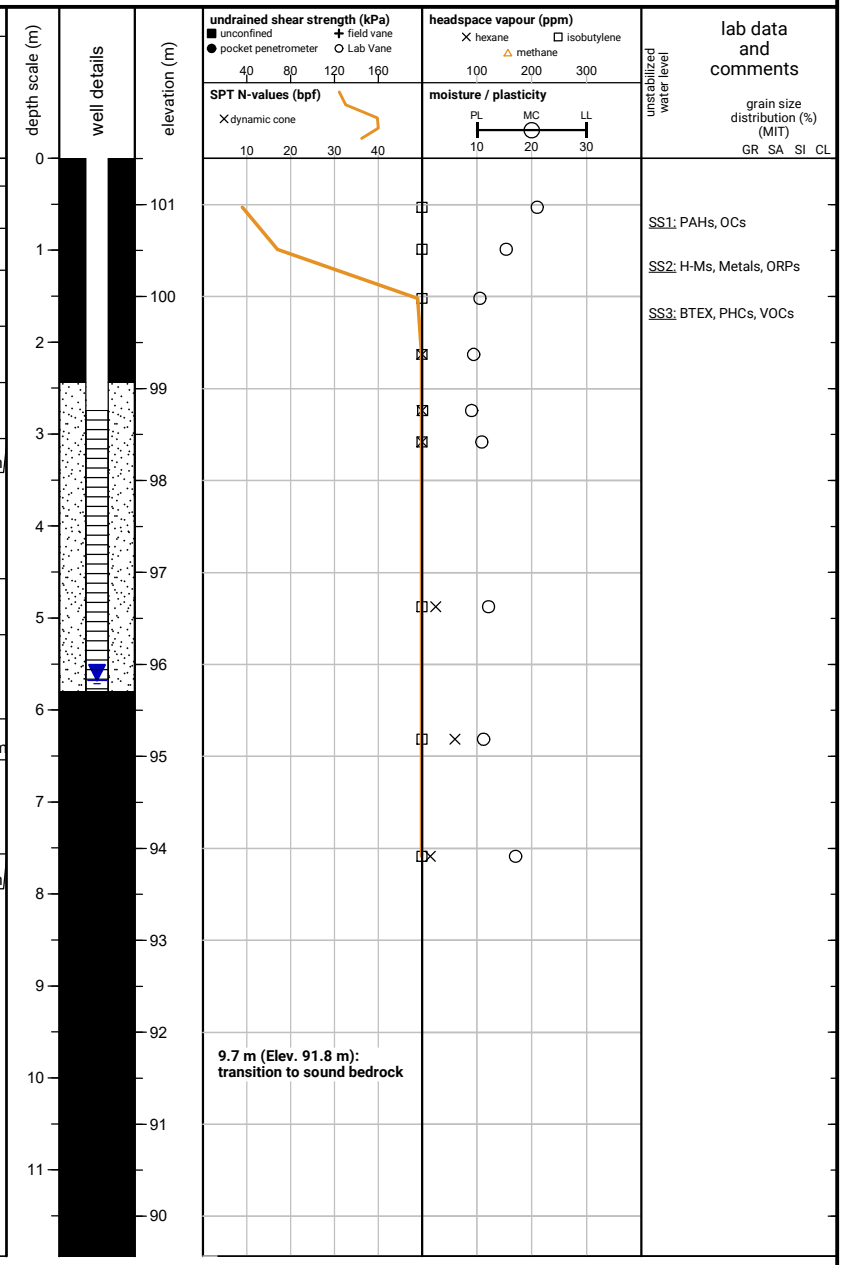
File No. : 24-099 **Project** : 2233 & 2235 Hurontario St, Mississauga **Client** : Starlight Development

drill method : Hilti DD350

elev / depth (m)	description	graphic log	samples: number	type	SPT N-value
101.5	**TOP OF SLAB**				
101.2 / 0.3	165mm **CONCRETE**				
100.7 / 0.8	140mm **AGGREGATE**		1	SS	9
	SILTY SAND, loose, brown, moist		2	SS	17
	SANDY SILT, clayey, trace gravel, very stiff, greyish brown, moist (GLACIAL TILL) ...at 1.2 m, grey, hard		3	SS	49
			4	SS	67
			5	SS	82
			6	SS	50 / 75mm
			7	SS	55
	...at 6.1 m, layer of sandy silt till, some clay, some shale fragments, grey, moist, very dense		8	SS	86 / 290mm
93.9 / 7.6	**GEORGIAN BAY FORMATION** (See rock core log for details)		9	SS	50 / 50mm
			1	RUN	
			2	RUN	
			3	RUN	
			4	RUN	
			5	RUN	
			6	RUN	
89.6 / 11.9					

mud rotary small OD=100 mm

Rock coring (NQ) OD=76 mm



END OF BOREHOLE

Dry and open upon completion of drilling.

GROUNDWATER LEVELS

date	depth (m)	elevation (m)
Apr 1, 2026	5.7	95.8

file: 24-099 gint.gpj

 Tech : LB | **PM** : RS | **Rev** : NN

Date Started : Mar 2, 2026
Position : E: 612640, N: 4825429 (UTM 17T)
Elev. Datum : Geodetic

ROCK CORE LOG 202

File No. : 24-099 **Project** : 2233 & 2235 Hurontario St, Mississauga **Client** : Starlight Development

depth (m)	stratigraphy	Run / elev depth (m)	recovery	elevation (m)	natural fracture frequency	notes and comments
	Rock coring started at 7.6m below grade	**93.9**				
8	**GEORGIAN BAY FORMATION** **Shale**, dark grey, laminated to thinly bedded, weak; joints are horizontal, closed to gapped, clean to unaltered;	R1 7.6–7.8	TCR = **93%** SCR = **79%** RQD = **72%**		5+RZ 4	**7.6 / 93.9 - 7.6 / 93.9m:** rubbilized zone
		R2	TCR = **92%** SCR = **74%** RQD = **38%**	93	3 1+LC	**8.7 / 92.8 - 8.7 / 92.8m:** lost core/ washout
9	interbedded with **limestone**, light grey, laminated to thinly bedded, strong	92.7–8.8 R3			LC	**8.7 / 92.8 - 8.8 / 92.7m:** FZ
	Overall shale: 85%, limestone: 15%	9.2	TCR = **11%** SCR = **11%** RQD = **0%**		LC	**8.8 / 92.7 - 9.2 / 92.3m:** lost core/ washout
		R4		92	5+LC	**9.2 / 92.3 - 9.5 / 92.0m:** lost core/ washout **9.7 / 91.9 - 9.7 / 91.8m:** FZ
10	**... at 9.7 m (Elev. 91.8 m), transition to sound rock**	91.3	TCR = **69%** SCR = **67%** RQD = **47%**		9 2	
		10.2 R5	TCR = **97%** SCR = **97%** RQD = **71%**	91	3 1	
11		90.4–11.1 R6	TCR = **100%** SCR = **100%** RQD = **73%**	90	2 2 3 1	
		89.6 **11.9m**				

shale weathering zones: Z1, Z2, Z3, Z4

UCS (MPa) / estimated strength: R1, R2, R3, R4, R5, R6 (5, 25, 50, 100, 250)

laboratory testing

END OF COREHOLE

Run 1 : 0% limestone
100% shale

Run 2 : 19% limestone
81% shale

Run 3 : 8% limestone
92% shale

Run 4 : 12% limestone
88% shale

Run 5 : 8% limestone
92% shale

Run 6 : 31% limestone
69% shale

file: 24-099 gint.gpj

Tech : LB | **PM** : RS | **Rev** : NN

Borehole 202

Run #	Depth (m)	Elevation (m)
1	7.6 – 7.8	93.9 – 93.7
2	7.8 – 8.8	93.7 – 92.7
3	8.8 – 9.2	92.7 – 92.3
4	9.2 – 10.2	92.3 – 91.3
5	10.2 – 11.1	91.3 – 90.4
6	11.1 – 11.9	90.4 – 89.6

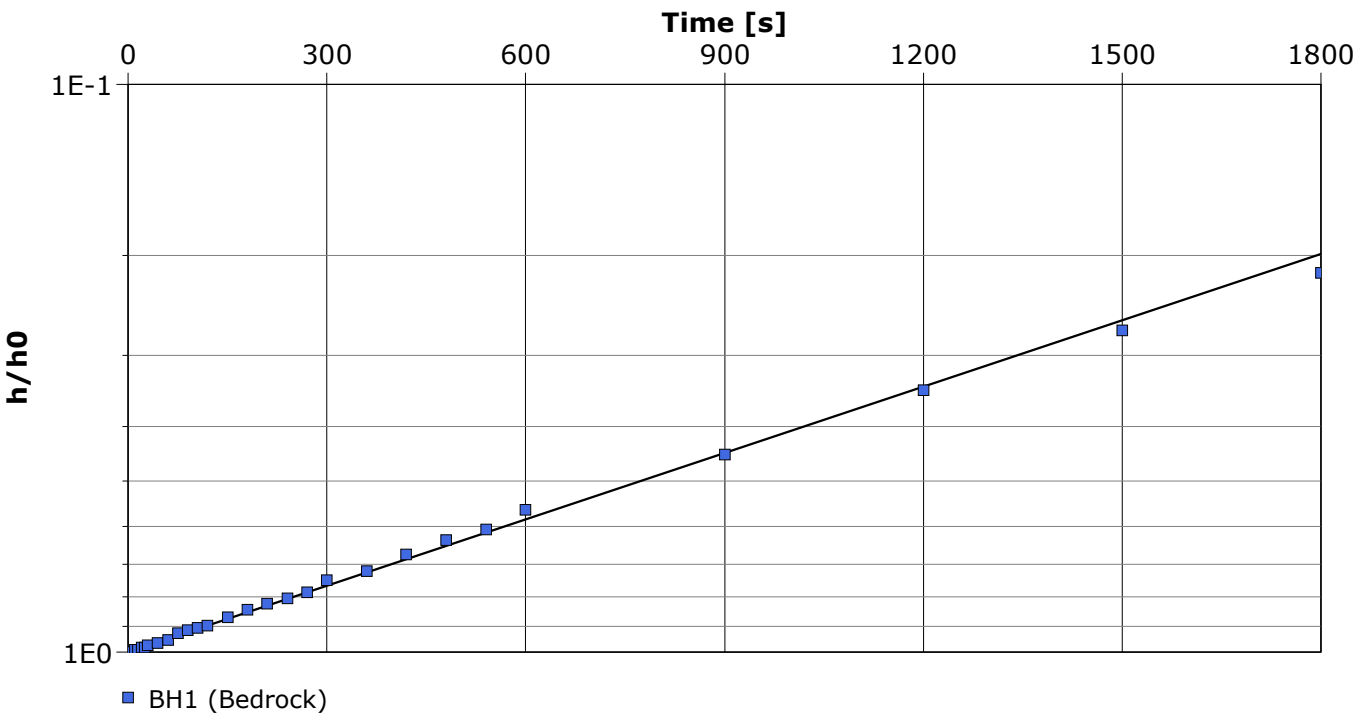
Runs 1 to 5

Run 6

APPENDIX B

GROUNDED ENGINEERING	**Slug Test Analysis Report**
	Project: 2233 Hurontario St
	Number: 24-099
	Client: Starlight Investments

Location: Mississauga, ON	Slug Test: BH1 - RHT	Test Well: BH1 (Bedrock)
Test Conducted by: MW		Test Date: 2024-07-12
Analysis Performed by: JAW	Bouwer & Rice	Analysis Date: 2024-07-23
Aquifer Thickness: 16.00 m		

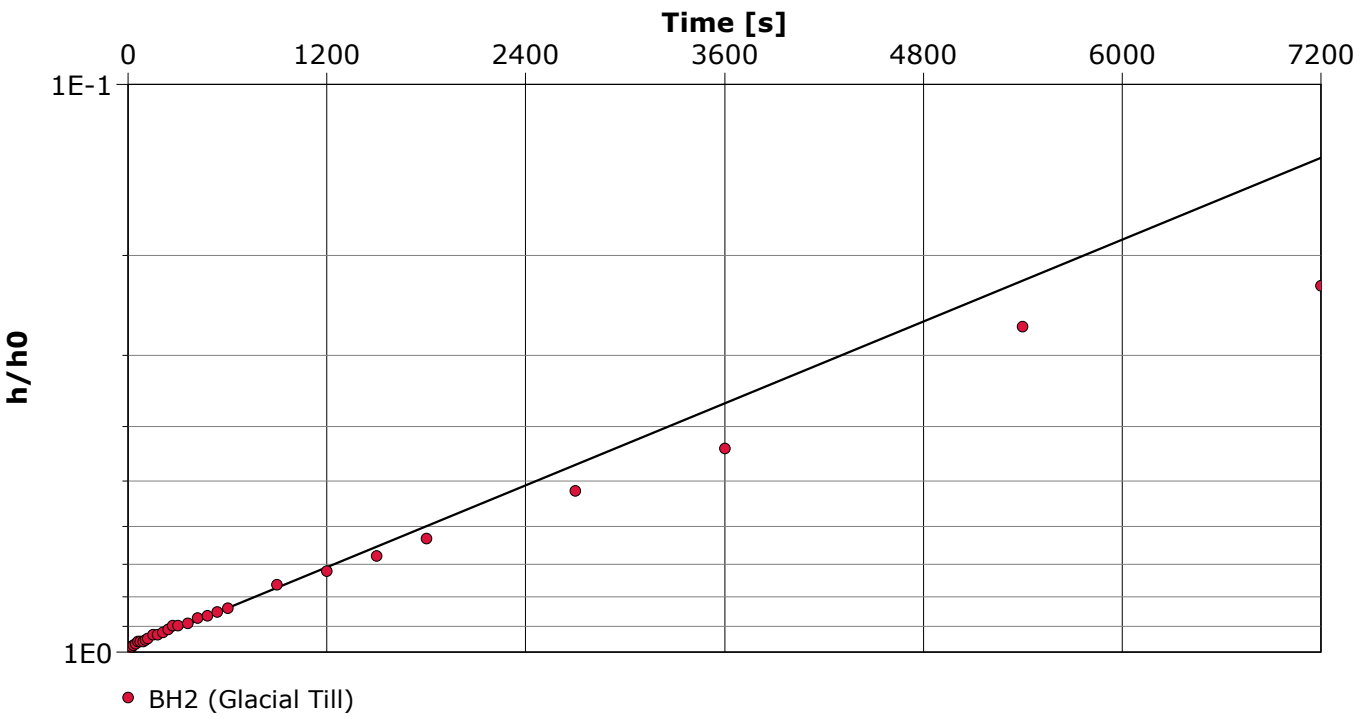


Calculation using Bouwer & Rice

Observation Well	Hydraulic Conductivity [m/s]	
BH1 (Bedrock)	3.97×10^{-7}	

GROUNDED ENGINEERING	**Slug Test Analysis Report**
	Project: 2233 Hurontario St
	Number: 24-099
	Client: Starlight Investments

Location: Mississauga, ON	Slug Test: BH2 - RHT	Test Well: BH2 (Glacial Till)
Test Conducted by: MW		Test Date: 2024-07-12
Analysis Performed by: JAW	Bouwer & Rice	Analysis Date: 2024-07-23
Aquifer Thickness: 16.00 m		

