2121 Rathburn Road East, Mississauga

Hydrogeological Investigation

Project Location:
2121 Rathburn Road East, Mississauga, ON

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1.0 INTRODUCTION

1.1 Project Description

MTE Consultants Inc. (MTE) was retained by CAPREIT Limited Partnership (the "Client") to conduct a Hydrogeological Investigation to support the proposed development of the site located at 2121 Rathburn Road East, Mississauga, Ontario (Site).

The Site is located west of Rathburn Road East and north of Garnetwood Chase, close to the northern terminus of Rathburn Road East, in City of Mississauga, Ontario. The Site is currently occupied by a 13-storey apartment building with paved parking area, underground garage, swimming pool, and landscape area.

Based on the drawing A1 00, Site Plan and Site Statistics, prepared by Kohn Partnership Architects Inc.(Kohn), dated September 8, 2025 the proposed development consists of one (1) 3-storey stacked townhouse block, referenced as Block A with one (1) level of basement. The location of Block A is within the development site area as presented on Figure 6.

The development site area is irregularly shaped and measures approximately 3,997 m^2 in size. The site has a gross site area of approximately 17,878 m^2. Currently, the development area is covered in asphalt and landscaping.

The following investigations were previously completed by others and provided to MTE for review:

a) Phase II Environmental Site Assessment, 2121 Rathburn Road East, Mississauga, Ontario, prepared by Construction Control Inc. (CCI), dated December 17, 1999;

b) Limited Phase II Environmental Site Assessment, 2121 Rathburn Road East, Mississauga, Ontario, prepared by ECOH Management Inc. (ECOH), dated January 19, 2023.

This report addresses the hydrogeological aspects of the proposed project. The report for the Geotechnical Investigation will be issued under a separate cover. The field investigation for the geotechnical and hydrogeological investigations was carried out concurrently.

1.2 Project Objectives

The main objectives of the Hydrogeological Investigation were to:

a) Establish the local hydrogeology settings of the site;

b) Provide preliminary assessment of anticipated construction dewatering flow rates and long term foundation sub-drain discharge volumes for a generic construction scenario;

c) Assess groundwater quality and compare the results to both Storm and Sanitary Sewer Use Bylaw for the City of Mississauga/Region of Peel Sewer Use By-Law;

d) Qualitatively assess the potential impact to any waterbody and comment on future regulatory agency involvement;

e) Develop a water balance for pre- and post-development conditions;

f) Provide water balance deficits between pre- and post-development conditions; and,

g) Prepare a Hydrogeological Investigation Report.

1.3 Scope of Work

To achieve the investigation objectives, MTE proposed and initiated the following scope of work:

a) Review available geological and hydrogeological information of for the subject Site;

b) Review of the Ministry of Environment, Conservation and Parks (MECP) Water Well Records;

c) Review and preparation of climate data, processing of data to map soil types and calculate slopes in pre- and post-development;

d) Prepare a water balance based on appropriate methods to compare pre- and post-development infiltration rates;

e) The advancement of three (3) boreholes (MW1-25 to MW3-25) to maximum depth of 5.5 m below ground surface (bgs) and installation of monitoring wells (MW1-25 to MW3-25);

f) Conduct single well response tests (SWRT) at selected monitoring wells to estimate the hydraulic conductivities of the saturated soils at the Site;

g) Collection of one (1) groundwater sample for laboratory testing and compare it against the City of Mississauga/Region of Peel Sewer Use By-Law parameters;

h) Evaluate the information of groundwater level measurements and groundwater quality;

i) Assess groundwater discharges during construction phases:

j) Assess foundation sub-drain discharge volumes;

k) Estimate water balance deficits between pre-and post-development conditions; and,

l) The preparation of a Hydrogeological Investigation Report.

1.4 Previous Reports

1.4.1 Phase II Environmental Site Assessment

CCI completed a Phase II Environmental Site Assessment dated December 17, 1999, that consisted of the advancement of four (4) boreholes (BH1 to BH4) on the exterior portion of the Site and four (4) boreholes (BH5 to BH8) in the underground parking garage to total depth of 3.5 m bgs. No monitoring wells were installed.

1.4.2 Limited Phase II Environmental Site Assessment

ECOH completed a Limited Phase II Environmental Site Assessment dated January 19, 2023, that consisted of the advancement of six (6) boreholes (BH101 to BH106) to total depth of 1.83 to 6.40 m bgs. No monitoring wells were installed.

2.0 REGIONAL SETTING

2.1 Regional Physiography

The Ontario Geological Survey Map P. 2204, indicates the Site lies within the South Slope and is characterized as till plains (drumlinized). Figure 2 shows the physiographic regions of Southern Ontario around the Site.

The overburden immediately below ground surface within the South Slope generally consists of clayey silt till and silty clay till and at depth consists of alternating deposits of dense lacustrine sands and silts and over consolidated lacustrine clays and clay tills overlying the bedrock.

2.2 Regional Geology

The surficial geology of the immediate area around the Site is described as coarse-textured glaciolacustrine deposits consisting of sand, gravel, minor silt and clay foreshore and basinal deposits in the southern portion and paleozoic bedrock in the northern portion. The surficial geology for the Site and surrounding areas is shown on Figure 3.

Bedrock of the region corresponds to the shale, limestone, dolostone and siltstone and is part of the Georgian Bay Formation, Blue Mountain formation, Billings Formation, Collingwood Member and Eastview Member. The contact between the bedrock and the overlying overburden is expected to fall at up to approximately 10.5 m bgs.

2.3 Regional Hydrogeology

Groundwater movement through the subsurface is controlled by hydraulic gradients, the physical characteristics of the sediments, and the interconnectedness of lithological formations. Fine grained sediments restrict lateral movement of groundwater and induce vertical infiltration, while coarse grained sediments allow vertical flow with increased transmissivity.

The regional shallow groundwater flow is expected to follow the local topography and discharge to local area creeks and streams. Local deviation from the regional groundwater flow directions may occur in response to changes in topography and/or soil stratigraphy, as well as the presence of surface water features and/or existing subsurface infrastructure.

No local aquifers were identified that could negatively impact the subject Site.

3.0 SITE SETTING

3.1 Site Topography and Drainage

The Site is irregular in shape and has an area of approximately 17,878 m^2. The Site is currently occupied by a 13-storey apartment building. The topography of the Site was sloping from southwest to northeast. Based on the borehole logs, the ground elevation ranges in the development site area range from 142.64 m to 141.94 m above sea level (asl). The land slopes towards the northeast and does not feature any surface water bodies.

3.2 Local Surface Water Features

The Site does not feature any surface water bodies on or adjacent to the Site. The closest surface water body to the Site is Etobicoke Creek, approximately 95 m north of the Site. Lake Ontario is located approximately 7.5 km southeast of the Site. The Site is situated within the Etobicoke Creek Watershed and is within a Toronto Regional Conservation Authority (TRCA) Regulated Area in the northern portion, the development site area is not located within the TRCA regulated area.

3.3 Ministry of Environment, Conservation and Parks Water Well Review

Well Records from the Ministry of Environment, Conservation and Parks (MECP) Water Well Record Database (WWR) were reviewed to determine the number of water wells and locations present within a 500 m radius of the Site boundaries.

The MECP WWR database indicated 2 well records within 500 m radius of the Site. All identified wells are shown on Figure 4. A summary of the Water Well Records is included in Appendix B, Table B-1. A review of the records indicated that the wells were classified as observation wells within 500 m radius of the Site. No supply water wells were identified within 500 m of radius.

3.4 Permit to Take Water and Environmental Activity and Sector Registry Search

The MECP also maintains a database of all active and expired Permit to Take Water (PTTW) and Environmental Activity and Sector Registry (EASR) items related to construction dewatering and pumping test. There are one (1) active and one (1) expired PTTW and one (1) active and three (3) expired EASR registrations within 1 km of the Site and are summarized in Table B-2, Appendix B. The location for each registration is shown on Figure 5.

4.0 FIELD PROGRAM

4.1 Borehole and Monitoring Well Details

MTE advanced three (3) boreholes (MW1-25 to MW3-25) to a maximum depth of 5.5 m bgs on June 17, 2025 and instrumented all three (3) boreholes with monitoring wells (MW1-25 to MW3-25). The boreholes were advanced by using a track mounted, power operated solid stem continuous flight auger, supplied, and operated by a specialist drilling contractor, working under the full-time supervision of an experienced MTE geotechnical personnel. Soil samples were retrieved at regular intervals with a 50 mm outside diameter split barrel sampler drive and accordance with the Standard Penetration Test Procedure (ASTM D1586). The samples were logged in the field and returned to the MTE laboratory for detailed visual examination. The borehole records and monitoring well construction details are included in Appendix A.

Figure 6 is a detailed Borehole/Monitoring Well Location Map of the Site. The borehole logs are attached in Appendix A.

4.2 Site Specific Overburden Geology

The borehole locations are shown on Figure 6 and detailed subsurface conditions are presented on the borehole logs in Appendix A. The following table is provided in addition to the borehole descriptions to provide a general summary of the soil conditions. The soil boundaries indicated on the borehole logs and discussed herein are inferred from the visual observations and auger resistance and should not be regarded as exact planes of geological change.

The soil conditions encountered at the borehole locations are summarized below. A stratigraphic cross-section across the property as aligned on Figure 6 is included as Figure 7.

Table 4-1: Soil Description

Layer	Description
Topsoil	Topsoil was encountered surficially in MW2-25 and MW3-25, with a thickness of 140 and 100 mm, respectively.
Asphalt Pavement	MW1-25 was advanced through the existing asphalt pavement, consisting of approximately 120 mm thick asphaltic concrete and 180 mm thick granular base.
Fill	Fill materials were encountered below topsoil and asphalt pavement in all boreholes and extended to depths ranging from approximately 1.5 to 2.3 m bgs. The fill is typically comprised of sand and gravel, sandy silt and clayey silt to silty clay.
Sandy Clayey Silt	Deposits of sandy clayey silt were encountered below fills in MW1-25 and MW3-25, and extended to depths ranging from approximately 2.3 to 3.1 m bgs.
Clayey Silt/Shale Complex	A stratum of clayey silt/shale complex was encountered below fills and sandy clayey silt deposits in all boreholes. All boreholes were terminated in this stratum at depths ranging from approximately 4.7 to 5.5 m bgs.

4.3 Water Level Monitoring

Water levels at all monitoring well locations were recorded after installation. A summary of all available water level observations is included in Table 4-2. Groundwater was observed in all monitoring wells on June 27, 2025, and depths to the groundwater ranged from 2.44 m to 4.43 m bgs. Groundwater produces a continuous surface across the Site that is situated at an elevation between 139.54 m and 137.51 m asl.

An interpreted groundwater contour map for the water level measurements recorded on June 27, 2025, is included as Figure 8. Based on the water level measurements obtained, the inferred direction of groundwater flow across the Site is interpreted to be to the eastern direction.

Seasonal variability can produce significant changes to the static water level. It has been observed that groundwater can rise and lower in response to changing weather and climate.

Table 4-2: Monitoring Well Details and Water Levels Elevations

Well ID	Elevation (m asl)	Well Depth(m)	June 27, 2025	
			Water Level (m bgs)	Elevation (m asl)
MW1-25	142.64	4.9	3.84	138.80
MW2-25	141.94	5.5	4.43	137.51
MW3-25	141.98	4.3	2.44	139.54

4.4 Hydraulic Conductivity Testing

The hydraulic conductivity test was completed to estimate the saturated hydraulic conductivity (K) of the soil at the well screen depth at selected monitoring well locations.

In advance of performing SWRT, the monitoring well was developed to remove the potential presence of fine sediments. The development process involved purging of the monitoring wells to induce the flow of fresh formation water through the screen. The monitoring well water level was permitted to fully recover prior to performing SWRTs.

During the SWRT, a slug of water was instantaneously removed from the well and the response to the water level is recorded. The Hydraulic Conductivity values for each of the tested wells were calculated from the SWRT data using Aqtesolv Software and the Hvorslev solutions for unconfined conditions. The semi-log plots for normalized drawdown versus time are included in Appendix C.

The summary of the hydraulic conductivity (K) values estimated from the SWRTs are provided below in Table 4-3:

Table 4-3: Summary of Hydraulic Conductivity (K) Testing Results

Monitoring Well	Well Depth (m bgs)	Hydraulic Conductivity (m/s)
MW2-25	5.5	6.58×10^{-9}
MW3-25	4.3	3.61×10^{-9}

The SWRT provides an estimate of K for the geological formation in the immediate media zone surrounding the well screen and may not be representative of bulk formation hydraulic conductivities.

4.5 Groundwater Sampling

To assess the suitability for discharge of pumped groundwater to the City of Mississauga/Region of Peel Storm and Sanitary Sewer Use By-Law parameters during dewatering activities, a groundwater sample was collected from MW3-25 on June 27, 2025.

Prior to collection of the samples, approximately three (3) standing well volumes of groundwater were purged from the well. The sample was collected and placed into pre-cleaned laboratory-supplied vials and/or bottles provided with analytical test group specific preservatives, as required.

The sample was not field filtered. Dedicated nitrile gloves were used during sample handling. The groundwater sample was submitted to an independent laboratory, Bureau Veritas Laboratories, of Mississauga, Ontario, for analysis.

For the assessment purposes, the analytical results were compared to Limits for Sanitary Sewer Discharge (By-Law No. 53-2010) of the Regional Municipality of Peel and Limits for Storm Sewer Discharge (By-Law No 0046-2022) of City of Mississauga.

The laboratory Certificate of Analysis (CofAs) and chain of custody are enclosed in Appendix D.

The laboratory CofAs show that there were no exceedances against the Limits for Sanitary Sewer Discharge (By-Law No. 53-2010) of the Regional Municipality of Peel.

When compared against the more stringent Limits for Storm Sewer Discharge (By-Law No 0046-2022) of City of Mississauga, the sample indicated exceedances for Total Suspended Solids and Total Aluminum (Al). A summary of the exceedances is provided in Table 4-4

Table 4-4: Summary of Analytical Results

Parameter	Limits for Sanitary Sewer Discharge (By-Law No. 53-2010) of the Regional Municipality of Peel (mg/L)	Limits for Storm Sewer Discharge (By-Law No 0046-2022) of City of Mississauga (mg/L)	Concentration for MW3-25 (mg/L) (June 27, 2025)
Total Suspended Solids	350	15	**34**
Total Aluminum (Al)	50	1	**2.5**

*Notes: **Bold** indicates concentration exceeds the City of Mississauga Storm Sewer Discharge Limit.*

If the groundwater encountered during excavation activities is discharged to the City of Mississauga Storm Sewer, it will require pre-treatment prior to discharge. Discharge water to the Regional Municipality of Peel sanitary sewer does not require pre-treatment prior to discharge.

