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**A REPORT TO
CHELSEA ON THE GREEN I LIMITED PARTNERSHIP**

**A HYDROGEOLOGICAL ASSESSMENT FOR
PROPOSED CONDOMINIUM DEVELOPMENT
PHASE TWO**

**4100 PONYTRAIL DRIVE
CITY OF MISSISSAUGA**

REFERENCE NO. 2505-W117B

DECEMBER 11, 2025

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ISSUES REGISTRY

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1.0 EXECUTIVE SUMMARY

Soil Engineers Ltd. (SEL) was retained by Chelsea on the Green I Limited Partnership to conduct hydrogeological assessments for the proposed condominium development, including Phase 1 and Phase 2 developments for a property with a municipal address of 4100 Ponytrail Drive, in the City of Mississauga, Ontario (Subject Site). This hydrogeological assessment is prepared for the proposed Phase 1 development.

The Subject Site is located on the south side of Rathburn Road East and Ponytrail Drive, approximately 700 m northwest of the main intersection of Burnhamthorpe Road East and Ponytrail Drive, in the City of Mississauga. The Subject Site is bounded by residential properties to the east, hydro corridor and residential properties to the south, Rathburn Road East and residential properties to the west, and Rathburn Road East, Ponytrail Drive, a commercial plaza, and residential properties to the north.

The Subject Site currently consists of two (2) 18-storey residential condominium buildings with two (2) separate 2-level underground parking structures, constructed since 1981.

Based on the review of the architectural drawings, prepared by 4 Architecture Inc., dated September 2025, it is understood that the proposed Phase 1 development consists of one (1) 25-storey condominium (residential) building with a 2-level underground parking (P2) structure, connecting to the existing underground parking structures of the adjoining two existing buildings. And the proposed Phase 2 development consists of three (3) 20-storey condominium (residential) building with a 3-level underground parking (P3) structure, connecting to the existing underground parking structures of the adjoining two existing buildings and the constructed Phase 1 P2.

The draft hydrogeological assessment report for the Phase 1 development was prepared under a separate cover by SEL, Reference No. 2505-W117A, dated September 2, 2025.

The current investigation revealed that:

- The Subject Site is underlain by the strata of glacial tills with a layer of sand at one borehole location, overlying the shale bedrock to the termination depth of investigation at 15.3 metres below ground surface (mbgs).
- Groundwater was monitored within the glacial till, sand, and bedrock units. The highest and lowest groundwater level was measured at El. 132.5 metres above sea level (masl) and 129.7 masl at BH/MW 7D on July 10, 2025 and August 6, 2025, respectively.
- Estimated hydraulic conductivity using single well response test (SWRT) ranges from 4.7×10^{-8} m/sec at BH/MW 6D to 2.7×10^{-6} m/sec at BH/MW 1D for shale bedrock. The hydraulic conductivities of 2.0×10^{-7} m/s, 1.4×10^{-6} m/s, and 6.0×10^{-7} m/s were considered for glacial till, sand, and bedrock for the dewatering assessment, respectively.
- Groundwater quality from one (1) unfiltered sample collected at BH/MW 6S exceeds the Total Suspended Solids (TSS) limits of both the Regional Municipality of Peel and City of Mississauga



Storm Sewer Use By-Laws, but meets the Regional Municipality of Peel Sanitary Sewer Use By-Law standard. These findings suggest that any short-term construction dewatering, or long-term foundation drainage discharge would not be acceptable for disposal to the region's or city's storm sewer without any pre-treatment to lower the TSS before discharge. While no significant pre-treatment is required prior to disposal to region's sanitary sewer.

- The groundwater seepage flow rate with an applied safety factor of 2, reach 39,000.0 L/day for the construction of the proposed P3 structure. The total estimated short-term construction dewatering flow rates for the construction of the proposed P3 structure, including groundwater seepage with a safety factor of 2, and 2-year storm event reach 290,500.0 L/day. As such, filing a EASR with MECP is required.
- The total estimated long-term foundation drainage flow rate for the proposed P3 structure that will be partially constructed below the groundwater table reaches 38,000.0 L/day, including infiltration and groundwater seepage with a safety factor of 2, which does not exceed 379,000 L/day. As such, filing PTTW with MECP is not required.
- Obtaining a discharge permit from the Municipality of Peel or City of Mississauga is required, if the potential short-term dewatering effluents or long-term foundation drainage flow are proposed to be discharged to the region's or city's sewer system.
- The conceptual ZOI for dewatering may reach to 31.4 m away from the excavation and dewatering area for the proposed P3 structure.
 - As per the conceptual ZOI, residential buildings, the constructed Phase 1, part of Ponytrail Drive and Rathburn Road East are located within the conceptual ZOI for dewatering. As such, potential risk for ground settlement is expected due to dewatering. The proposed dewatering plan is not available for review. If dewatering activities do not include the installation of dewatering wells or other active dewatering approaches, and groundwater seepage is controlled locally or an impermeable shoring is proposed along the perimeter of the proposed excavation box, significant risk for ground settlement is not expected. However, it is recommended that a professional geotechnical engineer is consulted in advance of excavation and construction due to the location of the adjacent buildings.
 - Record review suggests that there is a water course located near the Subject Site. However, the nearby water course is located outside of the maximum conceptual ZOI for the dewatering area for the proposed P3 structure. As such, potential impact to surface water, wetlands and areas of natural significance is not expected.
 - A review of the MECP well records confirmed that there is (1) record for water supply well that is registered within 500 m of the Subject Site Study Area. However, no records for water supply wells fall within the conceptual ZOI for dewatering area for the proposed P3 structure. As such, significant impacts to nearby water supply wells are not anticipated if



exist. Additionally, the Subject Site is located with a well-developed neighbourhood of the City of Mississauga, where it is provided by municipal services. As such, a door-to-door survey will not be required.



2.0 INTRODUCTION

2.1 Site Location and Project Description

Soil Engineers Ltd. (SEL) was retained by Chelsea on the Green I Limited Partnership to conduct hydrogeological assessments for the proposed condominium development, including Phase 1 and Phase 2 developments for a property with municipal address of 4100 Ponytrail Drive, in the City of Mississauga, Ontario (Subject Site). This hydrogeological assessment is prepared for the proposed Phase 1 development. The location of the Subject Site is shown on **Drawing 1**.

The Subject Site is located on the south side of Rathburn Road East and Ponytrail Drive, approximately 700 m northwest of the main intersection of Burnhamthorpe Road East and Ponytrail Drive, in the City of Mississauga. The Subject Site is bounded by residential properties to the east, hydro corridor and residential properties to the south, Rathburn Road East and residential properties to the west, and Rathburn Road East, Ponytrail Drive a commercial plaza and residential properties to the north.

The Subject Site currently consists of two (2) 18-storey residential condominium buildings with two (2) separate 2-level underground parking structures, constructed since 1981.

Based on the review of the architectural drawings, prepared by 4 Architecture Inc., dated September 2025, it is understood that the proposed Phase 1 development consists of one (1) 25-storey condominium (residential) building with a 2-level underground parking (P2) structure, connecting to the existing underground parking structures of the adjoining two existing buildings. Plan review indicates that the proposed Phase 2 development consists of three (3) 20-storey condominium (residential) building with a 3-level underground parking (P3) structure, connecting to the existing underground parking structures of the adjoining two existing buildings and the constructed Phase 1 P2.

The draft hydrogeological assessment report for the Phase 1 development was prepared under a separate cover by SEL, Reference No. 2505-W117A, dated September 2, 2025.

2.2 Project Objectives

The current hydrogeological assessment report presents the regional and local setting of the Subject Site. The findings of the fieldwork, including subsoil investigation, groundwater level monitoring, groundwater quality assessment, and hydraulic conductivity testing are presented in the report. Potential needs for short-term dewatering and long-term foundation drainage control are assessed, and hydrogeological impacts of the proposed development to the nearby groundwater receptors including water supply wells, natural heritage features, and structures are assessed (if applicable). The report provides recommendation for mitigation plans on the potential impacts of the proposed development to the groundwater receptors and structures if required. Comments and recommendations are provided on any needs for applying for a Permit



to Take Water (PTTW), or posting Environmental Activity and Sector Registry (EASR) with the Ministry of the Environment, Conservation and Parks (MECP).

The current report is prepared in consideration of the Ontario Water Resource Act, Ontario Regulation (O. Reg.) 387/04.

2.3 Scope of Work

The scope of work for the hydrogeological assessment is summarized below:

- *Background Review:* Available background geological and hydrogeological information for the Subject Site including topographic mapping, surface geological, natural heritage features databases, City of Mississauga official plans, Toronto Region Conservation Authority (TRCA) regulated area plans, and MECP water well records were reviewed.
- *Fieldwork:* Fieldwork includes inspecting the Subject Site and surrounding properties with respect to the natural features, groundwater receptors, and structures, as well as installing and developing the monitoring wells. Additionally, groundwater levels within the installed monitoring wells were monitored over four (4) monitoring events, in-situ hydraulic conductivity testing was completed within the installed monitoring wells. One (1) set of groundwater samples was collected and submitted to a CALA laboratory to characterize groundwater quality in comparison with the Regional Municipality of Peel Sewer Use By-Law (By-Law No. 53-2010) parameters and City of Mississauga Storm Sewer Use By-Law (By-Law No. 0046-2022) parameters.
- *Short-Term Dewatering Flow Rate:* Based on a review of the available plans, findings of the current subsurface investigation, and recommendations provided in the geotechnical investigation report, short-term dewatering flow rate including groundwater seepage, and anticipated water that should be collected over potential storm events was calculated. A recommendation was provided on mitigation plan to mitigate potential short-term dewatering impacts to the nearby groundwater receptors (including natural heritage features and water supply wells), and structures, if applicable.
- *Long-term foundation Drainage Control Requirement:* Based on a review of the available design drawings, findings of the current subsurface investigation, and recommendations provided in the geotechnical investigation report (if available), total long-term foundation drainage flow rate including groundwater seepage, and anticipated flow from infiltration source was estimated.
- *Permit Requirements:* Considering the estimated short-term construction dewatering and long-term foundation drainage flow rates, recommendations were provided on any need for applying for a PTTW or posting on the EASR with the MECP, and applying for a permit with the Regional Municipality of Peel, if required.



3.0 APPLICABLE REGULATIONS AND OFFICIAL PLANS

The regulations and policies are relevant to this hydrogeological assessment and the location of the Subject Site within the official plans are summarized below.

3.1 Toronto Region Conservation Authority (TRCA) Policies and Regulation (O. Reg. 41/24)

Under Section 28 of the Conservation Authorities Act, local conservation authorities are mandated to protect the health and integrity of the regional greenspace system and to maintain or improve the hydrological and ecological functions performed by valley and stream corridors. The TRCA, through its regulatory mandate, is responsible for issuing permits under Ontario Regulation (O. Reg.) 41/24, Development, Interference with Wetlands and Alterations to Shorelines and Watercourses for development proposals or Site alteration work to shorelines and watercourses within the regulated areas.

TRCA Regulated Area online mapping was reviewed on August 27, 2025. It is our understanding that the Subject Site is not located within TRCA Regulated Area. As such, it is anticipated that obtaining a permit from the TRCA under O. Reg. 41/24 will not be required for the proposed development.

3.2 Clean Water Act

The MECP mandates the protection of existing and future sources of drinking water under the Clean Water Act, 2006 (CWA). Initiatives under the CWA include the delineation of Wellhead Protection Areas (WHPAs), significant groundwater recharge areas (SGRAs) and Highly Vulnerable Aquifers (HVAs) as well as the assessment of drinking water quality and quantity threats within Source Protection Regions. Source Protection Plans are developed under the CWA and include the restriction and prohibition of certain types of activities and land uses within WHPAs.

Based on a regional-scale source water protection mapping (Source Water Protection Information Atlas) provided by the MECP updated on June 16, 2025, the Subject Site is not located within a WHPA area, Issue Contributing Area and Intake Protection Zone, Event Based Area and SGRA. However, the Subject Site is partially located within the Highly Vulnerable Aquifer with a score of 6.



3.3 City of Mississauga Official Plan

The City of Mississauga Official Plan sets up policies that deal with legislative and administrative concerns, guides physical growth, and addresses social, economic, and environmental concerns. The Official Plan provides land use planning designations and identifies areas of environmental significance where more stringent policies may apply for development applications.

City of Mississauga Official Plan maps were reviewed for the current study with the results summarized below:

- Schedule 1 (Urban Structure) – A review of the schedule (V – 28.005), indicates that the Subject Site is located within an area designated as Neighbourhood Area.
- Schedule 3 (Natural System) – A review of the schedule (V – 23.003), indicates that the Subject Site is not located within a designated Natural Heritage Area.
- Schedule 10 (Land Use Designation) – A review of the schedule (V – 38.007), indicates that the Subject Site is located within an area designated as Residential High Density.



4.0 METHODOLOGY

4.1 Borehole Advancement and Monitoring Well Installation

Drilling boreholes and construction of monitoring wells were conducted for geotechnical investigation by SEL Ltd. between June 10 and 19, 2025. The program consisted of the drilling of the eight (8) boreholes extending to a maximum termination depth of investigation at 15.3 metres below ground surface (mbgs) for geotechnical investigation purpose and installation of seven (7) monitoring wells, including three (3) pairs of shallow and deep nested monitoring wells for hydrogeological assessment purposes. The locations of the boreholes and monitoring wells are shown on **Drawing 2**.

Borehole drilling and monitoring well construction were completed by a licensed water well contractor, under the full-time supervision of SEL's geotechnical supervisor who logged the soil strata encountered during borehole advancement and collected representative soil samples for textural classification. The boreholes were drilled using a track-mounted drill rig equipped with hollow stem augers and split spoons. Detailed descriptions of the encountered subsoil and groundwater conditions as well as a grain size distribution graph are provided by SEL and presented on the borehole and monitoring well logs, in the enclosed **Appendix A**.

The monitoring wells were constructed using 50-mm diameter PVC pipes for the four (4) selected borehole locations. 1.5 m long 10-slot well screens were installed in the seven (7) monitoring wells. Monitoring wells were equipped with monument or flush-mount protective casings.

The UTM coordinates and ground surface elevations at the monitoring wells' locations, as well as the monitoring well construction details, are presented in **Table 4-1**. The ground surface elevations and horizontal coordinates at the monitoring well locations were determined at the time of the investigation, using the Trimble TSC3 handheld Global Navigation Satellite System.

Table 4-1 – Monitoring Well Installation Details

Monitoring Well ID	Installation Date	UTM Coordinates (m)		Ground EL. (masl)	Screen Interval (mbgs)	Soil in the Screen Interval	Casing Dia. (mm)	Protective Casing Type
		Easting	Northing					
BH/MW 1D*	June 16, 2025	613246	4832214	136.8	6.2 – 7.7	Shale Bedrock	50	Monument
BH/MW 1S**	June 12, 2025	613246	4832214	136.8	4.3 – 5.8	Sand	50	Monument
BH/MW 4	June 17, 2025	613289	4832146	135.4	10.8 – 12.3	Shale Bedrock	50	Monument
BH/MW 6D*	June 19, 2025	613362	4832199	133.9	6.6 – 8.1	Shale Bedrock	50	Flush-mount
BH/MW 6S**	June 19, 2025	613362	4832199	133.9	3.0 – 5.5	Sandy Silt Till	50	Flush-mount
BH/MW 7D*	June 12, 2025	613264	4832292	136.9	8.6 – 10.1	Shale Bedrock	50	Monument
BH/MW 7S**	June 12, 2025	613264	4832292	136.9	4.5 – 6.0	Sandy Silt Till	50	Monument

Notes:

mbgs metres below ground surface
masl metres above sea level

*D Deep nested monitoring well

**S Shallow nested monitoring well



4.2 MECP Water Well Records Review

MECP Water Well Records (WWRs) were reviewed for the registered wells located within 500 m radius of the Subject Site (Study Area). The water well records indicate that twenty-seven (27) are located within the 500 m zone of influence Study Area relative to the Subject Site. The findings of the MECP well records are summarized in the **Section 5.6** and **Appendix B** of the current report.

4.3 Groundwater Monitoring

All seven (7) installed monitoring wells were utilized to measure and monitor groundwater levels within and close proximity of the Subject Site. Monitoring wells were developed, and the groundwater monitoring program confirmed the stabilized groundwater level beneath the Subject Site. The stabilized groundwater levels were manually measured over three (3) monitoring events from July 10 to August 6, 2025, with the results presented in **Section 7.1** and **Appendix C**.

4.4 In-Situ Hydraulic Conductivity Test

SEL has conducted in-situ hydraulic conductivity tests (falling head) at six (6) BH/MW locations.

The in-situ hydraulic conductivity test (falling head or rising head) provides estimated hydraulic conductivity (K) for subsoil strata at the depths of the well screens. The monitoring wells were developed in advance of the tests. Well development involves the purging and removal of groundwater from each monitoring well to remove remnants of clay, silt and other debris introduced into the monitoring well during construction, and to induce the flow of formation groundwater through the well screens, thereby improving the transmissivity of the subsoil strata formation at the well screen depths.

The in-situ falling head hydraulic conductivity test involves the placement of a slug of known volume into the monitoring well, below the water table, to displace the groundwater level upward. The in-situ rising head hydraulic conductivity test involves removing a volume of water from the monitoring well to displace the groundwater level downward. The rate at which the water level recovers to static conditions (rising head/falling head) is tracked manually using a water level tape and a data logger. Slug tests in the monitoring wells with partially submerged screens may exhibit a double straight-line effect due to the filter pack drainage. Therefore, the data that represents the filter pack around the screen is eliminated during the interpretation of the slug test. The rate at which the water table recovers to static conditions is used to estimate the K value for the water-bearing strata formation at the well screen depth using the Bouwer and Rice method (1976). The findings for the hydraulic conductivity testing are presented in **Section 7.3.1** and **Appendix D** of the current report.



4.5 Hydraulic Conductivity based on Grain Size Distribution Graphs

The Hazen equation estimation method was also used to estimate the hydraulic conductivity (K) for saturated subsoils at selected depths beneath the groundwater table beneath the Subject Site. The method provides alternative hydraulic conductivity (K) estimates which are derived from the grain size diameter, whereby 10% by weight of the soil particles are finer and 90% are coarser (Freeze and Cherry, 1979). The soils chosen for Hazen to estimate were selected primarily from above the well screen depths. Findings are presented in **Section 7.3.2**.

4.6 Groundwater Quality Assessment

Groundwater quality assessment was completed by SEL on August 6, 2025. One (1) set of groundwater samples was collected from one (1) selected monitoring well (BH/MW 6S) to characterize its quality for evaluation against the Regional Municipality of Peel Sewer Use By-Law (By-Law No. 53-2010) parameters and City of Mississauga Storm Sewer Use By-Law (By-Law No. 0046-2022) parameters. This is performed to assess whether any anticipated dewatering effluent can be disposed of into the Regional Municipality of Peel sanitary and/or storm sewer system or City of Mississauga storm sewer system during construction. Based on the results, recommendations for any pre-treatment for any dewatering effluent can be developed, if required.

The sample analysis was performed by SGS Canada Inc. and the results of the analysis are discussed in **Section 7.4** and **Appendix E** of the current report.

4.7 Review of Regional Data and Available Reports for the Subject Site

The maps, data, and documents provided by the MECP, Ontario Geological Survey (OGS), Ministry of Natural Resource (MNR), Oak Ridges Moraine Groundwater Program (ORMGP), and TRCA were reviewed. Additionally, the issued geotechnical investigation report (SEL Reference No. 2505-S117), dated August 2025 was reviewed at the time of preparation of the current hydrogeological assessment report, with the findings summarized in **Sections 5, 6 and 8.2**.



5.0 REGIONAL AND LOCAL SITE SETTING

5.1 Regional Geology

The current understanding of the surface geological setting of the Subject Site is based on scientific work conducted by the OGS (OGS, 2003). The Subject Site is located within an area mapped as Deltaic and Lacustrine Deposits (9c) also known as course-textured glaciolacustrine deposits, consisting of sand, gravel, minor silt, and clay. Furthermore, a small portion of the Subject Site within the south limit is mapped within Modern Alluvium Deposits (19), consisting of clay, silt, sand and gravel. **Drawing 3** illustrates the mapped surficial geology for the Subject Site and the surrounding area.

The Oak Ridges Moraine Groundwater Program (ORMGP) produced a cross-sectional geological map to aid in the characterization of the general area. Considering the regional cross-section, it is understood that the overburden units prevalent in this area are as follows, with the youngest unit at the top:

- *Undifferentiated Sediments*: Undifferentiated sediments present at the ground surface, with an approximate thickness between 1.7 m and 3.2 m beneath the Subject Site.
- *Halton Till*: The Halton Till is mainly comprised of sandy silt to clayey silt till interbedded with silt, clay, and a number of discontinuous sand and gravel lenses. It was deposited approximately 12,500 years ago. Based on cross-section, the Halton Till or equivalent can be contacted beneath the undifferentiated sediments with an approximate thickness ranging from 2.4 m to 3.9 m beneath the Subject Site.

The underlying bedrock at the Subject Site is the Georgian Bay Formation, which consists of interbedded grey-green to dark grey shale and fossiliferous calcareous siltstone to bioclastic limestone (OGS, 2007). A review of the ORMGP cross-section indicates that the bedrock could be contacted at an approximate depth of 132.9 metres above sea level (masl) beneath the Subject Site.

5.2 Regional Physiography

The Subject Site is located within a regional physiography of Southern Ontario known as South Slope, and is situated on the Till Plains (Drumlinized) physiographic feature (Chapman and Putnam, 1984). **Drawing 4** shows the location of the Subject Site within the regional physiography map.

5.3 Regional Topography and Drainage

A review of a regional topography map presented on **Drawing 5** indicates that topography along the Subject Site exhibits a decline towards the east boundary of the Subject Site.



The ground surface elevation ranges approximately between 133.9 and 136.9 masl, based on ground surface elevations measured at the borehole and monitoring wells' locations.

5.4 Watershed Setting

The Subject Site is located within the Etobicoke Creek Watershed that falls in the Toronto and Region Conservation Authority (TRCA) jurisdiction.

5.5 Local Surface Water and Natural Heritage Features

MNR database was reviewed for any natural heritage features including, watercourses, bodies of water, wetland features, Area of Natural and Scientific Interest (ANSI) and wooded areas. **Drawing 6** shows the location of the Subject Site within the surrounding Natural Heritage Features.

Record review indicates that there are no records for natural heritage features including woodland, wetlands, water bodies, watercourses and ANSI within the Subject Site.

Record review indicates that the closest watercourse is a tributary of Etobicoke Creek located approximately 35.0 m southeast of the Subject Site, and the closest record of a wooded area is located approximately 85.2 m east of the Subject Site. The closest wetland, not evaluated per Ontario Wetland Evaluation System (OWES), is located approximately 613.4 m east of the Subject Site, within the wooded area along Etobicoke Creek.



5.6 Ground Water Resources (MECP Well Records)

MECP well record database was reviewed for records located within a radius of 500 m from the approximate Subject Site (Study Area). The records indicate that twenty-seven (27) well records are located within the Study Area relative to the Subject Site boundaries. A summary of the final status of the records, obtained from the records review is presented in **Table 5-1**.

The locations of the well records, based on the UTM coordinates provided by the records, are shown on **Drawing 7**. Details of the MECP water well records that were reviewed are provided in **Appendix B**.

Table 5-1 – MECP Well Record Summary

Water Use - Final Status	Number of Records
Observation Wells	9
Test Hole	5
Monitoring and Test Hole	5
Unknown	3
Abandoned Monitoring and Test hole	2
Water Supply	1
Abandoned-Other	1
Abandoned-Supply	1

The above summary indicates that there is one (1) record of water supply well in close proximity of the Subject Site (Study Area).

5.7 Active Permit to Take Water Application Record Review

MECP website was reviewed for any active PTTW application records within 1.0 km radius of the Subject Site on November 10, 2025. Record review indicates there is no record of active PTTW within 1 km radius of the Subject Site.



6.0 SOIL LITHOLOGY AND SUBSURFACE INVESTIGATION

The subsoil investigation has revealed that beneath a topsoil veneer, pavement structure and earth fill, the Subject Site is underlain by the strata of glacial tills with a layer of sand at one (1) borehole location, overlying the shale bedrock to the termination depth of investigation at 15.3 metres below ground surface (mbgs). Information regarding borehole logs and grain size distributions is presented in **Appendix A**. The approximate locations of boreholes are shown on **Drawing 2**. Additionally, a subsoil profile cross-section key plan and subsoil profiles are presented on **Drawing 8-1** and **8-2A** and **8-2B**, respectively. Based on a review of the borehole logs, the stratigraphy beneath the investigated areas of the Subject Site generally consists of the followings:

6.1 Surface Cover

A veneer of topsoil, approximately 3 cm in thickness, was contacted at BH 2 location. At BH 6 (BH/MW 6D and BH/MW 6S) location, the ground surface is underlain by 150 mm of asphalt pavement overlying 20 mm of granular fill. No topsoil or pavement structure was observed at the ground surface of the remaining borehole locations.

6.2 Earth Fill

A layer of earth fill was contacted at all BH and BH/MW locations, extending to a depth of 0.8 to 4.6 mbgs. The fill consists of silty clay or sand with gravel and occasional organic inclusions and cobbles. The retrieved that subsoil samples are with high clay content and/or the presence of organics.

6.3 Glacial Till

Native deposits of glacial till, consisting of sandy silt till, silty clay till and silty sand till were contacted at various depths at all BH and BH/MW locations. The tills consist of a random mixture of particle sizes ranging from clay to gravel; depending on the grain size distribution and visual examination of the soil samples. Occasional sand seams were also observed in the soil samples at various depths and locations. The consistency of the soil is very dense for silty sand till, compact to very dense and generally very dense for sandy silt till, and stiff to very stiff, generally stiff for silty clay till. The color changes from brown to grey approximately between 2.2 mbgs to 4.0 mbgs. The retrieved subsoil samples are generally in damp to moist condition.

Grain size analyses were performed on two (2) selected subsoil samples for silty sandy till, and two (2) selected subsoil samples for sandy silt till. The estimated permeability for the silty sand till unit encountered at BH 5 and BH 8 locations at the depth of 4.6 mbgs and 6.1 mbgs is about 10^{-4} cm/sec. The estimated permeability for the sandy silt till unit encountered at BH 2 and BH 6 locations at the depth of 6.1 mbgs



and 3.0 mbgs are about 10^{-7} cm/sec and 10^{-7} cm/sec, respectively. The gradations are plotted in **Appendix A (Figures 12 and 13)**.

6.4 Sand

Native deposits of sand were contacted beneath the silty clay till in BH 1 (BH/MW 1D and BH/MW 1S) location. It is fine to medium grained with a trace of silt. The sand is stiff in compactness and brown in color. The moisture content for the retrieved subsoil sample is at 17 %, indicating there is trapped water in the sand layer.

6.5 Shale Bedrock

Shale bedrock was encountered at all BH and BH/MW locations at depths ranging from 5.5 to 8.5 mbgs, corresponding to elevations of 126.9 to 131.3 masl. The shale is dark grey in colour, consistent with the Georgian Bay Formation, and is interbedded with occasional bands of hard siltstone, limestone, and dolomite. The presence of shale fragments within the overlying till made it difficult to precisely delineate the bedrock surface.

The bedrock within the investigated depths could be penetrated by power-augering, although some difficulty was experienced in grinding through the harder layers. The upper portion of the shale was observed in a weathered condition, extending several metres below the bedrock interface, and becoming sound with depth.

Rock coring was carried out at BH 1 (BH/MW 1D and BH/MW 1S), BH 4 (BH/MW 4), BH 6 (BH/MW 6D and BH/MW 6S), and BH 7 (BH/MW 7D and BH/MW 7S), with the transition from weathered to sound bedrock noted at depths of 9.5 to 10.4 mbgs. Rock Quality Designation (RQD) values ranged from 0 % to 86 %, indicating rock quality from very poor to excellent.

The shale is susceptible to disintegration and swelling upon exposure to air and water, reverting to a clay-like soil; however, laminated limy and sandy layers are expected to remain as intact rock slabs. Excavation of sound shale may result in slight lateral displacement of excavation walls due to release of residual stress in the bedrock mantle combined with the swelling characteristics of the shale.

Infiltrated precipitation and groundwater from the overburden soils may permeate fissures in the shale, and in some instances may be encountered under artesian pressure.



7.0 LOCAL HYDROGEOLOGICAL STUDY

7.1 Monitoring Well Development and Groundwater Level Monitoring

The groundwater levels in the monitoring wells were measured, manually on July 10 and 21, August 1 and 6, 2025 to record the fluctuation of the groundwater table beneath the Subject Site.

Monitoring wells were developed and shallow groundwater levels were monitored over four (4) monitoring events. SEL measured the groundwater levels using an interface probe (Heron Water Tape Series #1900). A summary of the groundwater level observations and their corresponding elevations are provided in **Table 7-1**.

Table 7-1 – A Summary of Groundwater Monitoring

BH/MW ID	Unit	Groundwater Level				Fluctuation (m)
		July 10, 2025	July 21, 2025	August 1, 2025	August 6, 2025	
BH/MW 1D*	mbgs	4.7	4.8	4.8	4.8	0.1
	masl	132.1	132.0	132.0	132.0	
BH/MW 1S**	mbgs	4.4	4.4	4.5	4.4	0.1
	masl	132.4	132.4	132.3	132.4	
BH/MW 4	mbgs	4.1	4.1	4.1	4.1	0
	masl	131.3	131.3	131.3	131.3	
BH/MW 6D*	mbgs	4.0	NA	4.1	4.0	0.1
	masl	129.9	NA	129.8	129.9	
BH/MW 6S**	mbgs	4.0	NA	4.0	4.0	0
	masl	129.9	NA	129.9	129.9	
BH/MW 7D*	mbgs	4.4	7.1	7.2	7.2	2.8
	masl	132.5	129.8	129.7	129.7	
BH/MW 7S**	mbgs	4.9	5.1	4.9	4.7	0.4
	masl	132.0	131.8	132.0	132.2	

Notes:

mbgs metres below ground surface

masl metres above sea level

NA Not Available

*D Deep nested monitoring well

**S Shallow nested monitoring well

As shown in **Table 7-1**, the highest and lowest groundwater levels were measured at El. 132.5 masl and 129.7 masl at BH/MW 7D on July 10, 2025 and August 6, 2025, respectively.