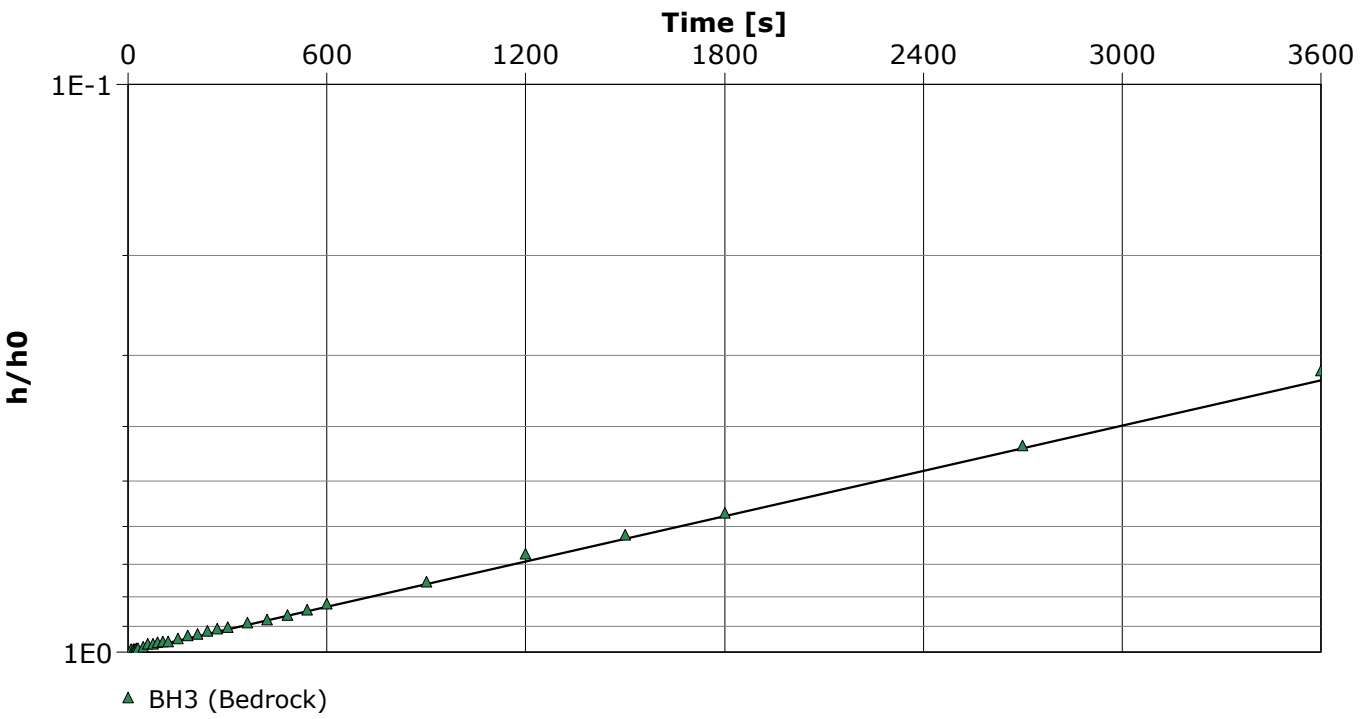


Calculation using Bouwer & Rice

Observation Well	Hydraulic Conductivity [m/s]	
BH2 (Glacial Till)	1.09×10^{-7}	

GROUNDED ENGINEERING	**Slug Test Analysis Report**
	Project: 2233 Hurontario St
	Number: 24-099
	Client: Starlight Investments

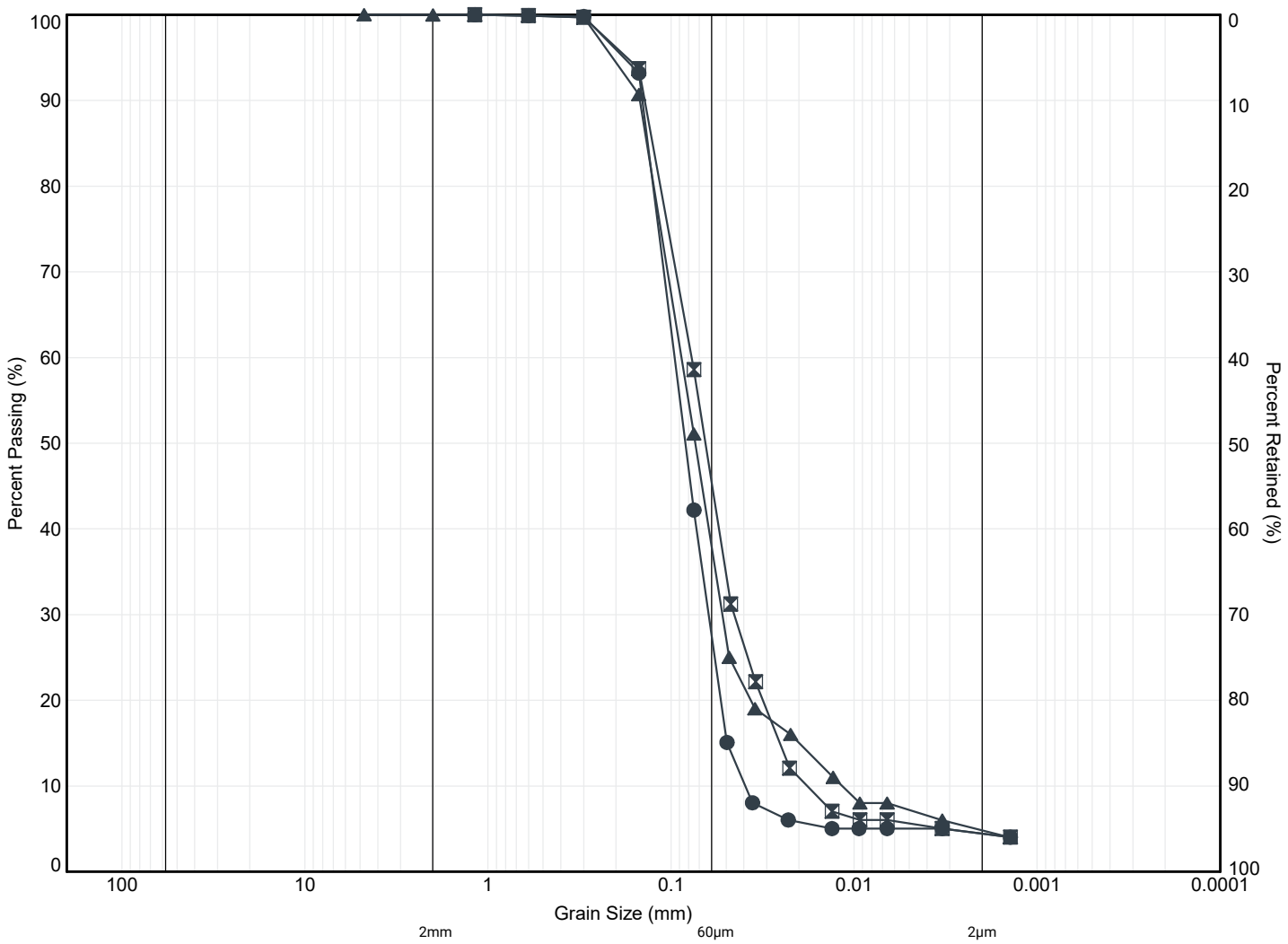
Location: Mississauga, ON	Slug Test: BH3 - RHT	Test Well: BH3 (Bedrock)
Test Conducted by: MW		Test Date: 2024-07-12
Analysis Performed by: JAW	Bouwer & Rice	Analysis Date: 2024-07-23
Aquifer Thickness: 16.00 m		



Calculation using Bouwer & Rice

Observation Well	Hydraulic Conductivity [m/s]	
BH3 (Bedrock)	1.34×10^{-7}	

APPENDIX C



MIT SYSTEM

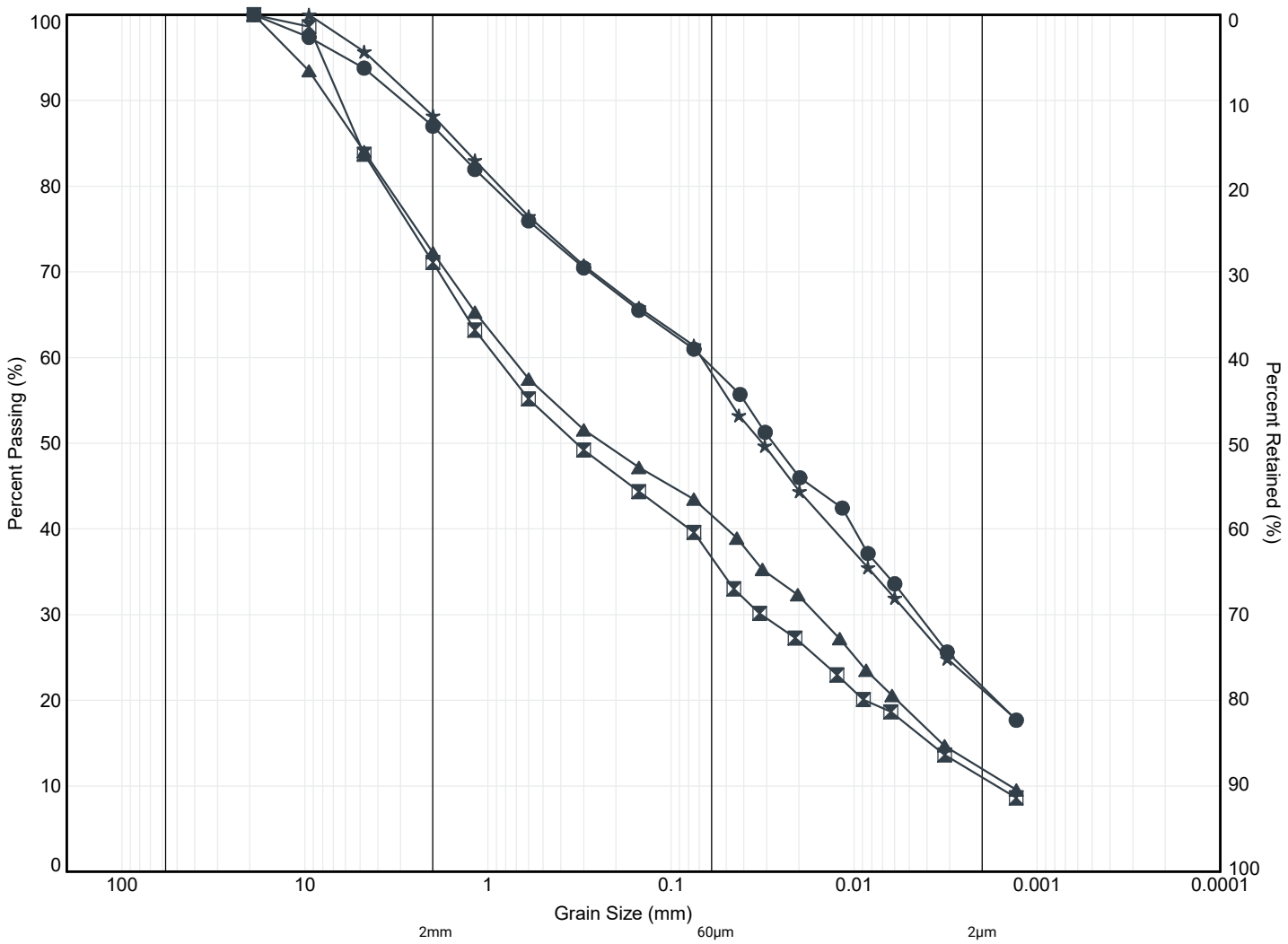
	Borehole	Sample	Depth (m)	Elev. (m)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)
●	**1**	SS5	3.4	102.1	0	73	23	4
⊠	**3**	SS5	3.4	101.5	0	54	41	5
▲	**201**	SS5	3.4	101.4	0	62	33	5

GROUNDED ENGINEERING

Title: **GRAIN SIZE DISTRIBUTION SANDS**

File No.: **24-099**

file: 24-099 gint.gpj



MIT SYSTEM	COBBLES	GRAVEL			SAND			SILT	CLAY
		COARSE	MEDIUM	FINE	COARSE	MEDIUM	FINE		

MIT SYSTEM

	Borehole	Sample	Depth (m)	Elev. (m)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)
●	**1**	SS8	5.6	99.8	13	28	37	22
⊠	**2**	10B	9.6	95.5	29	34	26	11
▲	**3**	SS9	9.4	95.4	28	30	30	12
★	**201**	SS8	7.9	96.8	12	30	37	21

GROUNDED ENGINEERING

Title: **GRAIN SIZE DISTRIBUTION GLACIAL TILL**

File No.: **24-099**

file: 24-099 gint.gpj

APPENDIX D

K from Grain Size Analysis Report

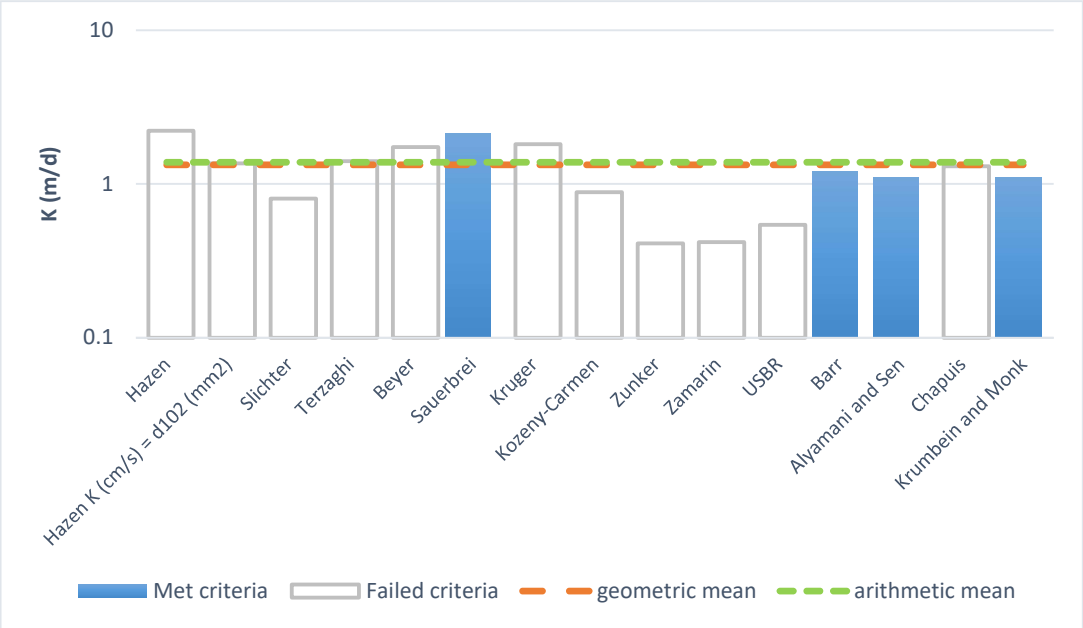
Date: 22-Jul-24

Sample Name: BH1-SS5

Mass Sample (g): 130.63

T (oC) 23

Moderately well sorted sand low in fines



Estimation of Hydraulic Conductivity	cm/s	m/s	m/d	de
Hazen	2.6E-03	2.6E-05	2.22	
Hazen K (cm/s) = d_{10} (mm)	1.6E-03	1.6E-05	1.36	
Slichter	9.3E-04	9.3E-06	0.80	
Terzaghi	1.6E-03	1.6E-05	1.41	
Beyer	2.0E-03	2.0E-05	1.74	
Sauerbrei	2.5E-03	2.5E-05	2.13	
Kruger	2.1E-03	2.1E-05	1.81	
Kozeny-Carmen	1.0E-03	1.0E-05	0.88	
Zunker	4.8E-04	4.8E-06	0.41	
Zamarin	4.8E-04	4.8E-06	0.42	
USBR	6.3E-04	6.3E-06	0.54	
Barr	1.4E-03	1.4E-05	1.21	
Alyamani and Sen	1.3E-03	1.3E-05	1.11	
Chapuis	1.5E-03	1.5E-05	1.31	
Krumbein and Monk	1.3E-03	1.3E-05	1.11	
geometric mean	1.5E-03	1.5E-05	1.33	
arithmetic mean	1.6E-03	1.6E-05	1.39	