It is noted that an agreement to discharge to the City of Mississauga or Regional Municipality of Peel will be required prior to discharging dewatering effluent, which includes both storm and groundwater.

5.0 TEMPORARY CONSTRUCTION DEWATERING

5.1 Construction Dewatering Requirements

Based on the drawing A1 00, Site Plan and Site Statistics, prepared by Kohn, dated September 8, 2025 the proposed development consists of one (1) 3-storey stacked townhouse block, referenced as Block A with one (1) level of basement. The location of Block A is within the development site area as presented on Figure 6. The lowest level of the building referenced as basement A is 3.13 m below Level 1A and Level 1A FFE is 143.50 masl based on drawing A1 00, Site Plan and Site Statistics, and drawing A4 11, Overall Building Sections prepared by Kohn, dated September 8, 2025.

The stabilized groundwater level measurements observed on June 27, 2025, were found to be varying between elevations of 139.54 m and 137.51 m asl. The highest groundwater elevation was utilized for the dewatering calculation. For conservative purposes, the construction dewatering calculation is based on open cut excavations at the present time. To excavate under dry conditions, the water level is anticipated to be lowered approximately 1.0 m below the footing elevation.

Additional dewatering capacity may be required to maintain dry conditions within the excavation during and following significant precipitation events. It should be noted that the dewatering estimates provided in this report are based on the conceptual building information available at this time. If design details are changed (including any changes to excavation depth), the dewatering estimates must be revised to include the final layout of the development.

5.2 Construction Dewatering Flow Rate Assumptions

The assumptions used to the calculation of the dewatering rate for each block is presented in Table 5-1.

Table 5-1: Dewatering Estimate Assumptions

Input Parameter	Block A	Notes
Existing Lowest Ground Elevation (m asl)	141.94	Based on BH logs
Lowest Level Elevation (m asl)	140.37	Basement A is 3.13 m below Level 1A and Level 1A FFE is 143.50 masl based on drawing A1 00, Site Plan and Site Statistics, and drawing A4 11, Overall Building Sections prepared by Kohn, dated September 8, 2025
Footing Elevation (m asl)	139.37	Assumed 1 m below the lowest level elevation
Dewatered Elevation Target (m asl)	138.37	Approximately 1.0 m below footing elevation
Highest Groundwater Elevation (m asl)	139.54	Highest groundwater elevation (June 27, 2025)
Excavation Area	66.2 m x 24.2 m	Based on drawing A1 00, Site Plan and Site Statistics, prepared by Kohn, dated September 8, 2025
Hydraulic Conductivity (m/s)	6.58×10^{-9}	Highest K value

5.3 Dewatering Flow Rate Equation

The Dupuit equation for steady flow from a linear source on both sides of a rectangular slot of an excavation through an unconfined aquifer resting on a horizontal impervious surface was used to obtain a flow rate estimate, and is expressed as follows:

$$Q_w = \frac{K(x + a)(H^2 - h^2)}{Lo}$$

Where:

Q_w	= Rate of pumping (m^3/s)
x	= Length of excavation (m)
a	= Width of excavation (m)
K	= Hydraulic conductivity (m/s)
H	= Head beyond the influence of pumping (static groundwater elevation) (m)
h	= Head above base of aquifer at the excavation (m)
Lo	= Distance to Line Source (m)

It is expected that the initial dewatering rate will be higher in order to remove groundwater from within the overburden formation. The dewatering rates are expected to decrease once the target water level is achieved in the excavation footprint as groundwater will have been removed locally from storage resulting in lower seepage rates into the excavation. Additionally, the use of a continuous caisson shoring system will further reduce groundwater migration into the excavation reducing the ongoing seepage rate.

5.4 Radius of Influence

The Radius of Influence (ROI) for the construction dewatering is based on the empirical Sichardt Equation. This equation is used to predict the distance at which the drawdown resulting from pumping is negligible. This equation is empirical and was developed to provide representative flow rates using the steady state flow dewatering equations, as discussed below.

It is noted that in steady state conditions, the radius of influence of pumping will extend until boundary flow conditions are reached and provide sufficient water inputs to the aquifer, such as recharge and surface water bodies.

The ROI of pumping (dewatering) for linear flow is calculated based on the Sichardt equation, which is described as follows:

$$Lo = 1750\ (H - h)\sqrt{K}$$

Where:

K	= Hydraulic conductivity (m/s)
H	= Static Saturated Head (m)
h	= Dynamic Saturated Head (m)

Based on the Sichardt equation and the highest K value, the ROI is approximately 0.2 m from the side of the excavation for linear flow (Lo=Ro/2). The ROI calculation is provided in Appendix E.

The ROI calculation is a conservative methodology and is calculated based on the assumption of active pumping during the construction dewatering. It should be noted that most of the water will be pumped during the first stage of the construction period or when a rain event occurs.

Although the ROI was conservatively predicted as 0.2 m from the side of the excavation, over a period of time, the drawdown curve will be very close to the bottom of the excavation and thus resulting in negligible ROI. The likelihood for impacts to the nearby structures are negligible.

5.5 Results of Construction Dewatering Flow Rate Estimates

Based on the assumptions provided in this report, the results of the dewatering rate estimate are as follows:

Table 5-2: Summary of Construction Dewatering Flow Rate Estimate

Location	Construction Dewatering Flow Rate Without Safety Factor (L/day)	Peak Construction Dewatering Flow Rate Including Safety Factor of 2.5 (L/day)
Block A	1,900	4,800

Construction dewatering flow rate estimates are provided in Table E-1, in Appendix E.

The peak construction dewatering flow rate includes a factor of safety of 2.5 to account for seasonal fluctuations in the groundwater table, flow from beddings of existing sewers, and variation in hydrogeological properties beyond those encountered during the course of this study.

Please note that it is the responsibility of the contractor to ensure dry conditions are maintained within the excavation at all times. The dewatering contractor should ensure that silt removal or replacement from subsoil be eliminated and monitored during construction dewatering at all times.

Additional pumping capacity may be required to maintain dry conditions within the excavation during and following significant precipitation events. Additionally, the presence of near-surface fill material could hold significant groundwater.

The maximum flow calculation is intended to provide a conservative estimate to account for unforeseeable conditions that may arise during construction. It should be noted that the dewatering estimate provided in this report are based on the proposed development information available at this time. If changes to the design are implemented (e.g., increase to planned excavation depths, widening of excavations, etc.), the dewatering estimates must be revised to include and reflect future changes.

6.0 LONG TERM DISCHARGE ESTIMATE

6.1 Long-Term Dewatering Assumptions

The lowest level of the building referenced as basement A is 3.13 m below Level 1A and Level 1A FFE is 143.50 masl based on drawing A1 00, Site Plan and Site Statistics, and drawing A4 11, Overall Building Sections prepared by Kohn, dated September 8, 2025 which corresponds to an elevation of 140.37 m asl. The stabilized groundwater level measurements observed on June 27, 2025, were found to be varying between elevations of 139.54 m and 137.51 m asl. Given the basement A elevation is greater than 0.8 m above the groundwater table, groundwater is not anticipated long-term, and no groundwater management or control is required for the proposed building.

It should be noted that the dewatering estimates provided in this report are based on the proposed building information available at this time. Subject to final design depth, grading and placement of below grade structure, the dewatering rates estimated in this report must be re-assessed.

7.0 POTENTIAL GROUNDWATER IMPACTS

7.1 Impacts to Nearby Groundwater Users

The Site lies within a heavily urbanized area of Mississauga, based on the MECP WWR database, no supply water wells were identified within 500 m. Given the area is serviced by municipal system, no private well water user is expected. There are no expected impacts to nearby groundwater users due to active dewatering.

7.2 Impacts Due to Construction Dewatering

As discussed in Section 5, the ROI calculation is a conservative methodology and is calculated based on the assumption of active pumping during the construction dewatering. It should be noted that most of the water will be pumped during the first stage of the construction period or when a rain event occurs. Although the ROI was conservatively predicted as 0.2 m from the side of the excavation, over a period of time, the drawdown curve will be very close to the bottom of the excavation and thus resulting in negligible ROI. The likelihood for impacts to the nearby structures are negligible.

8.0 WATER TAKING AND DISCHARGE PERMITS

8.1 EASR and PTTW

During the active construction dewatering phase, the volume of water expected to be pumped is within the daily limit on groundwater taking under the Ontario Water Resources Act (50,000 L/day). Given the cumulative construction discharge rate is within the limit, EASR for construction dewatering would not be required.

Given that groundwater is not anticipated to be discharged to the foundation drainage on a long-term basis a PTTW as per O.Reg.387/04 for long-term discharge is not required.

8.2 Regional Municipality of Peel or City of Mississauga Sewer Discharge Agreement

If the groundwater encountered during excavation activities dewatering is to be discharged into a Regional Municipality of Peel sanitary or City of Mississauga storm sewer, a sewer discharge permit under the Regional Municipality of Peel Sewer Use By-law 53-2010 or City of Mississauga Storm Sewer Use By-law 0046-2022 must be granted prior to discharge.

Given the current consideration for short-term discharges, a sewer discharge permit will be required for short-term discharge.

9.0 PRE- AND POST-DEVELOPMENT WATER BALANCE

A water balance assessment has been conducted for proposed development site area to develop a water balance for pre- and post-development conditions and assess water balance deficit between pre- and post-development conditions. Based on drawing L1a, Ground Floor Landscape and Landscape Site Plans, prepared by the mbtw group (mbtw), dated September 8, 2025 the proposed development site area is approximately 3,997 m^2.

9.1 Methodology

The hydrologic cycle includes the components of precipitation (P), evapotranspiration (ET), runoff (R), infiltrate (I) and change in groundwater storage (S) presented in the following equation:

$$P = ET + R + I + S$$

Where:

P = precipitation

ET = evapotranspiration

R = run-off

I = Infiltration

S = change in groundwater storage

Temperature and precipitation data is obtained from Canadian Climate Normals Pearson International Airport station (Climate ID 6158733) as the average data from 1983 to 2012 (Appendix F). The Pearson International Airport station is located 4.8 km northeast of the Site.

The evapotranspiration and water surplus are calculated from the Thornthwaite and Mather (1957) model, which is an accounting type method used to analyze the allocation of water among various components of hydrologic cycle.

Infiltration is governed by the surficial soil types, topography and land cover. Infiltration and runoff are the two components of water surplus. The infiltration and runoff are calculated separately for pre and post development conditions. The difference between pre and post development infiltrations is the infiltration deficit.

Change in groundwater storage could occur annually, however, when the long-term average historical data of P, ET, R and I are used in the above hydrologic cycle, there is no net change in groundwater storage.

9.2 Pre-Development Water Balance

The pre-development site condition is shown in Figure 9 and the area of each category is presented in Table 9-1. The pre-development site condition is based on Google Earth image dated 2025.

Table 9-1: Pre-development Site Condition

Land Use	Area (m^2)
Paved Surface	647
Landscape	3,350
TOTAL	**3,997**

Based on the Pearson International Airport station data from 1983 to 2012, the average annual precipitation is 786.9 mm. The Thornthwaite and Mather (1957) model utilized the monthly average temperature and precipitation data, estimate the actual evapotranspiration as 568.0 mm and water surplus as 217.3 mm (Appendix F).

According to the MECP SWM Planning Design Manual (MECP, 2003), the pre-development infiltration factor is calculated in Table 9-2. The topography condition is rolling land. The soil type at site is Sandy Clayey Silt/ Clayey Silt. The land cover is cultivated land.

Table 9-2: Pre-development Infiltration Factor

Category	Infiltration Factor
Topography/Slope	0.20
Soil Type (Sandy Clayey Silt/ Clayey Silt)	0.20
Cover (Cultivated Land)	0.10
Total Infiltration factor	**0.50**

The annual pre-development water balance is presented in Table 9-3. The pre-development annual volume of infiltration is estimated as approximately 364 m^3/year or unit rate of approximately 91 mm/year.

Table 9-3: Annual Pre-development Water Balance

Land Use	Area (m^2)	P (m^3)	AET (m^3)	Infiltration (m^3)	Run-off (m^3)
Paved Surface	647	509	0	0	509
Landscape	3,350	2,636	1,903	364	369
Total	**3,997**	**3,145**	**1,903**	**364**	**878**

9.3 Post-Development Water Balance

The post-development site condition is shown in Figure 10 and the area of each category is presented in Table 9-4. The post-development site condition is based on drawing L1a, Ground Floor Landscape and Landscape Site Plans, prepared by the mbtw group (mbtw), dated September 8, 2025.

Table 9-4: Post-development Site Condition

Land Use	Area (m^2)
Building Roofs	1,260
Paved Surface	2,110
Landscape	627
TOTAL	**3,997**

Based on the Pearson International Airport station data from 1983 to 2012, the average annual precipitation is 786.9 mm. The Thornthwaite and Mather (1957) model utilized the monthly average temperature and precipitation data, estimate the actual evapotranspiration as 568.0 mm and water surplus as 217.3 mm (Appendix F).

According to the MECP SWM Planning Design Manual (MECP, 2003), the post-development infiltration factor is calculated in Table 9-5. The topography condition is rolling land. The soil type at site is Sandy Clayey Silt/ Clayey Silt. The land cover is cultivated land.

Table 9-5: Post-development Infiltration Factor

Category	Infiltration Factor
Topography/Slope	0.20
Soil Type (Sandy Clayey Silt/ Clayey Silt)	0.20
Cover (Cultivated Land)	0.10
Total Infiltration factor	**0.50**

The annual post-development water balance is presented in Table 9-6. The post-development annual volume of infiltration is estimated as approximately 68 m^3/year or unit rate of approximately 17 mm/year.

Table 9-6: Annual Post-development Water Balance

Land Use	Area (m^2)	P (m^3)	AET (m^3)	Infiltration (m^3)	Run-off (m^3)
Building Roofs	1,260	991	0	0	991
Paved Surface	2,110	1,660	0	0	1,660
Landscape	627	493	356	68	69
TOTAL	3,997	3,145	356	68	2,721

Based on the water balance calculations, the pre and post development infiltration deficit is 296 m^3/year. The infiltration deficit was predicted based on the parameters that support the Site-specific conditions.

The design of low impact development (LID) or mitigation measures to minimize the pre and post development infiltration deficit will be addressed during the detailed design stage.