7.2 Groundwater Flow Pattern

The recorded static groundwater level measured in the selected monitoring wells installed in bedrock on August 6, 2025 was considered for the interpretation of the shallow groundwater direction beneath the Subject Site. A review of the interpreted shallow groundwater flow pattern indicates that shallow groundwater flows north-easterly direction. The shallow groundwater flow pattern at the Subject Site is shown on **Drawing 9**.



7.3 Hydraulic Conductivity Testing

7.3.1 Single Well Response Test

Six (6) BH/MWs underwent single well response testing (SWRTs), to assess the hydraulic conductivity (K) for saturated shallow aquifer or water bearing unit at the depths of the well screens. Each monitoring well was equipped with a digital transducer to record the fluctuation made to complete the SWRT. The results of the SWRT tests are presented in **Appendix C**, with a summary of the findings provided in **Table 7-2**.

Table 7-2 – A Summary of Falling Head Hydraulic Conductivity Testing

Well ID	Ground El. (masl)	Screen Interval (mbgs)	Screened Soil Strata	Hydraulic Conductivity (K) (m/sec)	Test Method
BH/MW 1D*	136.8	6.2 – 7.7	Shale Bedrock	2.7×10^{-6}	Falling Head Test
BH/MW 1S**	136.8	4.3 – 5.8	Sand	1.4×10^{-6}	Falling Head Test
BH/MW 4	135.4	10.8 – 12.3	Shale Bedrock	1.6×10^{-6}	Falling Head Test
BH/MW 6D*	133.9	6.6 – 8.1	Shale Bedrock	4.7×10^{-8}	Falling Head Test
BH/MW 6S**	133.9	3.0 – 5.5	Sandy Silt Till	2.0×10^{-7}	Falling Head Test
BH/MW 7D*	136.9	8.6 – 10.1	Shale Bedrock	6.3×10^{-7}	Falling Head Test

Notes:

mbgs metres below ground surface
masl metres above sea level

*D Deep nested monitoring well

**S Shallow nested monitoring well

The findings of SWRTs reveal that the hydraulic conductivity (K) for saturated water bearing units and bedrock underneath the Subject Site range from 4.7×10^{-8} m/sec at BH/MW 6D to 2.7×10^{-6} m/sec at BH/MW 1D.

7.3.2 Hydraulic Conductivity Test Using Grain Size Distribution Graphs

The Hazen Equation method was adopted to estimate the hydraulic conductivity (K) for different soil layers that may contain groundwater during the seasonal high-water table (spring) period, or if they are not encountered within the screen intervals.

The Hazen Equation method relies on the interrelationship between hydraulic conductivity and effective grain size, d_{10} , in the soil media. This empirical relation predicts a power-law relation with K, as follow:

$$K = Ad_{10}^2$$

where;

d_{10} : Value of the soil grain size gradation curve as determined by sieve analysis, whereby 10% by weight of the soil particles are finer and 90% by weight of the soil particles are coarser.

A: Coefficient; it is equal to 1 when K in cm/sec and d_{10} is in mm



The Hazen Equation estimation provides an indication of the groundwater yield capacity for saturated soil strata at the depths where soil samples were selected for grain size analysis. The grain size distribution graphs prepared for the supplementary geotechnical investigation were used to estimate the hydraulic conductivity, with the details presented in **Appendix A**. The results of the Hazen equation are provided in **Table 7-3**, below.

Table 7-3 – A Summary of Hydraulic Conductivity Using the Hazen Equation

Borehole ID	Soil Sample Depth (Sample Number) (mbgs)	Soil Sample Elevation (masl)	Soil Strata	Hydraulic Conductivity (m/s)
BH 5	4.6 (6)	129.6	Silty Sand Till	1.7×10^{-6}
BH 8	6.1 (7)	130.6	Silty Sand Till	6.9×10^{-7}
BH 6	3.0 (5)	130.9	Sandy Silt Till	7.5×10^{-8}

Notes:

mbgs metres below ground surface

masl metres above sea level

7.4 Groundwater Quality

One (1) set of unfiltered groundwater samples was collected for analysis from the monitoring well BH/MW 6S on August 6, 2025, by SEL to characterize their quality for evaluation against the Regional Municipality of Peel Sewer Use By-Law (By-Law No. 53-2010) parameters and City of Mississauga Storm Sewer Use By-Law (By-Law No. 0046-2022) parameters. Upon sampling, all of the bottles were placed in a cooler for shipment to the analytical laboratory. Sample analysis was performed by SGS Canada Inc., which is accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA). Results of the analysis are provided in **Appendix D**, with a discussion of the findings provided below. The chain of custody numbers for the submitted samples that underwent analysis is 043704.

As per the protocols for the Regional Municipality of Peel Sewer Use By-Law and City of Mississauga Storm Sewer Use By-Law, a complete set of unfiltered groundwater samples was submitted to the laboratory with the results being presented as totals for various analyzed parameters.

The results of analysis for the unfiltered groundwater indicate one (1) exceedance when compared and evaluated against the Regional Municipality of Peel Sanitary and Storm Sewer Use By-Law parameters and one (1) exceedance when compared and evaluated against the City of Mississauga Storm Sewer Use By-Law parameters. The exceedances, together with the Sanitary and Storm Sewer Use standards, are presented in **Table 7-4**.

**Table 7-4 – Groundwater Quality Analysis Results Exceeded**

Exceeded Parameter	Groundwater Quality Results (Unfiltered Sample) (mg/L)	Peel's Sanitary Sewer Use Limits (mg/L)	Peel's Storm Sewer Use Limits (mg/L)	Mississauga's Storm Sewer Use Limits (mg/L)	Detection Limit (mg/L)
Total Suspended Solids	198	350	15	15	2

As shown above, the concentration for total suspended solids (TSS) exceeds the Regional Municipality of Peel Storm Sewer Use By-Law standards and City of Mississauga Storm Sewer Use By-Law standards, but meets the Regional Municipality of Peel Sanitary Sewer Use By-Law standards.

These findings suggest that any short-term construction dewatering, or long-term foundation drainage discharge (from a groundwater source) would not be acceptable for disposal to the region's or city's storm sewer without any pre-treatment to lower the TSS before discharge. While no significant pre-treatment is required prior to disposal to the region's sanitary sewer.

The final design for any dewatering effluent pre-treatment system is the responsibility of the contractors responsible for construction, or of the water treatment system design specialist, or mechanical engineer, if required, for any long-term foundation drainage system for the completed underground structure.



8.0 DISCHARGE WATER CONTROL

8.1 A Review of Proposed Development Plans

The current assessment is completed based on the architectural drawings, prepared by 4 Architecture Inc., dated September 2025. Based on the reviewed plans it is understood that the proposed Phase 2 development consists of two (2) 20-storey condominium (residential) buildings with a 3-level underground parking (P3) structure, connecting to the existing underground parking structures of the adjoining two (2) existing buildings, and the constructed Phase 1 P2.

A review of Phase 2 Parking Level 3 (Drawing No. A-P-201) of the above-noted architectural drawings indicates that the proposed P3 structure is irregular in shape and has an approximate area of 8,320.0 m². Assuming the excavation box in a rectangle, the dimensions are assumed to be approximately 155.0 m and 53.7 m in length and width, respectively.

Based on Section 4 in the Building Sections (Drawing No A-P-207) included in the architectural drawings, the lowest proposed P3 Finished Floor Elevation (FFE) is set at Elev. 125.1 masl (125.053 masl). Reviewed plans (selected drawings) are presented in **Appendix E**.

8.2 A Review of Geotechnical Investigation Report

A review of the Geotechnical Investigation report, Reference No. 2505-S117, dated August 2025, prepared by SEL indicates that:

- The bulk excavation of the 2 and 3-level underground parking, is estimated to be 6 to 7 m and 9 to 10 m below the existing grade, respectively, where very dense glacial till stratum, weather shale or sound bedrock is anticipated, which are suitable for the construction of conventional footings.
- If higher bearing pressures are required, the foundation should be extended onto the sound shale bedrock.
- Where safe sloped excavation is not feasible, a braced shoring system is necessary for the excavation and construction of the underground parking and building foundation.
- Damp-proofing and perimeter drainage at the foundation level are necessary for the underground structure, connecting into the sump pit where water can be removed into the municipal sewer system.

8.3 Construction Dewatering Requirements

Based on a review of Phase 2 Parking Level 3 (Drawing No. A-P-201), the dimensions of 155.0 m and 53.7 m are considered as the excavation box dimensions for the proposed P3 structure for the current assessment. Based on Section 4 in the Building Sections (Drawing No A-P-207) included in the architectural drawings,



the lowest proposed P3 FFE is set at Elev. 125.1 masl. The existing ground surface elevation is considered at El. 136.8 masl, which is the highest ground surface elevations of boreholes located within the proposed P3 footprint. The base of the foundation drainage layer and the bulk excavation, for construction of a drainage layer and the underside of the slab is considered at El. 124.6 masl (0.5 m below the P3 FFE). The base of the elevator pit was assumed at El. 123.6 masl (1.0 m below the base of the foundation drainage layer), and the underside of the footings was assumed 1.0 m below the P3 FFE at El. 124.1 masl.

As a conservative approach, the highest recorded static groundwater level within the Subject Site, recorded at 132.4 masl (BH/MW 1S), is considered for the current assessment. The highest static groundwater level is 7.3 m and 7.8 m above the assumed proposed P3 FFE and the assumed base of the bulk excavation, respectively. As such, groundwater seepage is anticipated during the excavation and construction of the proposed underground parking. Furthermore, the existence of earth fill material in the upper stratigraphy is expected to result in perched water during excavation, which cannot be quantified.

It is assumed that, the existing 2-level underground parking structures adjacent to the proposed excavation area of the east adjoining existing building, and the constructed Phase 1 P2 structure have already foundation drainage systems, and the system will remain active during the construction of the proposed P3. Therefore, less groundwater seepage is anticipated through the excavation walls adjoining these structures, as these are formed by the partially impermeable wall of the existing underground parking structures.

The hydraulic conductivity of 1.0×10^{-6} m/s (interpreted from published data), 2.0×10^{-7} m/s (in-situ hydraulic conductivities from BH/MW 6S), 1.4×10^{-6} m/s (in-situ hydraulic conductivities from BH/MW 1S), and 6.0×10^{-7} m/s (geomean of in-situ hydraulic conductivities from BH/MW 1D, 4, 6D and 7D) were considered for earth fill, glacial till, sand and bedrock, respectively.

Shoring design is not available for review at the time of preparation of the current report. As such, a permeable shoring system extending along the perimeter of the proposed excavation boxes has been considered to estimate the groundwater seepage flows for the short-term dewatering flow rate. The assumptions considered for the dewatering flow rate calculations are summarized in **Table 8-1**.

Table 8-1 – Summary of Proposed and Assumptions for Construction of the Underground Structures

Proposed Development	Assumed P3 Dimensions (m)	Highest Existing Ground Surface (masl)	Assumed Proposed P3 FFE (masl)	Assumed Base of Bulk Excavation /Conventional Foundation Elevation (masl)	Assumed Base of Elevator Pit (masl)	Shallow Groundwater Level (masl)	Assumed Shoring System
20-Storey Residential Buildings with 3-Level Underground Parking	155.0 x 53.7	136.8	125.1	124.6*	123.6**	132.4	Permeable Shoring***

Notes:

mbgs metres below ground surface

masl metres above sea level

* Assumed 0.5 m below the proposed P3 FFE

** Assuming 1.5 m below the proposed P3 FFE

*** One partially impermeable wall with previously constructed underground parking of the adjacent buildings to the west and east



The anticipated groundwater flow rate for short-term dewatering was estimated using a numerical analysis. Slide 9.025, released October 17, 2022, developed by Rocscience Inc. was used to compute the anticipated flow rates utilizing the Finite Element Modelling (FEM) method. The estimated groundwater flow rates are presented in **Appendix F**.

A review of the intensity duration frequency curve (IDF curve) for the year 2010 for the coordinates 43° 38' 15" N, 79° 35' 44" W, the rainfall depth considering 2-year storm event over a 3-hour period per day is approximately 30.2 mm, and a 100-year storm event over a 12-hour period per day is 99.6 mm. The data was taken from the Ministry of Transportation's (MTO) website. The accumulated runoff associated with rainfall events within the anticipated excavations for the proposed underground services were calculated using the estimated rainfall depth multiplied by the estimated area of the proposed excavation footprint of the proposed development. A summary of anticipated short-term dewatering flow rates is presented in **Table 8-2**.

Table 8-2 – Summary of Anticipated Short-Term Dewatering Flow Rates

Proposed Development	Groundwater Seepage (L/day)	Groundwater Seepage -S.F.*2 (L/day)	Anticipated Storm Event (L/day)	Total Dewatering Flow Rate -S.F.*2 (L/day)
20-Storey Residential Buildings with 3-Level Underground Parking	19,500.0	39,000.0	251,500.0	290,500.0

Notes:

*S.F. Safety Factor

Additionally, stormwater flow considering a 100-year storm event was considered to estimate the maximum stormwater that can be collected during the excavation and construction period. The additional flow that can be expected in the occurrence of a 100-year storm event is approximately 829,500.0 L/day during the construction of the proposed P3 structures.

8.4 Long-Term Foundation Drainage

The groundwater seepage and infiltration flow due to storm events should be collected for the post-construction underground parking structure. As such, foundation drainage systems should be designed to collect the anticipated flow if the proposed underground structures will be constructed below the shallow groundwater table. The base of the drainage layer is assumed at El. 124.6 masl, which is 0.5 m below the proposed P3 FFE.

Anticipated flow considering 30.2 mm storm event (2-year events for a duration of 3 hours) was considered to estimate the total anticipated long-term foundation drainage flow rate. Summary of the estimated flow rates is presented in **Table 8-3**.

**Table 8-3** – Summary of Anticipated Long-term Foundation Drainage Flow Rates.

Proposed Development	Groundwater Seepage (L/day)	Groundwater Seepage -S.F.* 2 (L/day)	Anticipated Storm Event (L/day)	Total Dewatering Flow Rate - S.F.* 2 (L/day)
20-Storey Residential Buildings with 3-Level Underground Parking	17,000.0	34,000.0	4,000.0**	38,000.0

Notes:

*S.F. Safety Factor

** One wall connecting with previously constructed underground parking of the adjacent buildings and the constructed Phase 1 P2

The above estimated flow rate does not include potential long-term flow for the elevator pit, sump pit or any other localized structures that may extend below the drainage layer, assuming the above-noted structures will be waterproofed for post-development structure.

8.5 Permit Requirements

Short-Term Construction Dewatering: As per the recent amendment to O. Reg. 63/16 that came into effect from July 1, 2025, an EASR registration will be required if water takings of more than 50,000 L/day is required. If it is identified that an EASR is required for the Subject Site, a hydrogeological assessment report will need to be submitted in support of the application.

A review of the maximum total estimated dewatering flow rates presented in **Tables 8-2** and **Appendix F** indicates that total estimated dewatering flow rates during the construction of proposed P3 that will be constructed partially below groundwater table reach up to 290,500.0 L/day including precipitation and groundwater seepage with a safety factor of 2. As such, filing EASR with MECP is required.

Additionally, applying for a discharge permit with the Regional Municipality of Peel or City of Mississauga is required if the collected water during construction is proposed to be conveyed to the region's or city's sewer system.

Long-Term Foundation Drainage: As per the recent amendment to O. Reg. 387/04 that came into effect on July 1, 2025, PTTW registration will be required if long-term foundation drainage flow rates exceed 379,000.0 L/day.

A review of the maximum total estimated long-term foundation flow rates presented in **Table 8-3** and **Appendix F** indicates that the maximum total estimated long-term foundation drainage flow rate reaches 38,000.0 L/day, including infiltration and groundwater seepage with a safety factor of 2, which does not exceed 379,000 L/day for the proposed individual lots. As such, filing PTTW with MECP is not required.

However, obtaining a discharge agreement from the Regional Municipality of Peel or City of Mississauga is required if long-term foundation drainage effluent is proposed to be conveyed to the region's or city's sewer system.



8.6 Zone of Influence (ZOI)

The conceptual Zone of Influence (ZOI) for dewatering, also known as Radius of Influence (R_0), was calculated based on the anticipated maximum drawdown required and the highest hydraulic conductivity recorded at the Subject Site using Sichardt's relationship. The equation used is shown as:

$$R_0 = 3000 \times dH \times K^{0.5}$$

Where:

R_0 : Zone of Influence for dewatering (m)

dH: the drawdown (m)

K: the hydraulic conductivity (m/s)

Using the above equation, the conceptual ZOI for the proposed Phase 2 development could reach to 31.4 m away from the excavation and dewatering areas, respectively. Zone of Influence calculation details are included in **Table 8-4** below.

Table 8-4 – Summary of Zone of Influence (ZOI)

Proposed Development	Drawdown (m)	Hydraulic Conductivity (m/s)	Zone of Influence (ZOI) (m)
20-Storey Residential Buildings with 3-Level Underground Parking	8.8	1.4×10^{-6}	31.4

8.7 Potential Dewatering Impacts and Mitigation Plan

8.7.1 Short-Term Discharge Water Quality

The dewatering system must be appropriately filtered in order to prevent the pumping of fines and loss of ground during the dewatering activities.

One (1) set of unfiltered groundwater sample was collected for analysis from the selected monitoring well, BH/MW 6S, on August 6, 2025, and the results were compared with the Regional Municipality of Peel Sewer Use By-Law standards and City of Mississauga Storm Sewer Use By-Law standards. Based on the results, any short-term construction dewatering, or long-term foundation drainage discharge (from a groundwater source) would not be acceptable for disposal to the region's or city's storm sewer without any pre-treatment to lower the TSS. While no significant pre-treatment is required prior to disposal to the region's sanitary sewer.

The final design for any temporary construction dewatering effluent pre-treatment system is the responsibility of the contractors responsible for construction, or the water treatment system design specialists, if required.



8.7.2 Ground Settlement

The conceptual ZOI for dewatering may reach a maximum of 31.4 m away from the construction dewatering area for the proposed P3 structure, where dewatering is necessary. As per the conceptual ZOI, the existing adjacent residential buildings, the constructed Phase 1, part of Ponytrail Drive and Rathburn Road East are located within the conceptual ZOI for dewatering. As such, potential risk for ground settlement is expected due to dewatering. The proposed dewatering plan is not available for review. If dewatering activities do not include the installation of dewatering wells or other active dewatering approaches, and groundwater seepage is controlled locally or an impermeable shoring is proposed along the perimeter of the proposed excavation box, significant risk for ground settlement is not expected. However, it is recommended a professional geotechnical engineer is consulted in advance of excavation and construction due to the location of the adjacent buildings.

8.7.3 Surface Water, Wetlands and Areas of Natural Significance

Record review indicates that there is a water course located near the Subject Site. However, the nearby water course is located outside of the maximum conceptual ZOI for the dewatering area for the proposed P3 structure. As such, potential impact to surface water, wetlands and areas of natural significance is not expected.

8.7.4 Water Supply Wells and Zone of Influence

A review of the MECP well records confirmed that there is (1) record for a water supply well that is registered within 500 m of the Subject Site Study Area. However, no records for water supply wells fall within the conceptual ZOI for the dewatering area for the proposed P3 structure. As such, significant impacts to nearby water supply wells are not anticipated if exist. Additionally, the Subject Site is located with a well-developed neighbourhood of the City of Mississauga, where it is provided by municipal services. As such, a door-to-door survey will not be required.



9.0 CONCLUSIONS AND RECOMMENDATIONS

- The Subject Site is located within an area mapped as Glacial Lake deposit (9c) and Modern Alluvium Deposits (19).
- The Subject Site is located within a regional physiography of Southern Ontario known as South Slope.
- The Subject Site is located within the Etobicoke Creek Watershed that falls in the Toronto and Region Conservation Authority (TRCA) jurisdiction
- The Subject Site is underlain by the strata of glacial tills with a layer of sand at one borehole location, overlying the shale bedrock to the termination depth of investigation at 15.3 mbgs.
- Groundwater was monitored within the glacial till, sand, and bedrock units. The highest and lowest groundwater level was measured at El. 132.5 masl and 129.7 masl at BH/MW 7D on July 10, 2025 and August 6, 2025, respectively.
- Estimated hydraulic conductivity using single well response test (SWRT) ranges from 4.7×10^{-8} m/sec at BH/MW 6D to 2.7×10^{-6} m/sec at BH/MW 1D for shale bedrock. The hydraulic conductivities of 2.0×10^{-7} m/s, 1.4×10^{-6} m/s, and 6.0×10^{-7} m/s were considered for glacial till, sand, and bedrock for the dewatering assessment, respectively.
- Groundwater quality from one (1) unfiltered sample collected at BH/MW 6S exceeds the TSS limits of both the Regional Municipality of Peel and City of Mississauga Storm Sewer Use By-Laws, but meets the Regional Municipality of Peel Sanitary Sewer Use By-Law standard. These findings suggest that any short-term construction dewatering, or long-term foundation drainage discharge would not be acceptable for disposal to the region's or city's storm sewer without any pre-treatment to lower the TSS before discharge. While no significant pre-treatment is required prior to disposal to region's sanitary sewer.
- The groundwater seepage flow rate with an applied safety factor of 2, reach 39,000.0 L/day for the construction of the proposed P3 structure. The total estimated short-term construction dewatering flow rates for the construction of the proposed P3 structure, including groundwater seepage with a safety factor of 2, and 2-year storm event reach 290,500.0 L/day. As such, filing a EASR with MECP is required.
- The total estimated long-term foundation drainage flow rate for the proposed P3 structure that will be partially constructed below the groundwater table reaches 38,000.0 L/day, including infiltration and groundwater seepage with a safety factor of 2, which does not exceed 379,000 L/day. As such, filing PTTW with MECP is not required.



- Obtaining a discharge permit from the Municipality of Peel or City of Mississauga is required, if the potential short-term dewatering effluents or long-term foundation drainage flow are proposed to be discharged to the region's or city's sewer system.
- The conceptual ZOI for dewatering may reach to 31.4 m away from the excavation and dewatering area for the proposed P3 structure.
 - As per the conceptual ZOI, residential buildings, the constructed Phase 1, part of Ponytrail Drive and Rathburn Road East are located within the conceptual ZOI for dewatering. As such, potential risk for ground settlement is expected due to dewatering. The proposed dewatering plan is not available for review. If dewatering activities do not include the installation of dewatering wells or other active dewatering approaches, and groundwater seepage is controlled locally or an impermeable shoring is proposed along the perimeter of the proposed excavation box, significant risk for ground settlement is not expected. However, it is recommended that a professional geotechnical engineer is consulted in advance of excavation and construction due to the location of the adjacent buildings.
 - Record review suggests that there is a water course located near the Subject Site. However, the nearby water course is located outside of the maximum conceptual ZOI for the dewatering area for the proposed P3 structure. As such, potential impact to surface water, wetlands and areas of natural significance is not expected.
 - A review of the MECP well records confirmed that there is (1) record for water supply well that is registered within 500 m of the Subject Site Study Area. However, no records for water supply wells fall within the conceptual ZOI for dewatering area for the proposed P3 structure. As such, significant impacts to nearby water supply wells are not anticipated if exist. Additionally, the Subject Site is located with a well-developed neighbourhood of the City of Mississauga, where it is provided by municipal services. As such, a door-to-door survey will not be required.



10.0 CLOSURE

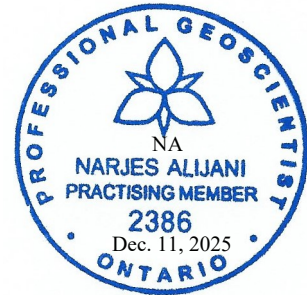
We trust that the above-noted information is suitable for your review. If you have any questions regarding this information, please do not hesitate to contact the undersigned.

Yours truly,

SOIL ENGINEERS LTD.

Daixi Zhang, B. Sc., G.I.T.
Project Manager-Hydrogeological Services

Narjes Alijani, M.Sc., P.Geo.
Department Manager-Hydrogeological Services





11.0 REFERENCES

1. Chapman, L.J. and D.F. Putnam, 1984. The Physiography of Southern Ontario. Ontario.
2. City of Mississauga, City of Mississauga Official Plans, 2025.
3. Freeze, A. and Cherry, J., 1979. Groundwater, Prentice-Hall Inc., New Jersey.
4. Geological Survey. Ontario Geological Survey (OGS), 2003. Surficial Geology of Southern Ontario. Miscellaneous Release – Data 128 – revised.
5. Geological Survey. Ontario Geological Survey (OGS), 2007. Bedrock Geology of Ontario. Miscellaneous Release – MRD 219.
6. Ministry of the Environment, Conservation and Parks (MECP), 2024, Source Protection Information Atlas Interactive Map.
7. Ministry of Natural Resources (MNR), 2024, Natural Heritage Interactive Map.
8. Toronto Region Conservation Authority (TRCA), 2024, Online Regulated Area Map.



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TEL: (905) 440-2040
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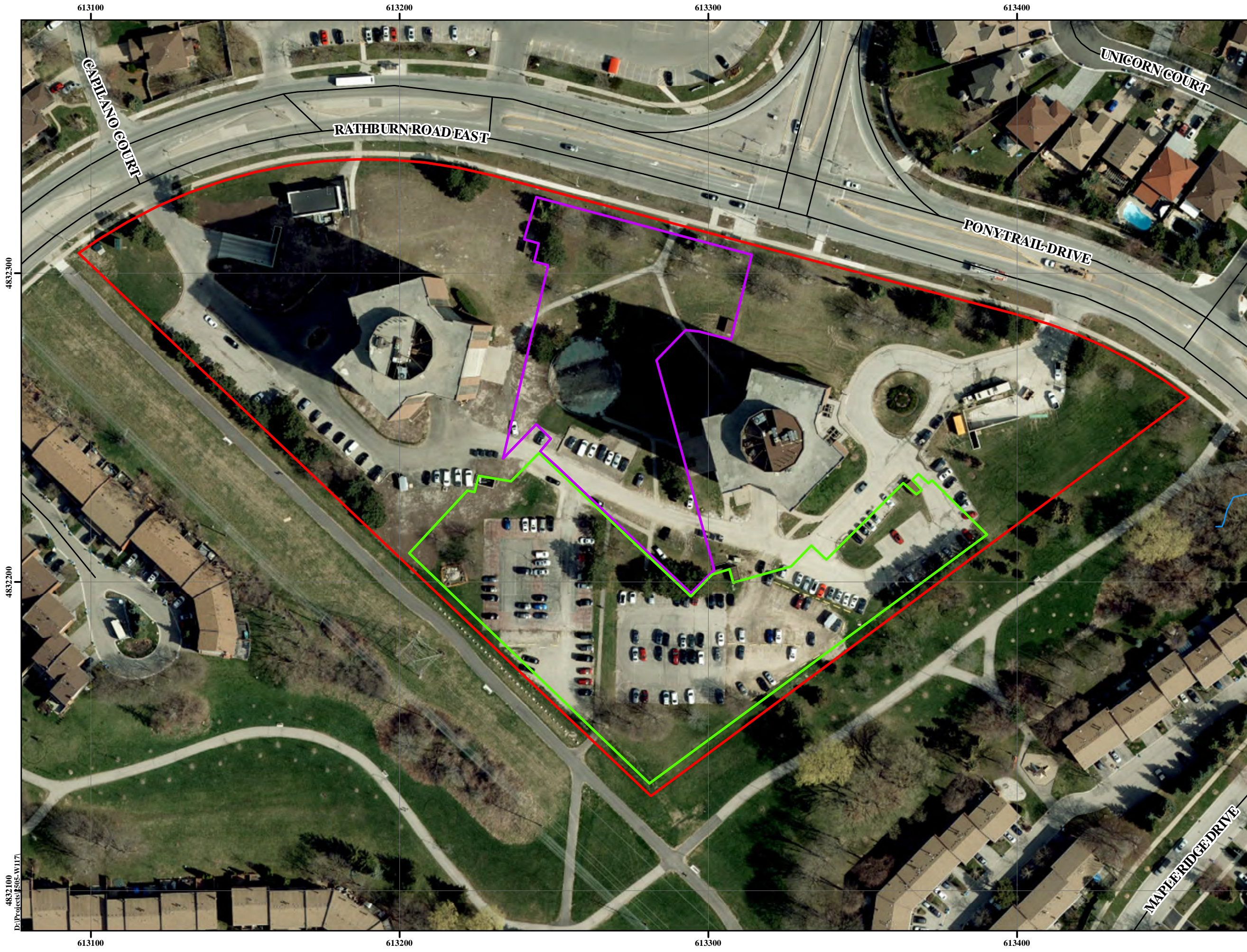
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DRAWINGS

REFERENCE NO. 2505-W117B



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Legend

- Approximate Boundary of Subject Site
- Phase One Boundary
- Phase Two Boundary
- Local Road
- ▶ Watercourse

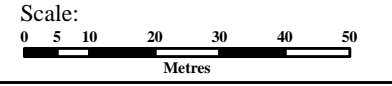


Site Location Plan

Hydrogeological Assessment
Proposed Condominium Development
With 2 To 3-Level Underground Parking
4100 Ponytrail Drive
City of Mississauga