K from Grain Size Analysis Report

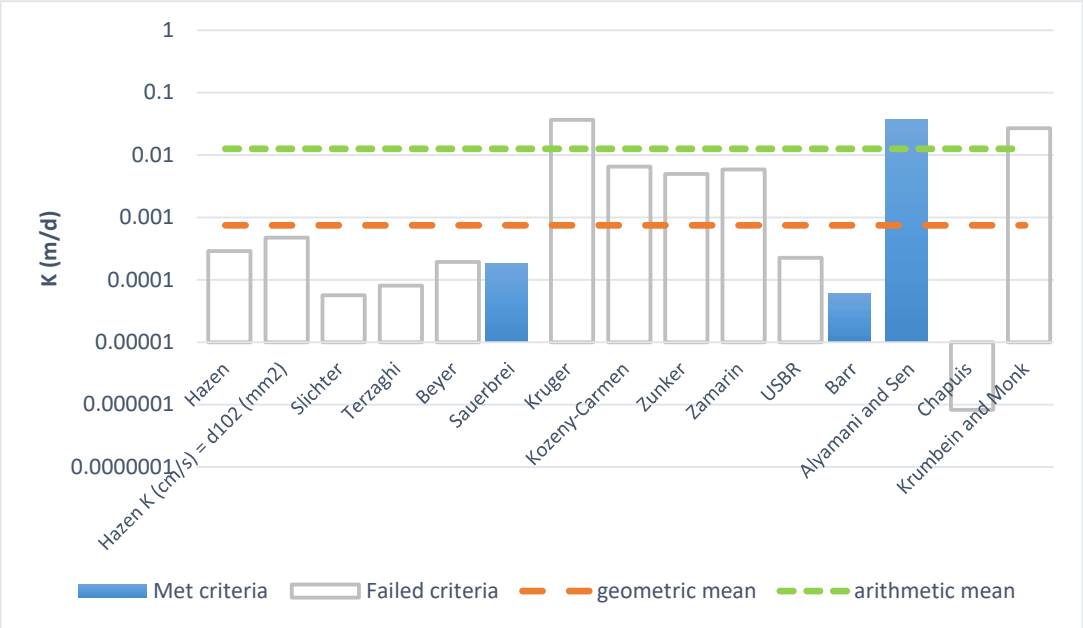
Date: 22-Jul-24

Sample Name: BH1-SS8

Mass Sample (g): 259.69

T (oC) 23

Poorly sorted sandy gravelly silt with fines



Estimation of Hydraulic Conductivity	cm/s	m/s	m/d	de
Hazen	3.3E-07	3.3E-09	0.00	
Hazen K (cm/s) = d_{10} (mm)	5.5E-07	5.5E-09	0.00	
Slichter	6.6E-08	6.6E-10	0.00	
Terzaghi	9.4E-08	9.4E-10	0.00	
Beyer	2.2E-07	2.2E-09	0.00	
Sauerbrei	2.1E-07	2.1E-09	0.00	
Kruger	4.2E-05	4.2E-07	0.04	
Kozeny-Carmen	7.6E-06	7.6E-08	0.01	
Zunker	5.8E-06	5.8E-08	0.00	
Zamarin	6.8E-06	6.8E-08	0.01	
USBR	2.6E-07	2.6E-09	0.00	
Barr	7.0E-08	7.0E-10	0.00	
Alyamani and Sen	4.4E-05	4.4E-07	0.04	
Chapuis	9.5E-10	9.5E-12	0.00	
Krumbein and Monk	3.1E-05	3.1E-07	0.03	
geometric mean	8.7E-07	8.7E-09	0.00	
arithmetic mean	1.5E-05	1.5E-07	0.01	

K from Grain Size Analysis Report

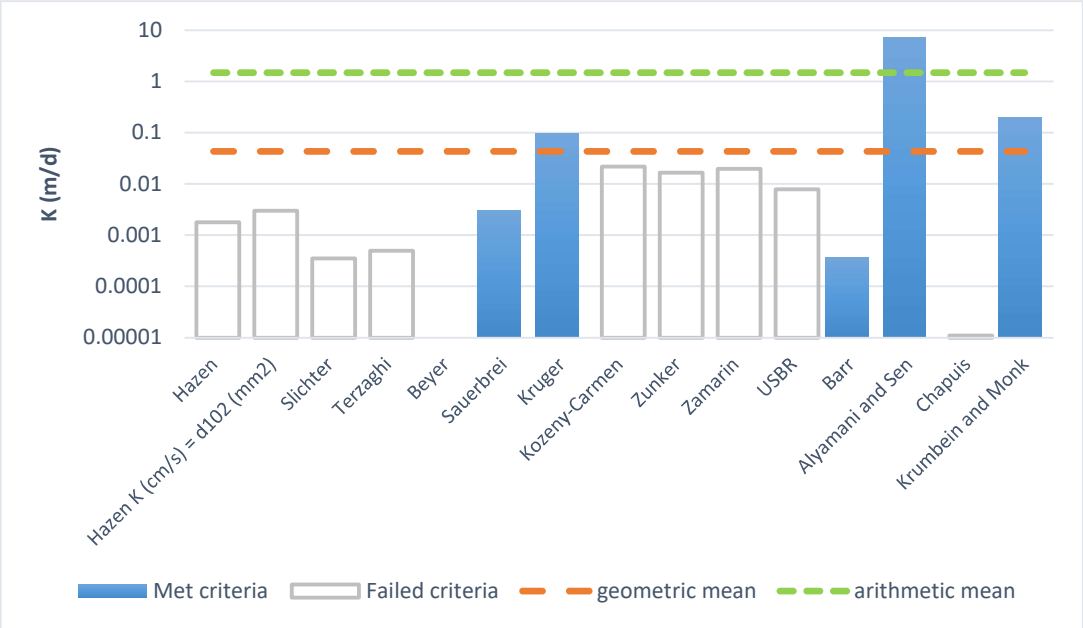
Date: 25-Jul-24

Sample Name: BH2-SS10B

Mass Sample (g): 129.11

T (oC) 22

Poorly sorted gravelly sand with fines



Estimation of Hydraulic Conductivity	cm/s	m/s	m/d	de
Hazen	2.1E-06	2.1E-08	0.00	
Hazen K (cm/s) = d_{10} (mm)	3.5E-06	3.5E-08	0.00	
Slichter	4.0E-07	4.0E-09	0.00	
Terzaghi	5.8E-07	5.8E-09	0.00	
Beyer	-1.7E-08	-1.7E-10	0.00	
Sauerbrei	3.6E-06	3.6E-08	0.00	
Kruger	1.1E-04	1.1E-06	0.09	
Kozeny-Carmen	2.5E-05	2.5E-07	0.02	
Zunker	1.9E-05	1.9E-07	0.02	
Zamarin	2.3E-05	2.3E-07	0.02	
USBR	9.1E-06	9.1E-08	0.01	
Barr	4.3E-07	4.3E-09	0.00	
Alyamani and Sen	8.3E-03	8.3E-05	7.18	
Chapuis	1.3E-08	1.3E-10	0.00	
Krumbein and Monk	2.3E-04	2.3E-06	0.20	
geometric mean	5.0E-05	5.0E-07	0.04	
arithmetic mean	1.7E-03	1.7E-05	1.49	

K from Grain Size Analysis Report

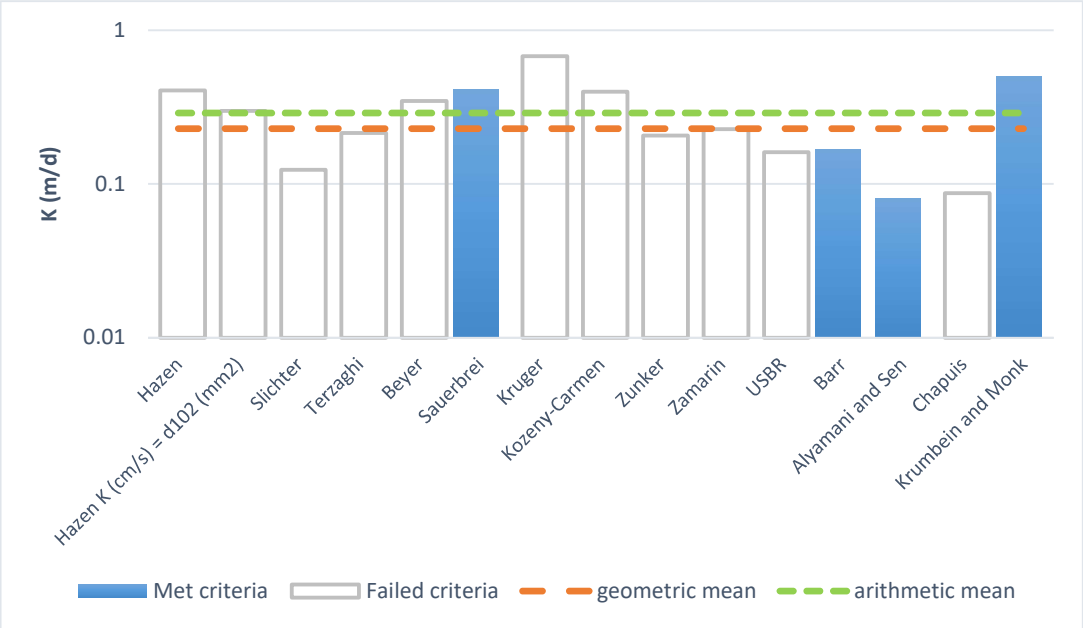
Date: 22-Jul-24

Sample Name: BH3-SS5

Mass Sample (g): 159.98

T (oC) 23

Moderately well sorted sand low in fines



Estimation of Hydraulic Conductivity	cm/s	m/s	m/d	de
Hazen	4.7E-04	4.7E-06	0.41	
Hazen K (cm/s) = d_{10} (mm)	3.5E-04	3.5E-06	0.30	
Slichter	1.4E-04	1.4E-06	0.12	
Terzaghi	2.5E-04	2.5E-06	0.21	
Beyer	4.0E-04	4.0E-06	0.35	
Sauerbrei	4.7E-04	4.7E-06	0.41	
Kruger	7.8E-04	7.8E-06	0.68	
Kozeny-Carmen	4.6E-04	4.6E-06	0.40	
Zunker	2.4E-04	2.4E-06	0.21	
Zamarin	2.6E-04	2.6E-06	0.23	
USBR	1.9E-04	1.9E-06	0.16	
Barr	1.9E-04	1.9E-06	0.17	
Alyamani and Sen	9.4E-05	9.4E-07	0.08	
Chapuis	1.0E-04	1.0E-06	0.09	
Krumbein and Monk	5.8E-04	5.8E-06	0.50	
geometric mean	2.7E-04	2.7E-06	0.23	
arithmetic mean	3.4E-04	3.4E-06	0.29	

K from Grain Size Analysis Report

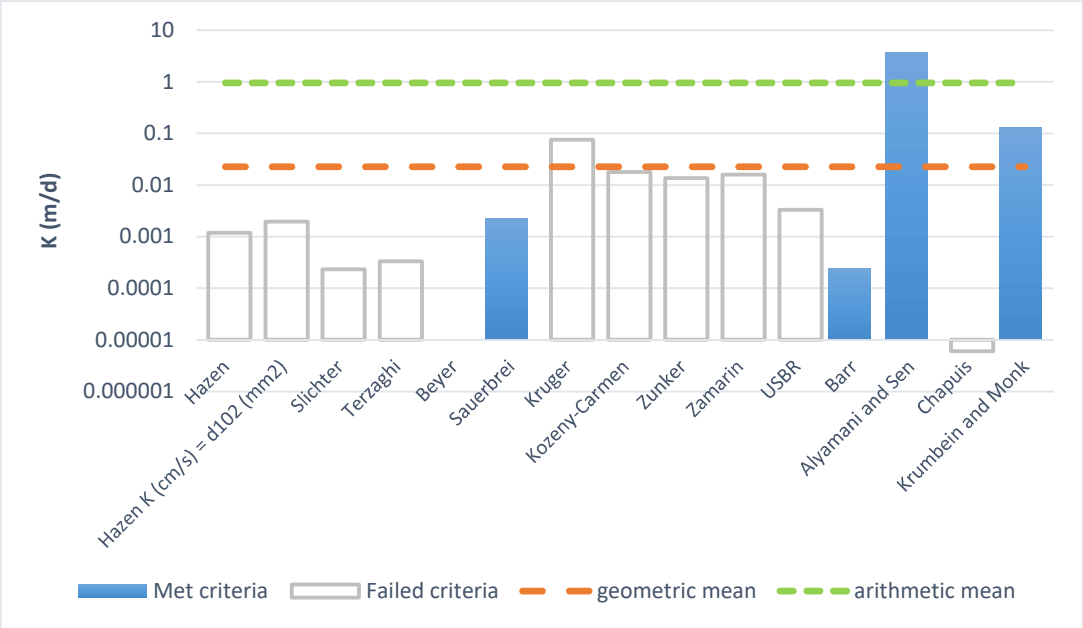
Date: 22-Jul-24

Sample Name: BH3-SS9

Mass Sample (g): 218.42

T (oC) 23

Poorly sorted gravelly sand with fines



Estimation of Hydraulic Conductivity	cm/s	m/s	m/d	de
Hazen	1.4E-06	1.4E-08	0.00	
Hazen K (cm/s) = d_{10} (mm)	2.3E-06	2.3E-08	0.00	
Slichter	2.7E-07	2.7E-09	0.00	
Terzaghi	3.8E-07	3.8E-09	0.00	
Beyer	-2.6E-08	-2.6E-10	0.00	
Sauerbrei	2.6E-06	2.6E-08	0.00	
Kruger	8.7E-05	8.7E-07	0.08	
Kozeny-Carmen	2.1E-05	2.1E-07	0.02	
Zunker	1.6E-05	1.6E-07	0.01	
Zamarin	1.9E-05	1.9E-07	0.02	
USBR	3.9E-06	3.9E-08	0.00	
Barr	2.9E-07	2.9E-09	0.00	
Alyamani and Sen	4.3E-03	4.3E-05	3.74	
Chapuis	6.9E-09	6.9E-11	0.00	
Krumbein and Monk	1.5E-04	1.5E-06	0.13	
geometric mean	2.6E-05	2.6E-07	0.02	
arithmetic mean	1.1E-03	1.1E-05	0.97	