10.0 CONCLUSIONS

Based on the findings of the Hydrogeological Investigation, the following summary of conclusions are provided:

a) Based on the drawing A1 00, Site Plan and Site Statistics, prepared by Kohn Partnership Architects Inc.(Kohn), dated September 8, 2025 the proposed development consists of one (1) 3-storey stacked townhouse block, referenced as Block A with one (1) level of basement;

b) The Site is located within a physiographic region within the South Slope and is characterized as till plains (drumlinized);

c) The surficial geology around the Site is comprised of till consisting of coarse-textured glaciolacustrine deposits consisting of sand, gravel, minor silt and clay foreshore and basinal deposits;

d) The MECP WWR database indicated 2 well records within 500 m radius of the Site. All identified wells are shown on Figure 4. A summary of the Water Well Records is included in Appendix B, Table B-1. A review of the records indicated that the wells were classified as observation wells within 500 m radius of the Site. No supply water wells were identified within 500 m of radius;

e) Groundwater was observed in all monitoring wells on June 27, 2025, and depths to the groundwater ranged from 2.44 m to 4.43 m bgs. Groundwater produces a continuous surface across the Site that is situated at an elevation between 139.54 m and 137.51 m asl;

f) Based on the water level measurements obtained, the inferred direction of groundwater flow across the Site is interpreted to be to the eastern direction;

g) The estimated hydraulic conductivity of the soil ranges from 3.61×10^{-9} m/s to 6.58×10^{-9} m/s;

h) Based on the assumptions outlined in this report, the estimated peak construction dewatering flow rate for the proposed construction activity is 4,800 L/day;

i) Given that the predicted dewatering volume is within the 50,000 L/day limit, EASR for construction dewatering will not be required;

j) Given the basement A elevation is greater than 0.8 m above the groundwater table, groundwater is not anticipated long-term, and no groundwater management or control is required for the proposed building;

k) Given that groundwater is not anticipated to be discharged to the foundation drainage on a long-term basis a PTTW as per O.Reg.387/04 for long-term discharge is not required;

l) The laboratory CofAs show that there were no exceedances against Limits for Sanitary Sewer Discharge (By-Law No. 53-2010) of the Regional Municipality of Peel;

m) When compared against the more stringent Limits for Storm Sewer Discharge (By-Law No 0046-2022) of City of Mississauga, the sample indicated exceedances for Total Suspended Solids and Total Aluminum (Al);

n) If the groundwater encountered during excavation activities is discharged to the City of Mississauga Storm Sewer, it will require pre-treatment prior to discharge.

Discharge water to the Regional Municipality of Peel sanitary sewer does not require pre-treatment prior to discharge;

o) If the groundwater encountered during excavation activities dewatering is to be discharged into a Regional Municipality of Peel sanitary or City of Mississauga storm sewer, a sewer discharge permit under the Regional Municipality of Peel Sewer Use By-law 53-2010 or City of Mississauga Storm Sewer Use By-law 0046-2022 must be granted prior to discharge; and,

p) Based on the water balance calculations, the pre and post development infiltration deficit is 296 m^3/year. The infiltration deficit was predicted based on the parameters that support the Site-specific conditions. The design of low impact development (LID) or mitigation measures to minimize the pre and post development infiltration deficit will be addressed during the detailed design stage.

It should be noted that the comments and recommendations in this report are based on the assumption that the present design concept described throughout the report will proceed to construction. Any changes to the design concept may result in a modification to the recommendations provided in this report. It is noted that these conclusions and recommendations should be read in conjunction with the entirety of the report.

11.0 LIMITATIONS

Services performed by **MTE Consultants Inc. (MTE)** were conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the Environmental Engineering & Consulting profession. No other warranty or representation expressed or implied as to the accuracy of the information, conclusions or recommendations is included or intended in this report.

This report was completed for the sole use of MTE and the Client. The assignment was carried out in accordance with the Scope of Work described in Section 1.3 as reviewed with and agreed to by the Client. MTE makes no representation that the present report has dealt with all of the important environmental issues, except as provided in the Scope of Work. This report is not intended to be exhaustive in scope or to imply a risk-free facility. As such, this report may not deal with all issues potentially applicable to the Site and may omit aspects which are or may be of interest to the reader.

In addition, it should be recognized that a soil sample or groundwater level measurement represents one discrete portion of the Site at the time it is collected, and that the findings of this report are based on conditions as they existed during the time period of the investigation.

Any use which another party makes of this report, or any reliance on, or decisions to be made based upon it, are the responsibility of such parties. MTE accepts no responsibility for liabilities incurred by or damages, if any, suffered by another party as a result of decisions made or actions taken, based upon this report. Others with interest in the Site should undertake their own investigations and studies to determine how or if the condition affects them or their plans.

It should be recognized that the passage of time may affect the views, conclusions, and recommendations (if any) provided in this report because environmental conditions of a property can change, along with regulatory requirements. Should additional or new information become available, MTE recommends that it be brought to our attention in order that we may determine whether it affects the contents of this report.

All of which is respectfully submitted,

MTE Consultants Inc.



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TVH & WXG: jpo & vys

https://mte85.sharepoint.com/sites/62615_001/Shared Documents/03- Reports/HG/62615_001_2121 Rathburn Rd East_HG Investigation_FINAL.docx

12.0 REFERENCES

Cashman, P. M. (2013). Groundwater Lowering in Construction: A Practical Guide to Dewatering (Second Ed.).

Chapman, L., & Putnam, D. (2007). Physiography of Southern Ontario. Miscellaneous Release, Data 228 ISBN 978-1-4249-5158-1. Ontario Geological Survey.

Construction Control Inc. (1999). Phase II Environmental Site Assessment, 2121 Rathburn Road East, Mississauga, Ontario, dated December 17, 1999.

ECOH Management Inc. (2023). Limited Phase II Environmental Site Assessment, 2121 Rathburn Road East, Mississauga, Ontario, dated January 19, 2023.

Gregory J. McCabe and Steven L. Markstrom., Monthly Water-Balance Model Driven By a Graphical User Interface; for U.S. Geological Survey, U.S. Department of Interior; Open File Report 2007-1088, 2007

Ministry of Environment, Conservation and Parks. (2003). Stormwater Management Planning and Design Manual

Ministry of Environment, Conservation and Parks. (2017). Ontario Water Resources Act.

Ontario Water Resources Act, Ontario Regulation 387/04, as amended. (2025). Water Taking and Transfer.

Ontario Ministry of Environment, Conservation and Parks, Map: Well Records, 2018. Accessed online at https://www.ontario.ca/environment-and-energy/map-well-records

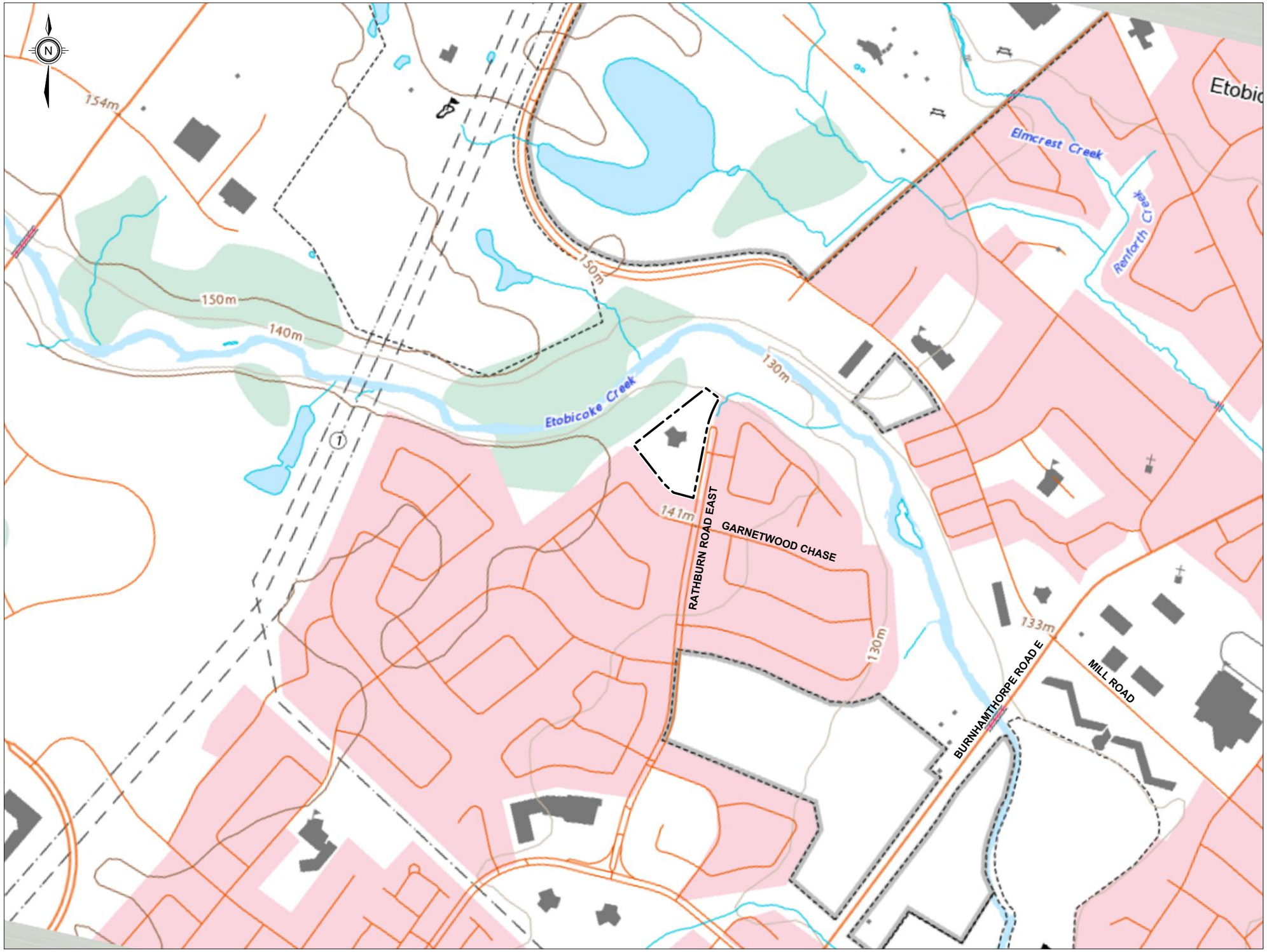
Ontario Water Resources Act, Ontario Regulation 387/04, as amended. (2016). Water Taking and Transfer

The Corporation of the City of Mississauga. Storm Sewer Use. By-law 0046-2022

The Regional Municipality of Peel. By-Law No.53-2010

Figures

CAD: P:\P\62615_001\62615_001-HG1.1.DWG





KEY PLAN (nts)

LEGEND

SITE

REFERENCES

CITY OF MISSISSAUGA, PARCEL, ROAD, RAIL, AND WATER NETWORK, OPEN DATA SET.

IMAGERY OBTAINED FROM TOPORAMA, NATURAL RESOURCES CANADA, 2025.

NOTES

THIS FIGURE IS SCHEMATIC ONLY AND TO BE READ IN CONJUNCTION WITH ACCOMPANYING TEXT.

0 50 100 150 200 250m

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PROJECT
HYDROGEOLOGICAL INVESTIGATION
2121 RATHBURN ROAD EAST,
MISSISSAUGA, ONTARIO

TITLE
SITE LOCATION MAP

Drawn: IC	Scale: 1:5,000	Figure: 1
Checked:	Project No.: 62615_001	
Date: 2025-07-03	Rev No.: 0	

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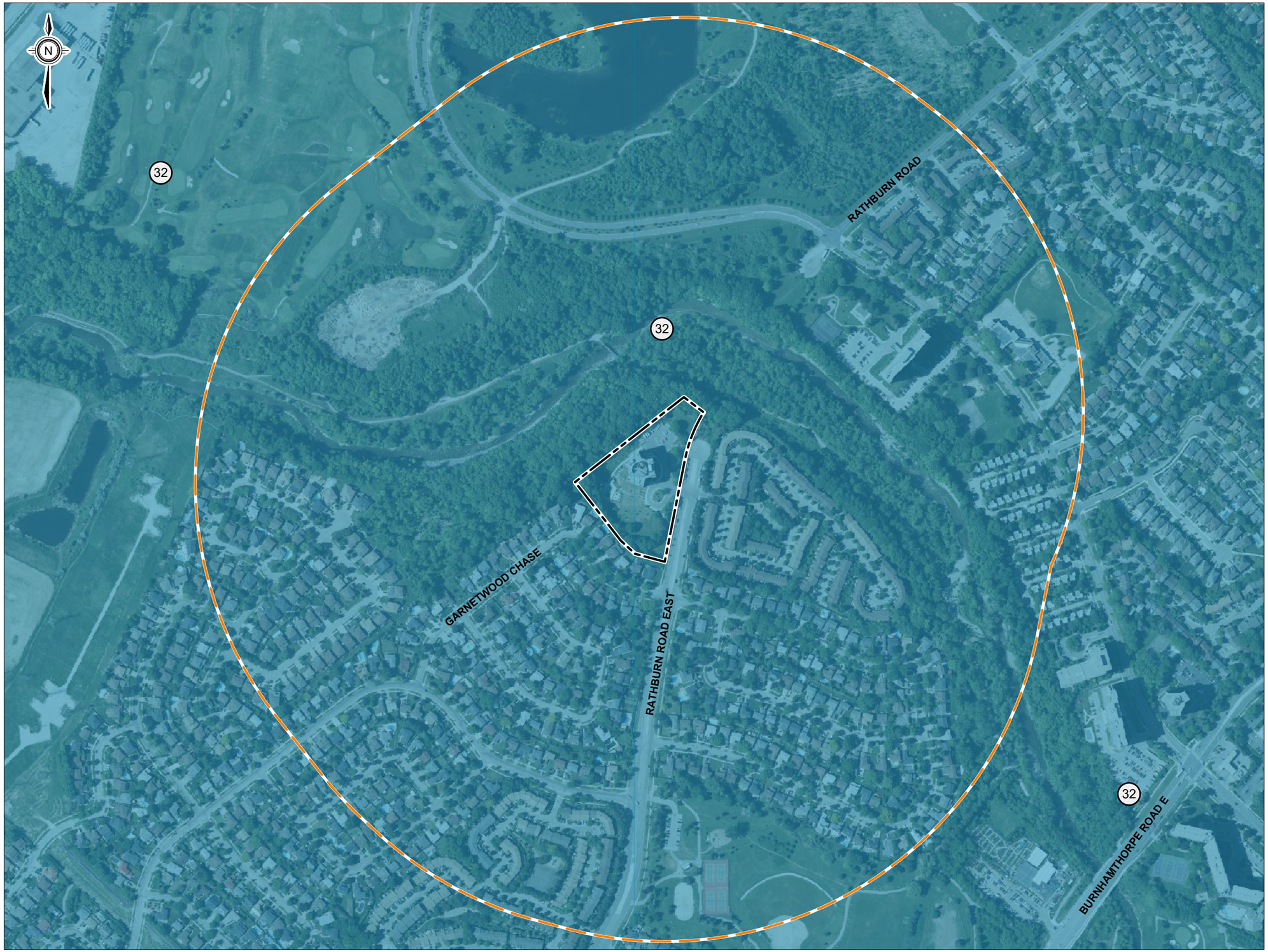

LEGEND

- SITE
- STUDY AREA (500m Buffer from Site)
- 32 South Slope

REFERENCES

BING IMAGERY AS MAY 8, 2025 (IMAGE DATE UNKNOWN); AND CITY OF MISSISSAUGA, PARCEL, ROAD, RAIL, AND WATER NETWORK, OPEN DATA SET.