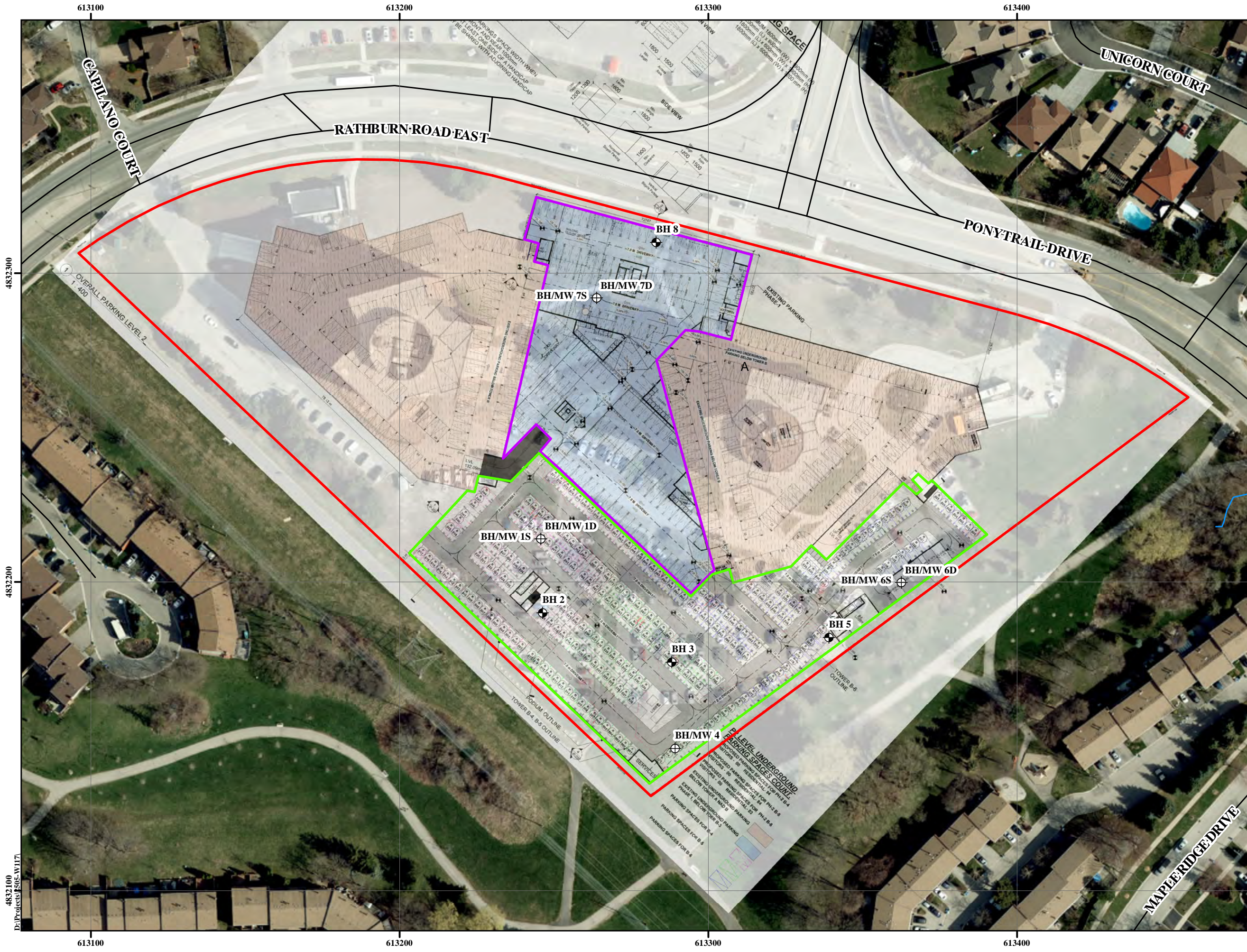
Reference No. 2505-W117

Date: November 07, 2025



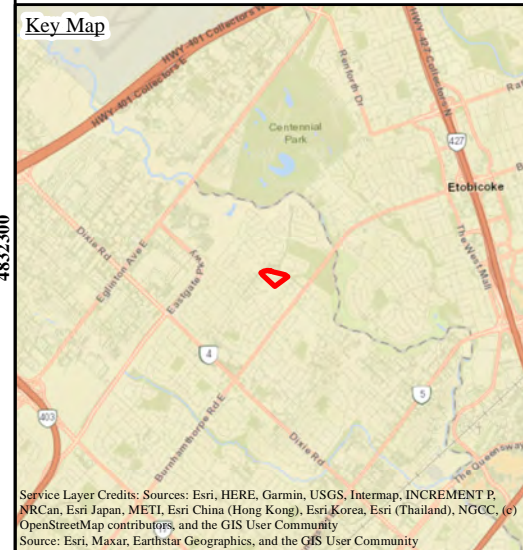
Drawing No. 1

D:\Projects\SIS-W117



N

References: Ontario Ministry of Natural Resources and Forestry
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- Legend**
- Approximate Boundary of Subject Site
 - Phase One Boundary
 - Phase Two Boundary
 - Local Road
 - ▶ Watercourse
 - ⊕ Borehole
 - ⊕ Borehole with Monitoring Well

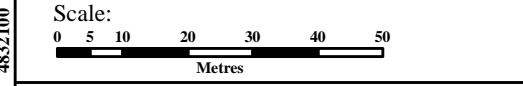


Borehole and Monitoring Well Location Plan

Hydrogeological Assessment
 Proposed Condominium Development
 With 2 to 3-Level Underground Parking
 4100 Ponytrail Drive
 City of Mississauga

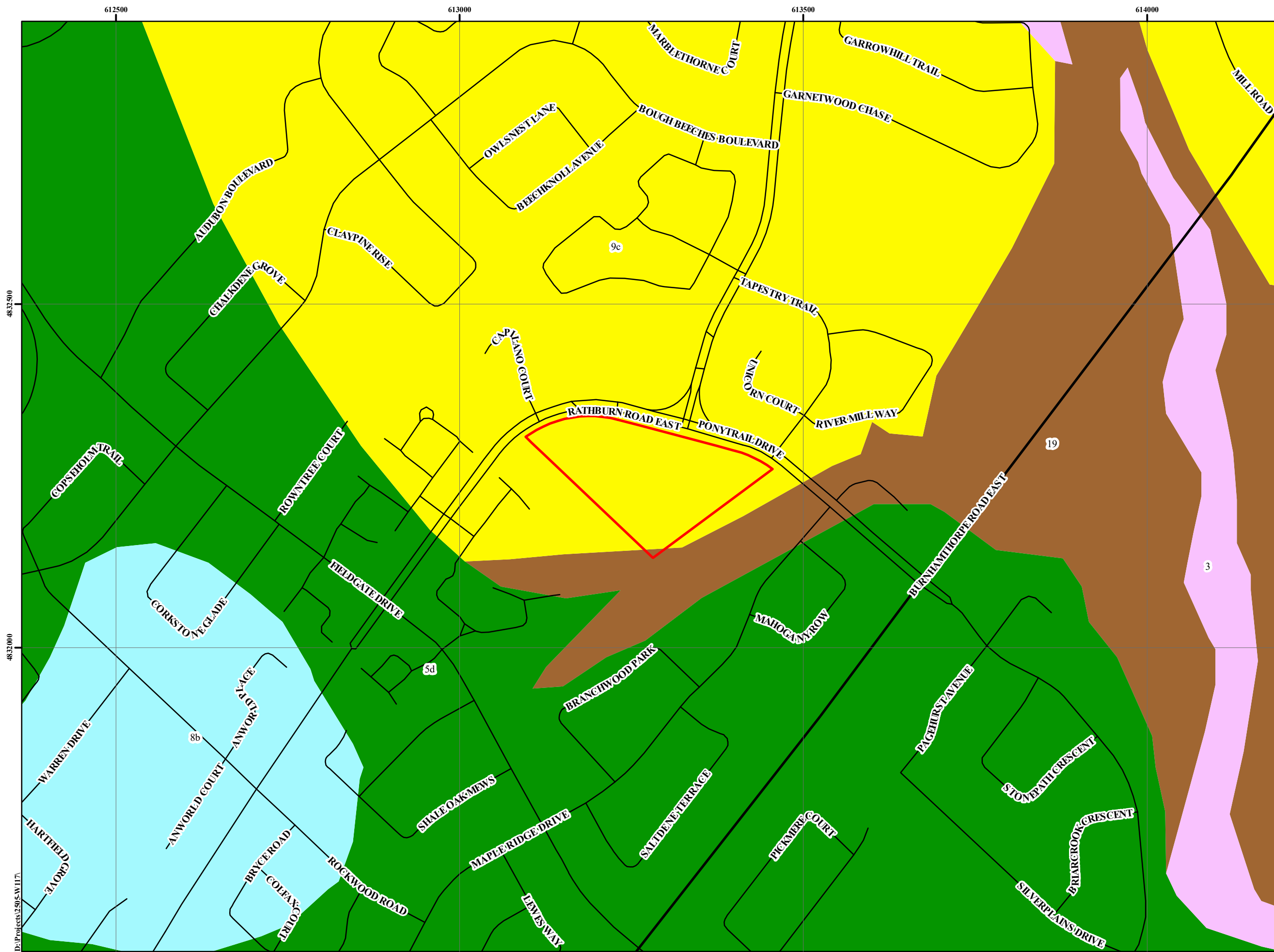
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Date: November 07, 2025

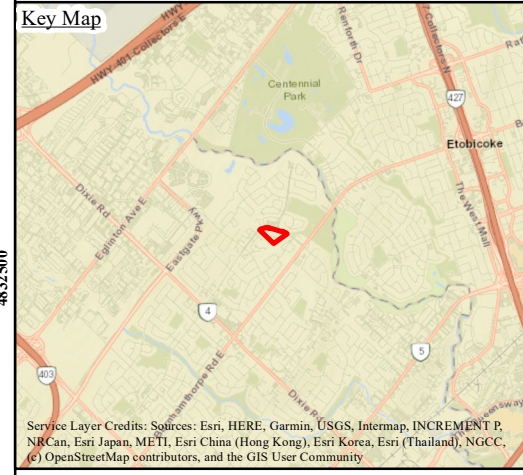


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- ### Legend
- Approximate Boundary of Subject Site
 - Major Road
 - Local Road
 - 3: Bedrock; consisting of Paleozoic Bedrock
 - 5d: Halton Till; consisting of diamicton
 - 8b: Glaciolacustrine Deposits; consisting of clay, silt diamicton; foreshore/basinal
 - 9c: Deltaic And Lacustrine Deposits; consisting of sand: deltaic
 - 19: Modern Alluvium; consisting of clay, silt, sand, gravel: modern floodplain

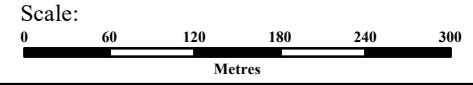


Surface Geology Map

Hydrogeological Assessment
 Proposed Condominium Development
 With 2 To 3-Level Underground Parking
 4100 Ponytrail Drive
 City of Mississauga

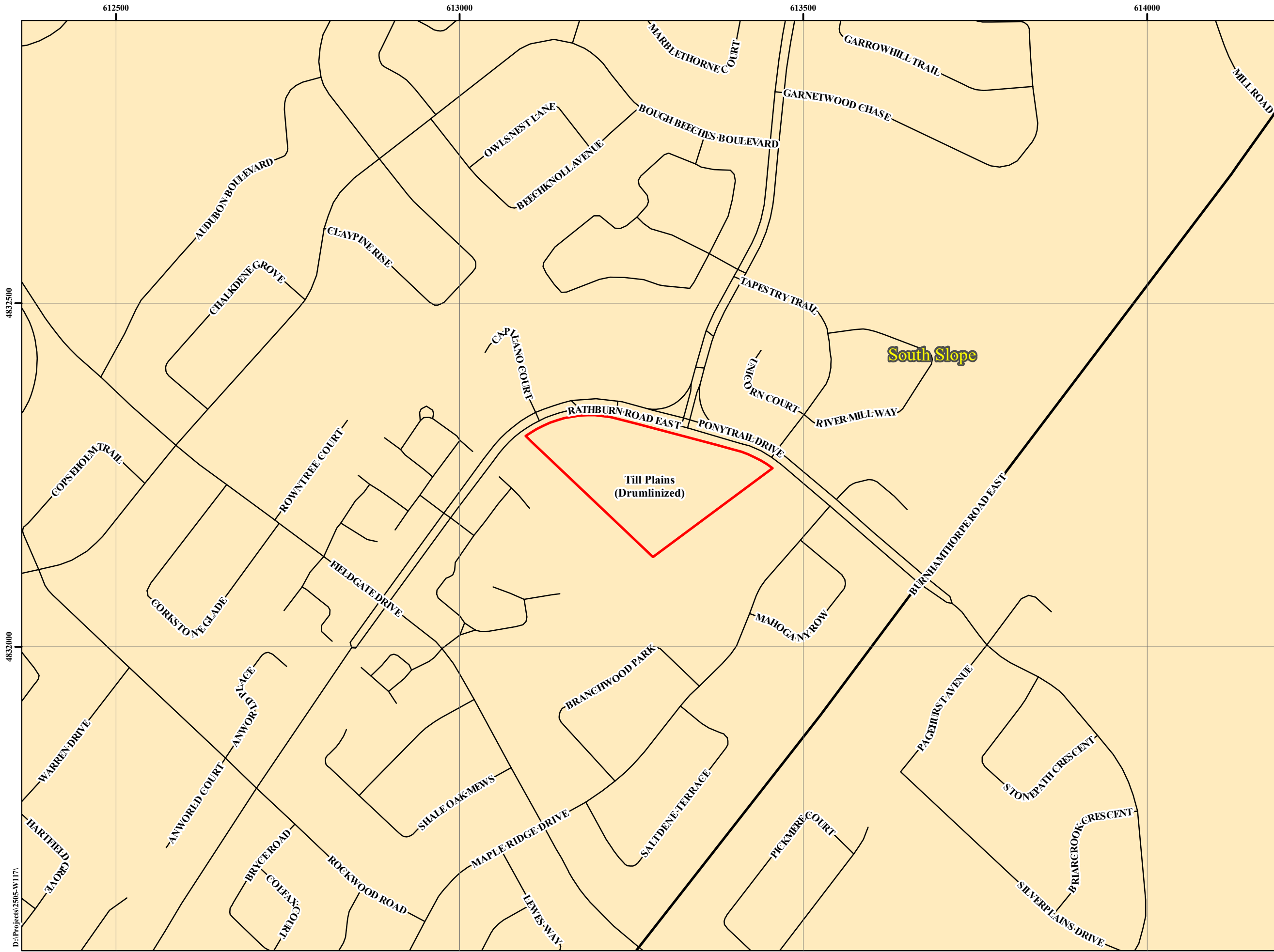
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Date: August 05, 2025

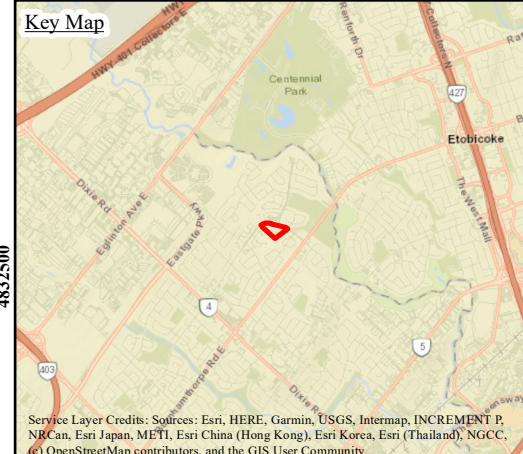


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


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Legend

-  Approximate Boundary of Subject Site
-  Major Road
-  Local Road
-  Region Boundary
-  Till Plains (Drumlinized)

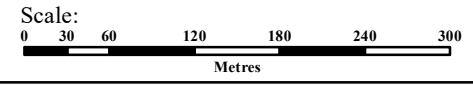


Physiographic Map

Hydrogeological Assessment
Proposed Condominium Development
With 2 To 3-Level Underground Parking
4100 Ponytrail Drive
City of Mississauga

Reference No. 2505-W117

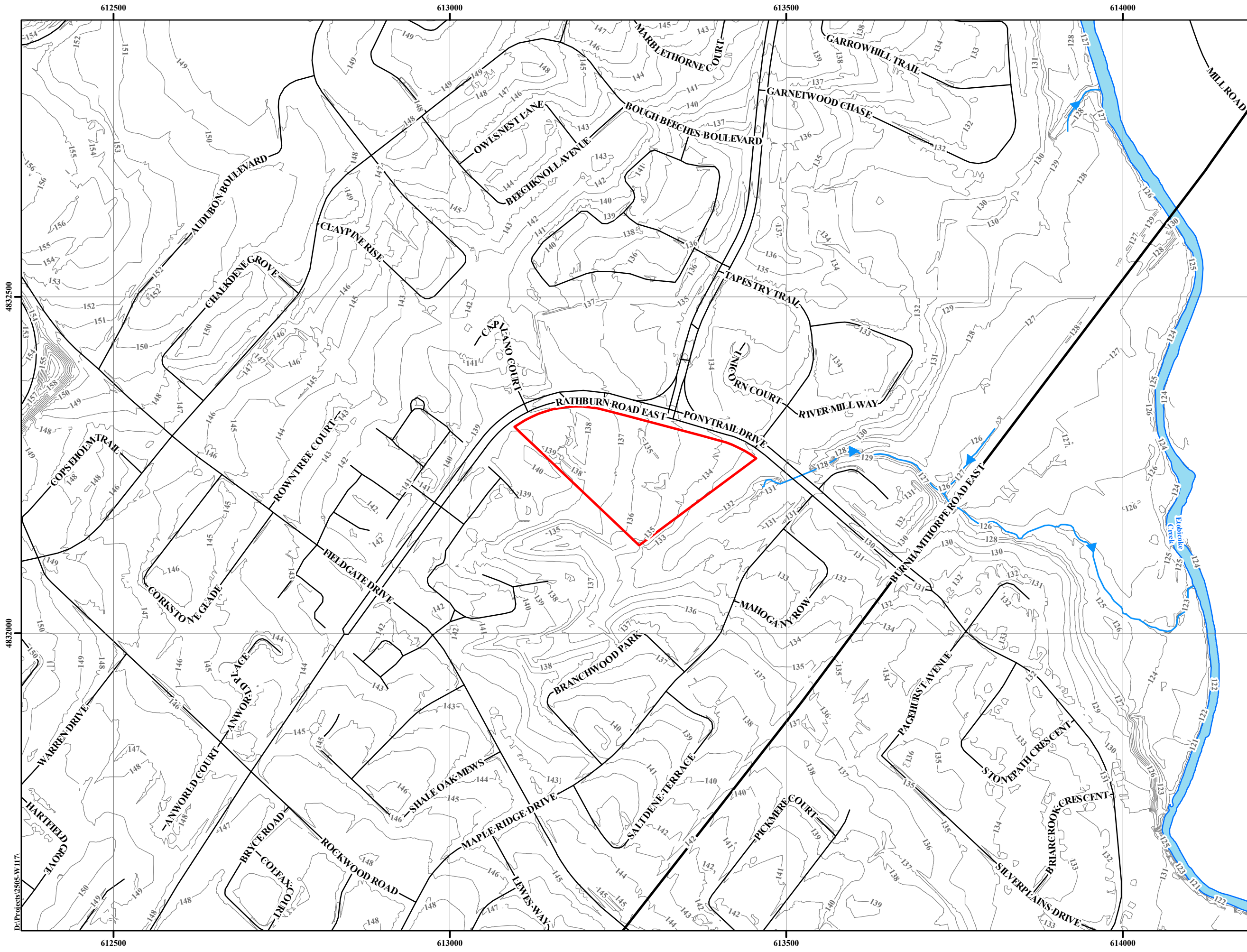
Date: August 05, 2025




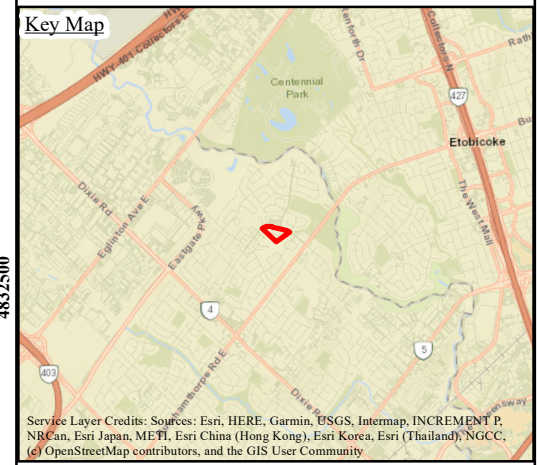
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


Source: Chapman, L.J. and Putnam, D.F. 2007. Physiography of Southern Ontario; Ontario Geological Survey, Miscellaneous Release--Data 228 ISBN 978-1-4249-5158-1

D:\Projects\2505-W117




 References: Ontario Ministry of Natural Resources and Forestry
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- Legend**
-  Approximate Boundary of Subject Site
 -  Major Road
 -  Local Road
 -  Waterbody
 -  Watercourse
 -  Mississauga - 1 m

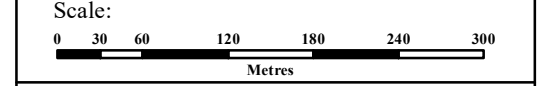


Topographic Map

Hydrogeological Assessment
 Proposed Condominium Development
 With 2 To 3-Level Underground Parking
 4100 Ponytrail Drive
 City of Mississauga

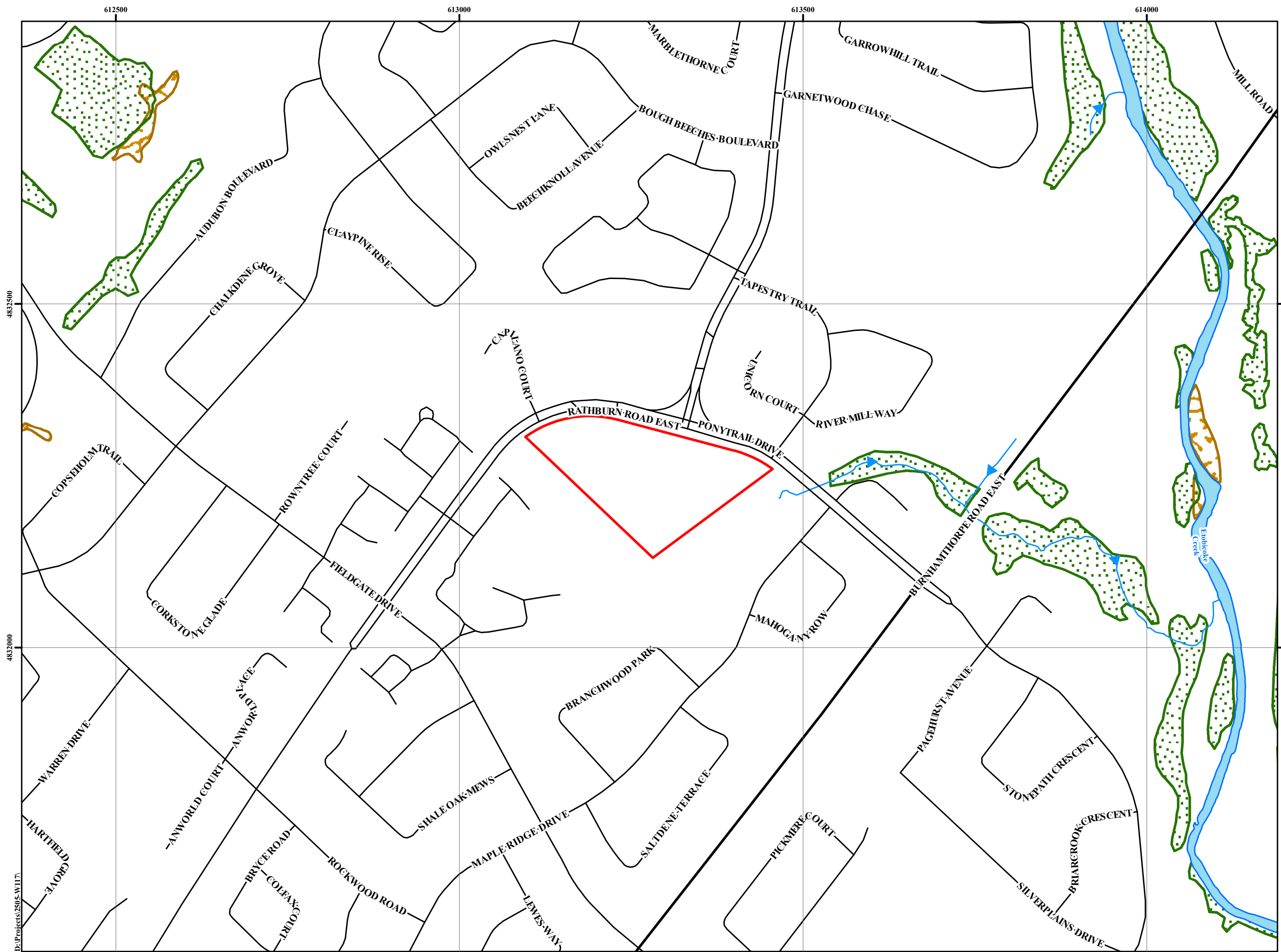
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Date: August 05, 2025

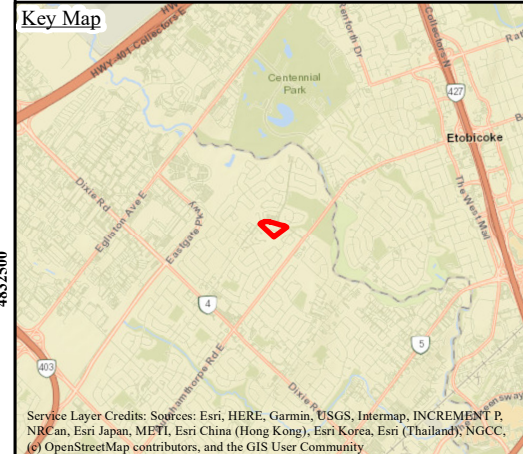


Drawing No. 5








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- ### Legend
-  Approximate Boundary of Subject Site
 -  Major Road
 -  Local Road
 -  Watercourse
 -  Waterbody
 -  Wooded Area *Wooded Area*
 -  Wetland (Not evaluated per OWES)

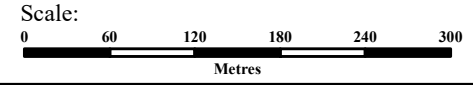


Natural Features and Protection Area Plan

Hydrogeological Assessment
 Proposed Condominium Development
 With 2 To 3-Level Underground Parking
 4100 Ponytrail Drive
 City of Mississauga

Reference No. 2505-W117

Date: August 05, 2025

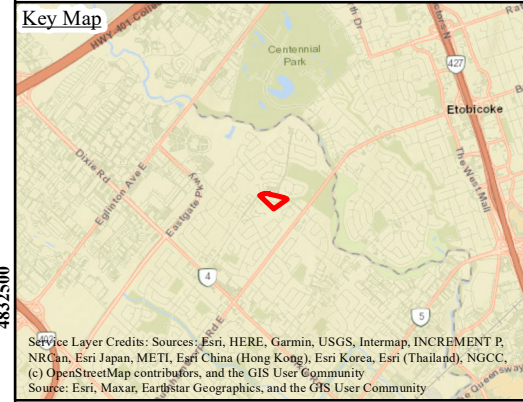


Drawing No. 6

D:\Projects\2505-W117



References: ESRI, DigitalGlobe, GeoEye, Earthstar Geograph-ics, CNES/Airbus Ds, USDA, USGS, AeroGRIS, IGN, and the GIS User Community produced by Soil Engineers Ltd. Copyright (c) King's Printer for Ontario, 2025. Water Well Information System Ministry of the Environment, Conservation and Parks, 2020



Legend

- Approximate Boundary of Subject Site
- 500 Metres From Subject Site Boundary
- Major Road
- Local Road
- Waterbody
- ▶ Watercourse
- Unknown (3)
- Abandoned Monitoring and Test hole (2)
- Abandoned-Other (1)
- Abandoned-Supply (1)
- Monitoring and Test Hole (5)
- Observation Wells (9)
- Test Hole (5)
- Water Supply (1)

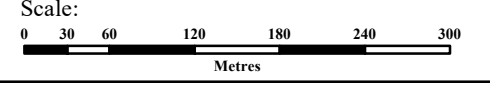


MECP Well Location Plan

Hydrogeological Assessment
Proposed Condominium Development
With 2 To 3-Level Underground Parking
4100 Ponytrail Drive
City of Mississauga

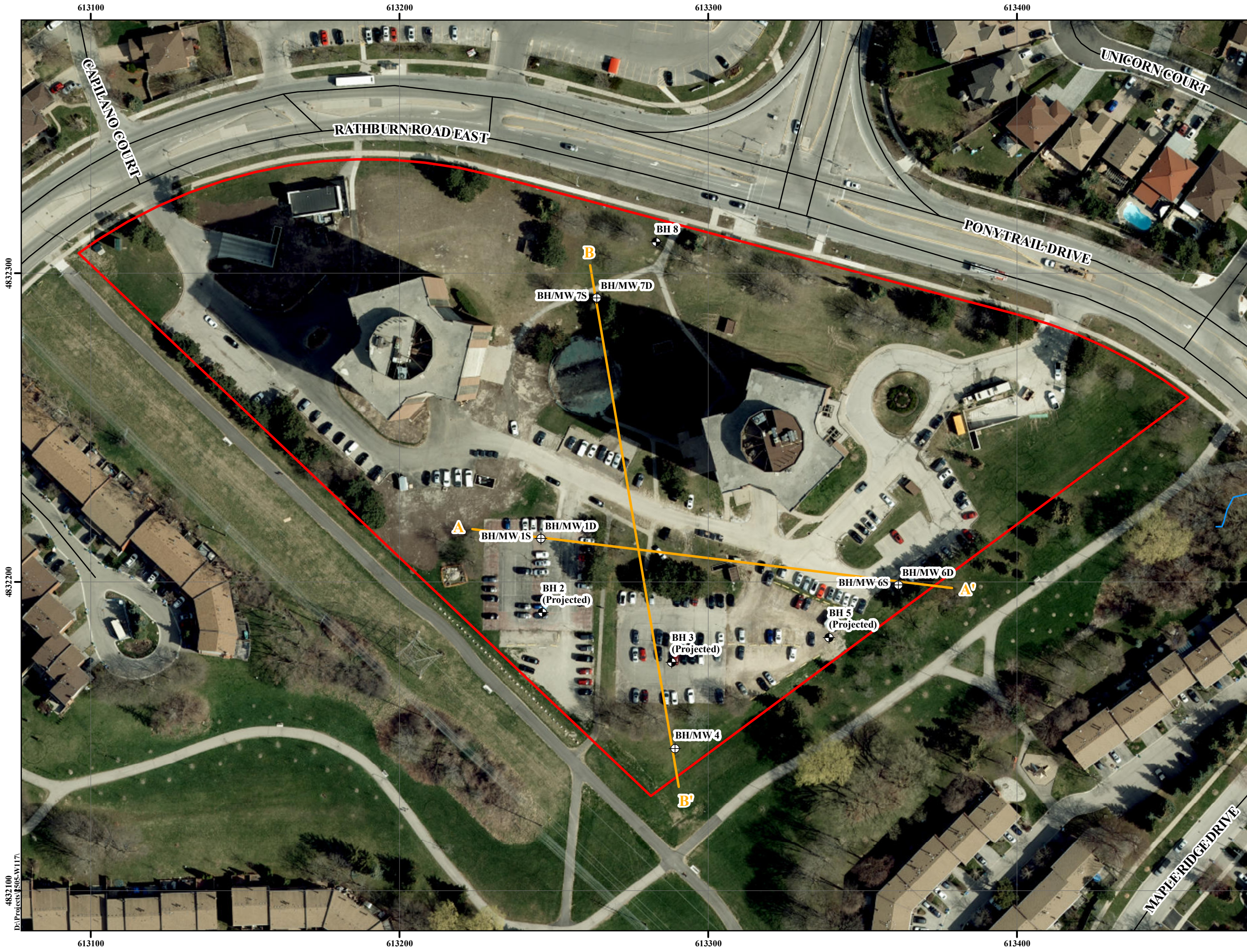
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Date: August 05, 2025