K from Grain Size Analysis Report

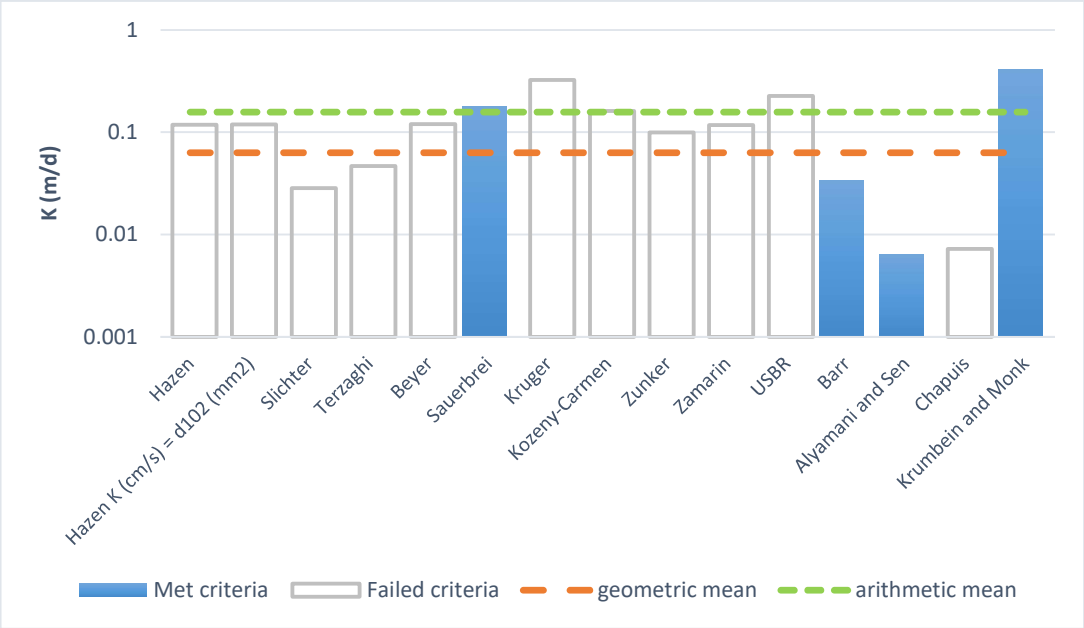
Date: 23-Mar-26

Sample Name: BH201 SS5

Mass Sample (g): 197.1

T (oC) 23

Poorly sorted sand low in fines



Estimation of Hydraulic Conductivity	cm/s	m/s	m/d	de
Hazen	1.4E-04	1.4E-06	0.12	
Hazen K (cm/s) = d_{10} (mm)	1.4E-04	1.4E-06	0.12	
Slichter	3.3E-05	3.3E-07	0.03	
Terzaghi	5.4E-05	5.4E-07	0.05	
Beyer	1.4E-04	1.4E-06	0.12	
Sauerbrei	2.1E-04	2.1E-06	0.18	
Kruger	3.8E-04	3.8E-06	0.32	
Kozeny-Carmen	1.9E-04	1.9E-06	0.16	
Zunker	1.2E-04	1.2E-06	0.10	
Zamarin	1.4E-04	1.4E-06	0.12	
USBR	2.6E-04	2.6E-06	0.23	
Barr	3.9E-05	3.9E-07	0.03	
Alyamani and Sen	7.4E-06	7.4E-08	0.01	
Chapuis	8.4E-06	8.4E-08	0.01	
Krumbein and Monk	4.8E-04	4.8E-06	0.41	
geometric mean	7.3E-05	7.3E-07	0.06	
arithmetic mean	1.8E-04	1.8E-06	0.16	

K from Grain Size Analysis Report

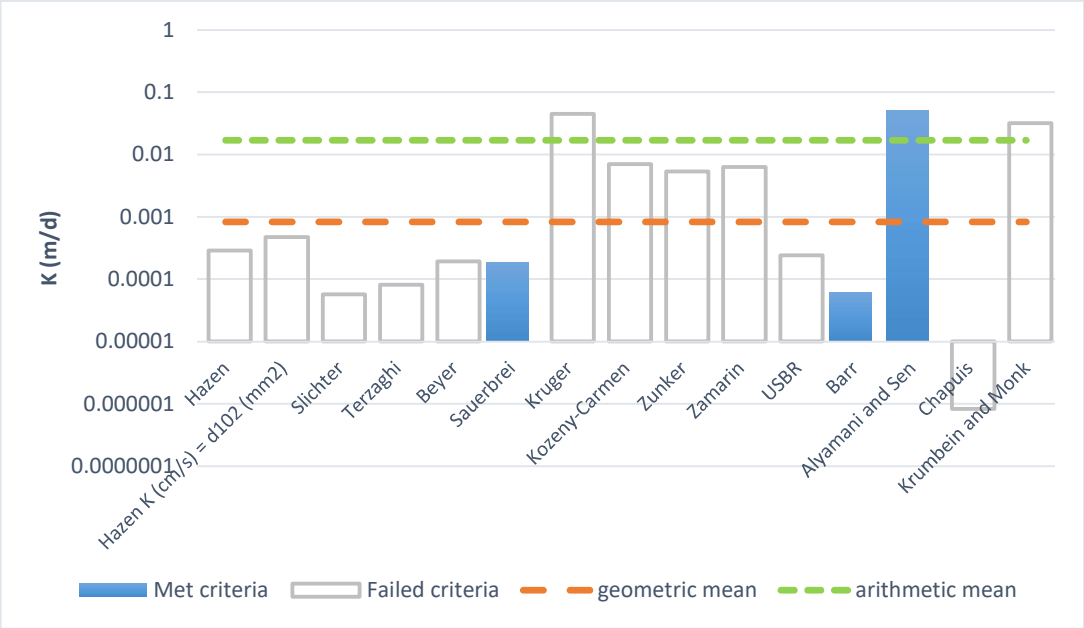
Date: 23-Mar-26

Sample Name: BH201 SS8

Mass Sample (g): 241.6

T (oC) 23

Poorly sorted sandy gravelly silt with fines



Estimation of Hydraulic Conductivity	cm/s	m/s	m/d	de
Hazen	3.4E-07	3.4E-09	0.00	
Hazen K (cm/s) = d_{10} (mm)	5.5E-07	5.5E-09	0.00	
Slichter	6.6E-08	6.6E-10	0.00	
Terzaghi	9.4E-08	9.4E-10	0.00	
Beyer	2.2E-07	2.2E-09	0.00	
Sauerbrei	2.2E-07	2.2E-09	0.00	
Kruger	5.2E-05	5.2E-07	0.04	
Kozeny-Carmen	8.2E-06	8.2E-08	0.01	
Zunker	6.2E-06	6.2E-08	0.01	
Zamarin	7.3E-06	7.3E-08	0.01	
USBR	2.8E-07	2.8E-09	0.00	
Barr	7.1E-08	7.1E-10	0.00	
Alyamani and Sen	5.9E-05	5.9E-07	0.05	
Chapuis	9.5E-10	9.5E-12	0.00	
Krumbein and Monk	3.7E-05	3.7E-07	0.03	
geometric mean	9.6E-07	9.6E-09	0.00	
arithmetic mean	2.0E-05	2.0E-07	0.02	

APPENDIX E

How did we do today?

Your feedback helps us improve our service and takes less than a minute to complete.

START SURVEY

FINAL REPORT

CA40102-MAR26 R1

24-099, 2233 Hurontario St

Prepared for

Grounded Engineering Inc.

FINAL REPORT

CA40102-MAR26 R1

First Page

CLIENT DETAILS		LABORATORY DETAILS	
Client	Grounded Engineering Inc.	Project Specialist	Jill Campbell, B.Sc.,GISAS
Address	49 Mobile Drive Toronto, Ontario M4A 1H5, Canada	Laboratory	SGS Canada Inc.
		Address	185 Concession St., Lakefield ON, K0L 2H0
Contact	Ruth Schoenhardt		
Telephone		Telephone	2165
Facsimile		Facsimile	705-652-6365
Email	rschoenhardt@groundedeng.ca	Email	jill.campbell@sgs.com
Works #		SGS Reference	CA40102-MAR26
Project	24-099, 2233 Hurontario St	Received	2026-03-09
Reference		Approved	03/17/2026
Batch		Report Number	CA40102-MAR26 R1
Samples	WATER (1)	Date Reported	03/17/2026

COMMENTS

RL - SGS Reporting Limit

Temperature of Sample upon Receipt: 8 degrees C
Cooling Agent Present: yes
Custody Seal Present: yes

Chain of Custody Number: 046639

Cl2 sample centrigued due to sample matrix
Cr6 RL increased due to sample matrix

SIGNATORIES

Jill Campbell, B.Sc.,GISAS

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FINAL REPORT

CA40102-MAR26 R1

Client: Grounded Engineering Inc.
Project: 24-099, 2233 Hurontario St
Project Manager: Ruth Schoenhardt
Samplers: Alex Johnson

MATRIX: WATER

L1 = SANSEW / WATER / - - Mississauga Sewer Use ByLaw - Storm Sewer Discharge - BL_0046_2022

Sample Number	9
Sample Name	SW-UF-BH3
Sample Matrix	Ground Water
Sample Date	2026-03-09 00:00

Parameter	Units	RL	L1	Result
General Chemistry				
Biochemical Oxygen Demand (BOD5)	mg/L	2	15	< 4 ↑
Total Suspended Solids	mg/L	2	15	44
Total Suspended Solids	mg/L	2	15	2
Total Kjeldahl Nitrogen	as N mg/L	0.5		3.8
Metals and Inorganics				
Total Chlorine	mg/L	0.02	1	0.02
Fluoride	mg/L	0.06		0.53
Cyanide (total)	mg/L	0.01	0.02	< 0.01
Sulphate	mg/L	1		290
Aluminum (total)	mg/L	0.001	1	0.670
Antimony (total)	mg/L	0.0005		< 0.0005
Arsenic (total)	mg/L	0.0002	0.02	0.0015
Cadmium (total)	mg/L	0.000003	0.008	0.000089
Chromium (total)	mg/L	0.00008	0.08	0.00255
Copper (total)	mg/L	0.001	0.04	0.002
Cobalt (total)	mg/L	0.000004		0.00339
Lead (total)	mg/L	0.00009	0.12	0.00027
Manganese (total)	mg/L	0.00001	2	0.969
Molybdenum (total)	mg/L	0.0004		0.0080
Nickel (total)	mg/L	0.0001	0.08	0.0171
Phosphorus (total)	mg/L	0.003	0.4	0.027

Client: Grounded Engineering Inc.
Project: 24-099, 2233 Hurontario St
Project Manager: Ruth Schoenhardt
Samplers: Alex Johnson

MATRIX: WATER

L1 = SANSEW / WATER / - - Mississauga Sewer Use ByLaw - Storm Sewer Discharge - BL_0046_2022

Sample Number 9
Sample Name SW-UF-BH3
Sample Matrix Ground Water
Sample Date 2026-03-09 00:00

Parameter	Units	RL	L1	Result
Metals and Inorganics (continued)				
Selenium (total)	mg/L	0.00004	0.02	0.00040
Silver (total)	mg/L	0.00005	0.12	< 0.00005
Tin (total)	mg/L	0.00006		0.00154
Titanium (total)	mg/L	0.0001		0.0110
Zinc (total)	mg/L	0.002	0.2	0.032
Microbiology				
Ecoli	mpn/100mL	0	200	0
Nonylphenol and Ethoxylates				
Nonylphenol	mg/L	0.001		< 0.001
Nonylphenol Ethoxylates	mg/L	0.01		< 0.01
Nonylphenol diethoxylate	mg/L	0.01		< 0.01
Nonylphenol monoethoxylate	mg/L	0.01		< 0.01
Oil and Grease				
Oil & Grease (total)	mg/L	2		< 2
Oil & Grease (animal/vegetable)	mg/L	4		< 4
Oil & Grease (mineral/synthetic)	mg/L	4		< 4

FINAL REPORT

CA40102-MAR26 R1

Client: Grounded Engineering Inc.
Project: 24-099, 2233 Hurontario St
Project Manager: Ruth Schoenhardt
Samplers: Alex Johnson

MATRIX: WATER

L1 = SANSEW / WATER / - - Mississauga Sewer Use ByLaw - Storm Sewer Discharge - BL_0046_2022

Sample Number 9
Sample Name SW-UF-BH3
Sample Matrix Ground Water
Sample Date 2026-03-09 00:00

Parameter	Units	RL	L1	Result
Other (ORP)				
pH	No unit	0.05	9	7.45
Chromium VI	mg/L	0.002	0.04	< 0.002
Mercury (total)	mg/L	0.00001	0.0004	< 0.00001
PAHs				
Benzo(b+j)fluoranthene	mg/L	0.0001		< 0.0001
PCBs				
Polychlorinated Biphenyls (PCBs) - Total	mg/L	0.0001	0.0004	< 0.0001
Phenols				
4AAP-Phenolics	mg/L	0.001	0.008	0.004
SVOCs				
di-n-Butyl Phthalate	mg/L	0.002		< 0.002
Bis(2-ethylhexyl)phthalate	mg/L	0.002		< 0.002
PAHs (Total)	mg/L		0.002	< 0.001
Perylene	mg/L	0.0005		< 0.0005

FINAL REPORT

CA40102-MAR26 R1

Client: Grounded Engineering Inc.
Project: 24-099, 2233 Hurontario St
Project Manager: Ruth Schoenhardt
Samplers: Alex Johnson

MATRIX: WATER

L1 = SANSEW / WATER / - - Mississauga Sewer Use ByLaw - Storm Sewer Discharge - BL_0046_2022

Sample Number 9
Sample Name SW-UF-BH3
Sample Matrix Ground Water
Sample Date 2026-03-09 00:00

Parameter	Units	RL	L1	Result
SVOCs - PAHs				
7Hdibenzo(c,g)carbazole	mg/L	0.0001		< 0.0001
Anthracene	mg/L	0.0001		< 0.0001
Benzo(a)anthracene	mg/L	0.0001		< 0.0001
Benzo(a)pyrene	mg/L	0.0001		< 0.0001
Benzo(e)pyrene	mg/L	0.0001		< 0.0001
Benzo(ghi)perylene	mg/L	0.0002		< 0.0002
Benzo(k)fluoranthene	mg/L	0.0001		< 0.0001
Chrysene	mg/L	0.0001		< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0001		< 0.0001
Dibenzo(a,i)pyrene	mg/L	0.0001		< 0.0001
Dibenzo(a,j)acridine	mg/L	0.0001		< 0.0001
Fluoranthene	mg/L	0.0001		< 0.0001
Indeno(1,2,3-cd)pyrene	mg/L	0.0002		< 0.0002
Phenanthrene	mg/L	0.0001		< 0.0001
Pyrene	mg/L	0.0001		< 0.0001

FINAL REPORT

CA40102-MAR26 R1

Client: Grounded Engineering Inc.
Project: 24-099, 2233 Hurontario St
Project Manager: Ruth Schoenhardt
Samplers: Alex Johnson