ONTARIO GEOLOGICAL SURVEY 2010, SURFICIAL GEOLOGY OF SOUTHERN ONTARIO, ONTARIO GEOLOGICAL SURVEY MISCELLANEOUS RELEASE-128-REVISED.

NOTES

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ALL LOCATIONS ARE APPROXIMATE.

0 50 100 150 200 250m

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HYDROGEOLOGICAL INVESTIGATION
2121 RATHBURN ROAD EAST,
MISSISSAUGA, ONTARIO

TITLE
PHYSIOGRAPHIC REGIONS OF SOUTHERN ONTARIO

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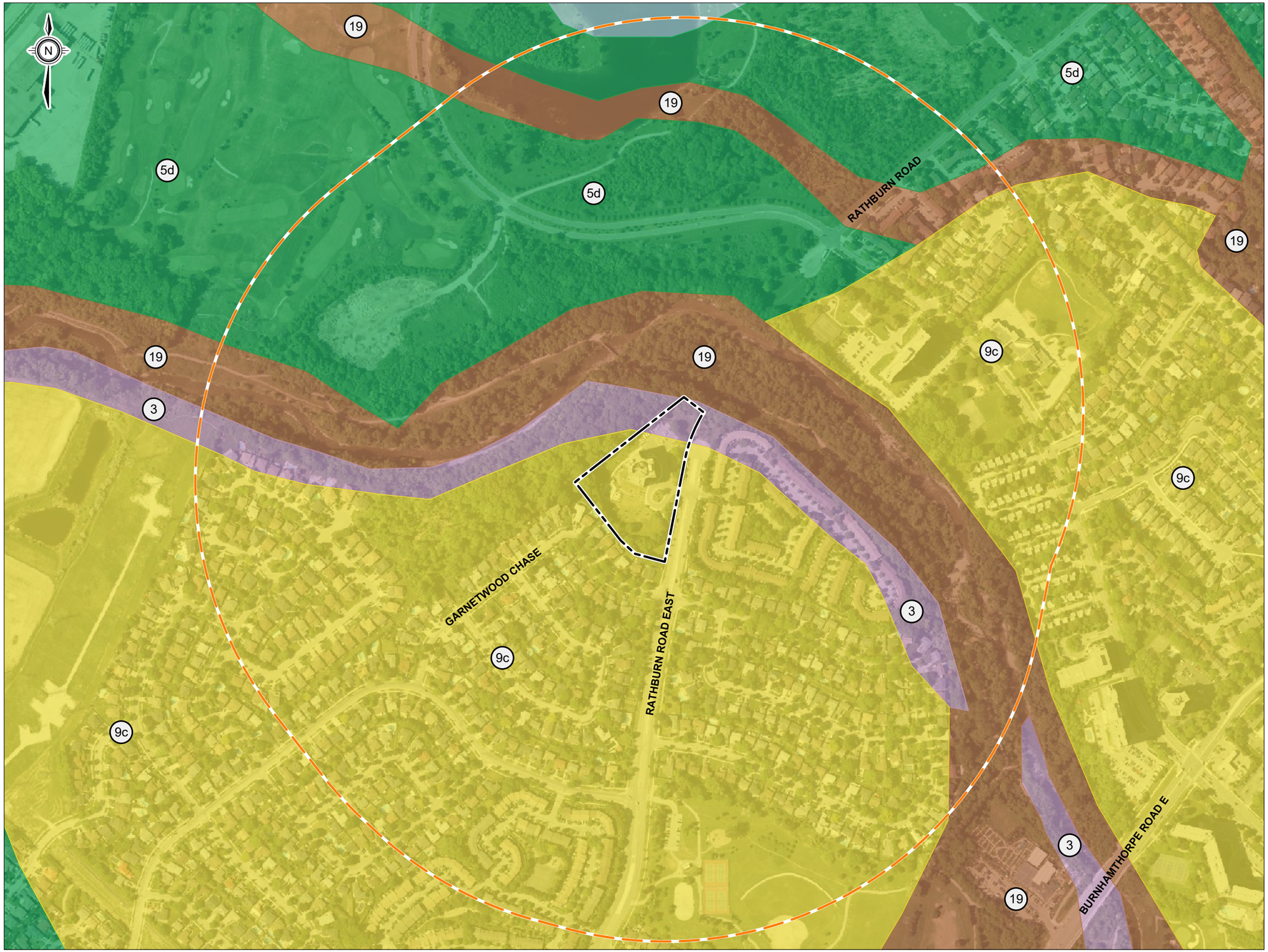

LEGEND

- SITE
- STUDY AREA (500m Buffer from Site)
- 9c Coarse-textured Glaciolacustrine Deposits
- 5d Till
- 19 Modern Alluvial Deposits
- 3 Paleozoic Bedrock

REFERENCES

BING IMAGERY AS MAY 8, 2025 (IMAGE DATE UNKNOWN); AND CITY OF MISSISSAUGA, PARCEL, ROAD, RAIL, AND WATER NETWORK, OPEN DATA SET.

ONTARIO GEOLOGICAL SURVEY 2010, SURFICIAL GEOLOGY OF SOUTHERN ONTARIO, ONTARIO GEOLOGICAL SURVEY MISCELLANEOUS RELEASE-128-REVISED.

NOTES

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ALL LOCATIONS ARE APPROXIMATE.

0 50 100 150 200 250m

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PROJECT
HYDROGEOLOGICAL INVESTIGATION
2121 RATHBURN ROAD EAST,
MISSISSAUGA, ONTARIO

TITLE
SURFICIAL GEOLOGY OF SOUTHERN ONTARIO

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Checked	Project No. 62615_001	
Date 2025-07-03	Rev No. 0	

Plot Date: July 6, 2025 - 2:28 PM



LEGEND

SITE

STUDY AREA
(500m Buffer from Site)

OBSERVATION WELL

UNKNOWN

REFERENCES

BING IMAGERY AS JULY 5, 2025 (IMAGE DATE UNKNOWN); AND CITY OF MISSISSAUGA, PARCEL, ROAD, RAIL, AND WATER NETWORK, OPEN DATA SET; AND WATER WELL RECORDS PROVIDED BY THE ONTARIO MINISTRY OF ENVIRONMENT CONSERVATION AND PARKS, © KING'S PRINTER OF ONTARIO, ALL RIGHTS RESERVED.

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ALL LOCATIONS ARE APPROXIMATE.

0 50 100 150 200 250m

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2121 RATHBURN ROAD EAST,
MISSISSAUGA, ONTARIO

TITLE
MECP WATER WELL RECORD LOCATIONS

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Date 2025-07-03	Rev No. 0	

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Plot Date: July 6, 2025 – 4:00 PM



LEGEND

- SITE
- PTTW RECORD
- EASR RECORD

REFERENCES

BING IMAGERY AS JULY 4, 2025 (IMAGE DATE UNKNOWN); AND CITY OF MISSISSAUGA, PARCEL, ROAD, RAIL, AND WATER NETWORK, OPEN DATA SET.

NOTES

THIS FIGURE IS SCHEMATIC ONLY AND TO BE READ IN CONJUNCTION WITH ACCOMPANYING TEXT.

ALL LOCATIONS ARE APPROXIMATE.

0 75 150 225 300

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HYDROGEOLOGICAL INVESTIGATION
2121 RATHBURN ROAD EAST,
MISSISSAUGA, ONTARIO

TITLE
PTTW AND EASR RECORD LOCATIONS

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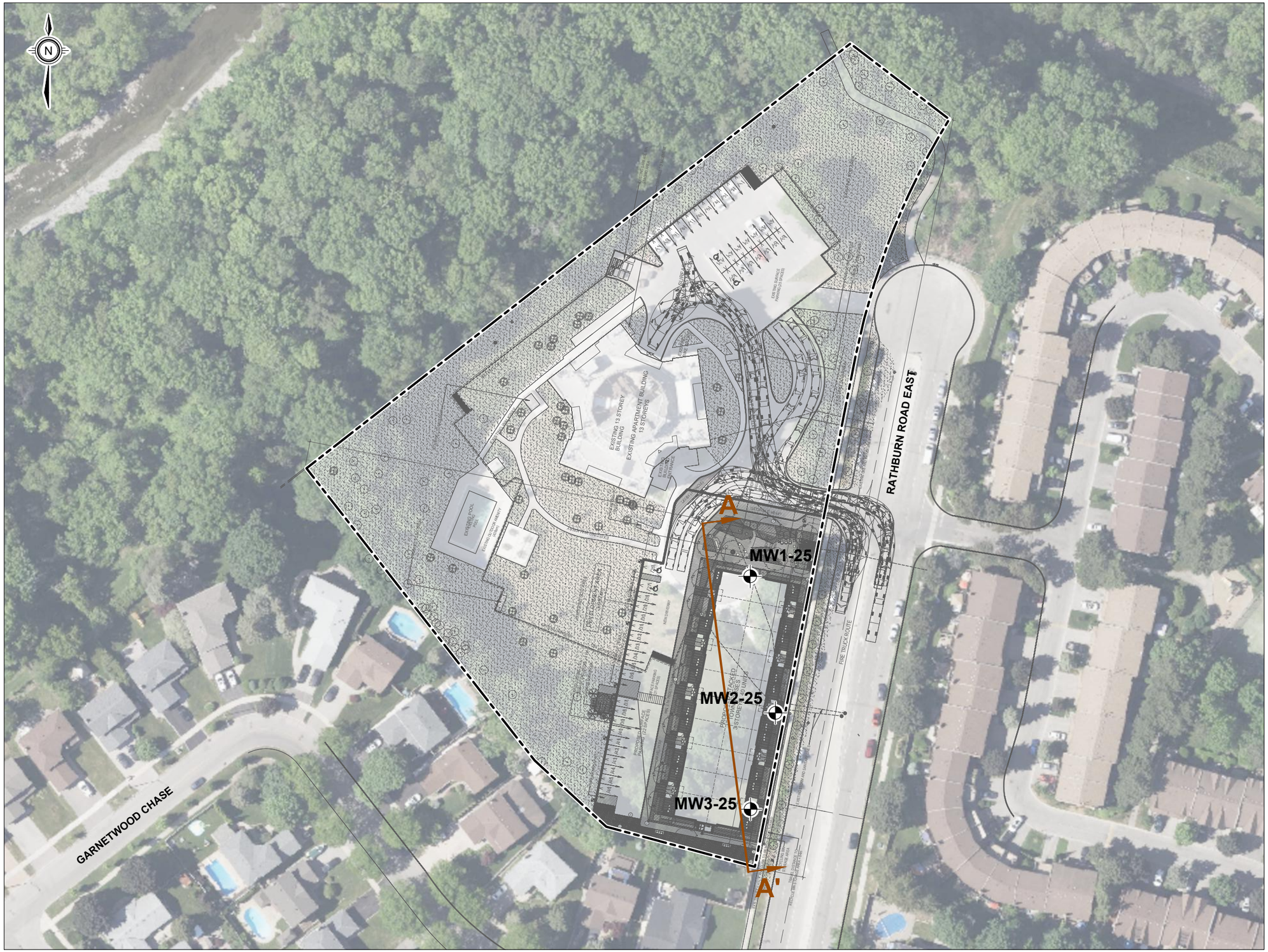



KEY PLAN (nts)

LEGEND

- SITE
- MONITORING WELL
- A A' CROSS-SECTION

REFERENCES

BING IMAGERY AS MAY 8, 2025 (IMAGE DATE UNKNOWN); AND
SITE PLAN AND SITE STATISTICS, KOHN PARTNERSHIP ARCHITECTS INC, PROJECT NO. 25-107, DATED SEPTEMBER 08, 2025, IN PDF FORMAT.

NOTES

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ALL LOCATIONS ARE APPROXIMATE.

0 10 20 30 40 50m

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HYDROGEOLOGICAL INVESTIGATION
2121 RATHBURN ROAD EAST,
MISSISSAUGA, ONTARIO

TITLE
BOREHOLE/MONITORING WELL LOCATION PLAN

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Date 2025-09-11	Rev No. 0	

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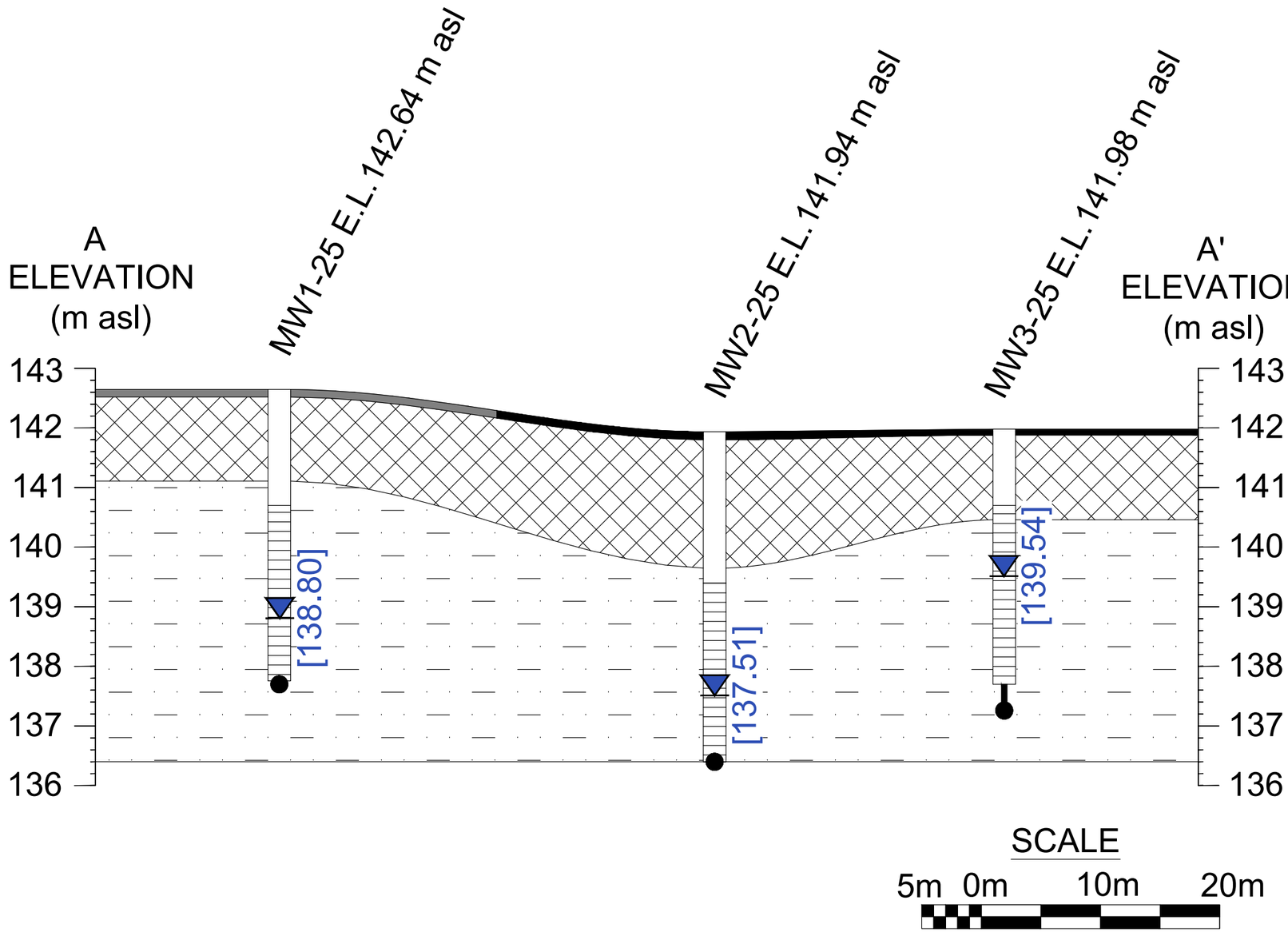