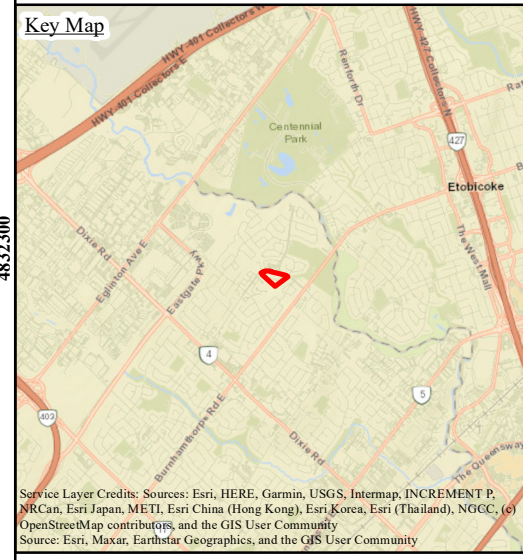
Drawing No. 7

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N

References: Ontario Ministry of Natural Resources and Forestry
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Legend

- Approximate Boundary of Subject Site
- A-A' Cross Section
- Local Road
- ▶ Watercourse
- + Borehole
- + Borehole with Monitoring Well

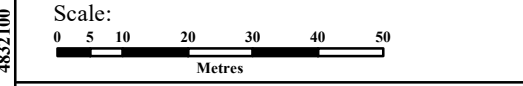


Subsurface Profile Cross-Section Key Plan

Hydrogeological Assessment
 Proposed Condominium Development
 With 2 To 3-Level Underground Parking
 4100 Ponytrail Drive
 City of Mississauga

Reference No. 2505-W117

Date: August 05, 2025



Drawing No. 8-1

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
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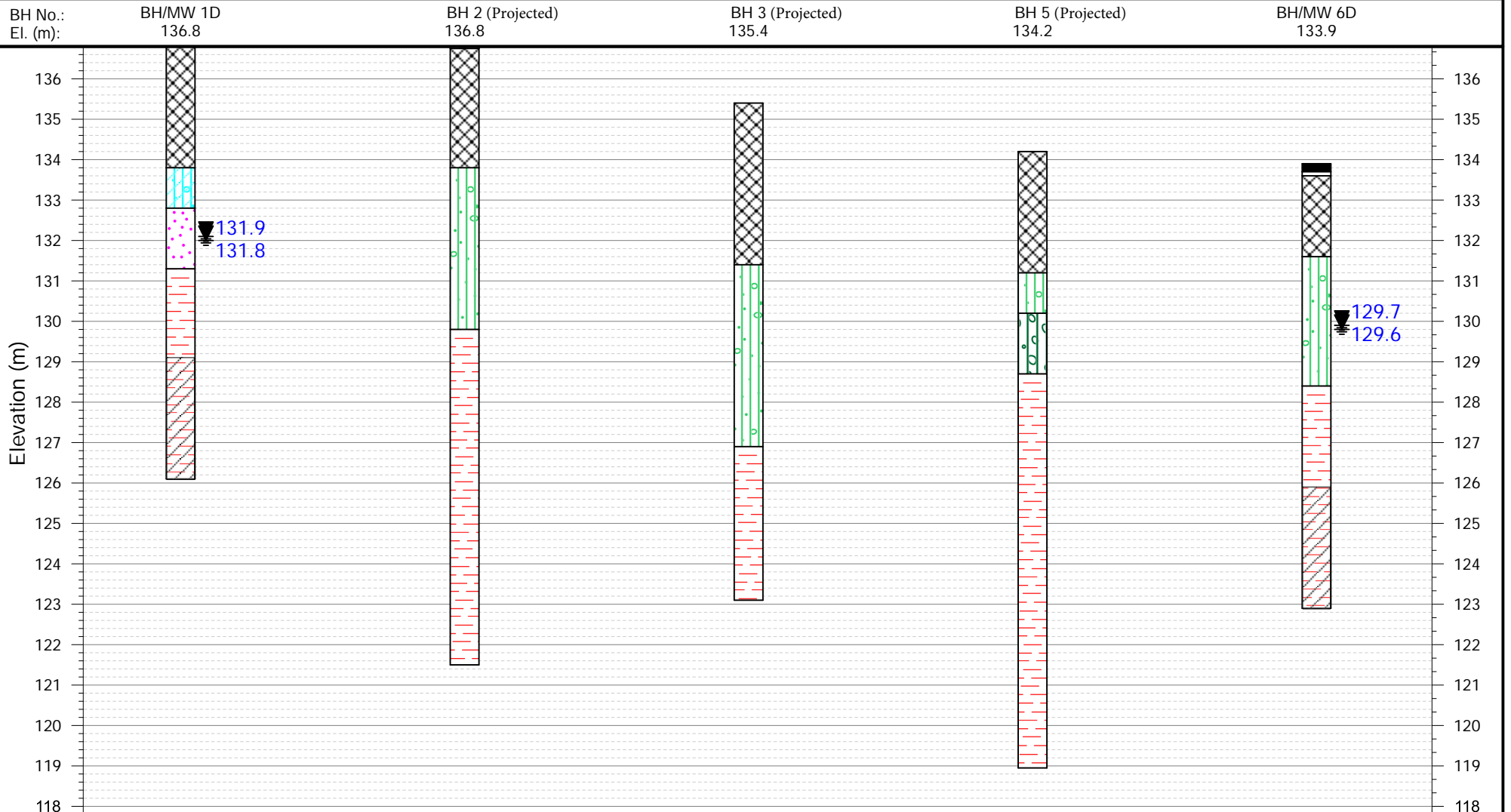
SUBSURFACE PROFILE CROSS SECTION A-A' DRAWING NO. 8-2A SCALE: AS SHOWN

JOB NO.: 2505-W117
REPORT DATE: August, 2025
PROJECT DESCRIPTION: Proposed Residential Development with 2 or 3-Level Underground Parking
PROJECT LOCATION: 4100 Ponytail Drive, City of Mississauga

LEGEND

-  ASPHALT
-  SAND
-  SHALE
-  SILTY SAND TILL
-  FILL
-  SANDY SILT TILL
-  SILTY CLAY TILL
-  TOPSOIL
-  GRANULAR
-  SCREEN

WATER LEVEL (STABILIZED) ▼











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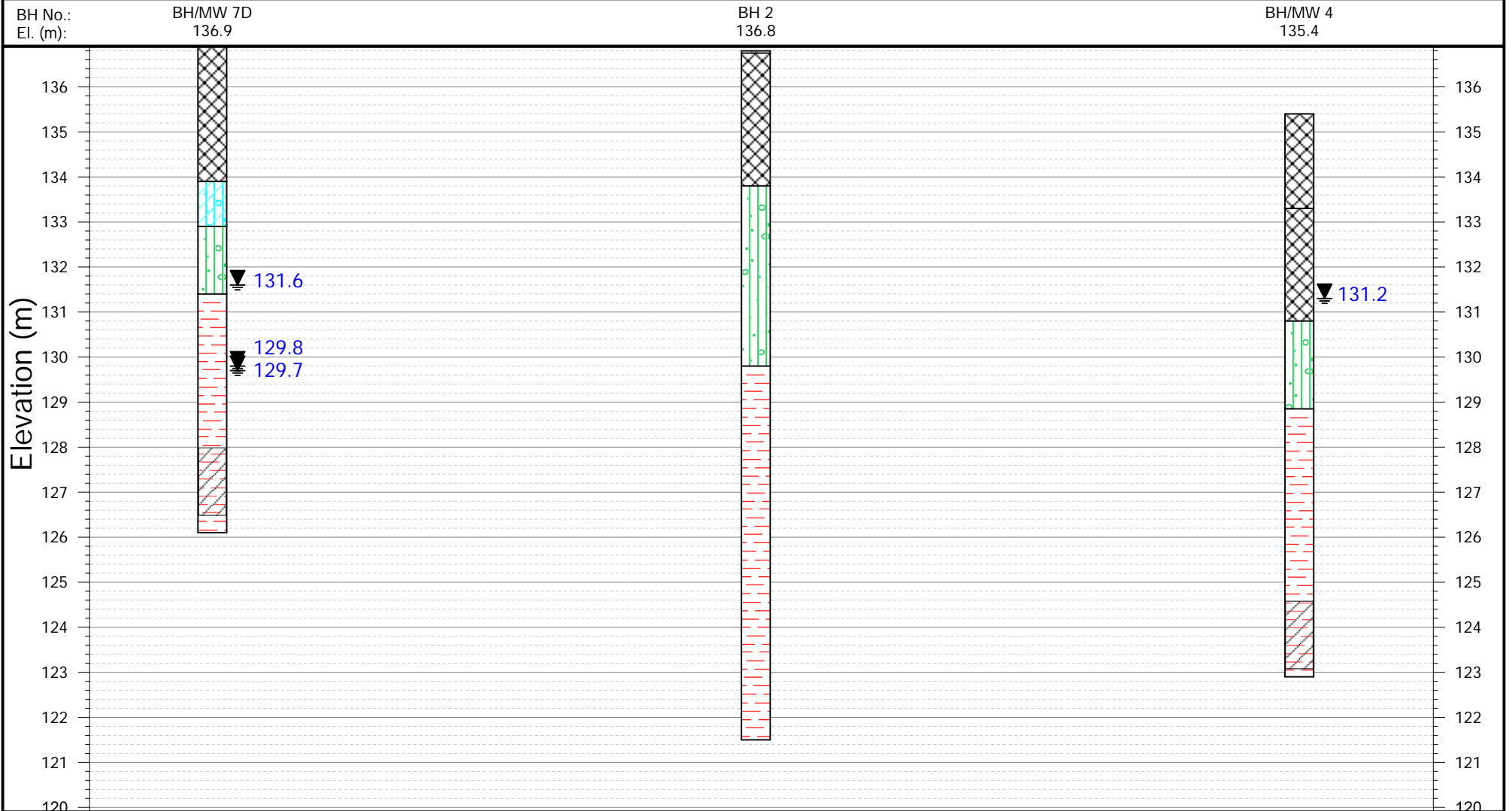
SUBSURFACE PROFILE CROSS SECTION B-B' DRAWING NO. 8-2B SCALE: AS SHOWN

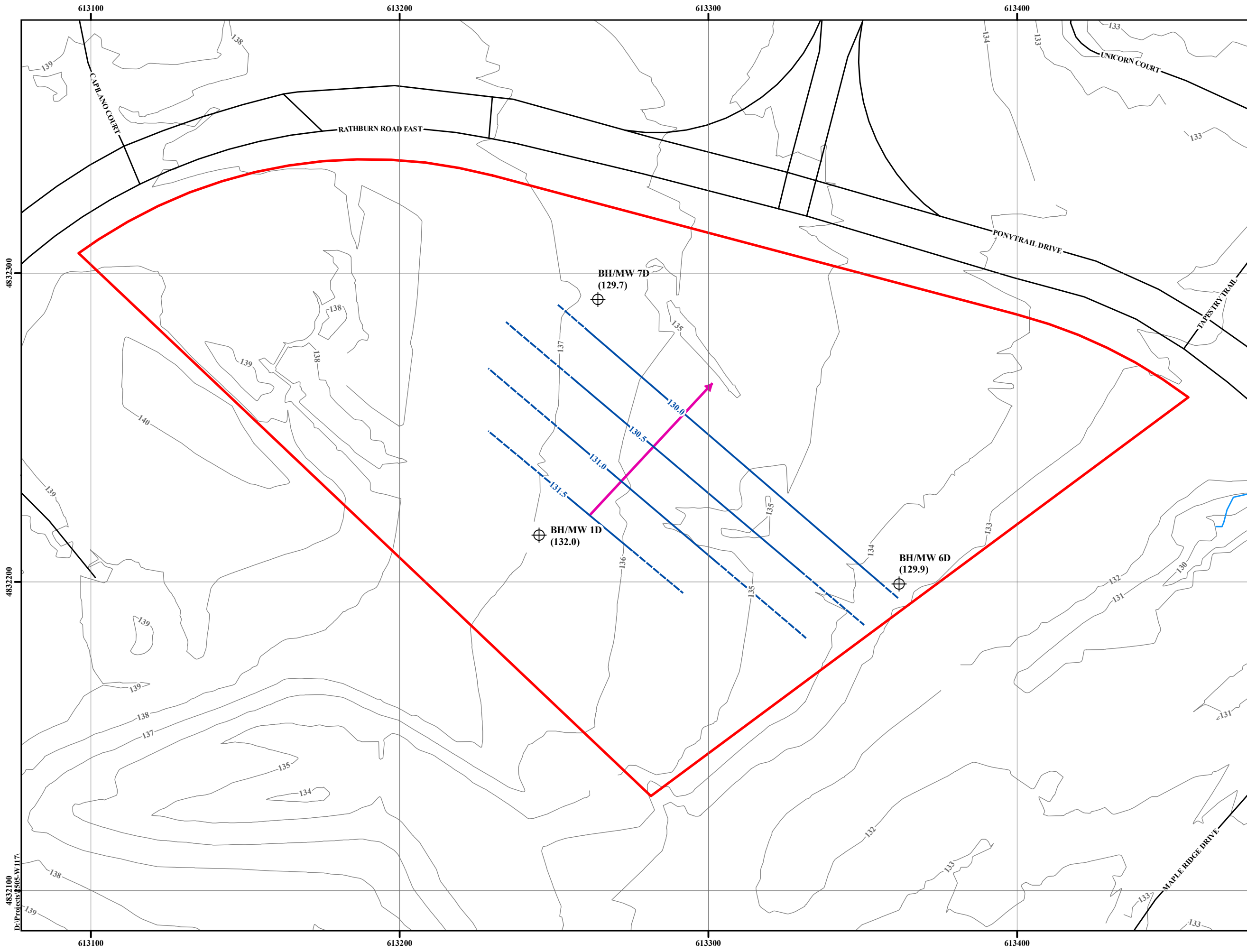
JOB NO.: 2505-W117
REPORT DATE: August, 2025
PROJECT DESCRIPTION: Proposed Residential Development with 2 or 3-Level Underground Parking
PROJECT LOCATION: 4100 Ponytail Drive, City of Mississauga

LEGEND

-  FILL
-  SHALE
-  SILTY CLAY TILL
-  TOPSOIL
-  SANDY SILT TILL
-  SCREEN

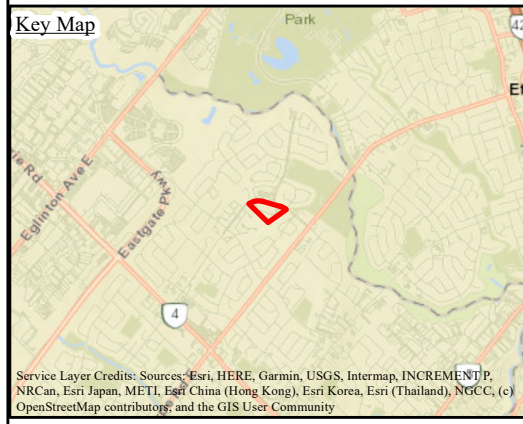
WATER LEVEL (STABILIZED) ▼





N

References: Ontario Ministry of Natural Resources and Forestry
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- Legend**
- Approximate Boundary of Subject Site
 - Borehole With Monitoring Well
 - Local Road
 - Mississauga - 1 m
 - Watercourse
 - Highest Interpreted Shallow Groundwater Elevation Contour
 - Highest Inferred Shallow Groundwater Elevation Contour
 - Interpreted Shallow Groundwater Flow Direction
 - (132.0) Highest Shallow Groundwater Level Measured on August 06, 2025

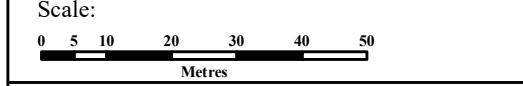


Groundwater Flow Pattern Plan

Hydrogeological Assessment
 Proposed Condominium Development
 With 2 To 3-Level Underground Parking
 4100 Ponytrail Drive
 City of Mississauga

Reference No. 2505-W117

Date: August 05, 2025



Drawing No. 9

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FAX: (705) 721-7864

HAMILTON
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FAX: (905) 542-2769

APPENDIX A

BOREHOLE AND MONITORING WELLS LOGS AND GRAIN SIZE DISTRIBUTION GRAPHS

REFERENCE NO. 2505-W117B

LIST OF ABBREVIATIONS AND DESCRIPTION OF TERMS

The abbreviations and terms commonly employed on the borehole logs and figures, and in the text of the report, are as follows:

SAMPLE TYPES

AS	Auger sample
CS	Chunk sample
DO	Drive open (split spoon)
DS	Denison type sample
FS	Foil sample
RC	Rock core (with size and percentage recovery)
ST	Slotted tube
TO	Thin-walled, open
TP	Thin-walled, piston
WS	Wash sample

PENETRATION RESISTANCE

Standard Penetration Resistance or 'N' Value:

The number of blows of a 63.5 kg hammer falling from a height of 76 cm required to advance a 51 mm outer diameter drive open sampler 30 cm into undisturbed soil, after an initial penetration of 15 cm.

Plotted as '○'

Dynamic Cone Penetration Resistance:

A continuous profile showing the number of blows per each 30 cm of penetration of a 51 mm diameter, 90° point cone driven by a 63.5 kg hammer falling from a height of 76 cm.

Plotted as '—●—'

WH	Sampler advanced by static weight
PH	Sampler advanced by hydraulic pressure
PM	Sampler advanced by manual pressure
NP	No penetration

SOIL DESCRIPTION

Cohesionless Soils:

<u>'N' (blows/30 cm)</u>		<u>Relative Density</u>
0	to 4	very loose
4	to 10	loose
10	to 30	compact
30	to 50	dense
	>50	very dense

Cohesive Soils:

<u>Undrained Shear Strength (kPa)</u>	<u>'N' (blows/30 cm)</u>	<u>Consistency</u>
<12	<2	very soft
12 to <25	2 to <4	soft
25 to <50	4 to <8	firm
50 to <100	8 to <15	stiff
100 to 200	15 to 30	very stiff
>200	>30	hard

Method of Determination of Undrained Shear Strength of Cohesive Soils:

x 0.0 Field vane test in borehole; the number denotes the sensitivity to remoulding

△ Laboratory vane test

METRIC CONVERSION FACTORS

1 ft	= 0.3048 m
1 inch	= 25.4 mm
1 lb	= 0.454 kg
1 ksf	= 47.88 kPa



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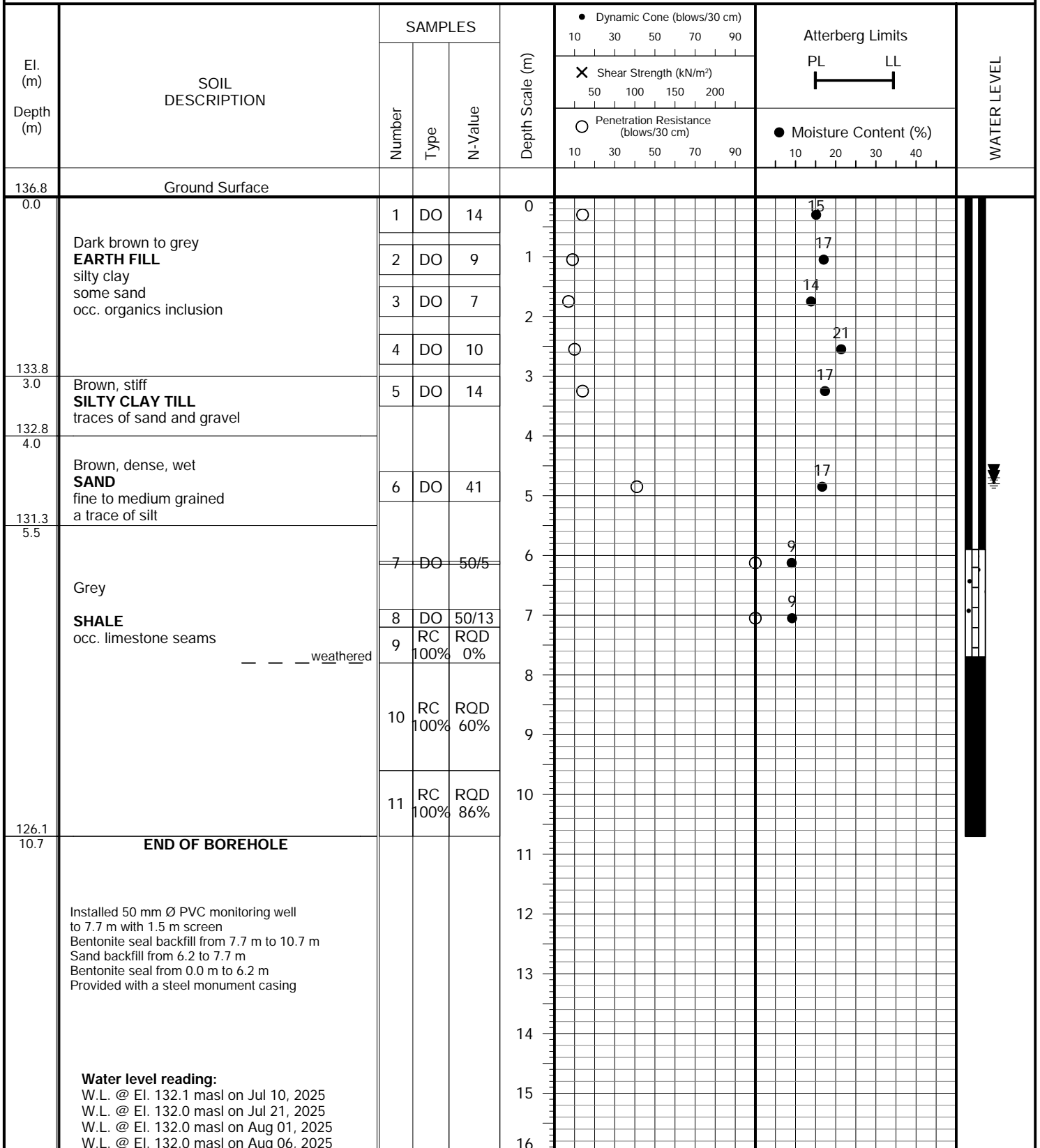
GEOTECHNICAL • ENVIRONMENTAL • HYDROGEOLOGICAL • BUILDING SCIENCE

PROJECT DESCRIPTION: Proposed Residential Development with 2 or 3-Level Underground Parking

METHOD OF BORING: Hollow Stem Augers

PROJECT LOCATION: 4100 Ponytail Drive, City of Mississauga

DRILLING DATE: June 13 and 16, 2025



PROJECT DESCRIPTION: Proposed Residential Development with 2 or 3-Level Underground Parking

METHOD OF BORING: Hollow Stem Augers

PROJECT LOCATION: 4100 Ponytail Drive, City of Mississauga

DRILLING DATE: June 11 and 12, 2025

El. (m) Depth (m)	SOIL DESCRIPTION	SAMPLES			Depth Scale (m)	Dynamic Cone (blows/30 cm)		Atterberg Limits		WATER LEVEL
		Number	Type	N-Value		10	30	50	70	
136.8	Ground Surface									
0.0	Dark brown to grey EARTH FILL silty clay some sand occ. organics inclusion				0					
133.8	3.0 Brown, stiff SILTY CLAY TILL traces of sand and gravel				3					
132.8	4.0 Brown, dense, wet SAND fine to medium grained a trace of silt				4					
131.3	5.5 END OF BOREHOLE				5					
	Installed 50 mm Ø monitoring well to 5.8 m completed with 1.5 m screen Sand backfill from 4.0 m to 5.8 m Bentonite seal from 0.0 m to 4.0 m Provided with a steel monument casing				6					
					7					
					8					
					9					
					10					
					11					
					12					
					13					
					14					
					15					
					16					

Water level reading:
 W.L. @ El. 132.4 masl on Jul 10, 2025
 W.L. @ El. 132.4 masl on Jul 21, 2025
 W.L. @ El. 132.3 masl on Aug 01, 2025
 W.L. @ El. 132.4 masl on Aug 06, 2025

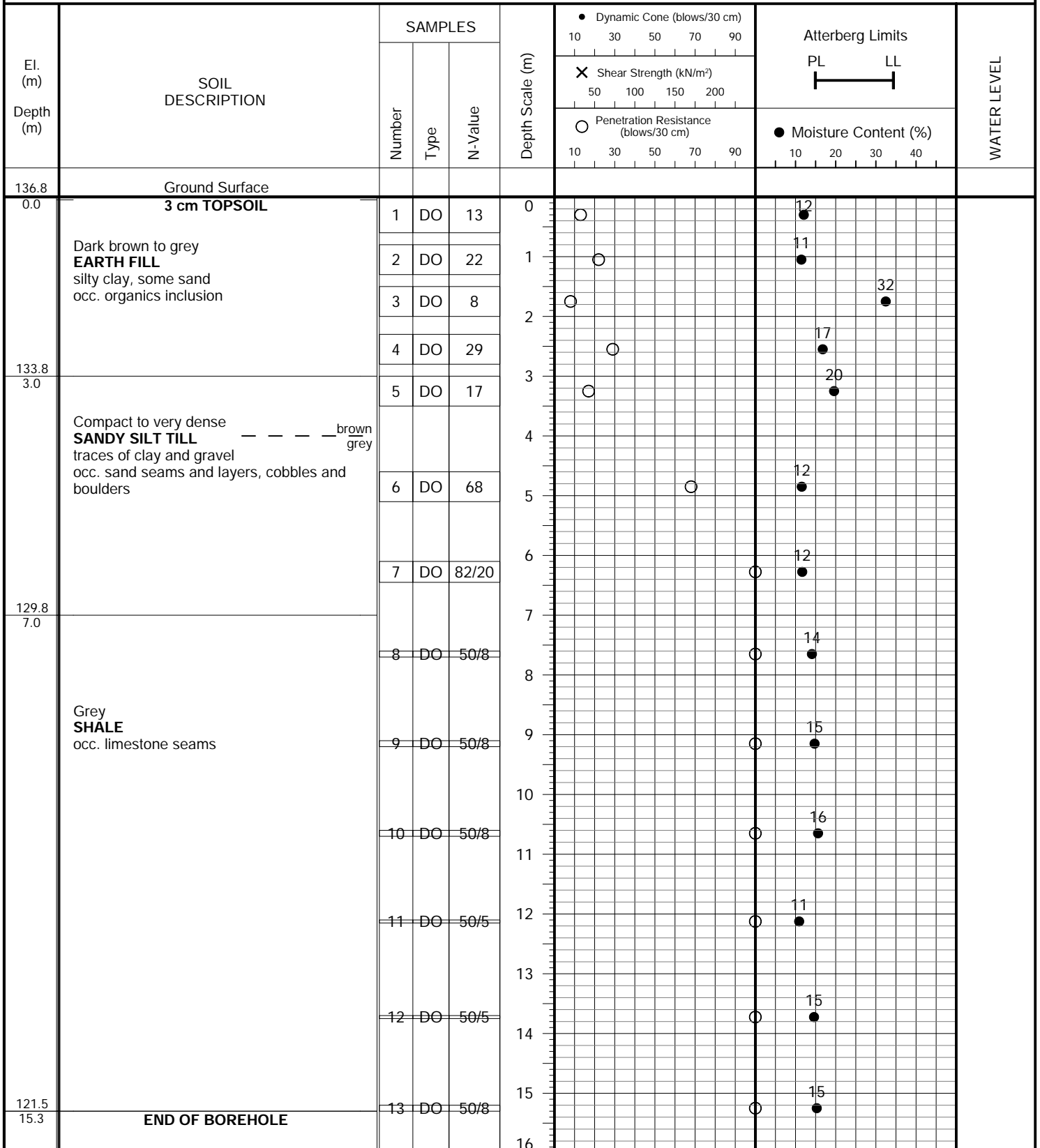


PROJECT DESCRIPTION: Proposed Residential Development with 2 or 3-Level Underground Parking