MATRIX: WATER

L1 = SANSEW / WATER / - - Mississauga Sewer Use ByLaw - Storm Sewer Discharge - BL_0046_2022

Sample Number 9
Sample Name SW-UF-BH3
Sample Matrix Ground Water
Sample Date 2026-03-09 00:00

Parameter	Units	RL	L1	Result
VOCs				
Chloroform	mg/L	0.0005		< 0.0005
1,2-Dichlorobenzene	mg/L	0.0005	0.0056	< 0.0005
1,4-Dichlorobenzene	mg/L	0.0005	0.0068	< 0.0005
cis-1,2-Dichloroethene	mg/L	0.0005		< 0.0005
trans-1,3-Dichloropropene	mg/L	0.0005		< 0.0005
Methylene Chloride	mg/L	0.0005		< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	0.0005	0.017	< 0.0005
1,1,1,2-Tetrachloroethane	mg/L	0.0005	0.017	< 0.0005
Methyl ethyl ketone	mg/L	0.02		< 0.02
Styrene	mg/L	0.0005		< 0.0005
Tetrachloroethylene (perchloroethylene)	mg/L	0.0005	0.0044	< 0.0005
Trichloroethylene	mg/L	0.0005	0.0076	< 0.0005
VOCs - BTEX				
Benzene	mg/L	0.0005	0.002	< 0.0005
Ethylbenzene	mg/L	0.0005	0.002	< 0.0005
Toluene	mg/L	0.0005	0.002	< 0.0005
Xylene (total)	mg/L	0.0005	0.0044	< 0.0005
m-p-xylene	mg/L	0.0005		< 0.0005
o-xylene	mg/L	0.0005		< 0.0005

EXCEEDANCE SUMMARY

Parameter	Method	Units	Result	SANSEW / WATER / - - Mississauga Sewer Use ByLaw - Storm Sewer Discharge - BL_0046_2022 L1
SW-UF-BH3				
Total Suspended Solids	SM 2540D	mg/L	44	15

QC SUMMARY

Anions by discrete analyzer

Method: US EPA 375.4 | Internal ref.: ME-CA-IENVIEWL-LAK-AN-026

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Sulphate	DIO8005-MAR26	mg/L	1	<2	ND	20	102	80	120	101	75	125

Biochemical Oxygen Demand

Method: SM 5210 | Internal ref.: ME-CA-IENVIEWL-LAK-AN-007

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Biochemical Oxygen Demand (BOD5)	BOD0015-MAR26	mg/L	2	< 2	3	30	96	70	130	NV	70	130

Chlorine

Method: SM 4500 | Internal ref.: ME-CA-IENVIEWL-LAK-AN-008

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Total Chlorine	EWL0180-MAR26	mg/L	0.02	< 0.02	0	20	97	90	110	NA		

QC SUMMARY

Cyanide by SFA

Method: SM 4500 I Internal ref.: ME-CA-IENVISFA-LAK-AN-005

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Cyanide (total)	SKA0085-MAR26	mg/L	0.01	<0.01	ND	10	91	90	110	100	75	125

Fluoride by Specific Ion Electrode

Method: SM 4500 I Internal ref.: ME-CA-IENVIEWL-LAK-AN-014

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Fluoride	EWL0231-MAR26	mg/L	0.06	<0.06	ND	10	95	90	110	103	75	125

Hexavalent Chromium by SFA

Method: EPA218.6/EPA3060A I Internal ref.: ME-CA-IENVISKA-LAK-AN-012

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Chromium VI	SKA0112-MAR26	mg/L	0.002	<0.0002	ND	20	102	80	120	101	75	125

QC SUMMARY

Mercury by CVAAS

Method: EPA 7471A/SM 3112B | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Mercury (total)	EHG0020-MAR26	mg/L	0.00001	< 0.00001	ND	20	111	80	120	110	70	130

QC SUMMARY

Metals in aqueous samples - ICP-MS

Method: SM 3030/EPA 200.8 | Internal ref.: ME-CA-IENVISPE-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Silver (total)	EMS0120-MAR26	mg/L	0.00005	<0.00005	ND	20	96	90	110	80	70	130
Aluminum (total)	EMS0120-MAR26	mg/L	0.001	<0.001	3	20	95	90	110	98	70	130
Arsenic (total)	EMS0120-MAR26	mg/L	0.0002	<0.0002	ND	20	96	90	110	107	70	130
Cadmium (total)	EMS0120-MAR26	mg/L	0.000003	<0.000003	0	20	97	90	110	98	70	130
Cobalt (total)	EMS0120-MAR26	mg/L	0.000004	<0.000004	10	20	100	90	110	99	70	130
Chromium (total)	EMS0120-MAR26	mg/L	0.00008	<0.00008	ND	20	102	90	110	114	70	130
Copper (total)	EMS0120-MAR26	mg/L	0.001	<0.001	ND	20	99	90	110	90	70	130
Manganese (total)	EMS0120-MAR26	mg/L	0.00001	<0.00001	2	20	101	90	110	94	70	130
Molybdenum (total)	EMS0120-MAR26	mg/L	0.0004	<0.0004	7	20	99	90	110	107	70	130
Nickel (total)	EMS0120-MAR26	mg/L	0.0001	<0.0001	2	20	98	90	110	95	70	130
Lead (total)	EMS0120-MAR26	mg/L	0.00009	<0.00009	ND	20	99	90	110	92	70	130
Phosphorus (total)	EMS0120-MAR26	mg/L	0.003	<0.003	0	20	104	90	110	NV	70	130
Antimony (total)	EMS0120-MAR26	mg/L	0.0005	<0.0005	ND	20	103	90	110	113	70	130
Selenium (total)	EMS0120-MAR26	mg/L	0.00004	<0.00004	ND	20	103	90	110	99	70	130
Tin (total)	EMS0120-MAR26	mg/L	0.00006	<0.00006	2	20	101	90	110	NV	70	130
Titanium (total)	EMS0120-MAR26	mg/L	0.0001	<0.0001	ND	20	105	90	110	NV	70	130
Zinc (total)	EMS0120-MAR26	mg/L	0.002	<0.002	2	20	98	90	110	84	70	130

QC SUMMARY

Microbiology

Method: SM 9223B | Internal ref.: ME-CA-IENVIMIC-LAK-AN-021

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Ecoli	BAC9125-MAR26	mpn/100mL	-	ACCEPTED	ACCEPTED							

Nonylphenol and Ethoxylates

Method: ASTM D7065-06 | Internal ref.: ME-CA-IENVIGC-LAK-AN-015

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Nonylphenol diethoxylate	GCM0198-MAR26	mg/L	0.01	<0.01			87	55	120			
Nonylphenol monoethoxylate	GCM0198-MAR26	mg/L	0.01	<0.01			86	55	120			
Nonylphenol	GCM0198-MAR26	mg/L	0.001	<0.001			76	55	120			

QC SUMMARY

Oil & Grease

Method: MOE E3401 | Internal ref.: ME-CA-IENVIGC-LAK-AN-019

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Oil & Grease (total)	GCM0159-MAR26	mg/L	2	<2	NSS	20	105	75	125			

Oil & Grease-AV/MS

Method: MOE E3401/SM 5520F | Internal ref.: ME-CA-IENVIGC-LAK-AN-019

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Oil & Grease (animal/vegetable)	GCM0159-MAR26	mg/L	4	< 4	NSS	20	NA	70	130			
Oil & Grease (mineral/synthetic)	GCM0159-MAR26	mg/L	4	< 4	NSS	20	NA	70	130			

pH

Method: SM 4500 | Internal ref.: ME-CA-IENVIEWL-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
pH	EWL0187-MAR26	No unit	0.05	NA	0		100			NA		

QC SUMMARY

Phenols by SFA

Method: SM 5530B-D | Internal ref.: ME-CA-IENVISFA-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
4AAP-Phenolics	SKA0130-MAR26	mg/L	0.001	<0.001	ND	10	98	80	120	92	75	125

Polychlorinated Biphenyls

Method: MOE E3400/EPA 8082A | Internal ref.: ME-CA-IENVIGC-LAK-AN-001

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Polychlorinated Biphenyls (PCBs) - Total	GCM0175-MAR26	mg/L	0.0001	<0.0001	NSS	30	95	60	140	NSS	60	140

QC SUMMARY

Semi-Volatile Organics

Method: EPA 3510C/8270D | Internal ref.: ME-CA-[ENV]GC-LAK-AN-005

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
7Hdibenzo(c,g)carbazole	GCM0150-MAR26	mg/L	0.0001	< 0.0001	NSS	30	70	50	140	NSS	50	140
Anthracene	GCM0150-MAR26	mg/L	0.0001	< 0.0001	NSS	30	83	50	140	NSS	50	140
Benzo(a)anthracene	GCM0150-MAR26	mg/L	0.0001	< 0.0001	NSS	30	86	50	140	NSS	50	140
Benzo(a)pyrene	GCM0150-MAR26	mg/L	0.0001	< 0.0001	NSS	30	78	50	140	NSS	50	140
Benzo(b+j)fluoranthene	GCM0150-MAR26	mg/L	0.0001	< 0.0001	NSS	30	86	50	140	NSS	50	140
Benzo(e)pyrene	GCM0150-MAR26	mg/L	0.0001	< 0.0001	NSS	30	82	50	140	NSS	50	140
Benzo(ghi)perylene	GCM0150-MAR26	mg/L	0.0002	< 0.0002	NSS	30	77	50	140	NSS	50	140
Benzo(k)fluoranthene	GCM0150-MAR26	mg/L	0.0001	< 0.0001	NSS	30	75	50	140	NSS	50	140
Bis(2-ethylhexyl)phthalate	GCM0150-MAR26	mg/L	0.002	< 0.002	NSS	30	123	50	140	NSS	50	140
Chrysene	GCM0150-MAR26	mg/L	0.0001	< 0.0001	NSS	30	84	50	140	NSS	50	140
di-n-Butyl Phthalate	GCM0150-MAR26	mg/L	0.002	< 0.002	NSS	30	96	50	140	NSS	50	140
Dibenzo(a,h)anthracene	GCM0150-MAR26	mg/L	0.0001	< 0.0001	NSS	30	81	50	140	NSS	50	140
Dibenzo(a,i)pyrene	GCM0150-MAR26	mg/L	0.0001	< 0.0001	NSS	30	73	50	140	NSS	50	140
Dibenzo(a,j)acridine	GCM0150-MAR26	mg/L	0.0001	< 0.0001	NSS	30	67	50	140	NSS	50	140
Fluoranthene	GCM0150-MAR26	mg/L	0.0001	< 0.0001	NSS	30	86	50	140	NSS	50	140
Indeno(1,2,3-cd)pyrene	GCM0150-MAR26	mg/L	0.0002	< 0.0002	NSS	30	80	50	140	NSS	50	140
Perylene	GCM0150-MAR26	mg/L	0.0005	< 0.0005	NSS	30	71	50	140	NSS	50	140
Phenanthrene	GCM0150-MAR26	mg/L	0.0001	< 0.0001	NSS	30	84	50	140	NSS	50	140
Pyrene	GCM0150-MAR26	mg/L	0.0001	< 0.0001	NSS	30	86	50	140	NSS	50	140

QC SUMMARY

Suspended Solids

Method: SM 2540D | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Total Suspended Solids	EWL0182-MAR26	mg/L	2	< 2	0	10	94	90	110	NA		
Total Suspended Solids	EWL0210-MAR26	mg/L	2	< 2	0	10	99	90	110	NA		

Total Nitrogen

Method: SM 4500-N C/4500-NO3- F | Internal ref.: ME-CA-[ENV]SFA-LAK-AN-002

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Total Kjeldahl Nitrogen	SKA0095-MAR26	as N mg/L	0.5	<0.5	0	10	100	90	110	109	75	125

QC SUMMARY

Volatile Organics

Method: EPA 5030B/8260C | Internal ref.: ME-CA-IENVIGC-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
1,1,1,2-Tetrachloroethane	GCM0124-MAR26	mg/L	0.0005	<0.0005	ND	30	98	60	130	102	50	140
1,1,2,2-Tetrachloroethane	GCM0124-MAR26	mg/L	0.0005	<0.0005	ND	30	106	60	130	108	50	140
1,2-Dichlorobenzene	GCM0124-MAR26	mg/L	0.0005	<0.0005	ND	30	102	60	130	106	50	140
1,4-Dichlorobenzene	GCM0124-MAR26	mg/L	0.0005	<0.0005	ND	30	102	60	130	103	50	140
Benzene	GCM0124-MAR26	mg/L	0.0005	<0.0005	ND	30	97	60	130	103	50	140
Chloroform	GCM0124-MAR26	mg/L	0.0005	<0.0005	ND	30	98	60	130	101	50	140
cis-1,2-Dichloroethene	GCM0124-MAR26	mg/L	0.0005	<0.0005	ND	30	95	60	130	104	50	140
Ethylbenzene	GCM0124-MAR26	mg/L	0.0005	<0.0005	ND	30	102	60	130	104	50	140
m-p-xylene	GCM0124-MAR26	mg/L	0.0005	<0.0005	ND	30	103	60	130	107	50	140
Methyl ethyl ketone	GCM0124-MAR26	mg/L	0.02	<0.02	ND	30	99	50	140	108	50	140
Methylene Chloride	GCM0124-MAR26	mg/L	0.0005	<0.0005	ND	30	100	60	130	101	50	140
o-xylene	GCM0124-MAR26	mg/L	0.0005	<0.0005	ND	30	102	60	130	109	50	140
Styrene	GCM0124-MAR26	mg/L	0.0005	<0.0005	ND	30	103	60	130	107	50	140
Tetrachloroethylene (perchloroethylene)	GCM0124-MAR26	mg/L	0.0005	<0.0005	ND	30	96	60	130	101	50	140
Toluene	GCM0124-MAR26	mg/L	0.0005	<0.0005	ND	30	100	60	130	104	50	140
trans-1,3-Dichloropropene	GCM0124-MAR26	mg/L	0.0005	<0.0005	ND	30	101	60	130	108	50	140
Trichloroethylene	GCM0124-MAR26	mg/L	0.0005	<0.0005	ND	30	105	60	130	100	50	140

QC SUMMARY

Method Blank: a blank matrix that is carried through the entire analytical procedure. Used to assess laboratory contamination.

Duplicate: Paired analysis of a separate portion of the same sample that is carried through the entire analytical procedure. Used to evaluate measurement precision.

LCS/Spike Blank: Laboratory control sample or spike blank refer to a blank matrix to which a known amount of analyte has been added. Used to evaluate analyte recovery and laboratory accuracy without sample matrix effects.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate laboratory accuracy with sample matrix effects.

Reference Material: a material or substance matrix matched to the samples that contains a known amount of the analyte of interest. A reference material may be used in place of a matrix spike.

RL: Reporting limit

RPD: Relative percent difference

AC: Acceptance criteria

Multielement Scan Qualifier: as the number of analytes in a scan increases, so does the chance of a limit exceedance by random chance as opposed to a real method problem. Thus, in multielement scans, for the LCS and matrix spike, up to 10% of the analytes may exceed the quoted limits by up to 10% absolute and the spike is considered acceptable.