SCALE

5m 0m 10m 20m

LEGEND

- ASPHALT PAVEMENT
- TOPSOIL
- FILL
- SANDY CLAYEY SILT / CLAYEY SILT / SHALE COMPLEX
- WELL SCREEN
- WATER LEVEL
- [XX.XX] WATER LEVEL MEASUREMENT (m asl) (JUNE 27, 2025)

NOTES

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HYDROGEOLOGICAL INVESTIGATION
2121 RATHBURN ROAD EAST,
MISSISSAUGA, ONTARIO

TITLE
GEOLOGICAL CROSS SECTION A-A'

Drawn	Scale	Figure
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Date 2025-07-03	Rev No. 0	

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LEGEND

- SITE
- MONITORING WELL
- 138.80 MEASURED WATER LEVEL JUNE 27, 2025 (m AMSL)
- 137.51 INTERPRETED WATER TABLE ELEVATION (m AMSL)
- INFERRED GROUNDWATER FLOW DIRECTION

REFERENCES

BING IMAGERY AS MAY 8, 2025 (IMAGE DATE UNKNOWN); AND
SITE PLAN AND SITE STATISTICS, KOHN PARTNERSHIP ARCHITECTS INC, PROJECT NO. 25-107, DATED SEPTEMBER 08, 2025, IN PDF FORMAT.

NOTES

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ALL LOCATIONS ARE APPROXIMATE.

0 10 20 30 40 50m

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2121 RATHBURN ROAD EAST,
MISSISSAUGA, ONTARIO

TITLE **INTERPRETED GROUNDWATER CONTOUR MAP (June 27 - 2025)**

Drawn	Scale	Figure
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Checked	Project No. 62615_001	
Date 2025-09-11	Rev No. 0	

Plot Date: September 11, 2025 - 4:09 PM



LEGEND

SITE

DEVELOPMENT SITE AREA

PAVED SURFACES

LANDSCAPED AREAS

REFERENCES

BING IMAGERY AS MAY 8, 2025 (IMAGE DATE UNKNOWN); AND
SITE PLAN AND SITE STATISTICS, KOHN PARTNERSHIP ARCHITECTS INC, PROJECT NO. 25-107, DATED SEPTEMBER 08, 2025, IN PDF FORMAT.

NOTES

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ALL LOCATIONS ARE APPROXIMATE.

0 10 20 30 40 50m

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2121 RATHBURN ROAD EAST,
MISSISSAUGA, ONTARIO

TITLE
EXISTING LAND USE

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Date 2025-09-11	Rev No. 0	

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Plot Date: September 11, 2025 - 4:35 PM

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N
EXISTING 13 STOREY BUILDING
EXISTING APARTMENT BUILDING 13 STOREY
EXISTING SWIMMING POOL
EXISTING CHILDREN'S PLAY AREA
EXISTING GAZEBO
EXISTING BUILDING TO BE DEMOLISHED
EXISTING SHED TO BE DEMOLISHED
EXISTING SHED
EXISTING GARAGE TO BE DEMOLISHED
EXISTING GARAGE
EXISTING SHED TO BE DEMOLISHED
EXISTING SHED

Appendix A

Borehole Logs

RECORD OF BOREHOLE No. MW1-25

Project Number:	62615_001	Drilling Location:	See BH Location Plan	Logged by:	FJ
Project Client:	CAPREIT Limited Partnership	Drilling Method:	150 mm Solid Stem Augering	Compiled by:	FJ
Project Name:	Geotechnical and Hydrogeological Investigations	Drilling Machine:	Track Mounted Drill	Reviewed by:	VB
Project Location:	2121 Rathburn Road East, Mississauga, ON	Date Started:	Jun 17, 25 Date Completed: Jun 17, 25	Revision No.:	0, 7/8/25

Geodetic Ground Surface Elevation: 142.64 m

Description	Elevation (m)	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%	Field Testing	Lab Testing	Comments
ASPHALT PAVEMENT: 120 mm asphalt over 180 mm granular base	142.52 / 0.1							
FILL: sand and gravel, trace silt, trace oxidizations, brown, moist, loose		SS	1	52	9		9	
- clayey silt, some limestone fragments, trace gravel, grey, moist, firm to stiff		SS	2	62	10		11	
SANDY CLAYSY SILT: trace gravel, trace oxidizations, grey, moist, soft to firm	141.12 / 1.5	SS	3	62	4		12	Gr:6%, Sa:29%, Si:46%, Cl:19% LL:20%, PL:13%, PI:7
		SS	4	67	7		12	
CLAYEY SILT/SHALE COMPLEX: highly weathered shale fragments, silty clay/clayey silt inclusions, trace limestones, grey, moist at top to damp at bottom, hard	139.59 / 3.1	SS	5	100	60/15 cm	60 / 15 cm		
		SS	6	100	50/8 cm	50 / 8 cm		
- intermittent hard grinding of augers at 3.35 mbgs to 4.88 mbgs		SS	7	100	50/8 cm	50 / 8 cm		
End of Borehole due to auger refusal at 4.88 mbgs	137.76 / 4.9							

Notes:
1. Borehole was open & dry upon completion of drilling.
2. Groundwater level reading at 3.84 m bgs on June 27, 2025.

MTE Consultants Inc.
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Toronto, Ontario M6A 3B6
Canada
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F: 416-489-7666

No freestanding groundwater measured in open borehole on completion of drilling.

Groundwater depth observed on 06/27/2025 at a depth of: 3.84 m.

Borehole details as presented, do not constitute a thorough understanding of all potential conditions present and requires interpretative assistance from a qualified Geotechnical Engineer. Also, borehole information should be read in conjunction with the geotechnical report for which it was commisioned and the accompanying'Notes to Record of Boreholes'.

Scale: 1 : 42

RECORD OF BOREHOLE No. MW2-25

Project Number:	62615_001	Drilling Location:	See BH Location Plan	Logged by:	FJ
Project Client:	CAPREIT Limited Partnership	Drilling Method:	150 mm Solid Stem Augering	Compiled by:	FJ
Project Name:	Geotechnical and Hydrogeological Investigations	Drilling Machine:	Track Mounted Drill	Reviewed by:	VB
Project Location:	2121 Rathburn Road East, Mississauga, ON	Date Started:	Jun 17, 25 Date Completed: Jun 17, 25	Revision No.:	0, 7/8/25

Geodetic Ground Surface Elevation: 141.94 m

Description	Elevation (m)	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%	Field Testing	Lab Testing
TOPSOIL: 140 mm thick topsoil	141.80						
FILL: sandy silt, trace clay, trace gravel, trace oxidizations, trace rootlets, brown with grey seam at bottom, moist, loose	0.1	SS	1	91	9		15
- clayey silt, trace gravel, trace limestone fragments, trace oxidization, grey, moist, firm		SS	2	84	6		13
		SS	3	75	8		12
CLAYEY SILT/SHALE COMPLEX: highly weathered shale fragments, trace limestones, some clayey silt/silty clay inclusions, grey, moist to dry, hard	139.65 2.3	SS	4	65	56/15 cm	56 15 cm	9
		SS	5	80	50/10 cm	50 10 cm	
- wet spoon		SS	6	100	50/10 cm	50 10 cm	
- intermittent hard grinding of augers at 3.05 mbgs to 5.49 mbgs		SS	7	100	50/8 cm	50 8 cm	
	136.40	SS	8	100	50/5 cm	50 5 cm	
End of Borehole due to auger refusal at 5.54 mbgs	5.5						

Notes:
1. Borehole was open & dry upon completion of drilling.
2. Groundwater level reading at 4.43 m bgs on June 27, 2025.

MTE Consultants Inc.
970 Lawrence Avenue West, Suite 600
Toronto, Ontario M6A 3B6
Canada
T: 416-489-7888
F: 416-489-7666

No freestanding groundwater measured in open borehole on completion of drilling.

Groundwater depth observed on at a depth of: 4.43 m.

Borehole details as presented, do not constitute a thorough understanding of all potential conditions present and requires interpretative assistance from a qualified Geotechnical Engineer. Also, borehole information should be read in conjunction with the geotechnical report for which it was commisioned and the accompanying'Notes to Record of Boreholes'.

Scale: 1 : 42

RECORD OF BOREHOLE No. MW3-25

Project Number:	62615_001	Drilling Location:	See BH Location Plan	Logged by:	FJ
Project Client:	CAPREIT Limited Partnership	Drilling Method:	150 mm Solid Stem Augering	Compiled by:	FJ
Project Name:	Geotechnical and Hydrogeological Investigations	Drilling Machine:	Track Mounted Drill	Reviewed by:	VB
Project Location:	2121 Rathburn Road East, Mississauga, ON	Date Started:	Jun 17, 25	Date Completed: Jun 17, 25	Revision No.: 0, 7/8/25

Geodetic Ground Surface Elevation: 141.98 m

Depth (m)	Elevation (m)	Description	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%	Field Testing	Lab Testing	Instrumentation Installation	Comments
	141.88	**TOPSOIL:** 100 mm thick topsoil								
	141.78	**FILL:** sandy silt, clayey at bottom, trace gravel, trace crushed stone fragments, trace oxidizations, trace rootlets, brown, moist, compact	SS	1	72	10		20		
1	141	- silty clay, trace sand, trace gravel, trace oxidization, brown/grey, moist, stiff	SS	2	92	13		14		
	140.46									
	140.48	**SANDY CLAYEY SILT:** trace gravel, trace oxidizations, grey, moist, very stiff	SS	3	92	26		7		Gr:7%, Sa:39%, Si:37%, Cl:17%
2	140									
	139.69									
	139.68	**CLAYEY SILT/SHALE COMPLEX:** highly weathered some weathered shale and limestone fragments, grey, dry to moist, very stiff to hard	SS	4	92	22		10		
3	139		SS	5	61	66/25 cm	66 / 25 cm			
4	138		SS	6	38	50/8 cm	50 / 8 cm			
	137.26									
	137.28	**End of Borehole due to auger refusal at 4.72 mbgs**								

Notes:
1. Borehole caved-in at 4.27 mbgs upon completion of drilling.
2. Borehole was dry upon completion of drilling.
3. Groundwater level reading at 2.44 m bgs on June 27, 2025.

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970 Lawrence Avenue West, Suite 600
Toronto, Ontario M6A 3B6
Canada
T: 416-489-7888
F: 416-489-7666

No freestanding groundwater measured in open borehole on completion of drilling. Cave in depth recorded on completion of drilling: 4.27 m.

Groundwater depth observed on at a depth of: 2.44 m.

Borehole details as presented, do not constitute a thorough understanding of all potential conditions present and requires interpretative assistance from a qualified Geotechnical Engineer. Also, borehole information should be read in conjunction with the geotechnical report for which it was commisioned and the accompanying'Notes to Record of Boreholes'.