METHOD OF BORING: Hollow Stem Augers

PROJECT LOCATION: 4100 Ponytail Drive, City of Mississauga

DRILLING DATE: June 12 and 13, 2025

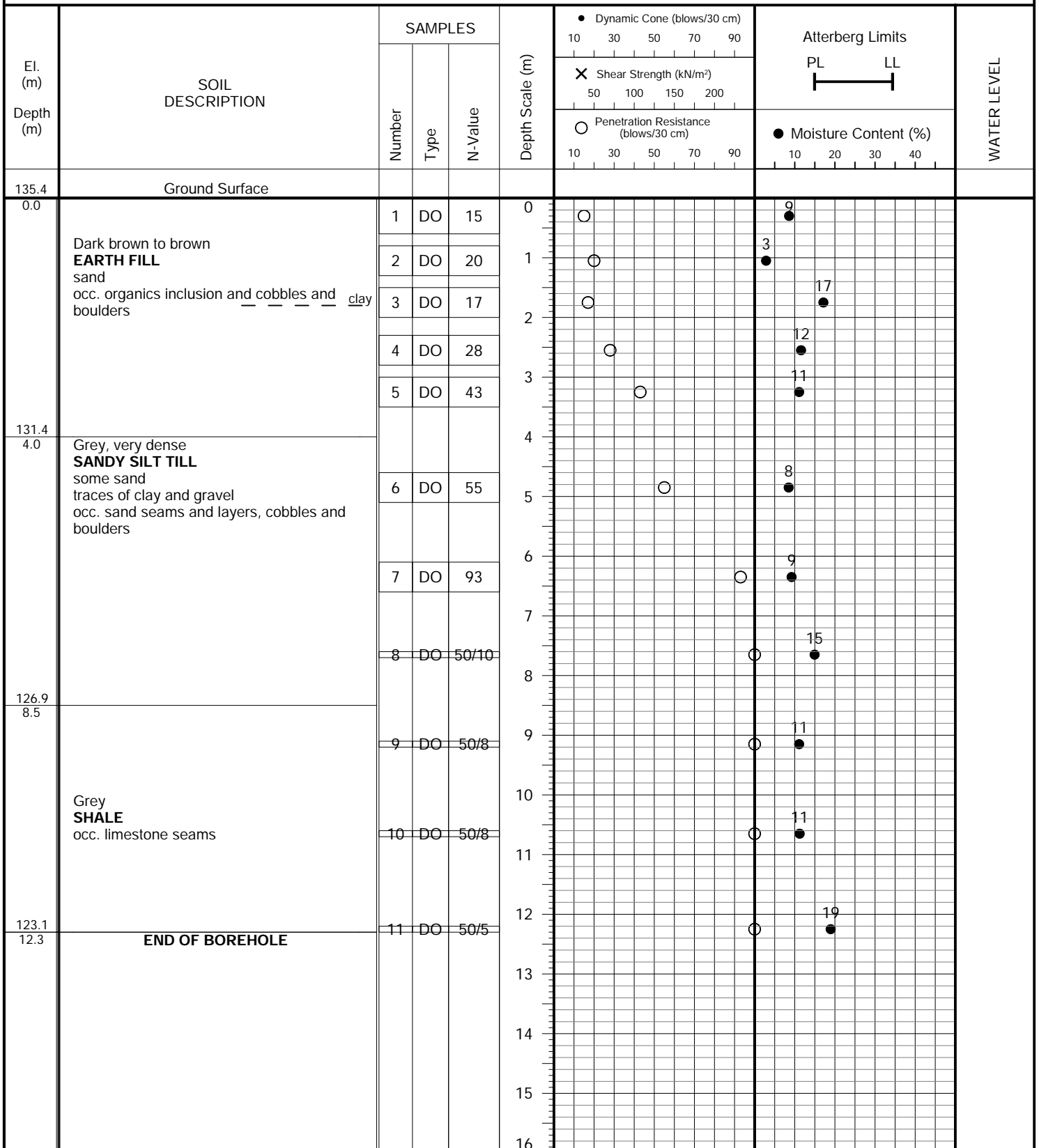


PROJECT DESCRIPTION: Proposed Residential Development with 2 or 3-Level Underground Parking

METHOD OF BORING: Hollow Stem Augers

PROJECT LOCATION: 4100 Ponytail Drive, City of Mississauga

DRILLING DATE: June 16 and 17, 2025

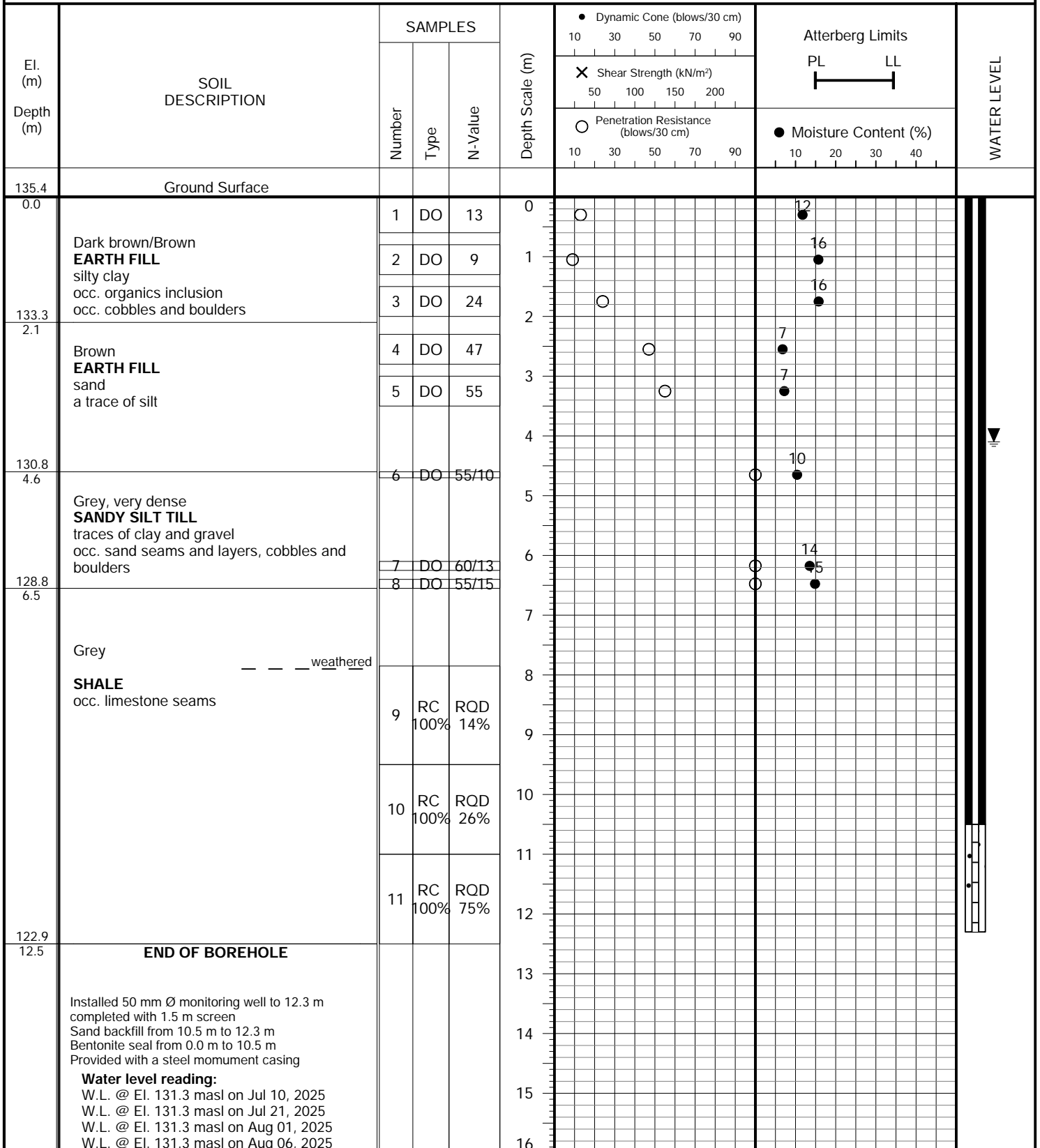


PROJECT DESCRIPTION: Proposed Residential Development with 2 or 3-Level Underground Parking

METHOD OF BORING: Hollow Stem Augers

PROJECT LOCATION: 4100 Ponytail Drive, City of Mississauga

DRILLING DATE: June 16 and 17, 2025

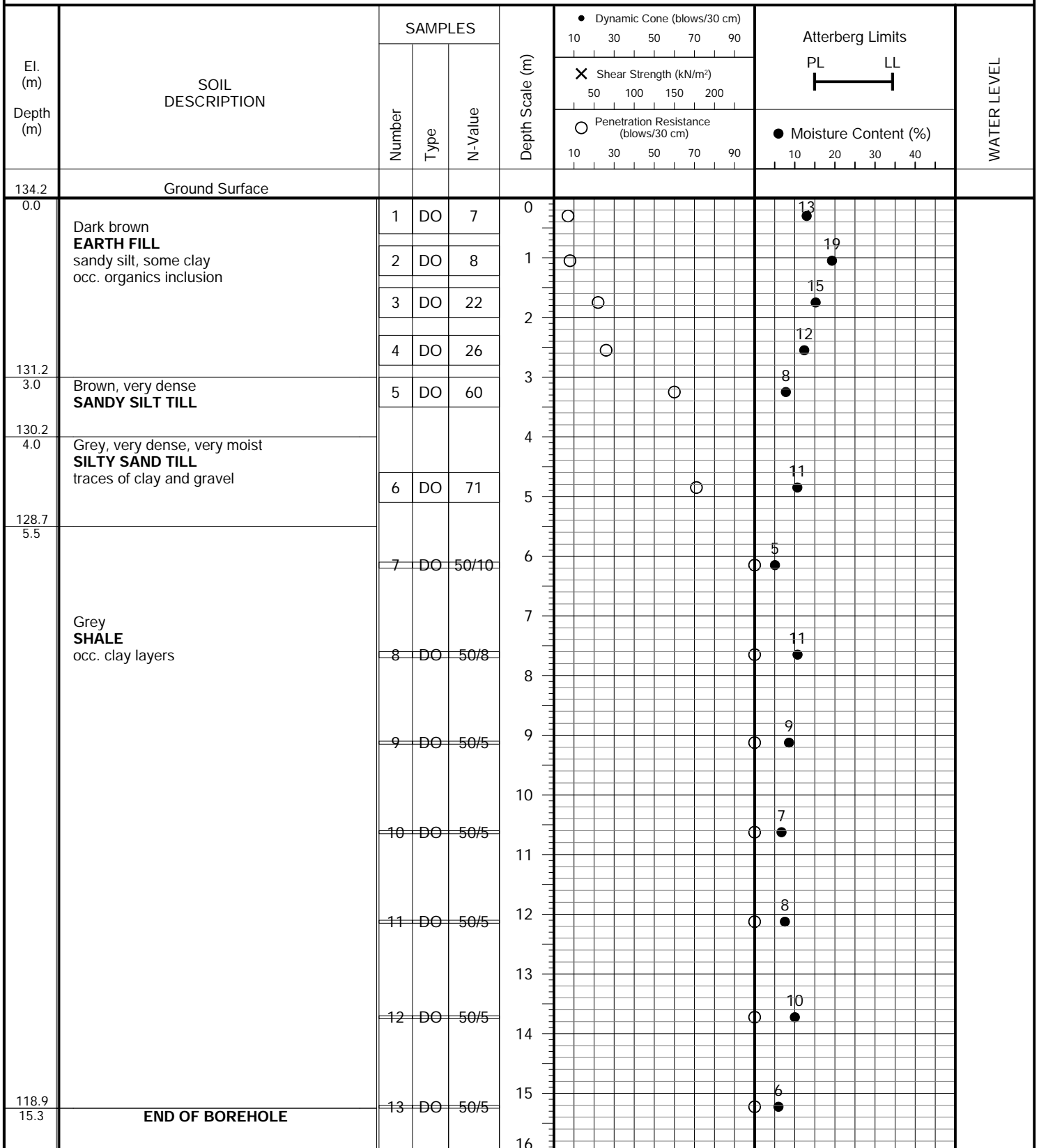


PROJECT DESCRIPTION: Proposed Residential Development with 2 or 3-Level Underground Parking

METHOD OF BORING: Hollow Stem Augers

PROJECT LOCATION: 4100 Ponytail Drive, City of Mississauga

DRILLING DATE: June 10, 2025

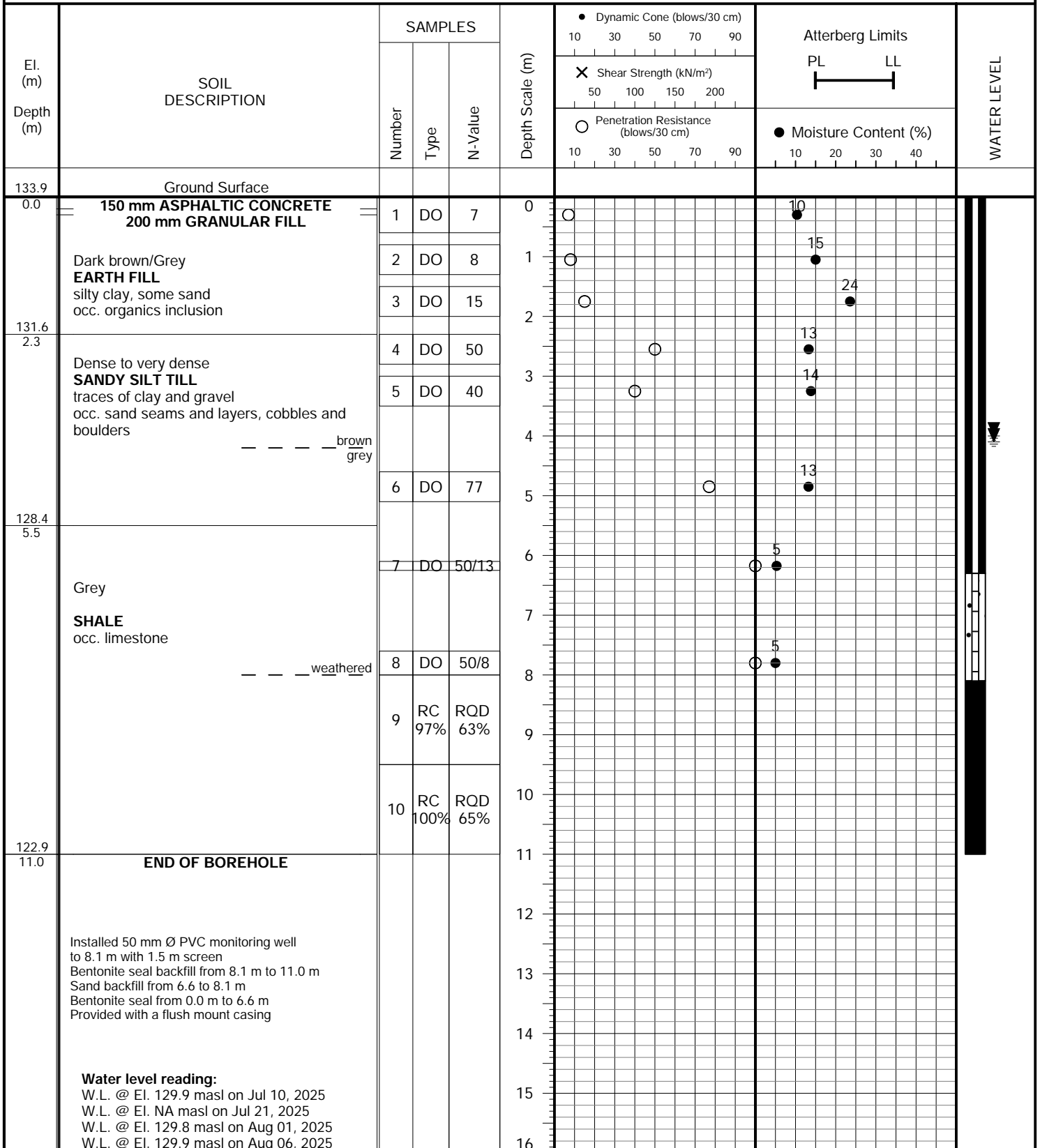


PROJECT DESCRIPTION: Proposed Residential Development with 2 or 3-Level Underground Parking

METHOD OF BORING: Hollow Stem Augers

PROJECT LOCATION: 4100 Ponytail Drive, City of Mississauga

DRILLING DATE: June 19, 2025



PROJECT DESCRIPTION: Proposed Residential Development with 2 or 3-Level Underground Parking

METHOD OF BORING: Hollow Stem Augers

PROJECT LOCATION: 4100 Ponytail Drive, City of Mississauga

DRILLING DATE: June 19, 2025

El. (m)	SOIL DESCRIPTION	SAMPLES			Depth Scale (m)	Dynamic Cone (blows/30 cm)		Atterberg Limits		WATER LEVEL
		Number	Type	N-Value		10	30	50	70	
133.9	Ground Surface									
0.0	150 mm ASPHALTIC CONCRETE 200 mm GRANULAR FILL				0					
	Dark brown/Grey EARTH FILL silty clay, some sand occ. organics inclusion				1					
131.6					2					
2.3	Dense to very dense SANDY SILT TILL traces of clay and gravel occ. sand seams and layers, cobbles and boulders				3					
					4					
					5					
128.4					6					
5.5	END OF BOREHOLE				7					
	Installed 50 mm Ø monitoring well to 5.5 m completed with 1.5 m screen Sand backfill from 3.4 m to 5.5 m Bentonite seal from 0.0 m to 3.4 m Provided with a flush mount casing				8					
					9					
					10					
					11					
					12					
					13					
					14					
					15					
					16					

Water level reading:
 W.L. @ El. 129.9 masl on Jul 10, 2025
 W.L. @ El. NA masl on Jul 21, 2025
 W.L. @ El. 129.9 masl on Aug 01, 2025
 W.L. @ El. 129.9 masl on Aug 06, 2025

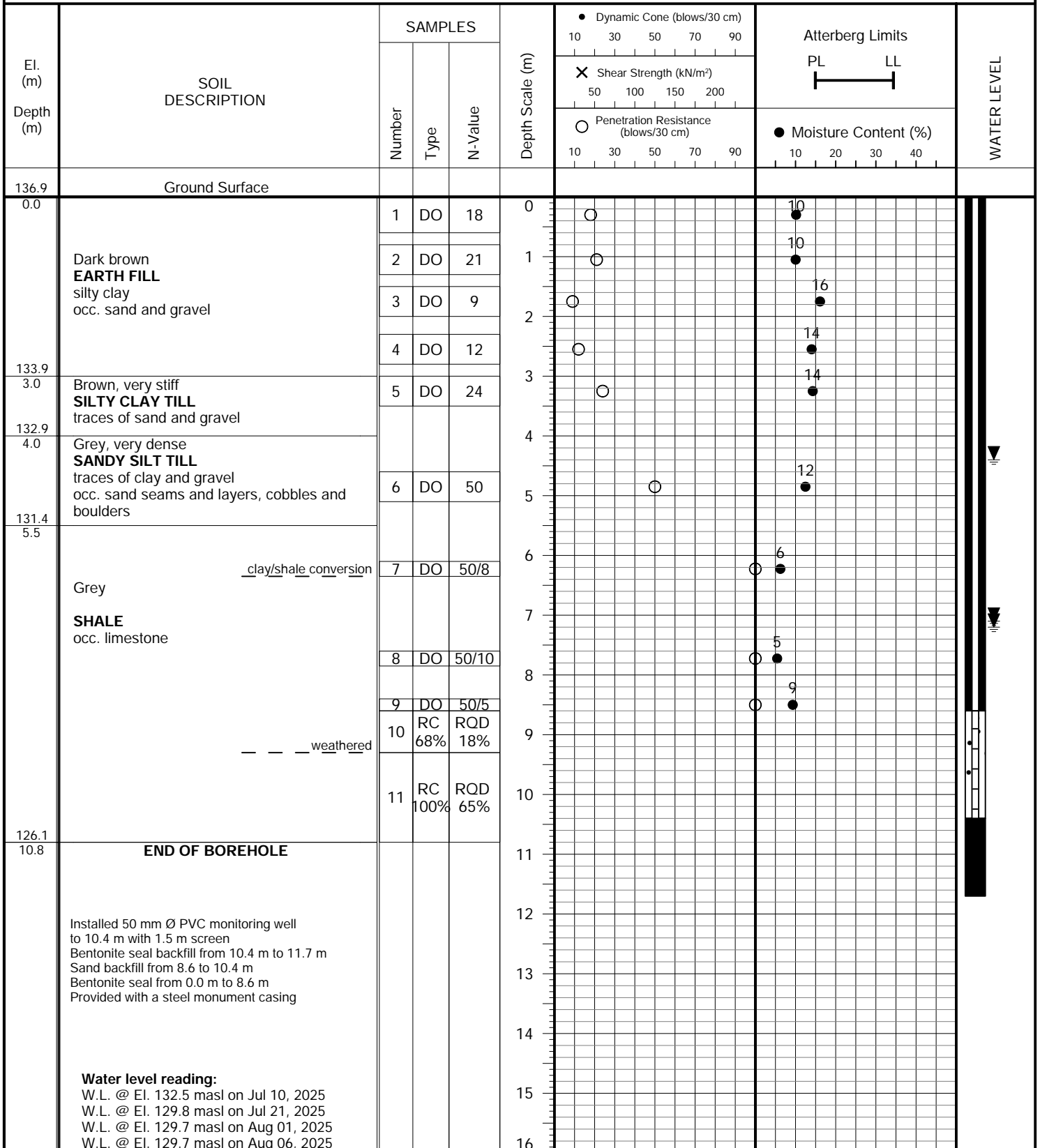


PROJECT DESCRIPTION: Proposed Residential Development with 2 or 3-Level Underground Parking

METHOD OF BORING: Hollow Stem Augers

PROJECT LOCATION: 4100 Ponytail Drive, City of Mississauga

DRILLING DATE: June 12, 2025

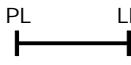



PROJECT DESCRIPTION: Proposed Residential Development with 2 or 3-Level Underground Parking

METHOD OF BORING: Hollow Stem Augers

PROJECT LOCATION: 4100 Ponytail Drive, City of Mississauga

DRILLING DATE: June 12, 2025

El. (m) Depth (m)	SOIL DESCRIPTION	SAMPLES			Depth Scale (m)	● Dynamic Cone (blows/30 cm) 10 30 50 70 90	Atterberg Limits PL LL 	WATER LEVEL
		Number	Type	N-Value		✕ Shear Strength (kN/m²) 50 100 150 200	○ Penetration Resistance (blows/30 cm) 10 30 50 70 90	
136.9	Ground Surface							
0.0	Dark brown EARTH FILL silty clay occ. sand and gravel				0			
133.9	Brown, very stiff SILTY CLAY TILL traces of sand and gravel				3			
132.9	Grey, very dense SANDY SILT TILL traces of clay and gravel occ. sand seams and layers, cobbles and boulders				4			
131.4	END OF BOREHOLE				5			
5.5	Installed 50 mm Ø monitoring well to 6.0 m completed with 1.5 m screen Sand backfill from 4.2 m to 6.0 m Bentonite seal from 0.0 m to 4.2 m Provided with a steel monument casing				6			
					7			
					8			
					9			
					10			
					11			
					12			
					13			
					14			
					15			
					16			

Water level reading:
 W.L. @ El. 132.0 masl on Jul 10, 2025
 W.L. @ El. 131.8 masl on Jul 21, 2025
 W.L. @ El. 132.0 masl on Aug 01, 2025
 W.L. @ El. 132.2 masl on Aug 06, 2025

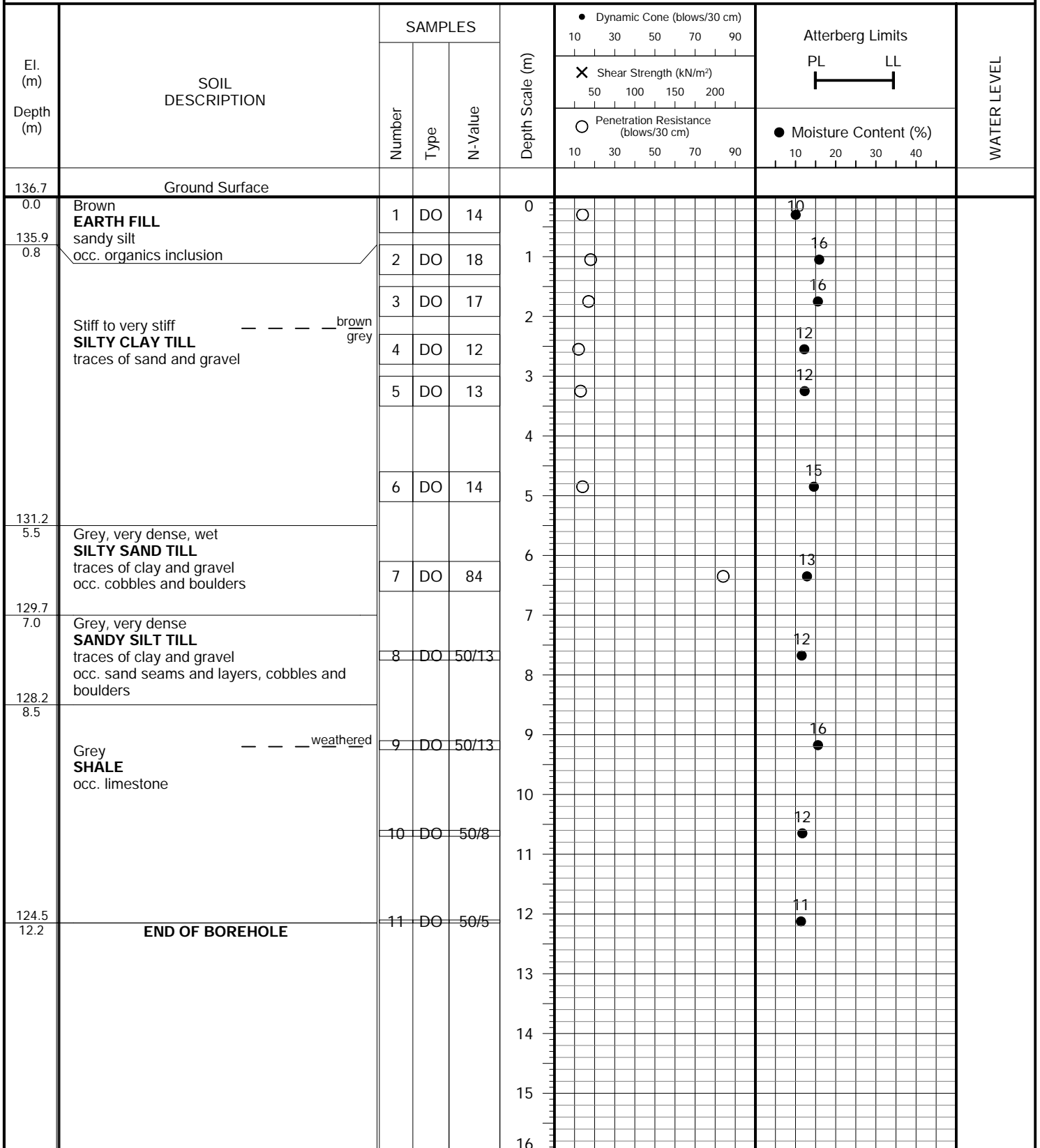


PROJECT DESCRIPTION: Proposed Residential Development with 2 or 3-Level Underground Parking

METHOD OF BORING: Hollow Stem Augers

PROJECT LOCATION: 4100 Ponytail Drive, City of Mississauga

DRILLING DATE: June 11 2025



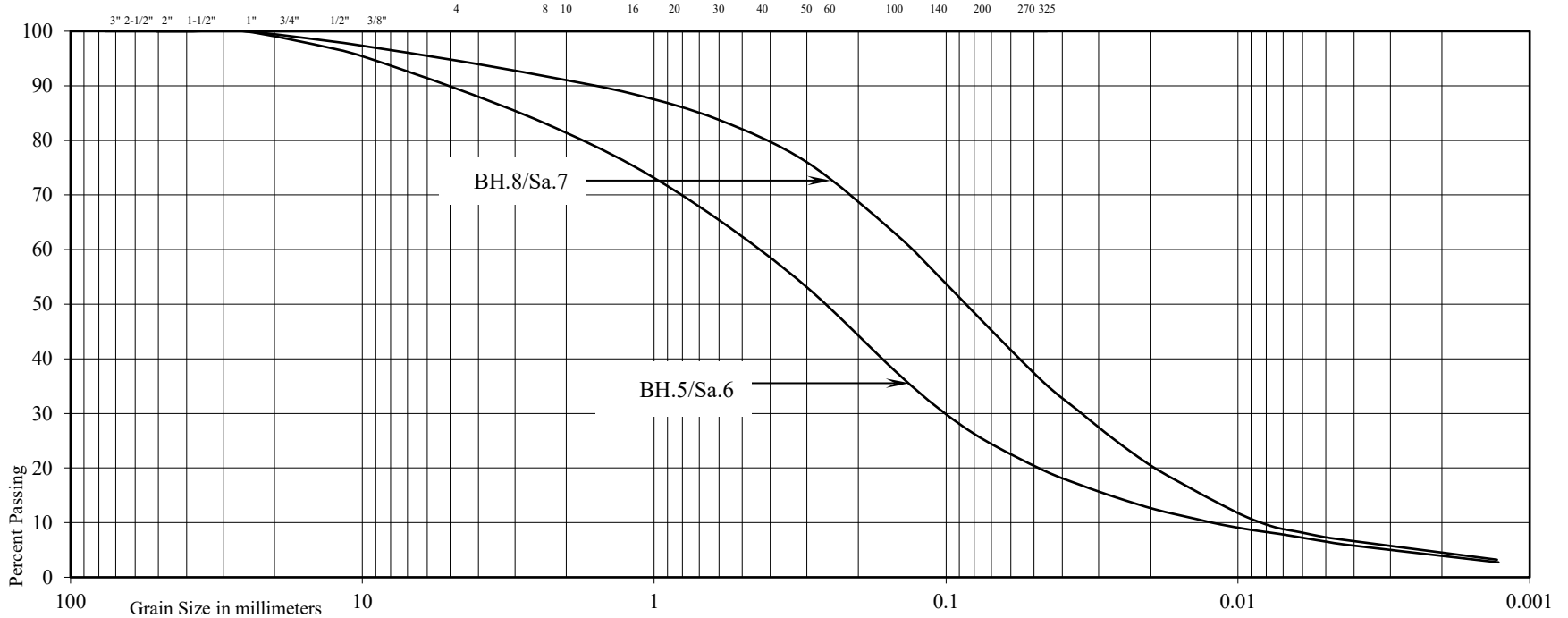


U.S. BUREAU OF SOILS CLASSIFICATION

GRAVEL				SAND				SILT	CLAY
COARSE		FINE		COARSE	MEDIUM	FINE	V. FINE		

UNIFIED SOIL CLASSIFICATION

GRAVEL			SAND				SILT & CLAY
COARSE	FINE		COARSE	MEDIUM	FINE		



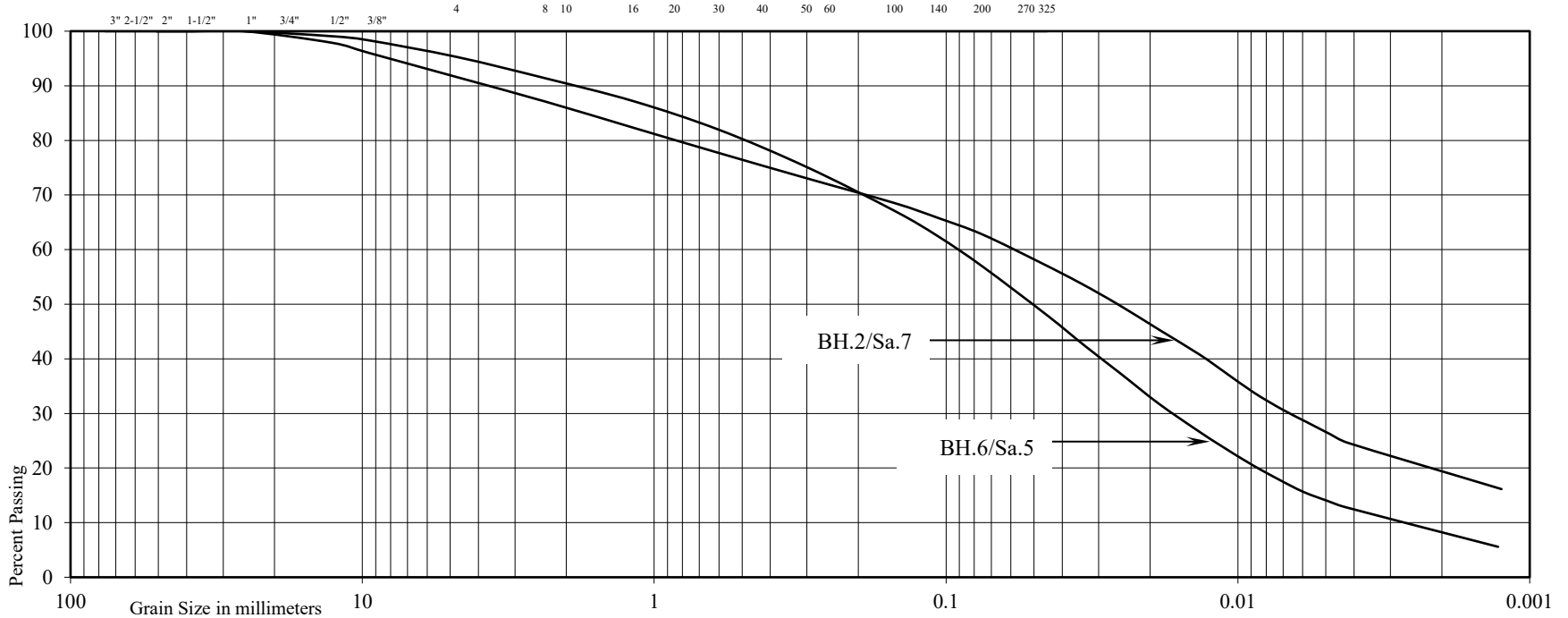


U.S. BUREAU OF SOILS CLASSIFICATION

GRAVEL			SAND				SILT	CLAY
COARSE		FINE	COARSE	MEDIUM	FINE	V. FINE		

UNIFIED SOIL CLASSIFICATION

GRAVEL		SAND			SILT & CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



Project: Proposed Residential Development with 3-Level Underground Parking

Location: South of Rathburn Road East and Ponytrail Drive, City of Mississauga

Borehole No: 2 6
 Sample No: 7 5
 Depth (m): 6.1 3.0
 Elevation (m): 130.7 130.9

	BH./Sa.	2/7	6/5
Liquid Limit (%) =		-	-
Plastic Limit (%) =		-	-
Plasticity Index (%) =		-	-
Moisture Content (%) =		12	14
Estimated Permeability (cm./sec.) =		10 ⁻⁷	10 ⁻⁵

Classification of Sample [& Group Symbol]:	SANDY SILT TILL, sandy, traces of clay and gravel
--	---

Figure: 13



Soil Engineers Ltd.