Duplicate Qualifier: for duplicates as the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL.

Matrix Spike Qualifier: for matrix spikes, as the concentration of the native analyte increases, the uncertainty of the matrix spike recovery increases. Thus, the matrix spike acceptance limits apply only when the concentration of the matrix spike is greater than or equal to the concentration of the native analyte.

LEGEND

FOOTNOTES

NSS	Insufficient sample for analysis.
RL	Reporting Limit.
↑	Reporting limit raised.
↓	Reporting limit lowered.
NA	The sample was not analysed for this analyte
ND	Non Detect

Results relate only to the sample tested.

Data reported represent the sample as submitted to SGS.

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Please refer to SGS General Conditions of Services located at http://www.sgs.com/terms_and_conditions.htm (Printed copies are available upon request.)

Test method information available upon request.

"Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

SGS Canada Inc. statement of conformity decision rule does not consider uncertainty when analytical results are compared to a specified standard or regulation.

-- End of Analytical Report --

Request for Laboratory Services and CHAIN OF CUSTODY

SGS Industries & Environment - Lakefield: 185 Concession St., Lakefield, ON K0L 2H0 Phone: 705-652-2000 Fax: 705-652-6365 Web: www.sgs.com/environment
- London: 657 Consortium Court, London, ON, N6E 2S8 Phone: 519-672-4500 Toll Free: 877-848-8060 Fax: 519-672-0361

No: U46639

Page 1 of 1

Laboratory Information Section - Lab use only

Received By: Scott Ron
Received Date: 03/09/2026 (mm/dd/yy)
Received Time: 1555 (hr : min)
Received By (signature): S
Custody Seal Present: Yes ☑ No ☐
Custody Seal Intact: Yes ☑ No ☐
Cooling Agent Present: Yes ☑ No ☐ Type: Ice
Temperature Upon Receipt (°C): 8.0°C x 3
LAB LIMS #: CA-40102-Mar26

REPORT INFORMATION

Company: Grounded Engineering
Contact: Ruth Schoenhardt
Address: 49 Mobile Dr
Toronto ON M4A 1H5
Phone: 647-264-7954
Fax:
Email: rschoenhardt@groundedeng.ca

INVOICE INFORMATION

☒ (same as Report Information)
Company:
Contact:
Address:
Phone:
Email:

Quotation #:
P.O. #:
Project #: 24-099
Site Location/ID: 2233 Huronfario St

TURNAROUND TIME (TAT) REQUIRED

☐ Client Regular TAT ☒ Regular TAT (5-7days)
TAT's are quoted in business days (exclude statutory holidays & weekends). Samples received after 6pm or on weekends: TAT begins next business day
RUSH TAT (Additional Charges May Apply): ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 4 Days
PLEASE CONFIRM RUSH FEASIBILITY WITH SGS REPRESENTATIVE PRIOR TO SUBMISSION
Specify Due Date:
*NOTE: DRINKING (POTABLE) WATER SAMPLES FOR HUMAN CONSUMPTION MUST BE SUBMITTED WITH SGS DRINKING WATER CHAIN OF CUSTODY

REGULATIONS

☐ O.Reg 153/04 ☐ O.Reg 406/19
☐ Table 1 ☐ Res/Park Soil Texture: ☐ Coarse
☐ Table 2 ☐ Ind/Com ☐ Medium/Fine
☐ Table 3 ☐ Agri/Other
☐ Table _____ Appx. _____
Soil Volume ☐ <350m3 ☐ >350m3

Other Regulations:
☐ Reg 347/558 (3 Day min TAT)
☐ PWQO ☐ MMER
☐ CCME ☐ Other:
☐ MISA
☐ ODWS Not Reportable *See note

Sewer By-Law:
☒ Sanitary
☒ Storm
Municipality: Mississauga Region of Peel

RECORD OF SITE CONDITION (RSC) ☐ YES ☐ NO

ANALYSIS REQUESTED

	SAMPLE IDENTIFICATION	DATE SAMPLED	TIME SAMPLED	# OF BOTTLES	MATRIX	Field Filtered (Y/N)	Metals & Inorganics (incl CrVI, CN, Hg pH,(B(HWS),EC,SAR–soil) (CN, Na–water)	Full Metals Suite (ICP metals plus B(HWS-soil only) Hg, CrVI	ICP Metals only Sb,As,Ba,Be,B,Cd, Cr,Co,Cu,Pb,Mo,Ni,Se,Ag,Tl,U,V,Zn	PAHs only	SVOCs all incl PAHs, ABNs, CPs	PCBs Total ☐ Aroclor ☐	F1-F4 + BTEX	F1-F4 only no BTEX	VOCs all incl BTEX	BTEX only	Pesticides Organochlorine or specify other	Other (please specify)				Sewer Use: Storm/Sanitary Specify pkg: Mississauga Peel	Water Characterization Pkg General ☐ Extended ☐	SPLP Specify tests ☐ Metals ☐ VOC ☐ 1,4-Dioxane ☐ OCP ☐ ABN	TCLP Specify tests ☐ M&I ☐ VOC ☐ PCB ☐ B(a)P ☐ ABN ☐ Ignit.	COMMENTS:
1	SW-UF-BH3	Mar-9,26	15:00	21	GW	N																X				
2																										
3																										
4																										
5																										
6																										
7																										
8																										
9																										
10																										
11																										
12																										

Observations/Comments/Special Instructions

Sampled By (NAME): Alex Johnson Signature: Alex Johnson Date: 03/09/26 (mm/dd/yy)
Relinquished by (NAME): Alex Johnson Signature: Alex Johnson Date: 03/09/26 (mm/dd/yy)

Pink Copy - Client
Yellow & White Copy - SGS

Revision #: 1.8
Date of Issue: 06 SEP 2024

Note: Submission of samples to SGS is acknowledgement that you have been provided direction on sample collection/handling and transportation of samples. {2} Submission of samples to SGS is considered authorization for completion of work. Signatures may appear on this form or be retained on file in the contract, or in an alternative format (e.g. shipping documents). {3} Results may be sent by email to an unlimited number of addresses for no additional cost. Fax is available upon request. This document is issued by the Company under its General Conditions of Service accessible at http://www.sgs.com/terms_and_conditions.htm. (Printed copies are available upon request.) Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

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START SURVEY

FINAL REPORT

CA40102-MAR26 R1

24-099, 2233 Hurontario St

Prepared for

Grounded Engineering Inc.

FINAL REPORT

CA40102-MAR26 R1

First Page

CLIENT DETAILS		LABORATORY DETAILS	
Client	Grounded Engineering Inc.	Project Specialist	Jill Campbell, B.Sc.,GISAS
Address	49 Mobile Drive Toronto, Ontario M4A 1H5, Canada	Laboratory	SGS Canada Inc.
		Address	185 Concession St., Lakefield ON, K0L 2H0
Contact	Ruth Schoenhardt		
Telephone		Telephone	2165
Facsimile		Facsimile	705-652-6365
Email	rschoenhardt@groundedeng.ca	Email	jill.campbell@sgs.com
Works #		SGS Reference	CA40102-MAR26
Project	24-099, 2233 Hurontario St	Received	2026-03-09
Reference		Approved	03/17/2026
Batch		Report Number	CA40102-MAR26 R1
Samples	WATER (1)	Date Reported	03/17/2026

COMMENTS

RL - SGS Reporting Limit

Temperature of Sample upon Receipt: 8 degrees C
Cooling Agent Present: yes
Custody Seal Present: yes

Chain of Custody Number: 046639

Cl2 sample centrigued due to sample matrix
Cr6 RL increased due to sample matrix

SIGNATORIES

Jill Campbell, B.Sc.,GISAS

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FINAL REPORT

CA40102-MAR26 R1

Client: Grounded Engineering Inc.
Project: 24-099, 2233 Hurontario St
Project Manager: Ruth Schoenhardt
Samplers: Alex Johnson

MATRIX: WATER

Sample Number 9
Sample Name SW-UF-BH3
Sample Matrix Ground Water
Sample Date 2026-03-09 00:00

L1 = SANSEW / WATER / - - Peel Sewer Use ByLaw - Sanitary Sewer Discharge - BL_53_2010
L2 = SANSEW / WATER / - - Peel Sewer Use ByLaw - Storm Sewer Discharge - BL_53_2010

Parameter	Units	RL	L1	L2	Result
General Chemistry					
Biochemical Oxygen Demand (BOD5)	mg/L	2	300	15	< 4 ↑
Total Suspended Solids	mg/L	2	350	15	44
Total Suspended Solids	mg/L	2	350	15	2
Total Kjeldahl Nitrogen	as N mg/L	0.5	100	1	3.8
Metals and Inorganics					
Total Chlorine	mg/L	0.02			0.02
Fluoride	mg/L	0.06	10		0.53
Cyanide (total)	mg/L	0.01	2	0.02	< 0.01
Sulphate	mg/L	1	1500		290
Aluminum (total)	mg/L	0.001	50		0.670
Antimony (total)	mg/L	0.0005	5		< 0.0005
Arsenic (total)	mg/L	0.0002	1	0.02	0.0015
Cadmium (total)	mg/L	0.000003	0.7	0.008	0.000089
Chromium (total)	mg/L	0.00008	5	0.08	0.00255
Copper (total)	mg/L	0.001	3	0.05	0.002
Cobalt (total)	mg/L	0.000004	5		0.00339
Lead (total)	mg/L	0.00009	3	0.12	0.00027
Manganese (total)	mg/L	0.00001	5	0.05	0.969
Molybdenum (total)	mg/L	0.0004	5		0.0080
Nickel (total)	mg/L	0.0001	3	0.08	0.0171
Phosphorus (total)	mg/L	0.003	10	0.4	0.027
Selenium (total)	mg/L	0.00004	1	0.02	0.00040

Client: Grounded Engineering Inc.
Project: 24-099, 2233 Hurontario St
Project Manager: Ruth Schoenhardt
Samplers: Alex Johnson

MATRIX: WATER

L1 = SANSEW / WATER / - - Peel Sewer Use ByLaw - Sanitary Sewer Discharge - BL_53_2010
L2 = SANSEW / WATER / - - Peel Sewer Use ByLaw - Storm Sewer Discharge - BL_53_2010

Sample Number	9
Sample Name	SW-UF-BH3
Sample Matrix	Ground Water
Sample Date	2026-03-09 00:00

Parameter	Units	RL	L1	L2	Result
Metals and Inorganics (continued)					
Silver (total)	mg/L	0.00005	5	0.12	< 0.00005
Tin (total)	mg/L	0.00006	5		0.00154
Titanium (total)	mg/L	0.0001	5		0.0110
Zinc (total)	mg/L	0.002	3	0.04	0.032
Microbiology					
Ecoli	mpn/100mL	0		200	0
Nonylphenol and Ethoxylates					
Nonylphenol	mg/L	0.001	0.02		< 0.001
Nonylphenol Ethoxylates	mg/L	0.01	0.2		< 0.01
Nonylphenol diethoxylate	mg/L	0.01			< 0.01
Nonylphenol monoethoxylate	mg/L	0.01			< 0.01
Oil and Grease					
Oil & Grease (total)	mg/L	2			< 2
Oil & Grease (animal/vegetable)	mg/L	4	150		< 4
Oil & Grease (mineral/synthetic)	mg/L	4	15		< 4

FINAL REPORT

CA40102-MAR26 R1

Client: Grounded Engineering Inc.
Project: 24-099, 2233 Hurontario St
Project Manager: Ruth Schoenhardt
Samplers: Alex Johnson

MATRIX: WATER

Sample Number 9
Sample Name SW-UF-BH3
Sample Matrix Ground Water
Sample Date 2026-03-09 00:00

L1 = SANSEW / WATER / - - Peel Sewer Use ByLaw - Sanitary Sewer Discharge - BL_53_2010
L2 = SANSEW / WATER / - - Peel Sewer Use ByLaw - Storm Sewer Discharge - BL_53_2010

Parameter	Units	RL	L1	L2	Result
Other (ORP)					
pH	No unit	0.05	10	9	7.45
Chromium VI	mg/L	0.002			< 0.002
Mercury (total)	mg/L	0.00001	0.01	0.0004	< 0.00001
PAHs					
Benzo(b+j)fluoranthene	mg/L	0.0001			< 0.0001
PCBs					
Polychlorinated Biphenyls (PCBs) - Total	mg/L	0.0001	0.001	0.0004	< 0.0001
Phenols					
4AAP-Phenolics	mg/L	0.001	1	0.008	0.004
SVOCs					
di-n-Butyl Phthalate	mg/L	0.002	0.08	0.015	< 0.002
Bis(2-ethylhexyl)phthalate	mg/L	0.002	0.012	0.0088	< 0.002
PAHs (Total)	mg/L				< 0.001
Perylene	mg/L	0.0005			< 0.0005

FINAL REPORT

CA40102-MAR26 R1

Client: Grounded Engineering Inc.
Project: 24-099, 2233 Hurontario St
Project Manager: Ruth Schoenhardt
Samplers: Alex Johnson

MATRIX: WATER

Sample Number 9
Sample Name SW-UF-BH3
Sample Matrix Ground Water
Sample Date 2026-03-09 00:00

L1 = SANSEW / WATER / - - Peel Sewer Use ByLaw - Sanitary Sewer Discharge - BL_53_2010
L2 = SANSEW / WATER / - - Peel Sewer Use ByLaw - Storm Sewer Discharge - BL_53_2010

Parameter	Units	RL	L1	L2	Result
SVOCs - PAHs					
7Hdibenzo(c,g)carbazole	mg/L	0.0001			< 0.0001
Anthracene	mg/L	0.0001			< 0.0001
Benzo(a)anthracene	mg/L	0.0001			< 0.0001
Benzo(a)pyrene	mg/L	0.0001			< 0.0001
Benzo(e)pyrene	mg/L	0.0001			< 0.0001
Benzo(ghi)perylene	mg/L	0.0002			< 0.0002
Benzo(k)fluoranthene	mg/L	0.0001			< 0.0001
Chrysene	mg/L	0.0001			< 0.0001
Dibenzo(a,h)anthracene	mg/L	0.0001			< 0.0001
Dibenzo(a,i)pyrene	mg/L	0.0001			< 0.0001
Dibenzo(a,j)acridine	mg/L	0.0001			< 0.0001
Fluoranthene	mg/L	0.0001			< 0.0001
Indeno(1,2,3-cd)pyrene	mg/L	0.0002			< 0.0002
Phenanthrene	mg/L	0.0001			< 0.0001
Pyrene	mg/L	0.0001			< 0.0001

FINAL REPORT

CA40102-MAR26 R1

Client: Grounded Engineering Inc.
Project: 24-099, 2233 Hurontario St
Project Manager: Ruth Schoenhardt
Samplers: Alex Johnson

MATRIX: WATER

Sample Number 9
Sample Name SW-UF-BH3
Sample Matrix Ground Water
Sample Date 2026-03-09 00:00

L1 = SANSEW / WATER / - - Peel Sewer Use ByLaw - Sanitary Sewer Discharge - BL_53_2010
L2 = SANSEW / WATER / - - Peel Sewer Use ByLaw - Storm Sewer Discharge - BL_53_2010