Appendix B

MECP Water Well Record Summary Table

Table B-1: MECP WWR Summary Table

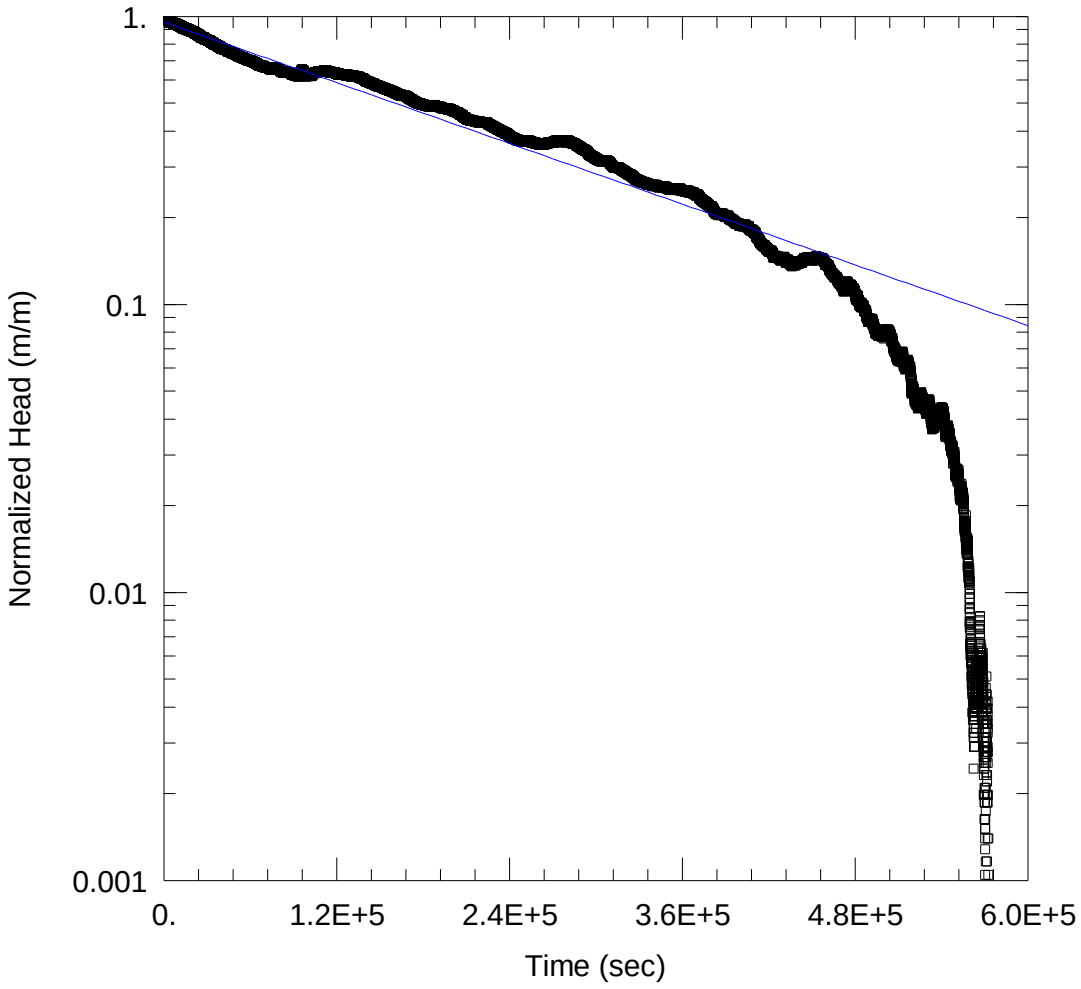
Count	Well ID	Date Constructed	Total Depth (m bgs)	Reported Water Depth (m bgs)	Status of Well
1.	7281244	12/06/2016	9.1	5.5	Observation
2.	7285849	11/16/2016	N/A	N/A	N/A

Table B-2: MECP PTTW and EASR Summary Table

Permit Number	Purpose	Address	Municipality	Water Source	Max L/Day	Active
P-300-9185453596	Foundation Drainage	330 Mill Road	Toronto	Groundwater	311,000	Yes
4618-8ZDPWX	Other - Construction	Part Part of lot D, Reference Plan M-1734	Toronto	Surface water	288,000	No
R-009-4185492295	Construction Dewatering	330 Mill Road	Toronto	Groundwater	395,000	Yes
R-009-3110914343	Construction Dewatering	2 Burnhamill Place	Toronto	Groundwater	50,000 – 400,000	No
R-009-5110543142	Construction Dewatering	No municipal address	Toronto	Groundwater	50,000 – 400,000	No
R-009-5110393594	Construction Dewatering	3657 Ponytrail Drive	Mississauga	Groundwater	50,000 – 400,000	No

Appendix C

SWRT Results



WELL TEST ANALYSIS

Data Set: C:\...\MW2-25.aqt
Date: 07/09/25 Time: 16:30:07

PROJECT INFORMATION

Company: MTE Consultants
Client: CAPREIT
Project: 62615_001
Location: 2121 Rathburn
Test Well: MW2-25
Test Date: June 20, 2025

AQUIFER DATA

Saturated Thickness: 1.05 m Anisotropy Ratio (Kz/Kr): 1.

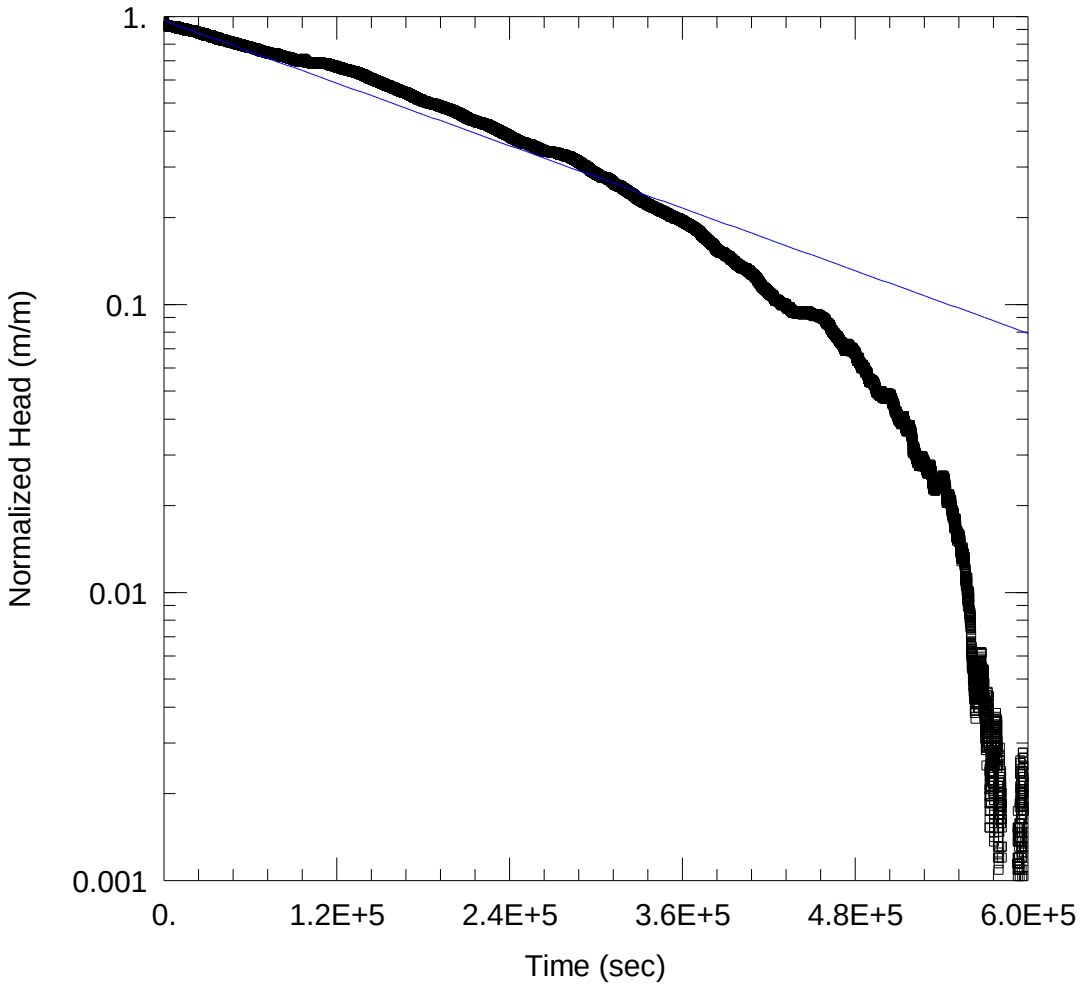
WELL DATA (MW2-25)

Initial Displacement: 0.8604 m
Total Well Penetration Depth: 1.05 m
Casing Radius: 0.0254 m
Static Water Column Height: 1.05 m
Screen Length: 1.05 m
Well Radius: 0.0254 m

SOLUTION

Aquifer Model: Unconfined
Solution Method: Hvorslev

K = 6.584E-9 m/sec
y0 = 0.8221 m



WELL TEST ANALYSIS

Data Set: C:\...\MW3-25.aqt
Date: 07/09/25 Time: 16:36:12

PROJECT INFORMATION

Company: MTE Consultants
Client: CAPREIT
Project: 62615_001
Location: 2121 Rathburn
Test Well: MW3-25
Test Date: June 20, 2025

AQUIFER DATA

Saturated Thickness: 1.97 m Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW3-25)

Initial Displacement: 1.837 m
Total Well Penetration Depth: 1.97 m
Casing Radius: 0.0254 m
Static Water Column Height: 1.97 m
Screen Length: 1.97 m
Well Radius: 0.0254 m

SOLUTION

Aquifer Model: Unconfined Solution Method: Hvorslev

K = 3.613E-9 m/sec y0 = 1.776 m

Appendix D

Water Quality Laboratory Certificates of Analysis and Chain of Custody

Your Project #: 62615 - 001
Site#: 2121 Rathburn Road East, Missi
Site Location: 2121 Rathburn Road East, Mississauga.
Your C.O.C. #: 1050439-01-01

Attention: Travis Van Holst

MTE Consultants Inc.
970 Lawrence Ave W, Suite 600
Toronto, ON
CANADA M6A 3B6

Report Date: 2025/07/04
Report #: R8569980
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C577192
Received: 2025/06/27, 14:05

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
ABN Compounds in Water by GC/MS	1	2025/06/30	2025/07/01	CAM SOP-00301	EPA 8270E m
Biochemical Oxygen Demand (BOD)	1	2025/06/28	2025/07/03	CAM SOP-00427	SM 24 5210B m
Carbonaceous BOD	1	2025/06/28	2025/07/03	CAM SOP-00427	SM 24 5210B m
Total Residual Chlorine	1	2025/06/28	2025/06/28	CAM SOP 00425	SM 24 4500-CL G m
Chromium (VI) in Water	1	N/A	2025/06/30	CAM SOP-00436	EPA 7199 m
Total Cyanide	1	2025/06/30	2025/06/30	CAM SOP-00457	OMOE E3015 5 m
Fluoride	1	2025/07/02	2025/07/02	CAM SOP-00449	SM 24 4500-F C m
Mercury in Water by CVAA	1	2025/07/02	2025/07/02	CAM SOP-00453	EPA 7470A m
Total Metals Analysis by ICPMS	1	2025/07/02	2025/07/02	CAM SOP-00447	EPA 6020B m
E.coli, (CFU/100mL)	1	N/A	2025/06/27	CAM SOP-00552	SM9222B, MECP E3371
Total Nonylphenol in Liquids by HPLC	1	2025/06/29	2025/06/30	CAM SOP-00313	In-house Method
Nonylphenol Ethoxylates in Liquids: HPLC	1	2025/06/29	2025/06/30	CAM SOP-00313	Bureau Veritas
Animal and Vegetable Oil and Grease	1	N/A	2025/07/02	CAM SOP-00326	EPA1664B m,SM5520B m
Total Oil and Grease	1	2025/07/02	2025/07/02	CAM SOP-00326	EPA1664B m,SM5520B m
PAH Compounds in Water by GC/MS (SIM)	1	2025/07/03	2025/07/03	CAM SOP-00318	EPA 8270E
Polychlorinated Biphenyl in Water	1	2025/06/30	2025/06/30	CAM SOP-00309	EPA 8082A m
Phenols (4AAP)	1	N/A	2025/07/03	CAM SOP-00444	OMOE E3179 m
pH	1	2025/06/30	2025/06/30	CAM SOP-00413	SM 24th-4500H+ B
Sulphate by Automated Turbidimetry	1	N/A	2025/07/02	CAM SOP-00464	SM 24 4500-SO42- E m
Total Kjeldahl Nitrogen in Water	1	2025/06/30	2025/07/02	CAM SOP-00938	SM 4500-N B m
Total PAHs: Barrie/Mississauga Sewer Use (1)	1	N/A	2025/07/04	CAM SOP - 00301	
Mineral/Synthetic O & G (TPH Heavy Oil) (2)	1	2025/07/02	2025/07/02	CAM SOP-00326	EPA1664B m,SM5520F m
Total Suspended Solids	1	2025/06/28	2025/06/30	CAM SOP-00428	SM 24 2540D m
Volatile Organic Compounds in Water	1	N/A	2025/07/02	CAM SOP-00228	EPA 8260D

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Your Project #: 62615 - 001
Site#: 2121 Rathburn Road East, Missi
Site Location: 2121 Rathburn Road East, Mississauga.
Your C.O.C. #: 1050439-01-01

Attention: Travis Van Holst

MTE Consultants Inc.
970 Lawrence Ave W, Suite 600
Toronto, ON
CANADA M6A 3B6

Report Date: 2025/07/04
Report #: R8569980
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C577192
Received: 2025/06/27, 14:05

writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) Total PAHs include only those PAHs specified in the sewer use by-by-law.
(2) Note: TPH (Heavy Oil) is equivalent to Mineral / Synthetic Oil & Grease

Encryption Key

AUTHORIZED REPORT
RAPPORT AUTORISÉ

Bureau Veritas
04 Jul 2025 15:45:30

Please direct all questions regarding this Certificate of Analysis to:
Deepthi Shaji, Project Manager
Email: Deepthi.Shaji@bureauveritas.com
Phone# (905)817-5700 Ext:7065843

==========

This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

Bureau Veritas Job #: C577192
Report Date: 2025/07/04

MTE Consultants Inc.
Client Project #: 62615 - 001
Site Location: 2121 Rathburn Road East, Mississauga.
Sampler Initials: HC

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID				ASKW62		
Sampling Date				2025/06/27 12:00		
COC Number				1050439-01-01		
	UNITS	Criteria	Criteria-2	MW3-25	RDL	QC Batch
Calculated Parameters						
Total Animal/Vegetable Oil and Grease	mg/L	150	-	ND	0.50	9959544
Inorganics						
Total BOD	mg/L	-	15	ND	2	9959924
Total Carbonaceous BOD	mg/L	300	-	ND	2	9959928
Total Chlorine	mg/L	-	1.0	0.1	0.1	9960097
Fluoride (F-)	mg/L	10	-	0.28	0.10	9961891
Total Kjeldahl Nitrogen (TKN)	mg/L	100	-	1.8	0.10	9960651
pH	pH	5.5:10.0	6:9	7.31		9960682
Phenols-4AAP	mg/L	1	0.008	ND	0.0010	9960956
Total Suspended Solids	mg/L	350	15	**34**	10	9960063
Dissolved Sulphate (SO4)	mg/L	1500	-	350	1.0	9961645
Total Cyanide (CN)	mg/L	2	0.02	ND	0.0050	9960487
Petroleum Hydrocarbons						
Total Oil & Grease	mg/L	-	-	ND	0.50	9961980
Total Oil & Grease Mineral/Synthetic	mg/L	15	-	ND	0.50	9961984

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: The Regional Municipality of Peel Sanitary Sewer Discharge. By-Law Number 53-2010.
Criteria-2: City of Mississauga Storm Sewer Use By-Law 0046-2022
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C577192
Report Date: 2025/07/04

MTE Consultants Inc.
Client Project #: 62615 - 001
Site Location: 2121 Rathburn Road East, Mississauga.
Sampler Initials: HC

NONYL PHENOL AND NONYL PHENOL ETHOXYLATE (WATER)

Bureau Veritas ID			ASKW62			ASKW62		
Sampling Date			2025/06/27 12:00			2025/06/27 12:00		
COC Number			1050439-01-01			1050439-01-01		
	UNITS	Criteria	MW3-25	RDL	QC Batch	MW3-25 Lab-Dup	RDL	QC Batch
Miscellaneous Parameters								
Nonylphenol Ethoxylate (Total)	mg/L	0.2	ND	0.025	9960174	ND	0.025	9960174
Nonylphenol (Total)	mg/L	0.02	ND	0.001	9960171			

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
Criteria: The Regional Municipality of Peel Sanitary Sewer Discharge. By-Law Number 53-2010.
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.