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APPENDIX B

MECP WELL RECORDS SUMMARY

REFERENCE NO. 2505-W117B

MECP Well Records Summary

WELL ID	MECP* WWR ID	Construction Method	Well Depth (m)**	Well Usage		Static Water Level (m)**	Top of Screen Depth (m)**	Bottom of Screen Depth (m)**	Date Completed
				Final Status	First Use				
1	4902888	Boring	4.6	Water Supply	Irrigation	1.2	-	-	1967-12-05
2	7127525	-	-	Test Hole	Monitoring	-	0.8	1.9	2007-11-29
3	7127525	-	-	Test Hole	Monitoring	-	0.8	1.9	2007-11-29
4	7127525	-	-	Test Hole	Monitoring	-	0.8	1.9	2007-11-29
5	7127525	-	1.8	Test Hole	Monitoring	-	0.8	1.9	2007-11-29
6	7136883	Rotary (Convent.)	7.6	Test Hole	Test Hole	-	5.5	7.6	2009-11-20
7	7223008	Digging	19.8	Observation Wells	Monitoring	-	0.5	19.8	2014-06-04
8	7223009	Digging	2.0	Observation Wells	Monitoring	-	0.5	2.0	2014-06-04
9	7223010	-	-	Abandoned Monitoring and Test	Monitoring	-	-	-	2014-06-04
10	7223011	-	-	Abandoned-Supply	Monitoring	-	-	-	2014-06-04
11	7223012	-	-	Abandoned Monitoring and Test	Monitoring	-	-	-	2014-06-04
12	7259861	-	-	-	-	-	-	-	2015-06-08
13	7281242	Other Method	10.7	Observation Wells	Monitoring	-	6.1	9.1	2016-12-05
14	7281243	Other Method	10.7	Observation Wells	Monitoring	-	5.3	8.4	2016-12-06
15	7281244	Other Method	9.1	Observation Wells	Monitoring	-	5.3	8.4	2016-12-06
16	7282004	Rotary (Convent.)	9.1	Observation Wells	Monitoring	-	7.6	9.1	2017-01-06
17	7282050	Rotary (Convent.)	9.1	Observation Wells	Monitoring	-	7.6	9.1	2017-01-06
18	7282074	Rotary (Convent.)	10.7	Observation Wells	Monitoring	-	9.1	10.7	2017-01-06
19	7282075	Rotary (Convent.)	8.8	Observation Wells	Monitoring	-	7.3	8.8	2017-01-06
20	7282177	-	-	-	-	-	-	-	2016-11-30
21	7337423	-	-	-	-	-	-	-	2018-09-12
22	7347499	-	-	Abandoned-Other	Monitoring	-	-	-	2019-10-03
23	7354356	Direct Push	3.7	Monitoring and Test Hole	Test Hole	-	2.1	3.7	2020-01-06
24	7354357	Direct Push	6.1	Monitoring and Test Hole	Test Hole	-	4.6	6.1	2020-01-06
25	7354358	Direct Push	3.7	Monitoring and Test Hole	Test Hole	-	2.1	3.7	2020-01-06
26	7354359	Other Method	6.1	Monitoring and Test Hole	Test Hole	-	4.6	6.1	2020-01-07
27	7354360	Direct Push	3.7	Monitoring and Test Hole	Test Hole	-	2.1	3.7	2020-01-07

Notes:

*MECP WWID: Ministry of the Environment, Conservation and Parks Water Well Records Identification

**Metres below ground surface



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APPENDIX C

IN-SITU HYDRAULIC CONDUCTIVITY TESTING DETAILS

REFERENCE NO. 2505-W117B

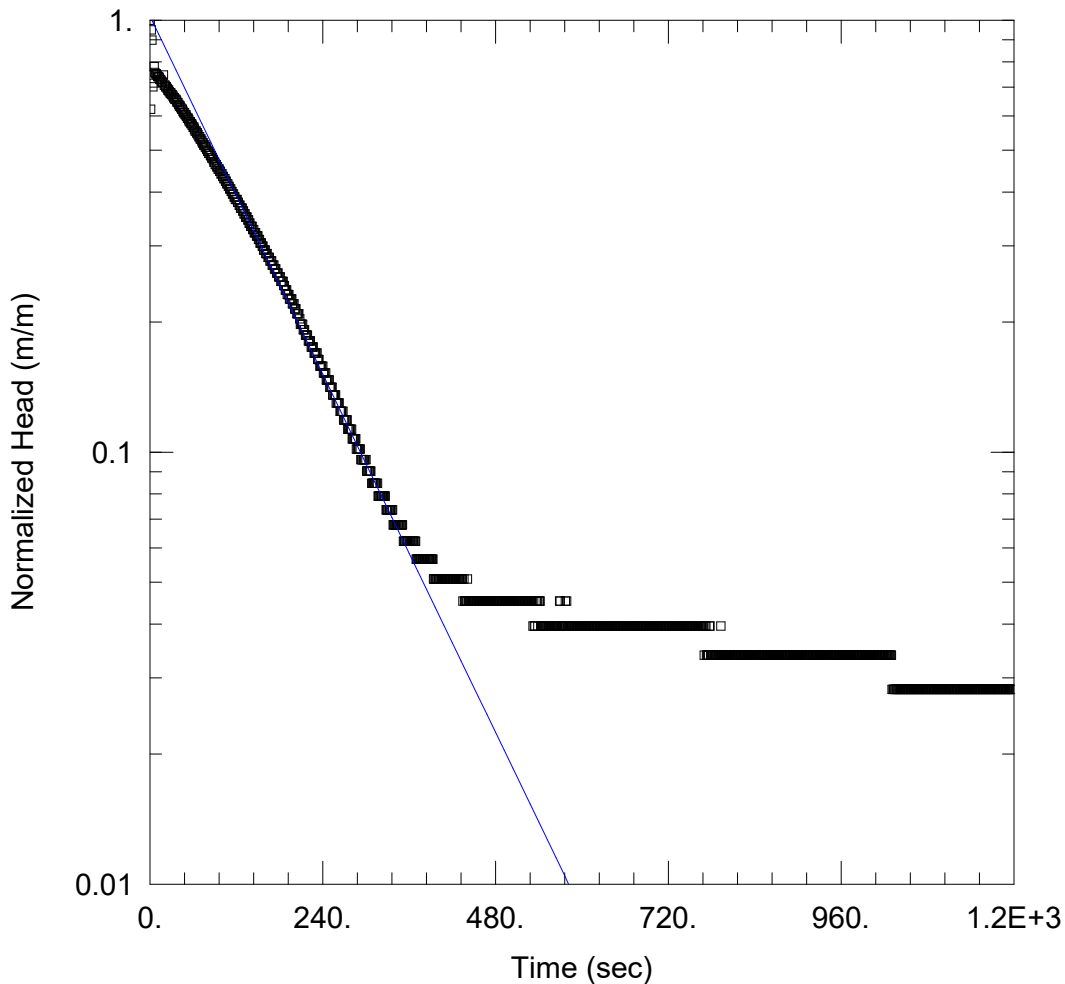
Falling Head SWRT of BH/MW 1D

Prepared By:
Soil Engineers Ltd.

Prepared For:
Forest Park Circle Ltd.

Project:
2505-W117

Location:
4100 Ponytrail Dr., Mississauga



SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

$K = 2.669E-6$ m/sec $y_0 = 0.5425$ m

AQUIFER DATA

Saturated Thickness: 2.9 m Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (BH/MW 1D)

Initial Displacement: 0.531 m

Static Water Column Height: 2.9 m

Total Well Penetration Depth: 2.9 m

Screen Length: 1.5 m

Casing Radius: 0.0254 m

Well Radius: 0.0254 m

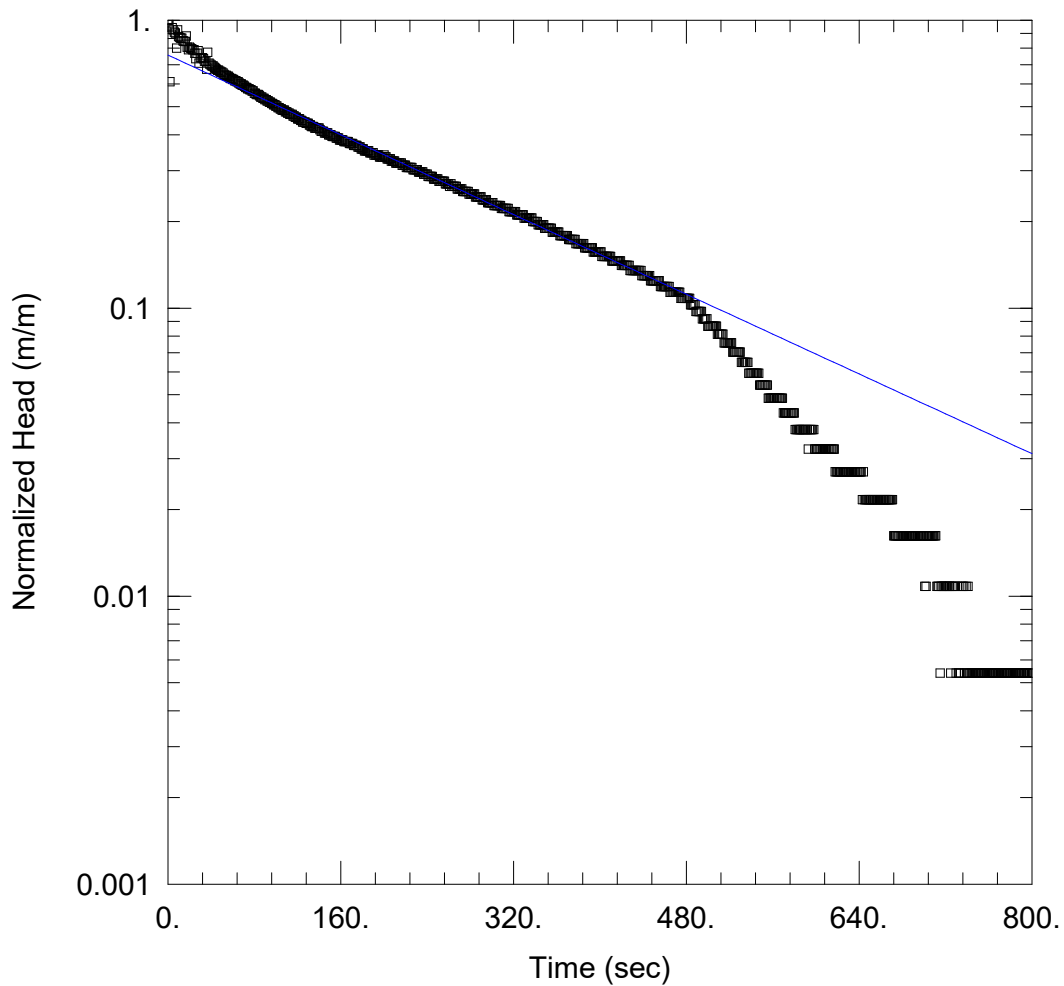
Falling Head SWRT of BH/MW 1S

Prepared By:
Soil Engineers Ltd.

Prepared For:
Forest Park Circle Ltd.

Project:
2505-W117

Location:
4100 Ponytrail Dr., Mississauga



SOLUTION

Aquifer Model: Unconfined
 Solution Method: Bouwer-Rice
 $K = 1.352E-6$ m/sec $y_0 = 0.4196$ m

AQUIFER DATA

Saturated Thickness: 1.3 m Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (BH/MW 1S)

Initial Displacement: 0.555 m
 Static Water Column Height: 1.3 m
 Total Well Penetration Depth: 1.5 m
 Screen Length: 1.5 m
 Casing Radius: 0.0254 m
 Well Radius: 0.0254 m

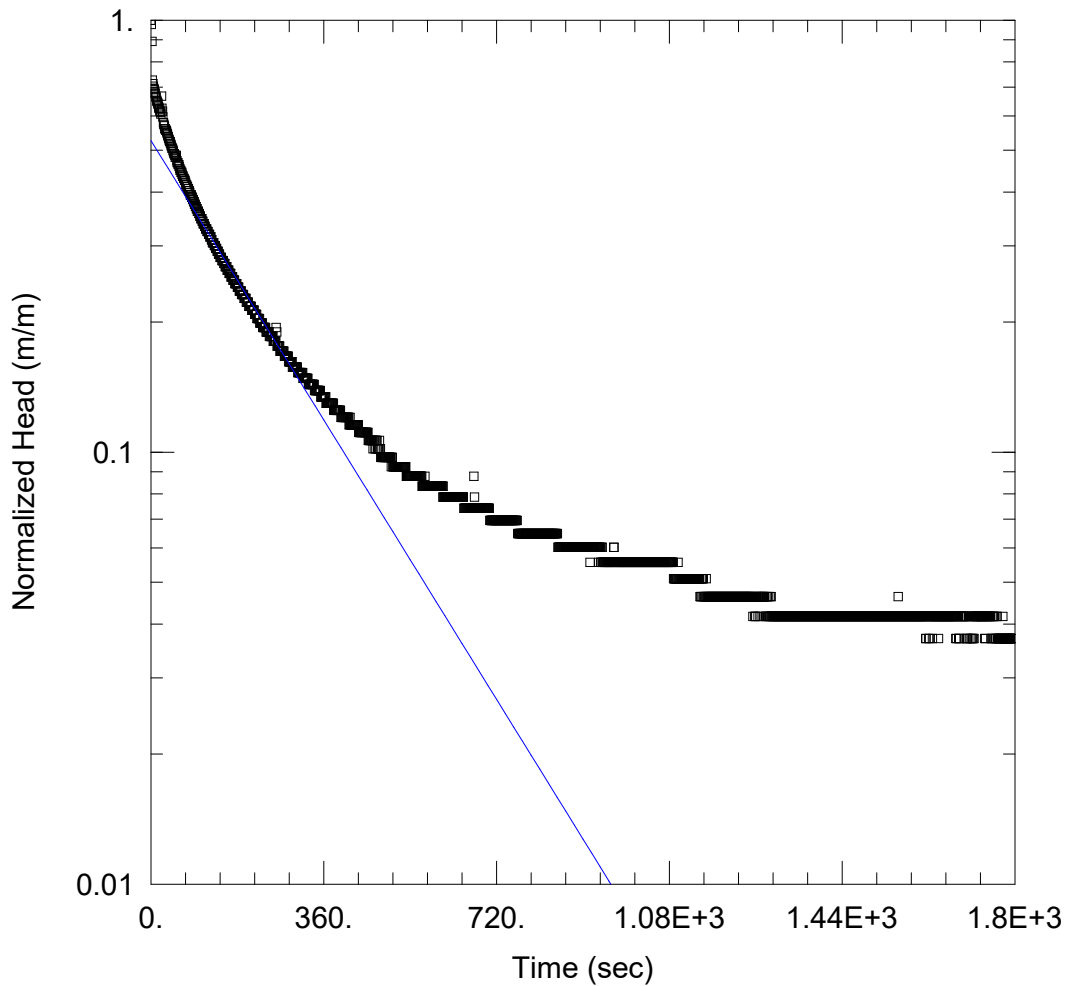
Falling Head SWRT of BH/MW 4

Prepared By:
Soil Engineers Ltd.

Prepared For:
Forest Park Circle Ltd.

Project:
2505-W117

Location:
4100 Ponytrail Dr., Mississauga



SOLUTION

Aquifer Model: Unconfined
 Solution Method: Bouwer-Rice
 $K = 1.63E-6$ m/sec $y_0 = 0.341$ m

AQUIFER DATA

Saturated Thickness: 8.2 m Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (BH/MW 4)

Initial Displacement: 0.648 m
 Static Water Column Height: 8.2 m
 Total Well Penetration Depth: 8.2 m
 Screen Length: 1.5 m
 Casing Radius: 0.0254 m
 Well Radius: 0.0254 m

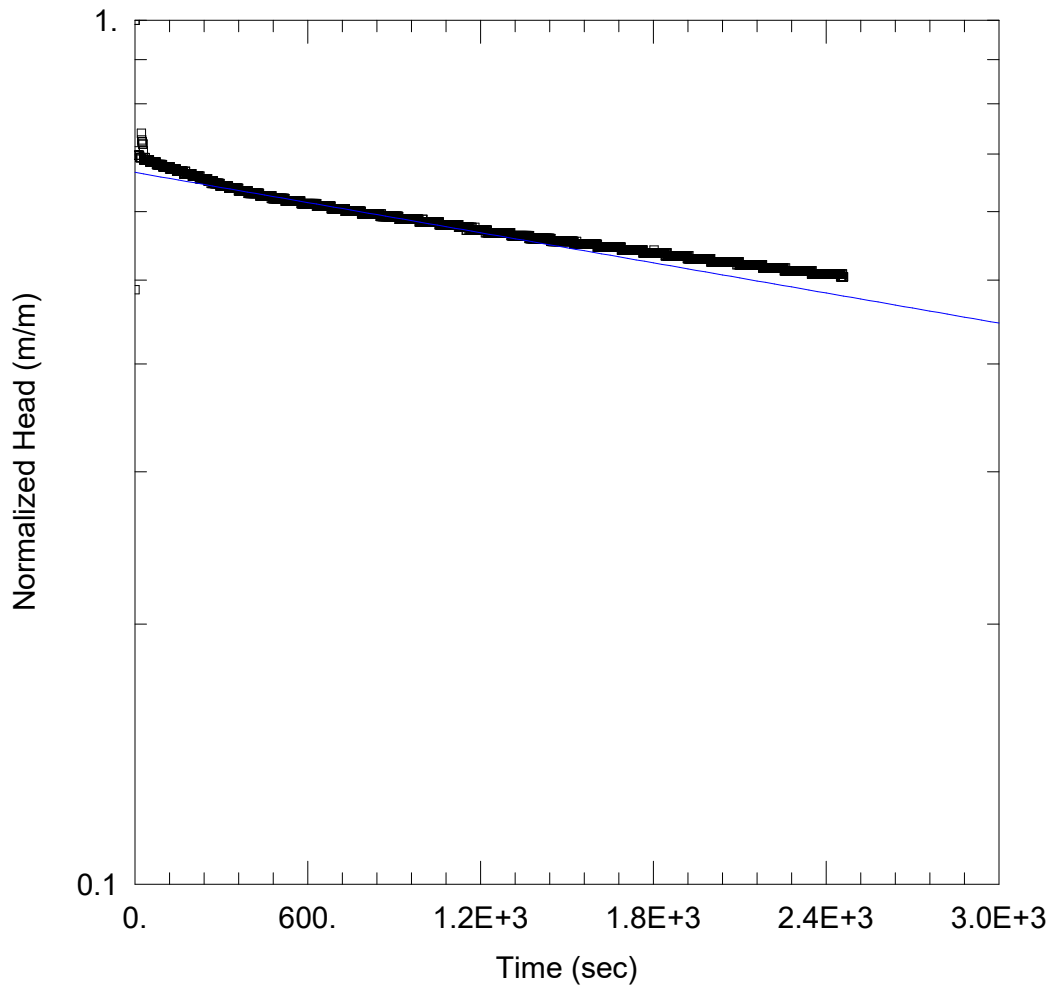
Falling Head SWRT of BH/MW 6D

Prepared By:
Soil Engineers Ltd.

Prepared For:
Forest Park Circle Ltd.

Project:
2505-W117

Location:
4100 Ponytrail Dr., Mississauga



SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

$K = 4.741E-8$ m/sec $y_0 = 0.4758$ m

AQUIFER DATA

Saturated Thickness: 4. m Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (BH/MW 6D)

Initial Displacement: 0.714 m

Static Water Column Height: 4. m

Total Well Penetration Depth: 4. m

Screen Length: 1.5 m

Casing Radius: 0.0254 m

Well Radius: 0.0254 m

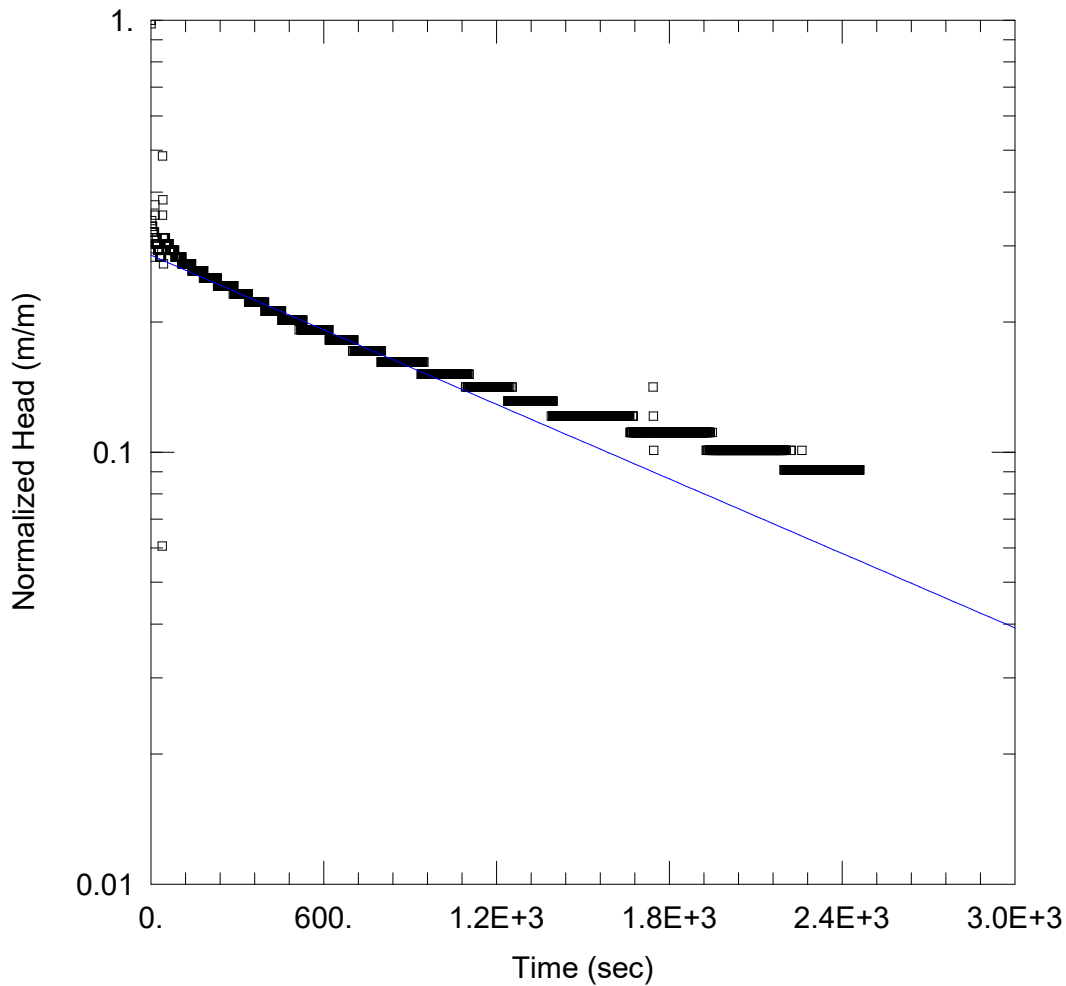
Falling Head SWRT of BH/MW 6S

Prepared By:
Soil Engineers Ltd.

Prepared For:
Forest Park Circle Ltd.

Project:
2505-W117

Location:
4100 Ponytrail Dr., Mississauga



SOLUTION

Aquifer Model: Unconfined
 Solution Method: Bouwer-Rice
 $K = 1.961E-7$ m/sec $y_0 = 0.08478$ m

AQUIFER DATA

Saturated Thickness: 1.5 m Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (BH/MW 6S)

Initial Displacement: 0.297 m
 Static Water Column Height: 1.5 m
 Total Well Penetration Depth: 1.5 m
 Screen Length: 1.5 m
 Casing Radius: 0.0254 m
 Well Radius: 0.0254 m

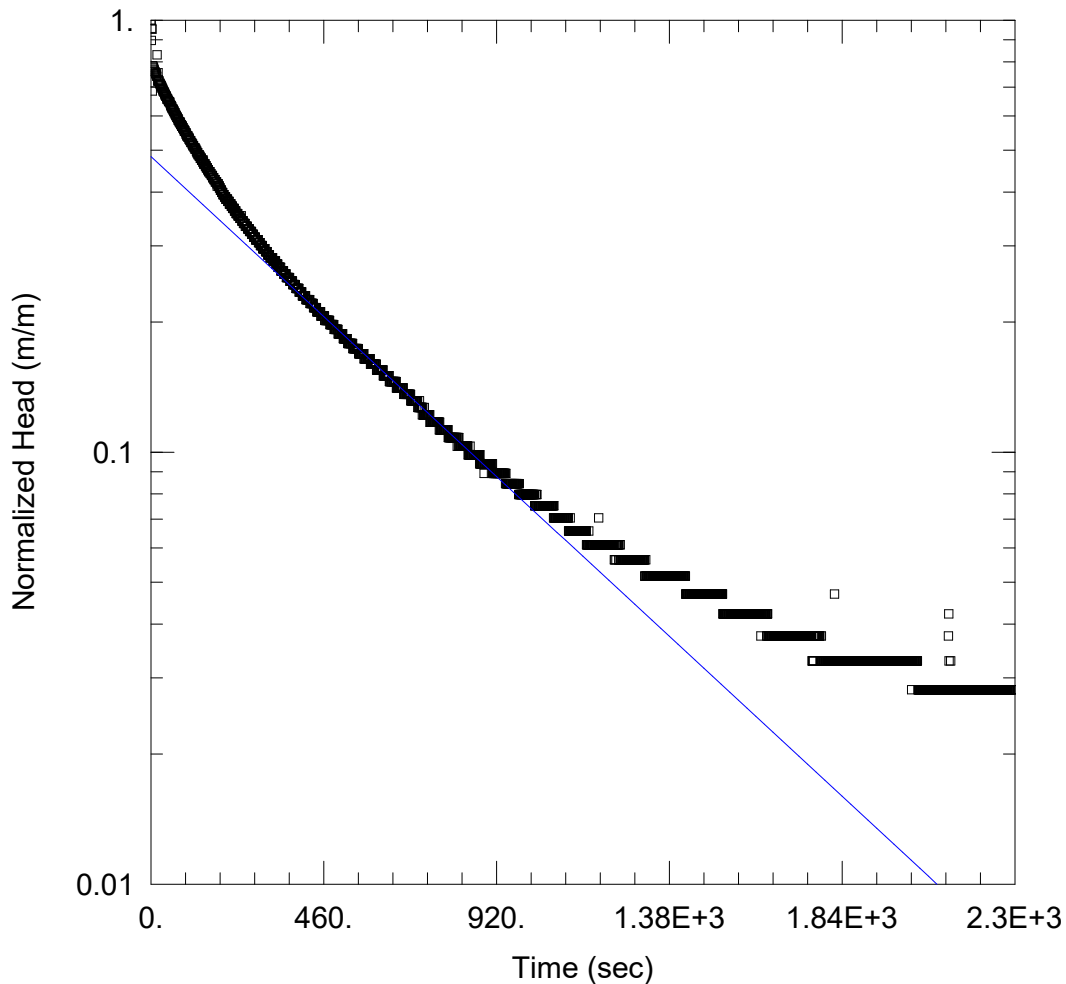
Falling Head SWRT of BH/MW 7D

Prepared By:
Soil Engineers Ltd.