Parameter	Units	RL	L1	L2	Result
VOCs					
Chloroform	mg/L	0.0005	0.04	0.002	< 0.0005
1,2-Dichlorobenzene	mg/L	0.0005	0.05	0.0056	< 0.0005
1,4-Dichlorobenzene	mg/L	0.0005	0.08	0.0068	< 0.0005
cis-1,2-Dichloroethene	mg/L	0.0005	4	0.0056	< 0.0005
trans-1,3-Dichloropropene	mg/L	0.0005	0.14	0.0056	< 0.0005
Methylene Chloride	mg/L	0.0005	2	0.0052	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	0.0005	1.4	0.017	< 0.0005
1,1,1,2-Tetrachloroethane	mg/L	0.0005			< 0.0005
Methyl ethyl ketone	mg/L	0.02			< 0.02
Styrene	mg/L	0.0005	0.2		< 0.0005
Tetrachloroethylene (perchloroethylene)	mg/L	0.0005	1	0.0044	< 0.0005
Trichloroethylene	mg/L	0.0005	0.4	0.008	< 0.0005
VOCs - BTEX					
Benzene	mg/L	0.0005	0.01	0.002	< 0.0005
Ethylbenzene	mg/L	0.0005	0.16	0.002	< 0.0005
Toluene	mg/L	0.0005	0.27	0.002	< 0.0005
Xylene (total)	mg/L	0.0005	1.4	0.0044	< 0.0005
m-p-xylene	mg/L	0.0005			< 0.0005
o-xylene	mg/L	0.0005			< 0.0005

EXCEEDANCE SUMMARY

Parameter	Method	Units	Result	SANSEW / WATER / - - Peel Sewer Use ByLaw - Sanitary Sewer Discharge - BL_53_2010 L1	SANSEW / WATER / - - Peel Sewer Use ByLaw - Storm Sewer Discharge - BL_53_2010 L2
SW-UF-BH3					
Total Suspended Solids	SM 2540D	mg/L	44		15
Manganese	SM 3030/EPA 200.8	mg/L	0.969		0.05
Total Kjeldahl Nitrogen	SM 4500-N C/4500-NO3- F	as N mg/L	3.8		1

QC SUMMARY

Anions by discrete analyzer

Method: US EPA 375.4 | Internal ref.: ME-CA-IENVIEWL-LAK-AN-026

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Sulphate	DIO8005-MAR26	mg/L	1	<2	ND	20	102	80	120	101	75	125

Biochemical Oxygen Demand

Method: SM 5210 | Internal ref.: ME-CA-IENVIEWL-LAK-AN-007

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Biochemical Oxygen Demand (BOD5)	BOD0015-MAR26	mg/L	2	< 2	3	30	96	70	130	NV	70	130

Chlorine

Method: SM 4500 | Internal ref.: ME-CA-IENVIEWL-LAK-AN-008

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Total Chlorine	EWL0180-MAR26	mg/L	0.02	< 0.02	0	20	97	90	110	NA		

QC SUMMARY

Cyanide by SFA

Method: SM 4500 I Internal ref.: ME-CA-IENVISFA-LAK-AN-005

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Cyanide (total)	SKA0085-MAR26	mg/L	0.01	<0.01	ND	10	91	90	110	100	75	125

Fluoride by Specific Ion Electrode

Method: SM 4500 I Internal ref.: ME-CA-IENVIEWL-LAK-AN-014

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Fluoride	EWL0231-MAR26	mg/L	0.06	<0.06	ND	10	95	90	110	103	75	125

Hexavalent Chromium by SFA

Method: EPA218.6/EPA3060A I Internal ref.: ME-CA-IENVISKA-LAK-AN-012

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Chromium VI	SKA0112-MAR26	mg/L	0.002	<0.0002	ND	20	102	80	120	101	75	125

QC SUMMARY

Mercury by CVAAS

Method: EPA 7471A/SM 3112B | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Mercury (total)	EHG0020-MAR26	mg/L	0.00001	< 0.00001	ND	20	111	80	120	110	70	130

QC SUMMARY

Metals in aqueous samples - ICP-MS

Method: SM 3030/EPA 200.8 | Internal ref.: ME-CA-IENVISPE-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Silver (total)	EMS0120-MAR26	mg/L	0.00005	<0.00005	ND	20	96	90	110	80	70	130
Aluminum (total)	EMS0120-MAR26	mg/L	0.001	<0.001	3	20	95	90	110	98	70	130
Arsenic (total)	EMS0120-MAR26	mg/L	0.0002	<0.0002	ND	20	96	90	110	107	70	130
Cadmium (total)	EMS0120-MAR26	mg/L	0.000003	<0.000003	0	20	97	90	110	98	70	130
Cobalt (total)	EMS0120-MAR26	mg/L	0.000004	<0.000004	10	20	100	90	110	99	70	130
Chromium (total)	EMS0120-MAR26	mg/L	0.00008	<0.00008	ND	20	102	90	110	114	70	130
Copper (total)	EMS0120-MAR26	mg/L	0.001	<0.001	ND	20	99	90	110	90	70	130
Manganese (total)	EMS0120-MAR26	mg/L	0.00001	<0.00001	2	20	101	90	110	94	70	130
Molybdenum (total)	EMS0120-MAR26	mg/L	0.0004	<0.0004	7	20	99	90	110	107	70	130
Nickel (total)	EMS0120-MAR26	mg/L	0.0001	<0.0001	2	20	98	90	110	95	70	130
Lead (total)	EMS0120-MAR26	mg/L	0.00009	<0.00009	ND	20	99	90	110	92	70	130
Phosphorus (total)	EMS0120-MAR26	mg/L	0.003	<0.003	0	20	104	90	110	NV	70	130
Antimony (total)	EMS0120-MAR26	mg/L	0.0005	<0.0005	ND	20	103	90	110	113	70	130
Selenium (total)	EMS0120-MAR26	mg/L	0.00004	<0.00004	ND	20	103	90	110	99	70	130
Tin (total)	EMS0120-MAR26	mg/L	0.00006	<0.00006	2	20	101	90	110	NV	70	130
Titanium (total)	EMS0120-MAR26	mg/L	0.0001	<0.0001	ND	20	105	90	110	NV	70	130
Zinc (total)	EMS0120-MAR26	mg/L	0.002	<0.002	2	20	98	90	110	84	70	130

QC SUMMARY

Microbiology

Method: SM 9223B | Internal ref.: ME-CA-IENVIMIC-LAK-AN-021

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Ecoli	BAC9125-MAR26	mpn/100mL	-	ACCEPTED	ACCEPTED							

Nonylphenol and Ethoxylates

Method: ASTM D7065-06 | Internal ref.: ME-CA-IENVIGC-LAK-AN-015

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Nonylphenol diethoxylate	GCM0198-MAR26	mg/L	0.01	<0.01			87	55	120			
Nonylphenol monoethoxylate	GCM0198-MAR26	mg/L	0.01	<0.01			86	55	120			
Nonylphenol	GCM0198-MAR26	mg/L	0.001	<0.001			76	55	120			

QC SUMMARY

Oil & Grease

Method: MOE E3401 | Internal ref.: ME-CA-IENVIGC-LAK-AN-019

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Oil & Grease (total)	GCM0159-MAR26	mg/L	2	<2	NSS	20	105	75	125			

Oil & Grease-AV/MS

Method: MOE E3401/SM 5520F | Internal ref.: ME-CA-IENVIGC-LAK-AN-019

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Oil & Grease (animal/vegetable)	GCM0159-MAR26	mg/L	4	< 4	NSS	20	NA	70	130			
Oil & Grease (mineral/synthetic)	GCM0159-MAR26	mg/L	4	< 4	NSS	20	NA	70	130			

pH

Method: SM 4500 | Internal ref.: ME-CA-IENVIEWL-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
pH	EWL0187-MAR26	No unit	0.05	NA	0		100			NA		

QC SUMMARY

Phenols by SFA

Method: SM 5530B-D | Internal ref.: ME-CA-IENVISFA-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
4AAP-Phenolics	SKA0130-MAR26	mg/L	0.001	<0.001	ND	10	98	80	120	92	75	125

Polychlorinated Biphenyls

Method: MOE E3400/EPA 8082A | Internal ref.: ME-CA-IENVIGC-LAK-AN-001

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Polychlorinated Biphenyls (PCBs) - Total	GCM0175-MAR26	mg/L	0.0001	<0.0001	NSS	30	95	60	140	NSS	60	140

QC SUMMARY

Semi-Volatile Organics

Method: EPA 3510C/8270D | Internal ref.: ME-CA-[ENV]GC-LAK-AN-005

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
7Hdibenzo(c,g)carbazole	GCM0150-MAR26	mg/L	0.0001	< 0.0001	NSS	30	70	50	140	NSS	50	140
Anthracene	GCM0150-MAR26	mg/L	0.0001	< 0.0001	NSS	30	83	50	140	NSS	50	140
Benzo(a)anthracene	GCM0150-MAR26	mg/L	0.0001	< 0.0001	NSS	30	86	50	140	NSS	50	140
Benzo(a)pyrene	GCM0150-MAR26	mg/L	0.0001	< 0.0001	NSS	30	78	50	140	NSS	50	140
Benzo(b+j)fluoranthene	GCM0150-MAR26	mg/L	0.0001	< 0.0001	NSS	30	86	50	140	NSS	50	140
Benzo(e)pyrene	GCM0150-MAR26	mg/L	0.0001	< 0.0001	NSS	30	82	50	140	NSS	50	140
Benzo(ghi)perylene	GCM0150-MAR26	mg/L	0.0002	< 0.0002	NSS	30	77	50	140	NSS	50	140
Benzo(k)fluoranthene	GCM0150-MAR26	mg/L	0.0001	< 0.0001	NSS	30	75	50	140	NSS	50	140
Bis(2-ethylhexyl)phthalate	GCM0150-MAR26	mg/L	0.002	< 0.002	NSS	30	123	50	140	NSS	50	140
Chrysene	GCM0150-MAR26	mg/L	0.0001	< 0.0001	NSS	30	84	50	140	NSS	50	140
di-n-Butyl Phthalate	GCM0150-MAR26	mg/L	0.002	< 0.002	NSS	30	96	50	140	NSS	50	140
Dibenzo(a,h)anthracene	GCM0150-MAR26	mg/L	0.0001	< 0.0001	NSS	30	81	50	140	NSS	50	140
Dibenzo(a,i)pyrene	GCM0150-MAR26	mg/L	0.0001	< 0.0001	NSS	30	73	50	140	NSS	50	140
Dibenzo(a,j)acridine	GCM0150-MAR26	mg/L	0.0001	< 0.0001	NSS	30	67	50	140	NSS	50	140
Fluoranthene	GCM0150-MAR26	mg/L	0.0001	< 0.0001	NSS	30	86	50	140	NSS	50	140
Indeno(1,2,3-cd)pyrene	GCM0150-MAR26	mg/L	0.0002	< 0.0002	NSS	30	80	50	140	NSS	50	140
Perylene	GCM0150-MAR26	mg/L	0.0005	< 0.0005	NSS	30	71	50	140	NSS	50	140
Phenanthrene	GCM0150-MAR26	mg/L	0.0001	< 0.0001	NSS	30	84	50	140	NSS	50	140
Pyrene	GCM0150-MAR26	mg/L	0.0001	< 0.0001	NSS	30	86	50	140	NSS	50	140

QC SUMMARY

Suspended Solids

Method: SM 2540D | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Total Suspended Solids	EWL0182-MAR26	mg/L	2	< 2	0	10	94	90	110	NA		
Total Suspended Solids	EWL0210-MAR26	mg/L	2	< 2	0	10	99	90	110	NA		

Total Nitrogen

Method: SM 4500-N C/4500-NO3- F | Internal ref.: ME-CA-[ENV]SFA-LAK-AN-002

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Total Kjeldahl Nitrogen	SKA0095-MAR26	as N mg/L	0.5	<0.5	0	10	100	90	110	109	75	125

QC SUMMARY

Volatile Organics

Method: EPA 5030B/8260C | Internal ref.: ME-CA-IENVIGC-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
1,1,1,2-Tetrachloroethane	GCM0124-MAR26	mg/L	0.0005	<0.0005	ND	30	98	60	130	102	50	140
1,1,2,2-Tetrachloroethane	GCM0124-MAR26	mg/L	0.0005	<0.0005	ND	30	106	60	130	108	50	140
1,2-Dichlorobenzene	GCM0124-MAR26	mg/L	0.0005	<0.0005	ND	30	102	60	130	106	50	140
1,4-Dichlorobenzene	GCM0124-MAR26	mg/L	0.0005	<0.0005	ND	30	102	60	130	103	50	140
Benzene	GCM0124-MAR26	mg/L	0.0005	<0.0005	ND	30	97	60	130	103	50	140
Chloroform	GCM0124-MAR26	mg/L	0.0005	<0.0005	ND	30	98	60	130	101	50	140
cis-1,2-Dichloroethene	GCM0124-MAR26	mg/L	0.0005	<0.0005	ND	30	95	60	130	104	50	140
Ethylbenzene	GCM0124-MAR26	mg/L	0.0005	<0.0005	ND	30	102	60	130	104	50	140
m-p-xylene	GCM0124-MAR26	mg/L	0.0005	<0.0005	ND	30	103	60	130	107	50	140
Methyl ethyl ketone	GCM0124-MAR26	mg/L	0.02	<0.02	ND	30	99	50	140	108	50	140
Methylene Chloride	GCM0124-MAR26	mg/L	0.0005	<0.0005	ND	30	100	60	130	101	50	140
o-xylene	GCM0124-MAR26	mg/L	0.0005	<0.0005	ND	30	102	60	130	109	50	140
Styrene	GCM0124-MAR26	mg/L	0.0005	<0.0005	ND	30	103	60	130	107	50	140
Tetrachloroethylene (perchloroethylene)	GCM0124-MAR26	mg/L	0.0005	<0.0005	ND	30	96	60	130	101	50	140
Toluene	GCM0124-MAR26	mg/L	0.0005	<0.0005	ND	30	100	60	130	104	50	140
trans-1,3-Dichloropropene	GCM0124-MAR26	mg/L	0.0005	<0.0005	ND	30	101	60	130	108	50	140
Trichloroethylene	GCM0124-MAR26	mg/L	0.0005	<0.0005	ND	30	105	60	130	100	50	140

QC SUMMARY

Method Blank: a blank matrix that is carried through the entire analytical procedure. Used to assess laboratory contamination.

Duplicate: Paired analysis of a separate portion of the same sample that is carried through the entire analytical procedure. Used to evaluate measurement precision.

LCS/Spike Blank: Laboratory control sample or spike blank refer to a blank matrix to which a known amount of analyte has been added. Used to evaluate analyte recovery and laboratory accuracy without sample matrix effects.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate laboratory accuracy with sample matrix effects.

Reference Material: a material or substance matrix matched to the samples that contains a known amount of the analyte of interest. A reference material may be used in place of a matrix spike.

RL: Reporting limit

RPD: Relative percent difference

AC: Acceptance criteria

Multielement Scan Qualifier: as the number of analytes in a scan increases, so does the chance of a limit exceedance by random chance as opposed to a real method problem. Thus, in multielement scans, for the LCS and matrix spike, up to 10% of the analytes may exceed the quoted limits by up to 10% absolute and the spike is considered acceptable.