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Bureau Veritas Job #: C577192
Report Date: 2025/07/04

MTE Consultants Inc.
Client Project #: 62615 - 001
Site Location: 2121 Rathburn Road East, Mississauga.
Sampler Initials: HC

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID				ASKW62		
Sampling Date				2025/06/27 12:00		
COC Number				1050439-01-01		
	UNITS	Criteria	Criteria-2	MW3-25	RDL	QC Batch
Metals						
Chromium (VI)	ug/L	-	40	ND	0.50	9960659
Mercury (Hg)	mg/L	0.01	0.0004	ND	0.00010	9961484
Total Aluminum (Al)	ug/L	50000	1000	**2500**	4.9	9961791
Total Antimony (Sb)	ug/L	5000	-	1.2	0.50	9961791
Total Arsenic (As)	ug/L	1000	20	3.5	1.0	9961791
Total Cadmium (Cd)	ug/L	700	8	0.38	0.090	9961791
Total Chromium (Cr)	ug/L	5000	80	ND	5.0	9961791
Total Cobalt (Co)	ug/L	5000	-	31	0.50	9961791
Total Copper (Cu)	ug/L	3000	40	2.8	0.90	9961791
Total Lead (Pb)	ug/L	3000	120	0.53	0.50	9961791
Total Manganese (Mn)	ug/L	5000	2000	380	2.0	9961791
Total Molybdenum (Mo)	ug/L	5000	-	9.1	0.50	9961791
Total Nickel (Ni)	ug/L	3000	80	26	1.0	9961791
Total Phosphorus (P)	ug/L	10000	400	ND	100	9961791
Total Selenium (Se)	ug/L	1000	20	ND	2.0	9961791
Total Silver (Ag)	ug/L	5000	120	ND	0.090	9961791
Total Tin (Sn)	ug/L	5000	-	ND	1.0	9961791
Total Titanium (Ti)	ug/L	5000	-	34	5.0	9961791
Total Zinc (Zn)	ug/L	3000	200	33	5.0	9961791

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: The Regional Municipality of Peel Sanitary Sewer Discharge. By-Law Number 53-2010.
Criteria-2: City of Mississauga Storm Sewer Use By-Law 0046-2022
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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Bureau Veritas ID				ASKW62		
Sampling Date				2025/06/27 12:00		
COC Number				1050439-01-01		
	UNITS	Criteria	Criteria-2	MW3-25	RDL	QC Batch
Semivolatile Organics						
Bis(2-ethylhexyl)phthalate	ug/L	12	-	ND	2.0	9960899
Di-N-butyl phthalate	ug/L	80	-	ND	2.0	9960899
Calculated Parameters						
Total PAHs	ug/L	-	2	ND	0.28	9959878
Polyaromatic Hydrocarbons						
Acenaphthene	ug/L	-	-	ND	0.050	9962155
Acenaphthylene	ug/L	-	-	ND	0.050	9962155
Anthracene	ug/L	-	-	ND	0.050	9962155
Benzo(a)anthracene	ug/L	-	-	ND	0.050	9962155
Benzo(a)pyrene	ug/L	-	-	ND	0.0090	9962155
Benzo(g,h,i)perylene	ug/L	-	-	ND	0.050	9962155
Benzo(k)fluoranthene	ug/L	-	-	ND	0.050	9962155
Chrysene	ug/L	-	-	ND	0.050	9962155
Dibenzo(a,h)anthracene	ug/L	-	-	ND	0.050	9962155
Fluoranthene	ug/L	-	-	ND	0.050	9962155
Fluorene	ug/L	-	-	ND	0.050	9962155
Indeno(1,2,3-cd)pyrene	ug/L	-	-	ND	0.050	9962155
1-Methylnaphthalene	ug/L	-	-	ND	0.050	9962155
2-Methylnaphthalene	ug/L	-	-	ND	0.050	9962155
Naphthalene	ug/L	-	-	ND	0.050	9962155
Phenanthrene	ug/L	-	-	ND	0.030	9962155
Pyrene	ug/L	-	-	ND	0.050	9962155
Benzo(b)fluoranthene	ug/L	-	-	ND	0.030	9962155
Surrogate Recovery (%)						
2,4,6-Tribromophenol	%	-	-	67		9960899
2-Fluorobiphenyl	%	-	-	65		9960899

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: The Regional Municipality of Peel Sanitary Sewer Discharge. By-Law Number 53-2010.
Criteria-2: City of Mississauga Storm Sewer Use By-Law 0046-2022
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.

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SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Bureau Veritas ID				ASKW62		
Sampling Date				2025/06/27 12:00		
COC Number				1050439-01-01		
	UNITS	Criteria	Criteria-2	MW3-25	RDL	QC Batch
2-Fluorophenol	%	-	-	26		9960899
D14-Terphenyl	%	-	-	83		9960899
D5-Nitrobenzene	%	-	-	96		9960899
D5-Phenol	%	-	-	23		9960899
D10-Anthracene	%	-	-	104		9962155
D14-Terphenyl (FS)	%	-	-	90		9962155
D8-Acenaphthylene	%	-	-	94		9962155

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: The Regional Municipality of Peel Sanitary Sewer Discharge. By-Law Number 53-2010.
Criteria-2: City of Mississauga Storm Sewer Use By-Law 0046-2022

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C577192
Report Date: 2025/07/04

MTE Consultants Inc.
Client Project #: 62615 - 001
Site Location: 2121 Rathburn Road East, Mississauga.
Sampler Initials: HC

VOLATILE ORGANICS BY GC/MS (WATER)

Bureau Veritas ID				ASKW62		
Sampling Date				2025/06/27 12:00		
COC Number				1050439-01-01		
	UNITS	Criteria	Criteria-2	MW3-25	RDL	QC Batch
Volatile Organics						
Benzene	ug/L	10	2	ND	0.20	9960213
Chloroform	ug/L	40	-	ND	0.20	9960213
1,2-Dichlorobenzene	ug/L	50	5.6	ND	0.40	9960213
1,4-Dichlorobenzene	ug/L	80	6.8	ND	0.40	9960213
cis-1,2-Dichloroethylene	ug/L	4000	-	ND	0.50	9960213
trans-1,3-Dichloropropene	ug/L	140	-	ND	0.40	9960213
Ethylbenzene	ug/L	160	2	ND	0.20	9960213
Methylene Chloride(Dichloromethane)	ug/L	2000	5.2	ND	2.0	9960213
Methyl Ethyl Ketone (2-Butanone)	ug/L	8000	-	ND	10	9960213
Styrene	ug/L	200	-	ND	0.40	9960213
1,1,2,2-Tetrachloroethane	ug/L	1400	17	ND	0.40	9960213
Tetrachloroethylene	ug/L	1000	4.4	ND	0.20	9960213
Toluene	ug/L	270	2	ND	0.20	9960213
Trichloroethylene	ug/L	400	7.6	ND	0.20	9960213
p+m-Xylene	ug/L	-	-	ND	0.20	9960213
o-Xylene	ug/L	-	-	ND	0.20	9960213
Total Xylenes	ug/L	1400	4.4	ND	0.20	9960213
Surrogate Recovery (%)						
4-Bromofluorobenzene	%	-	-	100		9960213
D4-1,2-Dichloroethane	%	-	-	102		9960213
D8-Toluene	%	-	-	92		9960213

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: The Regional Municipality of Peel Sanitary Sewer Discharge.
By-Law Number 53-2010.
Criteria-2: City of Mississauga Storm Sewer Use By-Law 0046-2022
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C577192
Report Date: 2025/07/04

MTE Consultants Inc.
Client Project #: 62615 - 001
Site Location: 2121 Rathburn Road East, Mississauga.
Sampler Initials: HC

POLYCHLORINATED BIPHENYLS BY GC-ECD (WATER)

Bureau Veritas ID				ASKW62		
Sampling Date				2025/06/27 12:00		
COC Number				1050439-01-01		
	UNITS	Criteria	Criteria-2	MW3-25	RDL	QC Batch
PCBs						
Total PCB	ug/L	1	0.4	ND	0.05	9960285
Surrogate Recovery (%)						
Decachlorobiphenyl	%	-	-	70		9960285

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: The Regional Municipality of Peel Sanitary Sewer Discharge.
By-Law Number 53-2010.
Criteria-2: City of Mississauga Storm Sewer Use By-Law 0046-2022
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.

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Bureau Veritas Job #: C577192
Report Date: 2025/07/04

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Site Location: 2121 Rathburn Road East, Mississauga.
Sampler Initials: HC

MICROBIOLOGY (WATER)

Bureau Veritas ID			ASKW62		
Sampling Date			2025/06/27 12:00		
COC Number			1050439-01-01		
	UNITS	Criteria	MW3-25	RDL	QC Batch
Microbiological					
Escherichia coli	CFU/100mL	200	<10	10	9959885

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: City of Mississauga Storm Sewer Use By-Law 0046-2022

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	16.0°C

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
9960213	4-Bromofluorobenzene	2025/07/02	101	70 - 130	101	70 - 130	102	%				
9960213	D4-1,2-Dichloroethane	2025/07/02	100	70 - 130	100	70 - 130	103	%				
9960213	D8-Toluene	2025/07/02	102	70 - 130	102	70 - 130	93	%				
9960285	Decachlorobiphenyl	2025/06/30	75	60 - 130	60	60 - 130	72	%				
9960899	2,4,6-Tribromophenol	2025/07/01	95	10 - 130	96	10 - 130	62	%				
9960899	2-Fluorobiphenyl	2025/07/01	62	30 - 130	72	30 - 130	75	%				
9960899	2-Fluorophenol	2025/07/01	46	10 - 130	48	10 - 130	44	%				
9960899	D14-Terphenyl	2025/07/01	81	30 - 130	79	30 - 130	79	%				
9960899	D5-Nitrobenzene	2025/07/01	96	30 - 130	100	30 - 130	102	%				
9960899	D5-Phenol	2025/07/01	34	10 - 130	32	10 - 130	31	%				
9962155	D10-Anthracene	2025/07/03	106	50 - 130	102	50 - 130	108	%				
9962155	D14-Terphenyl (FS)	2025/07/03	94	50 - 130	94	50 - 130	99	%				
9962155	D8-Acenaphthylene	2025/07/03	100	50 - 130	96	50 - 130	97	%				
9959924	Total BOD	2025/07/03					ND,RDL=2	mg/L	1.6	30	96	80 - 120
9959928	Total Carbonaceous BOD	2025/07/03					ND,RDL=2	mg/L	4.9	30	94	80 - 120
9960063	Total Suspended Solids	2025/06/30			98	80 - 120	ND, RDL=10	mg/L	NC	20		
9960097	Total Chlorine	2025/06/28	74 (1)	85 - 115	97	85 - 115	ND, RDL=0.1	mg/L	1.0	25		
9960171	Nonylphenol (Total)	2025/06/30	128	50 - 130	103	50 - 130	ND, RDL=0.001	mg/L	NC	40		
9960174	Nonylphenol Ethoxylate (Total)	2025/06/30	104	50 - 130	90	50 - 130	ND, RDL=0.025	mg/L	NC	40		
9960213	1,1,2,2-Tetrachloroethane	2025/07/02	92	70 - 130	91	70 - 130	ND, RDL=0.40	ug/L	NC	30		
9960213	1,2-Dichlorobenzene	2025/07/02	98	70 - 130	98	70 - 130	ND, RDL=0.40	ug/L	NC	30		
9960213	1,4-Dichlorobenzene	2025/07/02	100	70 - 130	100	70 - 130	ND, RDL=0.40	ug/L	NC	30		
9960213	Benzene	2025/07/02	99	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L	NC	30		
9960213	Chloroform	2025/07/02	99	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L	NC	30		
9960213	cis-1,2-Dichloroethylene	2025/07/02	104	70 - 130	103	70 - 130	ND, RDL=0.50	ug/L	NC	30		
9960213	Ethylbenzene	2025/07/02	99	70 - 130	99	70 - 130	ND, RDL=0.20	ug/L	NC	30		
9960213	Methyl Ethyl Ketone (2-Butanone)	2025/07/02	104	60 - 140	100	60 - 140	ND, RDL=10	ug/L	NC	30		
9960213	Methylene Chloride(Dichloromethane)	2025/07/02	106	70 - 130	104	70 - 130	ND, RDL=2.0	ug/L	NC	30		
9960213	o-Xylene	2025/07/02	103	70 - 130	106	70 - 130	ND, RDL=0.20	ug/L	NC	30		

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
9960213	p+m-Xylene	2025/07/02	100	70 - 130	100	70 - 130	ND, RDL=0.20	ug/L	NC	30		
9960213	Styrene	2025/07/02	98	70 - 130	99	70 - 130	ND, RDL=0.40	ug/L	NC	30		
9960213	Tetrachloroethylene	2025/07/02	97	70 - 130	96	70 - 130	ND, RDL=0.20	ug/L	NC	30		
9960213	Toluene	2025/07/02	100	70 - 130	100	70 - 130	ND, RDL=0.20	ug/L	NC	30		
9960213	Total Xylenes	2025/07/02					ND, RDL=0.20	ug/L	NC	30		
9960213	trans-1,3-Dichloropropene	2025/07/02	109	70 - 130	101	70 - 130	ND, RDL=0.40	ug/L	NC	30		
9960213	Trichloroethylene	2025/07/02	101	70 - 130	101	70 - 130	ND, RDL=0.20	ug/L	NC	30		
9960285	Total PCB	2025/06/30	88	60 - 130	79	60 - 130	ND, RDL=0.05	ug/L	NC	40		
9960487	Total Cyanide (CN)	2025/06/30	96	80 - 120	101	80 - 120	ND, RDL=0.0050	mg/L	NC	20		
9960651	Total Kjeldahl Nitrogen (TKN)	2025/07/02	NC	80 - 120	100	80 - 120	ND, RDL=0.10	mg/L	0.49	20	99	80 - 120
9960659	Chromium (VI)	2025/06/30	101	80 - 120	103	80 - 120	ND, RDL=0.50	ug/L	NC	20		
9960682	pH	2025/06/30			102	98 - 103			0.50	N/A		
9960899	Bis(2-ethylhexyl)phthalate	2025/07/01	119	30 - 130	115	30 - 130	ND, RDL=2.0	ug/L	NC	40		
9960899	Di-N-butyl phthalate	2025/07/01	106	30 - 130	115	30 - 130	ND, RDL=2.0	ug/L	NC	40		
9960956	Phenols-4AAP	2025/07/03	90	80 - 120	92	80 - 120	ND, RDL=0.0010	mg/L	NC	20		
9961484	Mercury (Hg)	2025/07/02	103	75 - 125	103	80 - 120	ND, RDL=0.00010	mg/L	NC	20		
9961645	Dissolved Sulphate (SO4)	2025/07/02	NC	75 - 125	99	80 - 120	ND, RDL=1.0	mg/L	0	20		
9961791	Total Aluminum (Al)	2025/07/02	114	80 - 120	100	80 - 120	ND, RDL=4.9	ug/L				
9961791	Total Antimony (Sb)	2025/07/02	97	80 - 120	97	80 - 120	ND, RDL=0.50	ug/L				
9961791	Total Arsenic (As)	2025/07/02	102	80 - 120	102	80 - 120	ND, RDL=1.0	ug/L				
9961791	Total Cadmium (Cd)	2025/07/02	97	80 - 120	98	80 - 120	ND, RDL=0.090	ug/L				
9961791	Total Chromium (Cr)	2025/07/02	95	80 - 120	97	80 - 120	ND, RDL=5.0	ug/L				
9961791	Total Cobalt (Co)	2025/07/02	97	80 - 120	100	80 - 120	ND, RDL=0.50	ug/L				
9961791	Total Copper (Cu)	2025/07/02	100	80 - 120	101	80 - 120	ND, RDL=0.90	ug/L				
9961791	Total Lead (Pb)	2025/07/02	95	80 - 120	98	80 - 120	ND, RDL=0.50	ug/L				
9961791	Total Manganese (Mn)	2025/07/02	95	80 - 120	96	80 - 120	ND, RDL=2.0	ug/L				
9961791	Total Molybdenum (Mo)	2025/07/02	93	80 - 120	93	80 - 120	ND, RDL=0.50	ug/L				