Prepared For:
Forest Park Circle Ltd.

Project:
2505-W117

Location:
4100 Ponytrail Dr., Mississauga



SOLUTION

Aquifer Model: Unconfined
 Solution Method: Bouwer-Rice
 $K = 6.324E-7$ m/sec $y_0 = 0.3086$ m

AQUIFER DATA

Saturated Thickness: 3.2 m Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (BH/MW 7D)

Initial Displacement: 0.639 m
 Static Water Column Height: 3.2 m
 Total Well Penetration Depth: 3.2 m
 Screen Length: 1.5 m
 Casing Radius: 0.0254 m
 Well Radius: 0.0254 m



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APPENDIX D

GROUNDWATER QUALITY TEST RESULTS

REFERENCE NO. 2505-W117B



FINAL REPORT

CA40044-AUG25 R1

2505-W117, South of Rathburn Rd. East and Ponytail Dr. Forest
Park Apartment

Prepared for

Soil Engineers Ltd.

First Page

CLIENT DETAILS		LABORATORY DETAILS	
Client	Soil Engineers Ltd.	Project Specialist	Jill Campbell, B.Sc.,GISAS
Address	90 West Beaver Creek Rd Richmond, ON M1S 3A7. Canada	Laboratory	SGS Canada Inc.
Contact	Daixi Zhang	Address	185 Concession St., Lakefield ON, K0L 2H0
Telephone	437-771-6640	Telephone	2165
Facsimile	416-754-8516	Facsimile	705-652-6365
Email	Daixi.zhang@soilengineersltd.com	Email	jill.campbell@sgs.com
Project	2505-W117, South of Rathburn Rd. East and Ponytail Dr. Fores	SGS Reference	CA40044-AUG25
Order Number		Received	08/06/2025
Samples	Ground Water (1)	Approved	08/13/2025
		Report Number	CA40044-AUG25 R1
		Date Reported	08/15/2025

COMMENTS
<p>RL - SGS Reporting Limit</p> <p>Temperature of Sample upon Receipt: 9 degrees C</p> <p>Cooling Agent Present:yes</p> <p>Custody Seal Present:yes</p> <p>Chain of Custody Number:043703</p>


SIGNATORIES
<p>Jill Campbell, B.Sc.,GISAS</p> 

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QC Summary.....	10-20
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FINAL REPORT

CA40044-AUG25 R1

Client: Soil Engineers Ltd.

Project: 2505-W117, South of Rathburn Rd. East and Ponytail Dr. Forest Parl

Project Manager: Daixi Zhang

Samplers: Amar Deep Regmi

MATRIX: WATER

Sample Number 9

Sample Name BH/MW 6S

Sample Matrix Ground Water

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

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

Sample Date 06/08/2025

Parameter	Units	RL	L1	L2	Result
General Chemistry					
Biochemical Oxygen Demand (BOD5)	mg/L	2	15	300	< 4 †
Total Suspended Solids	mg/L	2	15	350	198
Total Kjeldahl Nitrogen	as N mg/L	0.5		100	< 0.5

Metals and Inorganics

Total Chlorine	mg/L	0.02	1		0.04
Fluoride	mg/L	0.06		10	0.11
Cyanide (total)	mg/L	0.01	0.02	2	< 0.01
Sulphate	mg/L	1		1500	240
Aluminum (total)	mg/L	0.001	1	50	0.082
Antimony (total)	mg/L	0.0009		5	< 0.0009
Arsenic (total)	mg/L	0.0002	0.02	1	0.0004
Cadmium (total)	mg/L	0.000003	0.008	0.7	0.000040
Chromium (total)	mg/L	0.00008	0.08	5	0.00076
Copper (total)	mg/L	0.001	0.04	3	0.002
Cobalt (total)	mg/L	0.000004		5	0.000745
Lead (total)	mg/L	0.00009	0.12	3	0.00010
Manganese (total)	mg/L	0.00001	2	5	0.291
Molybdenum (total)	mg/L	0.0004		5	0.0006
Nickel (total)	mg/L	0.0001	0.08	3	0.0026
Phosphorus (total)	mg/L	0.003	0.4	10	0.012
Selenium (total)	mg/L	0.00004	0.02	1	0.00012



FINAL REPORT

CA40044-AUG25 R1

Client: Soil Engineers Ltd.

Project: 2505-W117, South of Rathburn Rd. East and Ponytail Dr. Forest Park

Project Manager: Daixi Zhang

Samplers: Amar Deep Regmi

MATRIX: WATER

Sample Number 9

Sample Name BH/MW 6S

Sample Matrix Ground Water

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

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

Sample Date 06/08/2025

Parameter	Units	RL	L1	L2	Result
Metals and Inorganics (continued)					
Silver (total)	mg/L	0.00005	0.12	5	< 0.00005
Tin (total)	mg/L	0.00006		5	0.00102
Titanium (total)	mg/L	0.0001		5	0.0020
Zinc (total)	mg/L	0.002	0.2	3	0.013

Microbiology

Ecoli	mpn/100mL	0	200		0
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Nonylphenol and Ethoxylates

Nonylphenol	mg/L	0.001		0.02	0.003
Nonylphenol Ethoxylates	mg/L	0.01		0.2	< 0.01
Nonylphenol diethoxylate	mg/L	0.01			< 0.01
Nonylphenol monoethoxylate	mg/L	0.01			< 0.01

Oil and Grease

Oil & Grease (total)	mg/L	2			< 2
Oil & Grease (animal/vegetable)	mg/L	4		150	< 4
Oil & Grease (mineral/synthetic)	mg/L	4		15	< 4



FINAL REPORT

CA40044-AUG25 R1

Client: Soil Engineers Ltd.

Project: 2505-W117, South of Rathburn Rd. East and Ponytail Dr. Forest Park

Project Manager: Daixi Zhang

Samplers: Amar Deep Regmi

MATRIX: WATER

Sample Number 9

Sample Name BH/MW 6S

Sample Matrix Ground Water

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

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

Sample Date 06/08/2025

Parameter	Units	RL	L1	L2	Result
Other (ORP)					
pH	No unit	0.05	9	10	7.05
Chromium VI	mg/L	0.0002	0.04		< 0.0002
Mercury (total)	mg/L	0.00001	0.0004	0.01	< 0.00001
PAHs					
Benzo(b+j)fluoranthene	mg/L	0.0001			< 0.0001
PCBs					
Polychlorinated Biphenyls (PCBs) - Total	mg/L	0.0001	0.0004	0.001	< 0.0001
Phenols					
4AAP-Phenolics	mg/L	0.001	0.008	1	0.005
SVOCs					
di-n-Butyl Phthalate	mg/L	0.002		0.08	< 0.002
Bis(2-ethylhexyl)phthalate	mg/L	0.002		0.012	< 0.002
PAHs (Total)	mg/L		0.002		< 0.001
Perylene	mg/L	0.0005			< 0.0005



FINAL REPORT

CA40044-AUG25 R1

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MATRIX: WATER

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

Sample Date 06/08/2025

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



FINAL REPORT

CA40044-AUG25 R1

Client: Soil Engineers Ltd.

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Sample Number 9

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

Sample Date 06/08/2025

Parameter	Units	RL	L1	L2	Result
VOCs					
Chloroform	mg/L	0.0005		0.04	< 0.0005
1,2-Dichlorobenzene	mg/L	0.0005	0.0056	0.05	< 0.0005
1,4-Dichlorobenzene	mg/L	0.0005	0.0068	0.08	< 0.0005
cis-1,2-Dichloroethene	mg/L	0.0005		4	< 0.0005
trans-1,3-Dichloropropene	mg/L	0.0005		0.14	< 0.0005
Methylene Chloride	mg/L	0.0005		2	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	0.0005	0.017	1.4	< 0.0005
1,1,1,2-Tetrachloroethane	mg/L	0.0005	0.017		< 0.0005
Methyl ethyl ketone	mg/L	0.02		8	< 0.02
Styrene	mg/L	0.0005		0.2	< 0.0005
Tetrachloroethylene (perchloroethylene)	mg/L	0.0005	0.0044	1	< 0.0005
Trichloroethylene	mg/L	0.0005	0.0076	0.4	< 0.0005

VOCs - BTEX

Benzene	mg/L	0.0005	0.002	0.01	< 0.0005
Ethylbenzene	mg/L	0.0005	0.002	0.16	< 0.0005
Toluene	mg/L	0.0005	0.002	0.27	< 0.0005
Xylene (total)	mg/L	0.0005	0.0044	1.4	< 0.0005
m-p-xylene	mg/L	0.0005			< 0.0005
o-xylene	mg/L	0.0005			< 0.0005

EXCEEDANCE SUMMARY

Parameter	Method	Units	Result	SANSEW / WATER	SANSEW / WATER
				BL_0046_2022	BL_53_2010
				/ - - Mississauga Sewer Use ByLaw - Storm Sewer Discharge - BL_0046_2022	/ - - Peel Sewer Use ByLaw - Sanitary Sewer Discharge - BL_53_2010
				L1	L2

BH/MW 6S

Total Suspended Solids	SM 2540D	mg/L	198	15
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FINAL REPORT

CA40044-AUG25 R1

QC SUMMARY

Anions by discrete analyzer

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

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Sulphate	DIO5008-AUG25	mg/L	1	<2	ND	20	104	80	120	103	75	125

Biochemical Oxygen Demand

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

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Biochemical Oxygen Demand (BOD5)	BOD0007-AUG25	mg/L	2	< 2	4	30	91	70	130	NV	70	130

Chlorine

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

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Total Chlorine	EWL0087-AUG25	mg/L	0.02	< 0.02	ND	20	98	90	110	NA		



FINAL REPORT

CA40044-AUG25 R1

QC SUMMARY

Cyanide by SFA

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

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Cyanide (total)	SKA0063-AUG25	mg/L	0.01	<0.01	ND	10	94	90	110	NV	75	125

Fluoride by Specific Ion Electrode

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

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Fluoride	EWL0139-AUG25	mg/L	0.06	<0.06	ND	10	100	90	110	102	75	125

Hexavalent Chromium by SFA

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

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Chromium VI	SKA0068-AUG25	mg/L	0.0002	<0.0002	2	20	98	80	120	103	75	125



FINAL REPORT

CA40044-AUG25 R1

QC SUMMARY

Mercury by CVAAS

Method: EPA 7471A/SM 3112B | Internal ref.: ME-CA-IENVISPE-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Mercury (total)	EHG0014-AUG25	mg/L	0.00001	< 0.00001	ND	20	114	80	120	130	70	130

QC SUMMARY

Metals in aqueous samples - ICP-MS

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

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Silver (total)	EMS0099-AUG25	mg/L	0.00005	<0.00005	ND	20	103	90	110	75	70	130
Aluminum (total)	EMS0099-AUG25	mg/L	0.001	<0.001	11	20	93	90	110	90	70	130
Arsenic (total)	EMS0099-AUG25	mg/L	0.0002	<0.0002	3	20	97	90	110	105	70	130
Cadmium (total)	EMS0099-AUG25	mg/L	0.000003	<0.000003	8	20	98	90	110	98	70	130
Cobalt (total)	EMS0099-AUG25	mg/L	0.000004	<0.000004	1	20	93	90	110	96	70	130
Chromium (total)	EMS0099-AUG25	mg/L	0.00008	<0.00008	4	20	97	90	110	118	70	130
Copper (total)	EMS0099-AUG25	mg/L	0.001	<0.001	4	20	96	90	110	97	70	130
Manganese (total)	EMS0099-AUG25	mg/L	0.00001	<0.00001	0	20	96	90	110	93	70	130
Molybdenum (total)	EMS0099-AUG25	mg/L	0.0004	<0.0004	0	20	98	90	110	99	70	130
Nickel (total)	EMS0099-AUG25	mg/L	0.0001	<0.0001	0	20	96	90	110	104	70	130
Lead (total)	EMS0099-AUG25	mg/L	0.00009	<0.00009	1	20	93	90	110	89	70	130
Phosphorus (total)	EMS0099-AUG25	mg/L	0.003	<0.003	2	20	98	90	110	NV	70	130
Antimony (total)	EMS0099-AUG25	mg/L	0.0009	<0.0009	ND	20	100	90	110	110	70	130
Selenium (total)	EMS0099-AUG25	mg/L	0.00004	<0.00004	4	20	95	90	110	94	70	130
Tin (total)	EMS0099-AUG25	mg/L	0.00006	<0.00006	17	20	96	90	110	NV	70	130
Titanium (total)	EMS0099-AUG25	mg/L	0.0001	<0.0001	2	20	96	90	110	NV	70	130
Zinc (total)	EMS0099-AUG25	mg/L	0.002	<0.002	1	20	95	90	110	98	70	130



FINAL REPORT

CA40044-AUG25 R1

QC SUMMARY

Microbiology

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

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Ecoli	BAC9084-AUG25	mpn/100mL	-	ACCEPTED	ACCEPTED							

Nonylphenol and Ethoxylates

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

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Nonylphenol diethoxylate	GCM0081-AUG25	mg/L	0.01	<0.01			104	55	120			
Nonylphenol monoethoxylate	GCM0081-AUG25	mg/L	0.01	<0.01			105	55	120			
Nonylphenol	GCM0081-AUG25	mg/L	0.001	<0.001			104	55	120			

QC SUMMARY

Oil & Grease

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

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Oil & Grease (total)	GCM0088-AUG25	mg/L	2	<2	NSS	20	103	75	125			

Oil & Grease-AV/MS

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

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Oil & Grease (animal/vegetable)	GCM0088-AUG25	mg/L	4	< 4	NSS	20	NA	70	130			
Oil & Grease (mineral/synthetic)	GCM0088-AUG25	mg/L	4	< 4	NSS	20	NA	70	130			

pH

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

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
pH	EWL0109-AUG25	No unit	0.05	NA	0		100			NA		



FINAL REPORT

CA40044-AUG25 R1

QC SUMMARY

Phenols by SFA

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

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
4AAP-Phenolics	SKA0105-AUG25	mg/L	0.001	<0.001	9	10	99	80	120	98	75	125

Polychlorinated Biphenyls

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

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Polychlorinated Biphenyls (PCBs) - Total	GCM0130-AUG25	mg/L	0.0001	<0.0001	NSS	30	96	60	140	NSS	60	140

QC SUMMARY

Semi-Volatile Organics

Method: EPA 3510C/8270D | Internal ref.: ME-CA-IENVIGC-LAK-AN-005

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
7Hdibenzo(c,g)carbazole	GCM0090-AUG25	mg/L	0.0001	< 0.0001	NSS	30	97	50	140	NSS	50	140
Anthracene	GCM0090-AUG25	mg/L	0.0001	< 0.0001	NSS	30	88	50	140	NSS	50	140
Benzo(a)anthracene	GCM0090-AUG25	mg/L	0.0001	< 0.0001	NSS	30	90	50	140	NSS	50	140
Benzo(a)pyrene	GCM0090-AUG25	mg/L	0.0001	< 0.0001	NSS	30	86	50	140	NSS	50	140
Benzo(b+j)fluoranthene	GCM0090-AUG25	mg/L	0.0001	< 0.0001	NSS	30	105	50	140	NSS	50	140
Benzo(e)pyrene	GCM0090-AUG25	mg/L	0.0001	< 0.0001	NSS	30	97	50	140	NSS	50	140
Benzo(ghi)perylene	GCM0090-AUG25	mg/L	0.0002	< 0.0002	NSS	30	92	50	140	NSS	50	140
Benzo(k)fluoranthene	GCM0090-AUG25	mg/L	0.0001	< 0.0001	NSS	30	73	50	140	NSS	50	140
Bis(2-ethylhexyl)phthalate	GCM0090-AUG25	mg/L	0.002	< 0.002	NSS	30	101	50	140	NSS	50	140
Chrysene	GCM0090-AUG25	mg/L	0.0001	< 0.0001	NSS	30	92	50	140	NSS	50	140
di-n-Butyl Phthalate	GCM0090-AUG25	mg/L	0.002	< 0.002	NSS	30	100	50	140	NSS	50	140
Dibenzo(a,h)anthracene	GCM0090-AUG25	mg/L	0.0001	< 0.0001	NSS	30	93	50	140	NSS	50	140
Dibenzo(a,i)pyrene	GCM0090-AUG25	mg/L	0.0001	< 0.0001	NSS	30	93	50	140	NSS	50	140
Dibenzo(a,j)acridine	GCM0090-AUG25	mg/L	0.0001	< 0.0001	NSS	30	94	50	140	NSS	50	140
Fluoranthene	GCM0090-AUG25	mg/L	0.0001	< 0.0001	NSS	30	92	50	140	NSS	50	140
Indeno(1,2,3-cd)pyrene	GCM0090-AUG25	mg/L	0.0002	< 0.0002	NSS	30	93	50	140	NSS	50	140
Perylene	GCM0090-AUG25	mg/L	0.0005	< 0.0005	NSS	30	90	50	140	NSS	50	140
Phenanthrene	GCM0090-AUG25	mg/L	0.0001	< 0.0001	NSS	30	88	50	140	NSS	50	140
Pyrene	GCM0090-AUG25	mg/L	0.0001	< 0.0001	NSS	30	91	50	140	NSS	50	140



FINAL REPORT

CA40044-AUG25 R1

QC SUMMARY

Suspended Solids

Method: SM 2540D | Internal ref.: ME-CA-IENVIEWL-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Total Suspended Solids	EWL0101-AUG25	mg/L	2	< 2	0	10	99	90	110	NA		

Total Nitrogen

Method: SM 4500-N C/4500-NO3- F | Internal ref.: ME-CA-IENVISFA-LAK-AN-002

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Total Kjeldahl Nitrogen	SKA0090-AUG25	as N mg/L	0.5	<0.5	ND	10	101	90	110	90	75	125

QC SUMMARY

Volatile Organics

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

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
1,1,1,2-Tetrachloroethane	GCM0087-AUG25	mg/L	0.0005	<0.0005	ND	30	98	60	130	100	50	140
1,1,2,2-Tetrachloroethane	GCM0087-AUG25	mg/L	0.0005	<0.0005	ND	30	95	60	130	103	50	140
1,2-Dichlorobenzene	GCM0087-AUG25	mg/L	0.0005	<0.0005	ND	30	99	60	130	103	50	140
1,4-Dichlorobenzene	GCM0087-AUG25	mg/L	0.0005	<0.0005	ND	30	100	60	130	103	50	140
Benzene	GCM0087-AUG25	mg/L	0.0005	<0.0005	ND	30	109	60	130	103	50	140
Chloroform	GCM0087-AUG25	mg/L	0.0005	<0.0005	ND	30	108	60	130	101	50	140
cis-1,2-Dichloroethene	GCM0087-AUG25	mg/L	0.0005	<0.0005	ND	30	109	60	130	103	50	140
Ethylbenzene	GCM0087-AUG25	mg/L	0.0005	<0.0005	ND	30	103	60	130	104	50	140
m-p-xylene	GCM0087-AUG25	mg/L	0.0005	<0.0005	ND	30	103	60	130	105	50	140
Methyl ethyl ketone	GCM0087-AUG25	mg/L	0.02	<0.02	ND	30	95	50	140	99	50	140
Methylene Chloride	GCM0087-AUG25	mg/L	0.0005	<0.0005	ND	30	110	60	130	101	50	140
o-xylene	GCM0087-AUG25	mg/L	0.0005	<0.0005	ND	30	105	60	130	107	50	140
Styrene	GCM0087-AUG25	mg/L	0.0005	<0.0005	ND	30	105	60	130	107	50	140
Tetrachloroethylene (perchloroethylene)	GCM0087-AUG25	mg/L	0.0005	<0.0005	ND	30	107	60	130	104	50	140
Toluene	GCM0087-AUG25	mg/L	0.0005	<0.0005	ND	30	106	60	130	102	50	140
trans-1,3-Dichloropropene	GCM0087-AUG25	mg/L	0.0005	<0.0005	ND	30	106	60	130	108	50	140
Trichloroethylene	GCM0087-AUG25	mg/L	0.0005	<0.0005	ND	30	103	60	130	100	50	140

QC SUMMARY

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

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

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

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

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

RL: Reporting limit

RPD: Relative percent difference

AC: Acceptance criteria

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

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

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

LEGEND

FOOTNOTES

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

Results relate only to the sample tested.

Data reported represent the sample as submitted to SGS. Solid samples expressed on a dry weight basis.

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

Analysis conducted on samples submitted pursuant to or as part of Reg. 153/04, are in accordance to the "Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act and Excess Soil Quality" published by the Ministry and dated March 9, 2004 as amended.

SGS provides criteria information (such as regulatory or guideline limits and summary of limit exceedances) as a service. Every attempt is made to ensure the criteria information in this report is accurate and current, however, it is not guaranteed. Comparison to the most current criteria is the responsibility of the client and SGS assumes no responsibility for the accuracy of the criteria levels indicated.

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

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The Client's attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any other holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Reproduction of this analytical report in full or in part is prohibited.

This report supersedes all previous versions.

-- End of Analytical Report --

Request for Laboratory Services and CHAIN OF CUSTODY

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

Received By: Abneer (mm/dd/yy)
 Received Date: 08/06/25
 Received Time: 13:20 (hr : min)

Received By (signature): AD
 Custody Seal Present: Yes No
 Cooling Agent Present: Yes No
 Temperature Upon Receipt (°C): 19.5

Company: Soil Engineers Ltd.
 Contact: daixi@soilengineers.com
 Address: 90 West Beaver Creek Rd. Richmond Hill
 Phone: 437-734-0430
 Fax: daixi.zhang@soilengineers.com
 Email: engineers@soilengineers.com

Quotation #: 2505-W117
 Project #: 2505-W117
 P.O. #: South of Rathburn Rd.
 Site Location/ID: East and Poytrai Dr. Forest Hills

Turnaround Time (TAT) REQUIRED: 5-7 days
 Regular TAT (5-7 days) 1 Day 2 Days 3 Days 4 Days
 Client Regular TAT Regular TAT (5-7 days) 1 Day 2 Days 3 Days 4 Days
 RUSH TAT (Additional Charges May Apply): 1 Day 2 Days 3 Days 4 Days
 PLEASE CONFIRM RUSH FEASIBILITY WITH SGS REPRESENTATIVE PRIOR TO SUBMISSION

INVOICE INFORMATION
 Same as Report Information
 Company: _____
 Contact: _____
 Address: _____
 Phone: _____
 Email: _____

LAB LIMS #: _____
 TAT's are quoted in business days (exclude statutory holidays & weekends) - samples received after 6pm or on weekends: TAT begins next business day
 Miss: 519-672-0361

NOTE: DRINKING (POTABLE) WATER SAMPLES FOR HUMAN CONSUMPTION MUST BE SUBMITTED WITH SGS DRINKING WATER CHAIN OF CUSTODY

REGULATIONS
 O.Reg 153/04 O.Reg 406/19
 Table 1 Res/Park Soil Texture: Coarse Fine
 Table 2 Ind/Com Other: Medium/Fine
 Table 3 Agri/Other Other: Medium/Fine
 Table 4 Appx. Other: Medium/Fine
 Soil Volume <350m³ >350m³

REGULATIONS (RSC)
 RECORD OF SITE CONDITION (RSC) YES NO
 Other Regulations: Reg 347/558 (3 Day min TAT) PWQO MMER Other:
 Sanitary
 Storm
 Municipality: MISSISSAUGA

SEWER BY-LAW
 Sewer By-Law: Sanitary
 Storm
 Municipality: MISSISSAUGA

ANALYSIS REQUESTED
 Field Filtered (Y/N)
 Metals & Inorganics (incl CrVI, CN, Hg, Pb, (B)(HWS), EC, SAR-soil)
 Full Metals Suite (incl Cr, Cu, Pb, Ni, Se, Ag, Tl, U, V, Zn)
 ICP Metals only (Sb, Ba, Be, B, Cd, Cr, Co, Cu, Pb, Mo, Ni, Se, Ag, Tl, U, V, Zn)
 PAHs only
 SVOCs (all incl PAHs, ABNs, CPS)
 PCBs (Total) Aroclor
 F1-F4 + BTEX
 F1-F4 only
 VOCs (incl BTEX)
 BTEX only
 Pesticides (Organochlorine or specify other)
 Other (please specify) _____

SAMPLE IDENTIFICATION	DATE SAMPLED	TIME SAMPLED	# OF BOTTLES	MATRIX	SPLP TCLP		Other (please specify)	
					Specify tests	Specify tests	Specify tests	Specify tests
1 BHMW 6S	8/6/25	10:45	21	GW	<input type="checkbox"/> Metals <input type="checkbox"/> VOC <input type="checkbox"/> PCB <input type="checkbox"/> Biopl <input type="checkbox"/> ABN <input type="checkbox"/> Light	<input type="checkbox"/> Metals <input type="checkbox"/> VOC <input type="checkbox"/> PCB <input type="checkbox"/> Biopl <input type="checkbox"/> ABN <input type="checkbox"/> Light	<input type="checkbox"/> Metals <input type="checkbox"/> VOC <input type="checkbox"/> PCB <input type="checkbox"/> Biopl <input type="checkbox"/> ABN <input type="checkbox"/> Light	<input type="checkbox"/> Metals <input type="checkbox"/> VOC <input type="checkbox"/> PCB <input type="checkbox"/> Biopl <input type="checkbox"/> ABN <input type="checkbox"/> Light
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								

COMMENTS: Analysis for City of Missauga Storm and Peel Region Sanitary, and storm sewer Use. By-Law.

Observations/Comments/Special Instructions
 Sampled By (NAME): Amar Deep Ragmi Signature: AD
 Relinquished by (NAME): Amar Deep Ragmi Signature: AD
 Date of Issue: 06 SEP 2024
 Note: Submission of samples to SGS is acknowledgement that you have been provided direction on sample collection/handling and transportation of samples. (2) Submission of samples to SGS is considered authorization for completion of work. Signatures may appear on this form or be retained on file in the contract, or in an alternative format (e.g. shipping documents). (3) Results may be sent by email to an unlimited number of addresses for no additional cost. Fax is available upon request. This document is issued by the Company under its General Conditions of Service accessible at http://www.sgs.com/terms_and_conditions.htm. (Printed copies are available upon request.) Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.



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FINAL REPORT

CA40044-AUG25 R1

2505-W117, South of Rathburn Rd. East and Ponytail Dr. Forest
Park Apartment

Prepared for

Soil Engineers Ltd.

First Page

CLIENT DETAILS

Client Soil Engineers Ltd.
 Address 90 West Beaver Creek Rd
 Richmond, ON
 M1S 3A7, Canada
 Contact Daixi Zhang
 Telephone 437-771-6640
 Facsimile 416-754-8516
 Email Daixi.zhang@soilengineersltd.com
 Works #
 Project 2505-W117, South of Rathburn Rd. East and Ponytail Dr. Fores
 Reference
 Batch
 Samples WATER (1)

LABORATORY DETAILS

Project Specialist Jill Campbell, B.Sc.,GISAS
 Laboratory SGS Canada Inc.
 Address 185 Concession St., Lakefield ON, K0L 2H0
 Telephone 2165
 Facsimile 705-652-6365
 Email jill.campbell@sgs.com
 SGS Reference CA40044-AUG25
 Received 2025-08-06
 Approved 08/13/2025
 Report Number CA40044-AUG25 R1
 Date Reported 11/10/2025

COMMENTS

RL - SGS Reporting Limit

Temperature of Sample upon Receipt: 9 degrees C

Cooling Agent Present:yes

Custody Seal Present:yes

Chain of Custody Number:043703

SIGNATORIES

Jill Campbell, B.Sc.,GISAS



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FINAL REPORT

CA40044-AUG25 R1

Client: Soil Engineers Ltd.

Project: 2505-W117, South of Rathburn Rd. East and Ponytail Dr. Forest Parl

Project Manager: Daixi Zhang

Samplers: Amar Deep Regmi

MATRIX: WATER

Sample Number 9

Sample Name BH/MW 6S

Sample Matrix Ground Water

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

Sample Date 2025-08-06 00:00

Parameter	Units	RL	L1	Result
General Chemistry				
Biochemical Oxygen Demand (BOD5)	mg/L	2	15	< 4 †
Total Suspended Solids	mg/L	2	15	198
Total Kjeldahl Nitrogen	as N mg/L	0.5		< 0.5
Metals and Inorganics				
Total Chlorine	mg/L	0.02	1	0.04
Fluoride	mg/L	0.06		0.11
Cyanide (total)	mg/L	0.01	0.02	< 0.01
Sulphate	mg/L	1		240
Aluminum (total)	mg/L	0.001	1	0.082
Antimony (total)	mg/L	0.0009		< 0.0009
Arsenic (total)	mg/L	0.0002	0.02	0.0004
Cadmium (total)	mg/L	0.000003	0.008	0.000040
Chromium (total)	mg/L	0.00008	0.08	0.00076
Copper (total)	mg/L	0.001	0.04	0.002
Cobalt (total)	mg/L	0.000004		0.000745
Lead (total)	mg/L	0.00009	0.12	0.00010
Manganese (total)	mg/L	0.00001	2	0.291
Molybdenum (total)	mg/L	0.0004		0.0006
Nickel (total)	mg/L	0.0001	0.08	0.0026
Phosphorus (total)	mg/L	0.003	0.4	0.012
Selenium (total)	mg/L	0.00004	0.02	0.00012



FINAL REPORT

CA40044-AUG25 R1

Client: Soil Engineers Ltd.