Duplicate Qualifier: for duplicates as the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL.

Matrix Spike Qualifier: for matrix spikes, as the concentration of the native analyte increases, the uncertainty of the matrix spike recovery increases. Thus, the matrix spike acceptance limits apply only when the concentration of the matrix spike is greater than or equal to the concentration of the native analyte.

LEGEND

FOOTNOTES

NSS	Insufficient sample for analysis.
RL	Reporting Limit.
↑	Reporting limit raised.
↓	Reporting limit lowered.
NA	The sample was not analysed for this analyte
ND	Non Detect

Results relate only to the sample tested.

Data reported represent the sample as submitted to SGS.

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Please refer to SGS General Conditions of Services located at http://www.sgs.com/terms_and_conditions.htm (Printed copies are available upon request.)

Test method information available upon request.

"Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

SGS Canada Inc. statement of conformity decision rule does not consider uncertainty when analytical results are compared to a specified standard or regulation.

-- End of Analytical Report --

Request for Laboratory Services and CHAIN OF CUSTODY

SGS Industries & Environment - Lakefield: 185 Concession St., Lakefield, ON K0L 2H0 Phone: 705-652-2000 Fax: 705-652-6365 Web: www.sgs.com/environment
- London: 657 Consortium Court, London, ON, N6E 2S8 Phone: 519-672-4500 Toll Free: 877-848-8060 Fax: 519-672-0361

No: U46639

Page 1 of 1

Laboratory Information Section - Lab use only

Received By: Scott Ron
Received Date: 03/09/2026 (mm/dd/yy)
Received Time: 1555 (hr : min)
Received By (signature): S
Custody Seal Present: Yes ☑ No ☐
Custody Seal Intact: Yes ☑ No ☐
Cooling Agent Present: Yes ☑ No ☐ Type: Ice
Temperature Upon Receipt (°C): 8.0°C x 3
LAB LIMS #: CA-40102-Mar26

REPORT INFORMATION

Company: Grounded Engineering
Contact: Ruth Schoenhardt
Address: 49 Mobile Dr
Toronto ON M4A 1H5
Phone: 647-264-7954
Fax:
Email: rschoenhardt@groundedeng.ca

INVOICE INFORMATION

☒ (same as Report Information)
Company:
Contact:
Address:
Phone:
Email:

Quotation #:
P.O. #:
Project #: 24-099
Site Location/ID: 2233 Huronfario St

TURNAROUND TIME (TAT) REQUIRED

☐ Client Regular TAT ☒ Regular TAT (5-7days)
TAT's are quoted in business days (exclude statutory holidays & weekends). Samples received after 6pm or on weekends: TAT begins next business day
RUSH TAT (Additional Charges May Apply): ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 4 Days
PLEASE CONFIRM RUSH FEASIBILITY WITH SGS REPRESENTATIVE PRIOR TO SUBMISSION
Specify Due Date:
*NOTE: DRINKING (POTABLE) WATER SAMPLES FOR HUMAN CONSUMPTION MUST BE SUBMITTED WITH SGS DRINKING WATER CHAIN OF CUSTODY

REGULATIONS

☐ O.Reg 153/04 ☐ O.Reg 406/19
☐ Table 1 ☐ Res/Park Soil Texture: ☐ Coarse
☐ Table 2 ☐ Ind/Com ☐ Medium/Fine
☐ Table 3 ☐ Agri/Other
☐ Table _____ Appx. _____
Soil Volume ☐ <350m3 ☐ >350m3

Other Regulations:
☐ Reg 347/558 (3 Day min TAT)
☐ PWQO ☐ MMER
☐ CCME ☐ Other:
☐ MISA
☐ ODWS Not Reportable *See note

Sewer By-Law:
☒ Sanitary
☒ Storm
Municipality: Mississauga Region of Peel

RECORD OF SITE CONDITION (RSC) ☐ YES ☐ NO

ANALYSIS REQUESTED

	SAMPLE IDENTIFICATION	DATE SAMPLED	TIME SAMPLED	# OF BOTTLES	MATRIX	Field Filtered (Y/N)	Metals & Inorganics (incl CrVI, CN, Hg pH,(B(HWS),EC,SAR–soil) (CN, Na–water)	Full Metals Suite (ICP metals plus B(HWS-soil only) Hg, CrVI	ICP Metals only Sb,As,Ba,Be,B,Cd, Cr,Co,Cu,Pb,Mo,Ni,Se,Ag,Tl,U,V,Zn	PAHs only	SVOCs all incl PAHs, ABNs, CPs	PCBs Total ☐ Aroclor ☐	F1-F4 + BTEX	F1-F4 only no BTEX	VOCs all incl BTEX	BTEX only	Pesticides Organochlorine or specify other	Other (please specify)				Sewer Use: Storm/Sanitary Specify pkg: Mississauga Peel	Water Characterization Pkg General ☐ Extended ☐	SPLP Specify tests ☐ Metals ☐ VOC ☐ 1,4-Dioxane ☐ OCP ☐ ABN	TCLP Specify tests ☐ M&I ☐ VOC ☐ PCB ☐ B(a)P ☐ ABN ☐ Ignit.	COMMENTS:
1	SW-UF-BH3	Mar-9,26	15:00	21	GW	N																X				
2																										
3																										
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5																										
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11																										
12																										

Observations/Comments/Special Instructions

Sampled By (NAME): Alex Johnson Signature: Alex Johnson Date: 03/09/26 (mm/dd/yy)
Relinquished by (NAME): Alex Johnson Signature: Alex Johnson Date: 03/09/26 (mm/dd/yy)

Pink Copy - Client
Yellow & White Copy - SGS

Revision #: 1.8
Date of Issue: 06 SEP 2024

Note: Submission of samples to SGS is acknowledgement that you have been provided direction on sample collection/handling and transportation of samples. {2} Submission of samples to SGS is considered authorization for completion of work. Signatures may appear on this form or be retained on file in the contract, or in an alternative format (e.g. shipping documents). {3} Results may be sent by email to an unlimited number of addresses for no additional cost. Fax is available upon request. This document is issued by the Company under its General Conditions of Service accessible at http://www.sgs.com/terms_and_conditions.htm. (Printed copies are available upon request.) Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

APPENDIX F

Material Name	Color	KS (m/s)	K2/K1
Fill		0.0001	1
Sands		1.5e-05	1
Glacial Till		1.1e-07	1
Weathered Bedrock		4e-07	1
Sound Bedrock		4e-07	0.1

Short Term Dewatering - Soldier Pile and Lagging

Dimensions: 110 m (N-S) x 50 m (E-W)
Section Cut: E-W

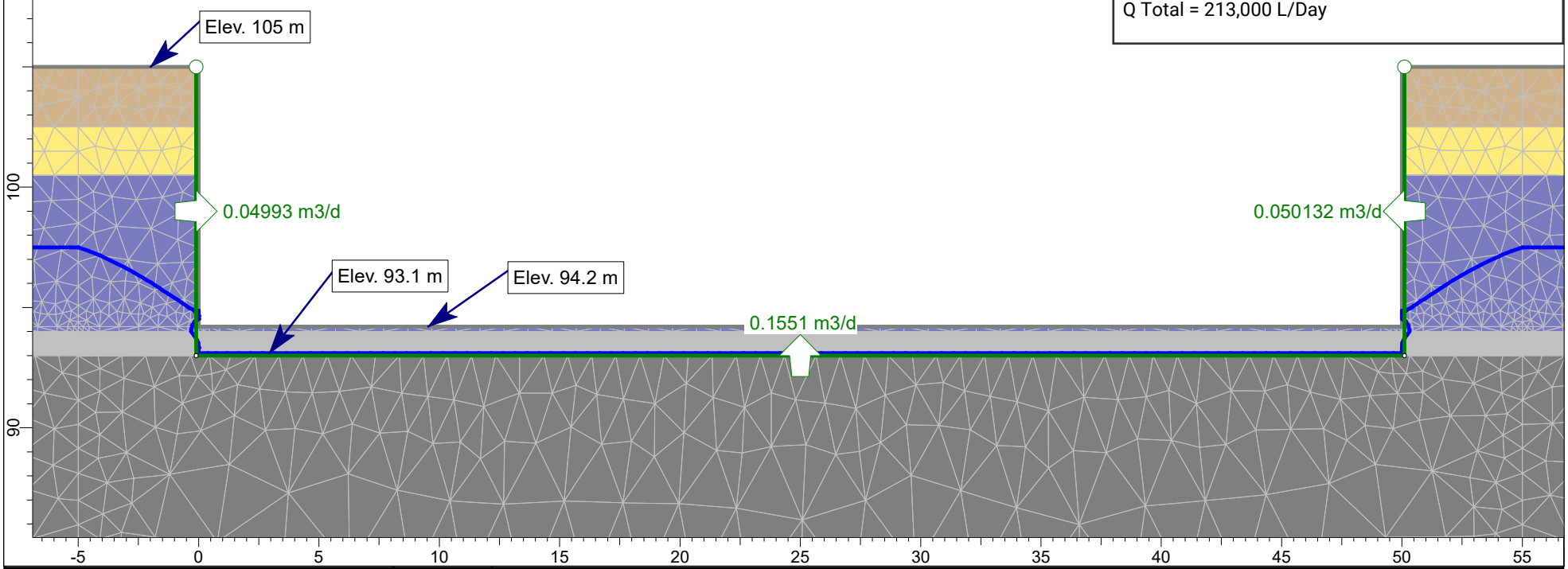
Lowest P3 FFE: Elev. 94.7 m
Bulk Excavation: Elev. 94.2 m

Groundwater Table: Elev. 97.5 m
Dewatering Target: Elev. 93.1 m

Q Groundwater: 75,000 L/Day
(S.F. = 1.5)

Q Rainfall: 138,000 L/Day
(25mm Rainfall Event)

Q Total = 213,000 L/Day



GROUNDED ENGINEERING

SLIDEINTERPRET 9.041

File	24-099 2233 Hurontario Street
Analysis	Steady State FEM: Short Term Dewtering - SPL, Master Scenario
Ref.	
RS2 File	24-099 FEM 2026.slmd
Scale	1:250
Eng	RS

Material Name	Color	KS (m/s)	K2/K1
Fill		0.0001	1
Sands		1.5e-05	1
Glacial Till		1.1e-07	1
Weathered Bedrock		4e-07	1
Sound Bedrock		4e-07	0.1

Long Term Dewatering - Drained Basement

Dimensions: 110 m (N-S) x 50 m (E-W)
Section Cut: E-W

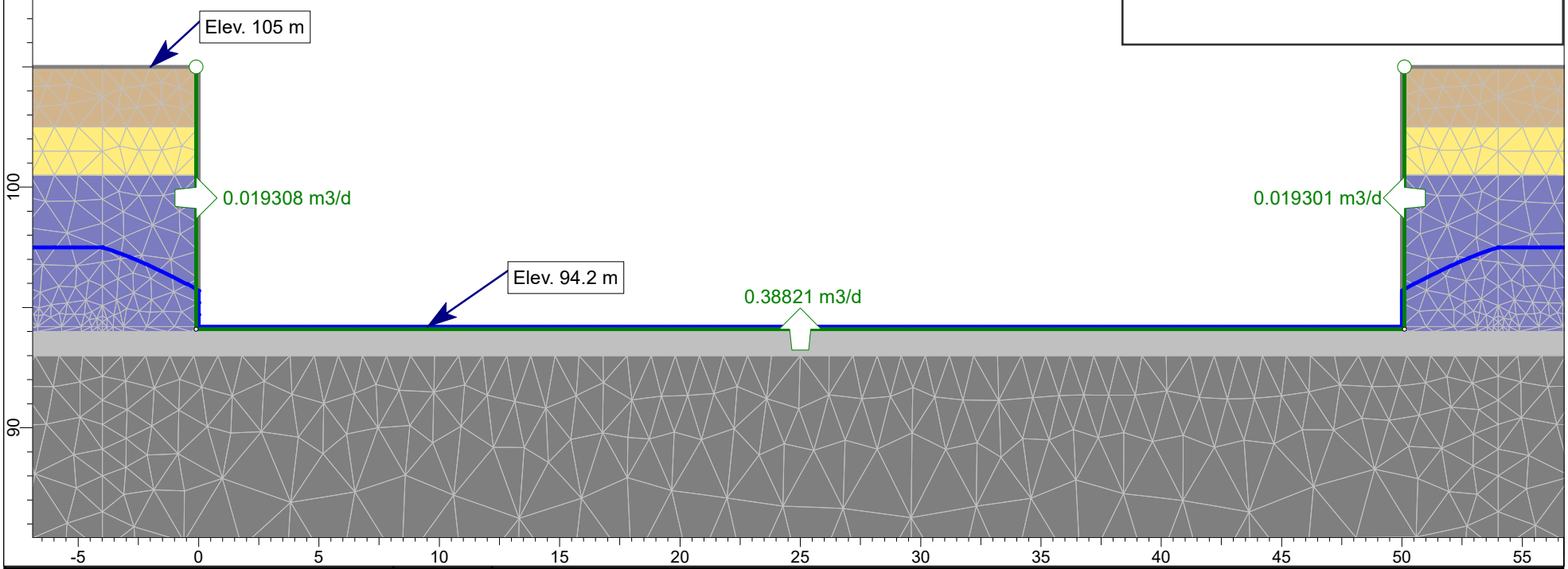
Lowest P3 FFE: Elev. 94.7 m

Groundwater Table: Elev. 97.5 m
Subfloor Drainage: Elev. 94.2 m

Q Groundwater: 85,000 L/Day
(S.F. = 1.5)

Q Infiltration: 2,000 L/Day
(25mm Rainfall Event)

Q Total = 87,000 L/Day



GROUNDED ENGINEERING

SLIDEINTERPRET 9.041

File	24-099 2233 Hurontario Street
Analysis	Steady State FEM: Long Term Dewatering - Drained Base, Master Scenario
Ref.	
RS2 File	24-099 FEM 2026.slmd
Scale	1:250
Eng	RS

APPENDIX G

SHORT TERM - Solider Pile and Lagging

Excavation Dimensions [m]	
N-S	110
E-W	50
Area (m^2)	5515
Perimeter (m)	320.6

Rainfall Data		
Year	2	100
Hour	3	12
Depth (mm)	25	94
Depth (m)	0.025	0.094

Storm Events	
2 Year [L/day]	100 Year [L/day]
137,875	519,000

Summary	L/day	L/min
Groundwater flow, unfactored	49,252	34.2
Design groundwater flow (FS = 1.5)	75,000	52.1
Rainfall, per event	138,000	95.8
Total flow	213,000	147.9

LONG TERM - Drained Basement

Excavation Dimensions [m]	
N-S	110
E-W	50
Area (m^2)	5515
Area (ha)	0.5515
Perimeter (m)	320.6

Rainfall Data		
Year	2	100
Hour	3	12
Depth (mm)	25	94
Depth (m)	0.025	0.094

Infiltration [L/day]
1204

Summary	L/day	L/min
Groundwater flow, unfactored	55,200	38.3
Design groundwater flow (FS = 1.5)	85,000	59.0
Infiltration, per event	2,000	1.4
Total flow	87,000	60.4