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
9961791	Total Nickel (Ni)	2025/07/02	96	80 - 120	98	80 - 120	ND, RDL=1.0	ug/L				
9961791	Total Phosphorus (P)	2025/07/02	96	80 - 120	92	80 - 120	ND, RDL=100	ug/L				
9961791	Total Selenium (Se)	2025/07/02	104	80 - 120	106	80 - 120	ND, RDL=2.0	ug/L				
9961791	Total Silver (Ag)	2025/07/02	93	80 - 120	94	80 - 120	ND, RDL=0.090	ug/L				
9961791	Total Tin (Sn)	2025/07/02	96	80 - 120	95	80 - 120	ND, RDL=1.0	ug/L				
9961791	Total Titanium (Ti)	2025/07/02	93	80 - 120	93	80 - 120	ND, RDL=5.0	ug/L				
9961791	Total Zinc (Zn)	2025/07/02	99	80 - 120	102	80 - 120	ND, RDL=5.0	ug/L				
9961891	Fluoride (F-)	2025/07/02	94	80 - 120	98	80 - 120	ND, RDL=0.10	mg/L	14	20		
9961980	Total Oil & Grease	2025/07/02			98	80 - 110	ND, RDL=0.50	mg/L	0.26	25		
9961984	Total Oil & Grease Mineral/Synthetic	2025/07/02			96	65 - 130	ND, RDL=0.50	mg/L	0.52	25		
9962155	1-Methylnaphthalene	2025/07/03	97	50 - 130	90	50 - 130	ND, RDL=0.050	ug/L	2.3	30		
9962155	2-Methylnaphthalene	2025/07/03	98	50 - 130	90	50 - 130	ND, RDL=0.050	ug/L	2.3	30		
9962155	Acenaphthene	2025/07/03	106	50 - 130	99	50 - 130	ND, RDL=0.050	ug/L	NC	30		
9962155	Acenaphthylene	2025/07/03	102	50 - 130	96	50 - 130	ND, RDL=0.050	ug/L	NC	30		
9962155	Anthracene	2025/07/03	117	50 - 130	112	50 - 130	ND, RDL=0.050	ug/L	NC	30		
9962155	Benzo(a)anthracene	2025/07/03	113	50 - 130	106	50 - 130	ND, RDL=0.050	ug/L	NC	30		
9962155	Benzo(a)pyrene	2025/07/03	106	50 - 130	100	50 - 130	ND, RDL=0.0090	ug/L	NC	30		
9962155	Benzo(b)fluoranthene	2025/07/03	116	50 - 130	107	50 - 130	ND, RDL=0.030	ug/L				
9962155	Benzo(g,h,i)perylene	2025/07/03	115	50 - 130	111	50 - 130	ND, RDL=0.050	ug/L	NC	30		
9962155	Benzo(k)fluoranthene	2025/07/03	108	50 - 130	104	50 - 130	ND, RDL=0.050	ug/L	NC	30		
9962155	Chrysene	2025/07/03	111	50 - 130	105	50 - 130	ND, RDL=0.050	ug/L	NC	30		

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
9962155	Dibenzo(a,h)anthracene	2025/07/03	105	50 - 130	101	50 - 130	ND, RDL=0.050	ug/L	NC	30		
9962155	Fluoranthene	2025/07/03	118	50 - 130	111	50 - 130	ND, RDL=0.050	ug/L	NC	30		
9962155	Fluorene	2025/07/03	109	50 - 130	102	50 - 130	ND, RDL=0.050	ug/L	NC	30		
9962155	Indeno(1,2,3-cd)pyrene	2025/07/03	114	50 - 130	110	50 - 130	ND, RDL=0.050	ug/L	NC	30		
9962155	Naphthalene	2025/07/03	93	50 - 130	88	50 - 130	ND, RDL=0.050	ug/L	3.1	30		
9962155	Phenanthrene	2025/07/03	111	50 - 130	105	50 - 130	ND, RDL=0.030	ug/L	NC	30		
9962155	Pyrene	2025/07/03	118	50 - 130	111	50 - 130	ND, RDL=0.050	ug/L	NC	30		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

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

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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Bureau Veritas Job #: C577192
Report Date: 2025/07/04

MTE Consultants Inc.
Client Project #: 62615 - 001
Site Location: 2121 Rathburn Road East, Mississauga.
Sampler Initials: HC

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Cristina Carriere, Senior Scientific Specialist

Jing (Sammy) Sun, M.Sc. Biotechnology, Analyst 1

Louise Harding, Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

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Sampler Initials: HC

Exceedance Summary Table – Peel Region Sanitary 2010

Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
No Exceedances						

The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.

Exceedance Summary Table – Mississauga Storm Sewer

Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
MW3-25	ASKW62-13	Total Aluminum (Al)	1000	2500	4.9	ug/L
MW3-25	ASKW62-08	Total Suspended Solids	15	34	10	mg/L

The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.

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C577192
2025/06/27 14:05

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MICRO

Page 1 of 1

NONT-2025-06-6085

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
Company Name:	#31796 MTE Consultants Inc.	Company Name:		Quotation #:	C35246
Attention:	Accounts Payable	Attention:	Travis Van Holst	P.O. #:	
Address:	970 Lawrence Ave W, Suite 600	Address:		Project:	62615-01
	Toronto ON M6A 3B6			Project Name:	
Tel:	(416) 214-4880 Fax:	Tel:	Fax:	Site #:	2121 Rathburn Road East, Missi
Email:	accounting@mte85.com	Email:	tvanholst@mte85.com	Sampled By:	HC

Bottle Order #: 1050439
COC #: C#1050439-01-01
Project Manager: Deepthi Shaji

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BUREAU VERITAS DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011)
- ☐ Table 1 ☐ Res/Park ☐ Medium/Fine
- ☐ Table 2 ☐ Ind/Comm ☐ Coarse
- ☐ Table 3 ☐ Agri/Other ☐ For RSC
- ☐ Table ___

Other Regulations
- ☐ CCME ☑ Sanitary Sewer Bylaw
- ☐ Reg 558 ☑ Storm Sewer Bylaw
- ☐ MISA Municipality Peel/Mississauga
- ☐ PWQO ☐ Reg 406 Table ___
- ☐ Other ___

Special Instructions

Include Criteria on Certificate of Analysis (Y/N)? Y

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

Regular (Standard) TAT: ☑
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: ___ Time Required: ___ ☐
Rush Confirmation Number: ___ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	Peel Sanitary Sewer Bylaw (53-2010)	Mississauga Storm Sewer Bylaw (46-2022)							# of Bottles	Comments
1		MW3-25	25/06/27	12:00	GW	N	✓	✓							18	Limited water.
2																
3																
4																
5																
6																
7																
8																
9																
10																

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Hongshan Chen	25/06/27	14:02		25/06/27	17:05	

Laboratory Use Only
Time Sensitive | Temperature (°C) on Recei: 19.8/11 | Custody Seal Present ☐ Yes ☐ | Intact ☐ No ☑

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/CHAIN-CUSTODY-FORMS-COCS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

Appendix E

Construction Dewatering Estimate Rate Calculations

CONSTRUCTION DEWATERING RATE ESTIMATE

2121 Rathburn Road East, Mississauga, Ontario

1 level of basement, Unconfined Aquifer, Groundwater seepage to rectangle excavation (line source)

Table E-1: Construction Dewatering Rate Estimates

Description	Symbol	Blocks A	Unit	Explanation
Input				
Existing Lowest Ground Elevation		141.94	m asl	Based on BH logs
Highest Groundwater Elevation		139.54	m asl	Highest groundwater elevation (June 27, 2025)
Lowest Level Footing Elevation		139.37	m asl	Basement A is 3.13 m below Level 1A and Level 1A FFE is 143.50 masl based on drawing A1 00, Site Plan and Site Statistics, and drawing A4 11, Overall Building Sections prepared by Kohn, dated September 8, 2025, Footing is assumed 1 m below the lowest level elevation
Aquifer Bottom		136.37	m asl	Assumed 3 m below footing level
Hydraulic Conductivity	K	6.58E-09	m/s	Highest K
Length of Excavation	x	66.20	m	Based on drawing A1 00, Site Plan and Site Statistics, prepared by Kohn, dated September 8, 2025
Width of Excavation	a	24.20	m	
Output				
Top of Aquifer		139.54	m asl	Water table for unconfined aquifer
Target Water Level		138.37	m asl	Assumed 1.0 m below footing elevation
Water Level above aquifer bottom before dewatering	H	3.2	m	-
target water level above aquifer bottom	h	2.0	m	-
Radius of Influence	L (R_0)	0.17	m	Sichardt's Formula C=1750
Construction Dewatering Flow Rate - Steady State	Q	1.87	m^3/day	Construction Dewatering flow – Dupuit Equation
Maximum Construction Flow Rate (safety factor of 2.5)	2.5Q	4.7	m^3/day	During the initial period and after rains
Construction Dewatering Flow Rate - Steady State	Q	**1,900**	L/day	
Maximum Construction Flow Rate (safety factor of 2.5)	2.5Q	**4,800**	L/day	

MTE

Appendix F

Pre- and Post-Development Water Balance

SUMMARY OF PRE-DEVELOPMENT WATER BALANCE

2121 Rathburn Road East, Mississauga, Ontario
Project Number: 62615_001

Pre-Developed Site Condition

Landscape	3,350	sq.m.
Paved Surfaces	647	sq.m.
TOTAL	**3,997**	**sq.m.**

Pre-Development Infiltration Factor

Category	Infiltration Factor
Topography/Slope	0.20
Soil Type (Sandy Clayey Silt/ Clayey Silt)	0.20
Cover (Cultivated Lands)	0.10
Total Infiltration factor	**0.50**

Climate Data (Climate Normals 1983-2012 at Pearson International Airport Climate ID 6158733)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Ave. Tempreature (^{0}C)	-5.11	-4.42	0.34	7.13	13.27	18.84	21.69	20.78	16.37	9.65	3.82	-2.06	
Total Precipitation (P) (mm)	52.77	46.97	50.69	70.05	77.06	70.19	76.89	73.91	73.63	63.35	73.62	57.73	786.9

Thornthwaite and Mather (1955) method	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Potential Evapotranspiration (PET) (mm)	9.16	10.88	21.00	39.61	72.46	108.22	127.91	102.63	59.75	31.19	16.15	10.16	609.13
Actual Evapotranspiration (AET) (mm)	9.16	10.88	21.00	39.61	72.38	105.74	112.13	84.58	55.67	30.48	16.15	10.16	567.95
Water Surplus (mm)	15.78	24.71	46.09	46.15	16.71	4.75	2.16	2.66	8.82	5.33	22.07	22.07	217.31

Annual Pre-Development Water Balance

Land Use	Area (sq.m.)	P (cu.m.)	AET (cu.m.)	Infiltration (cu.m.)	Run-off (cu.m.)
Paved Surface	647	509	0	0	509
Landscape	3,350	2,636	1,903	364	369
Total	3,997	3,145	1,903	364	878
		Pre-development Infiltration Rate		**91**	**mm/a**

SUMMARY OF POST-DEVELOPMENT WATER BALANCE

2121 Rathburn Road East, Mississauga, Ontario
Project Number: 62615_001

Post-Developed Site Condition

Building Roofs	1,260	sq.m.
Paved Surface	2,110	sq.m.
Landscape	627	sq.m.
TOTAL	**3,997**	**sq.m.**

Post-Development Infiltration Factor

Category	Infiltration Factor
Topography/Slope	0.20
Soil Type (Sandy Clayey Silt/ Clayey Silt)	0.20
Cover (Cultivated Lands)	0.10
Total Infiltration factor	**0.50**

Climate Data (Climate Normals 1983-2012 at Pearson International Airport Climate ID 6158733)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Ave. Tempreature (^{0}C)	-5.11	-4.42	0.34	7.13	13.27	18.84	21.69	20.78	16.37	9.65	3.82	-2.06	
Total Precipitation (P) (mm)	52.77	46.97	50.69	70.05	77.06	70.19	76.89	73.91	73.63	63.35	73.62	57.73	786.9

Thornthwaite and Mather (1955) method	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Potential Evapotranspiration (PET) (mm)	9.16	10.88	21.00	39.61	72.46	108.22	127.91	102.63	59.75	31.19	16.15	10.16	609.13
Actual Evapotranspiration (AET) (mm)	9.16	10.88	21.00	39.61	72.38	105.74	112.13	84.58	55.67	30.48	16.15	10.16	567.95
Water Surplus (mm)	15.78	24.71	46.09	46.15	16.71	4.75	2.16	2.66	8.82	5.33	22.07	22.07	217.31

Annual Post-Development Water Balance

Land Use	Area (sq.m.)	P (cu.m.)	AET (cu.m.)	Infiltration (cu.m.)	Run-off (cu.m.)
Building Roofs	1,260	991	0	0	991
Paved Surface	2,110	1,660	0	0	1,660
Landscape	627	493	356	68	69
TOTAL	3,997	3,145	356	68	2,721
		Post-development Infiltration Rate		**17**	**mm/a**