Project: 2505-W117, South of Rathburn Rd. East and Ponytail Dr. Forest Park

Project Manager: Daixi Zhang

Samplers: Amar Deep Regmi

MATRIX: WATER

Sample Number 9

Sample Name BH/MW 6S

Sample Matrix Ground Water

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

Sample Date 2025-08-06 00:00

Parameter	Units	RL	L1	Result
Metals and Inorganics (continued)				
Silver (total)	mg/L	0.00005	0.12	< 0.00005
Tin (total)	mg/L	0.00006		0.00102
Titanium (total)	mg/L	0.0001		0.0020
Zinc (total)	mg/L	0.002	0.2	0.013
Microbiology				
Ecoli	mpn/100mL	0	200	0
Nonylphenol and Ethoxylates				
Nonylphenol	mg/L	0.001		0.003
Nonylphenol Ethoxylates	mg/L	0.01		< 0.01
Nonylphenol diethoxylate	mg/L	0.01		< 0.01
Nonylphenol monoethoxylate	mg/L	0.01		< 0.01
Oil and Grease				
Oil & Grease (total)	mg/L	2		< 2
Oil & Grease (animal/vegetable)	mg/L	4		< 4
Oil & Grease (mineral/synthetic)	mg/L	4		< 4



FINAL REPORT

CA40044-AUG25 R1

Client: Soil Engineers Ltd.

Project: 2505-W117, South of Rathburn Rd. East and Ponytail Dr. Forest Park

Project Manager: Daixi Zhang

Samplers: Amar Deep Regmi

MATRIX: WATER

Sample Number 9

Sample Name BH/MW 6S

Sample Matrix Ground Water

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

Sample Date 2025-08-06 00:00

Parameter	Units	RL	L1	Result
Other (ORP)				
pH	No unit	0.05	9	7.05
Chromium VI	mg/L	0.0002	0.04	< 0.0002
Mercury (total)	mg/L	0.00001	0.0004	< 0.00001
PAHs				
Benzo(b+j)fluoranthene	mg/L	0.0001		< 0.0001
PCBs				
Polychlorinated Biphenyls (PCBs) - Total	mg/L	0.0001	0.0004	< 0.0001
Phenols				
4AAP-Phenolics	mg/L	0.001	0.008	0.005
SVOCs				
di-n-Butyl Phthalate	mg/L	0.002		< 0.002
Bis(2-ethylhexyl)phthalate	mg/L	0.002		< 0.002
PAHs (Total)	mg/L		0.002	< 0.001
Perylene	mg/L	0.0005		< 0.0005



FINAL REPORT

CA40044-AUG25 R1

Client: Soil Engineers Ltd.

Project: 2505-W117, South of Rathburn Rd. East and Ponytail Dr. Forest Parl

Project Manager: Daixi Zhang

Samplers: Amar Deep Regmi

MATRIX: WATER

Sample Number 9

Sample Name BH/MW 6S

Sample Matrix Ground Water

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

Sample Date 2025-08-06 00:00

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



FINAL REPORT

CA40044-AUG25 R1

Client: Soil Engineers Ltd.

Project: 2505-W117, South of Rathburn Rd. East and Ponytail Dr. Forest Park

Project Manager: Daixi Zhang

Samplers: Amar Deep Regmi

MATRIX: WATER

Sample Number 9

Sample Name BH/MW 6S

Sample Matrix Ground Water

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

Sample Date 2025-08-06 00:00

Parameter	Units	RL	L1	Result
VOCs				
Chloroform	mg/L	0.0005		< 0.0005
1,2-Dichlorobenzene	mg/L	0.0005	0.0056	< 0.0005
1,4-Dichlorobenzene	mg/L	0.0005	0.0068	< 0.0005
cis-1,2-Dichloroethene	mg/L	0.0005		< 0.0005
trans-1,3-Dichloropropene	mg/L	0.0005		< 0.0005
Methylene Chloride	mg/L	0.0005		< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	0.0005	0.017	< 0.0005
1,1,1,2-Tetrachloroethane	mg/L	0.0005	0.017	< 0.0005
Methyl ethyl ketone	mg/L	0.02		< 0.02
Styrene	mg/L	0.0005		< 0.0005
Tetrachloroethylene (perchloroethylene)	mg/L	0.0005	0.0044	< 0.0005
Trichloroethylene	mg/L	0.0005	0.0076	< 0.0005

VOCs - BTEX

Benzene	mg/L	0.0005	0.002	< 0.0005
Ethylbenzene	mg/L	0.0005	0.002	< 0.0005
Toluene	mg/L	0.0005	0.002	< 0.0005
Xylene (total)	mg/L	0.0005	0.0044	< 0.0005
m-p-xylene	mg/L	0.0005		< 0.0005
o-xylene	mg/L	0.0005		< 0.0005

EXCEEDANCE SUMMARY

Parameter	Method	Units	Result	SANSEW / WATER / - - Mississauga Sewer Use ByLaw - Storm Sewer Discharge - BL_0046_2022 L1
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BH/MW 6S

Total Suspended Solids	SM 2540D	mg/L	198	15
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FINAL REPORT

CA40044-AUG25 R1

QC SUMMARY

Anions by discrete analyzer

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

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Sulphate	DIO5008-AUG25	mg/L	1	<2	ND	20	104	80	120	103	75	125

Biochemical Oxygen Demand

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

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Biochemical Oxygen Demand (BOD5)	BOD0007-AUG25	mg/L	2	< 2	4	30	91	70	130	NV	70	130

Chlorine

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

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Total Chlorine	EWL0087-AUG25	mg/L	0.02	< 0.02	ND	20	98	90	110	NA		



FINAL REPORT

CA40044-AUG25 R1

QC SUMMARY

Cyanide by SFA

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

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Cyanide (total)	SKA0063-AUG25	mg/L	0.01	<0.01	ND	10	94	90	110	NV	75	125

Fluoride by Specific Ion Electrode

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

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Fluoride	EWL0139-AUG25	mg/L	0.06	<0.06	ND	10	100	90	110	102	75	125

Hexavalent Chromium by SFA

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

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Chromium VI	SKA0068-AUG25	mg/L	0.0002	<0.0002	2	20	98	80	120	103	75	125



FINAL REPORT

CA40044-AUG25 R1

QC SUMMARY

Mercury by CVAAS

Method: EPA 7471A/SM 3112B | Internal ref.: ME-CA-IENVISPE-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Mercury (total)	EHG0014-AUG25	mg/L	0.00001	< 0.00001	ND	20	114	80	120	130	70	130



FINAL REPORT

CA40044-AUG25 R1

QC SUMMARY

Metals in aqueous samples - ICP-MS

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

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Silver (total)	EMS0099-AUG25	mg/L	0.00005	<0.00005	ND	20	103	90	110	75	70	130
Aluminum (total)	EMS0099-AUG25	mg/L	0.001	<0.001	11	20	93	90	110	90	70	130
Arsenic (total)	EMS0099-AUG25	mg/L	0.0002	<0.0002	3	20	97	90	110	105	70	130
Cadmium (total)	EMS0099-AUG25	mg/L	0.000003	<0.000003	8	20	98	90	110	98	70	130
Cobalt (total)	EMS0099-AUG25	mg/L	0.000004	<0.000004	1	20	93	90	110	96	70	130
Chromium (total)	EMS0099-AUG25	mg/L	0.00008	<0.00008	4	20	97	90	110	118	70	130
Copper (total)	EMS0099-AUG25	mg/L	0.001	<0.001	4	20	96	90	110	97	70	130
Manganese (total)	EMS0099-AUG25	mg/L	0.00001	<0.00001	0	20	96	90	110	93	70	130
Molybdenum (total)	EMS0099-AUG25	mg/L	0.0004	<0.0004	0	20	98	90	110	99	70	130
Nickel (total)	EMS0099-AUG25	mg/L	0.0001	<0.0001	0	20	96	90	110	104	70	130
Lead (total)	EMS0099-AUG25	mg/L	0.00009	<0.00009	1	20	93	90	110	89	70	130
Phosphorus (total)	EMS0099-AUG25	mg/L	0.003	<0.003	2	20	98	90	110	NV	70	130
Antimony (total)	EMS0099-AUG25	mg/L	0.0009	<0.0009	ND	20	100	90	110	110	70	130
Selenium (total)	EMS0099-AUG25	mg/L	0.00004	<0.00004	4	20	95	90	110	94	70	130
Tin (total)	EMS0099-AUG25	mg/L	0.00006	<0.00006	17	20	96	90	110	NV	70	130
Titanium (total)	EMS0099-AUG25	mg/L	0.0001	<0.0001	2	20	96	90	110	NV	70	130
Zinc (total)	EMS0099-AUG25	mg/L	0.002	<0.002	1	20	95	90	110	98	70	130



FINAL REPORT

CA40044-AUG25 R1

QC SUMMARY

Microbiology

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

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Ecoli	BAC9084-AUG25	mpn/100mL	-	ACCEPTED	ACCEPTED							

Nonylphenol and Ethoxylates

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

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Nonylphenol diethoxylate	GCM0081-AUG25	mg/L	0.01	<0.01			104	55	120			
Nonylphenol monoethoxylate	GCM0081-AUG25	mg/L	0.01	<0.01			105	55	120			
Nonylphenol	GCM0081-AUG25	mg/L	0.001	<0.001			104	55	120			

QC SUMMARY

Oil & Grease

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

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Oil & Grease (total)	GCM0088-AUG25	mg/L	2	<2	NSS	20	103	75	125			

Oil & Grease-AV/MS

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

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Oil & Grease (animal/vegetable)	GCM0088-AUG25	mg/L	4	< 4	NSS	20	NA	70	130			
Oil & Grease (mineral/synthetic)	GCM0088-AUG25	mg/L	4	< 4	NSS	20	NA	70	130			

pH

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

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
pH	EWL0109-AUG25	No unit	0.05	NA	0		100			NA		

QC SUMMARY

Phenols by SFA

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

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
4AAP-Phenolics	SKA0105-AUG25	mg/L	0.001	<0.001	9	10	99	80	120	98	75	125

Polychlorinated Biphenyls

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

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Polychlorinated Biphenyls (PCBs) - Total	GCM0130-AUG25	mg/L	0.0001	<0.0001	NSS	30	96	60	140	NSS	60	140

QC SUMMARY

Semi-Volatile Organics

Method: EPA 3510C/8270D | Internal ref.: ME-CA-IENVIGC-LAK-AN-005

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
7Hdibenzo(c,g)carbazole	GCM0090-AUG25	mg/L	0.0001	< 0.0001	NSS	30	97	50	140	NSS	50	140
Anthracene	GCM0090-AUG25	mg/L	0.0001	< 0.0001	NSS	30	88	50	140	NSS	50	140
Benzo(a)anthracene	GCM0090-AUG25	mg/L	0.0001	< 0.0001	NSS	30	90	50	140	NSS	50	140
Benzo(a)pyrene	GCM0090-AUG25	mg/L	0.0001	< 0.0001	NSS	30	86	50	140	NSS	50	140
Benzo(b+j)fluoranthene	GCM0090-AUG25	mg/L	0.0001	< 0.0001	NSS	30	105	50	140	NSS	50	140
Benzo(e)pyrene	GCM0090-AUG25	mg/L	0.0001	< 0.0001	NSS	30	97	50	140	NSS	50	140
Benzo(ghi)perylene	GCM0090-AUG25	mg/L	0.0002	< 0.0002	NSS	30	92	50	140	NSS	50	140
Benzo(k)fluoranthene	GCM0090-AUG25	mg/L	0.0001	< 0.0001	NSS	30	73	50	140	NSS	50	140
Bis(2-ethylhexyl)phthalate	GCM0090-AUG25	mg/L	0.002	< 0.002	NSS	30	101	50	140	NSS	50	140
Chrysene	GCM0090-AUG25	mg/L	0.0001	< 0.0001	NSS	30	92	50	140	NSS	50	140
di-n-Butyl Phthalate	GCM0090-AUG25	mg/L	0.002	< 0.002	NSS	30	100	50	140	NSS	50	140
Dibenzo(a,h)anthracene	GCM0090-AUG25	mg/L	0.0001	< 0.0001	NSS	30	93	50	140	NSS	50	140
Dibenzo(a,i)pyrene	GCM0090-AUG25	mg/L	0.0001	< 0.0001	NSS	30	93	50	140	NSS	50	140
Dibenzo(a,j)acridine	GCM0090-AUG25	mg/L	0.0001	< 0.0001	NSS	30	94	50	140	NSS	50	140
Fluoranthene	GCM0090-AUG25	mg/L	0.0001	< 0.0001	NSS	30	92	50	140	NSS	50	140
Indeno(1,2,3-cd)pyrene	GCM0090-AUG25	mg/L	0.0002	< 0.0002	NSS	30	93	50	140	NSS	50	140
Perylene	GCM0090-AUG25	mg/L	0.0005	< 0.0005	NSS	30	90	50	140	NSS	50	140
Phenanthrene	GCM0090-AUG25	mg/L	0.0001	< 0.0001	NSS	30	88	50	140	NSS	50	140
Pyrene	GCM0090-AUG25	mg/L	0.0001	< 0.0001	NSS	30	91	50	140	NSS	50	140



FINAL REPORT

CA40044-AUG25 R1

QC SUMMARY

Suspended Solids

Method: SM 2540D | Internal ref.: ME-CA-IENVIEWL-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Total Suspended Solids	EWL0101-AUG25	mg/L	2	< 2	0	10	99	90	110	NA		

Total Nitrogen

Method: SM 4500-N C/4500-NO3- F | Internal ref.: ME-CA-IENVISFA-LAK-AN-002

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Total Kjeldahl Nitrogen	SKA0090-AUG25	as N mg/L	0.5	<0.5	ND	10	101	90	110	90	75	125

QC SUMMARY

Volatile Organics

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

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
1,1,1,2-Tetrachloroethane	GCM0087-AUG25	mg/L	0.0005	<0.0005	ND	30	98	60	130	100	50	140
1,1,2,2-Tetrachloroethane	GCM0087-AUG25	mg/L	0.0005	<0.0005	ND	30	95	60	130	103	50	140
1,2-Dichlorobenzene	GCM0087-AUG25	mg/L	0.0005	<0.0005	ND	30	99	60	130	103	50	140
1,4-Dichlorobenzene	GCM0087-AUG25	mg/L	0.0005	<0.0005	ND	30	100	60	130	103	50	140
Benzene	GCM0087-AUG25	mg/L	0.0005	<0.0005	ND	30	109	60	130	103	50	140
Chloroform	GCM0087-AUG25	mg/L	0.0005	<0.0005	ND	30	108	60	130	101	50	140
cis-1,2-Dichloroethene	GCM0087-AUG25	mg/L	0.0005	<0.0005	ND	30	109	60	130	103	50	140
Ethylbenzene	GCM0087-AUG25	mg/L	0.0005	<0.0005	ND	30	103	60	130	104	50	140
m-p-xylene	GCM0087-AUG25	mg/L	0.0005	<0.0005	ND	30	103	60	130	105	50	140
Methyl ethyl ketone	GCM0087-AUG25	mg/L	0.02	<0.02	ND	30	95	50	140	99	50	140
Methylene Chloride	GCM0087-AUG25	mg/L	0.0005	<0.0005	ND	30	110	60	130	101	50	140
o-xylene	GCM0087-AUG25	mg/L	0.0005	<0.0005	ND	30	105	60	130	107	50	140
Styrene	GCM0087-AUG25	mg/L	0.0005	<0.0005	ND	30	105	60	130	107	50	140
Tetrachloroethylene (perchloroethylene)	GCM0087-AUG25	mg/L	0.0005	<0.0005	ND	30	107	60	130	104	50	140
Toluene	GCM0087-AUG25	mg/L	0.0005	<0.0005	ND	30	106	60	130	102	50	140
trans-1,3-Dichloropropene	GCM0087-AUG25	mg/L	0.0005	<0.0005	ND	30	106	60	130	108	50	140
Trichloroethylene	GCM0087-AUG25	mg/L	0.0005	<0.0005	ND	30	103	60	130	100	50	140

QC SUMMARY

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

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

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

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

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

RL: Reporting limit

RPD: Relative percent difference

AC: Acceptance criteria

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

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

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

LEGEND

FOOTNOTES

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

Results relate only to the sample tested.

Data reported represent the sample as submitted to SGS.

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

Test method information available upon request.

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

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

-- End of Analytical Report --



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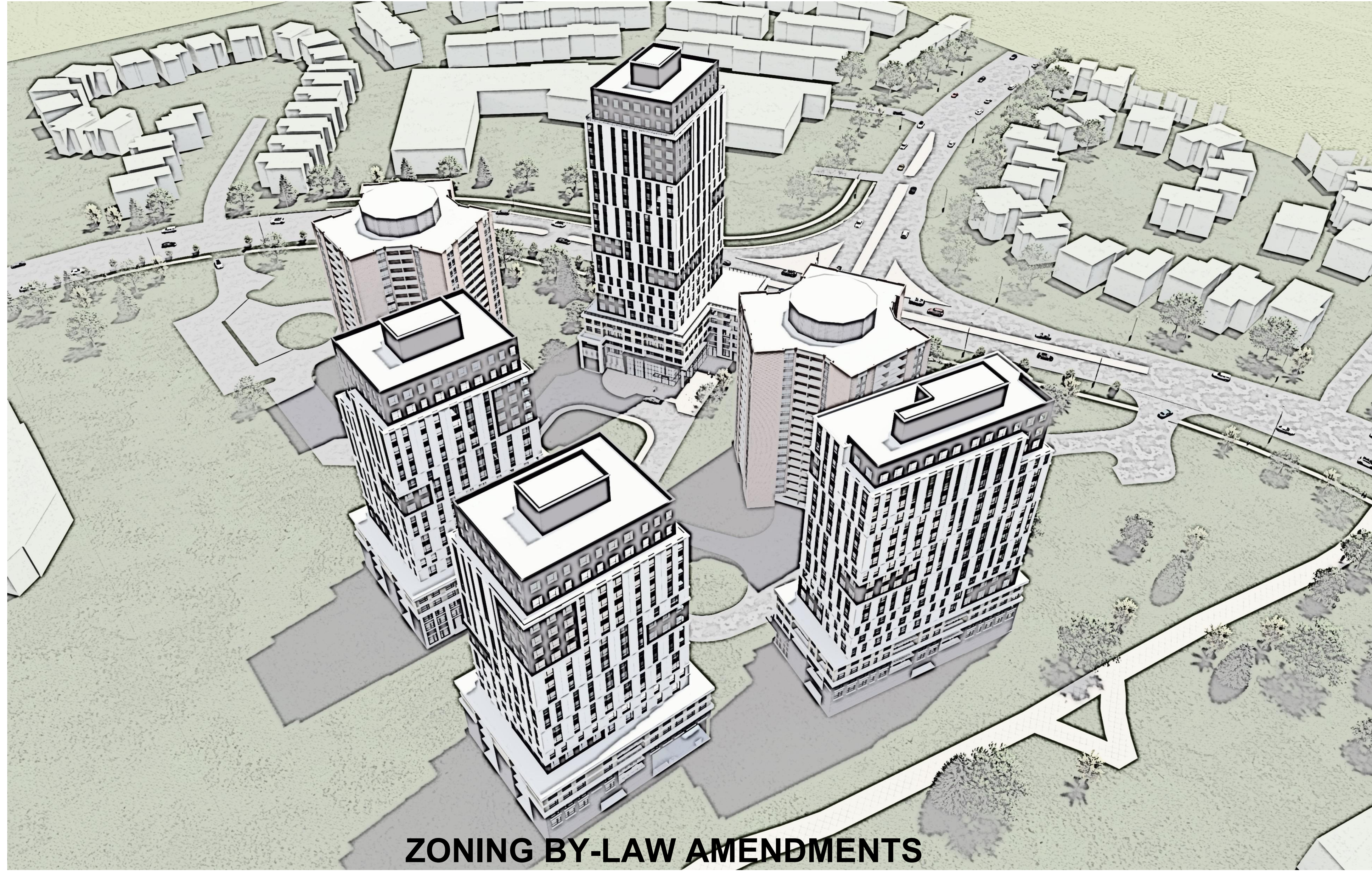
APPENDIX E

REVIEWED PLANS

REFERENCE NO. 2505-W117B

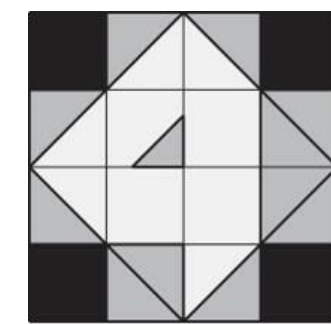
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FOREST PARK CIRCLE



ZONING BY-LAW AMENDMENTS

4100 PONYTRAIL DRIVE AND 1850 RATHBURN RD EAST, MISSISSAUGA



4 ARCHITECTURE INC.

ARCHITECTURAL SHEET LIST

SHEET NUMBER	SHEET NAME
A-GR-000	COVER PAGE
A-GR-101	CONTEXT, SITE STATS, OBC MATRIX
A-GR-102	OBC MATRIX - B4,B5,B6
A-GR-103	SURVEY DRAWING
A-GR-104	SITE PLAN
A-GR-105	LEVEL 1 ON SITE PLAN
A-P-201	PHASE 2 PARKING LEVEL 3
A-P-202	PARKING LEVEL 3
A-P-203	PHASE 2 PARKING LEVEL 2
A-P-204	PARKING LEVEL 2
A-P-205	PHASE 2 PARKING LEVEL 1
A-P-206	PARKING LEVEL 1
A-P-207	BUILDING SECTIONS

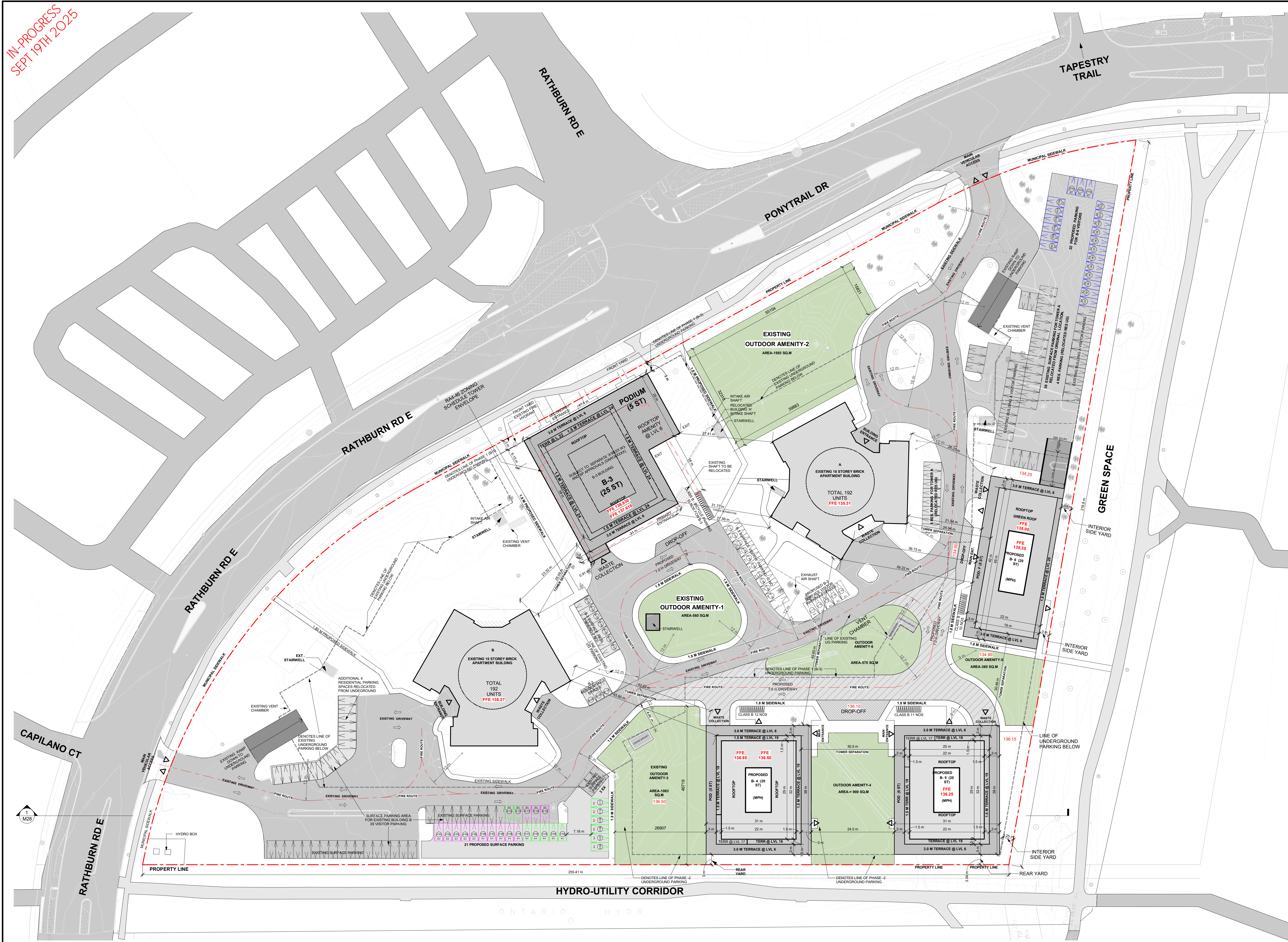
BUILDING 4	
A-B4-101	GFA AREA SCHEDULE
A-B4-102	GCA AREA SCHEDULE
A-B4-201	LEVEL 1 & 2 FLOOR PLAN
A-B4-202	TYP. PODIUM LVL 3-5 & LVL 6 FLOOR PLAN
A-B4-203	TYP. TOWER LVL 7-18 & TYP. 19-20 FLOOR PLAN
A-B4-204	ROOF & MECH. FLOOR PLAN
A-B4-301	NORTH ELEVATION
A-B4-302	SOUTH ELEVATION
A-B4-303	EAST ELEVATION
A-B4-304	WEST ELEVATION
A-B4-401	SECTION

BUILDING 5	
A-B5-101	GFA AREA SCHEDULE
A-B5-102	GCA AREA SCHEDULE
A-B5-201	LEVEL 1 & 2 FLOOR PLAN
A-B5-202	TYP. PODIUM LVL 3-5 & LVL 6 FLOOR PLAN
A-B5-203	TYP. TOWER LVL 7-18 & TYP. 19-20 FLOOR PLAN
A-B5-204	ROOF & MECH. FLOOR PLAN
A-B5-301	NORTH ELEVATION
A-B5-302	SOUTH ELEVATION
A-B5-303	EAST ELEVATION
A-B5-304	WEST ELEVATION
A-B5-401	SECTION

BUILDING 6	
A-B6-101	GFA AREA SCHEDULE
A-B6-102	GCA AREA SCHEDULE
A-B6-201	LEVEL 1 & 2, TYP. PODIUM LVL 3-5 FLOOR PLAN
A-B6-202	LVL 6, TYP. TOWER LVL 7-19 & LVL 20 FLOOR PLAN
A-B6-203	ROOF & MECH. FLOOR PLAN
A-B6-301	NORTH ELEVATION
A-B6-302	SOUTH ELEVATION
A-B6-303	EAST ELEVATION
A-B6-304	WEST ELEVATION
A-B6-401	SECTION

CLIENT	ARCHITECT	LANDSCAPE ARCHITECT	ENGINEERING - STRUCTURAL	ENGINEERING - CIVIL	SHORING (DESIGN BUILD)						
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SEPT 19TH 2025



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 8966 Woodbine Avenue, Suite 900, Markham, ON L3R 0J7
 T: (905) 470 7212 / email: mail@4architecture.ca

FOREST PARK CIRCLE - 424028
 4100 PONYTRAIL DRIVE AND 1850 RATHBURN RD EAST, MISSISSAUGA

SITE PLAN
 2025.09.17
 Scale: 1:500
 Drawn By: SV
 Checked By: EM
A-GR-104

1 Site Plan - PHASE 2 BLDG 4,5,6 - ZBA_18.09
 1 : 500

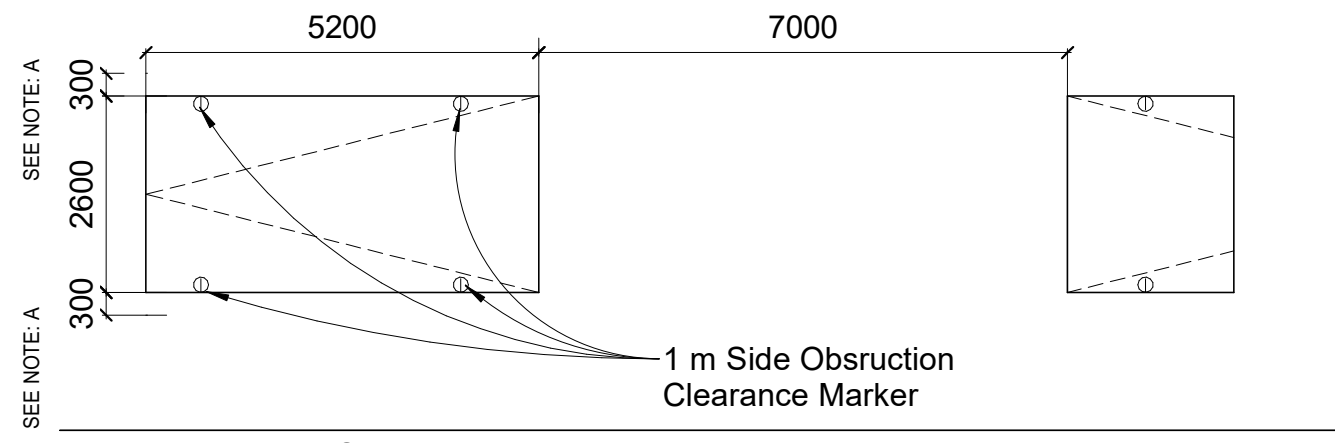
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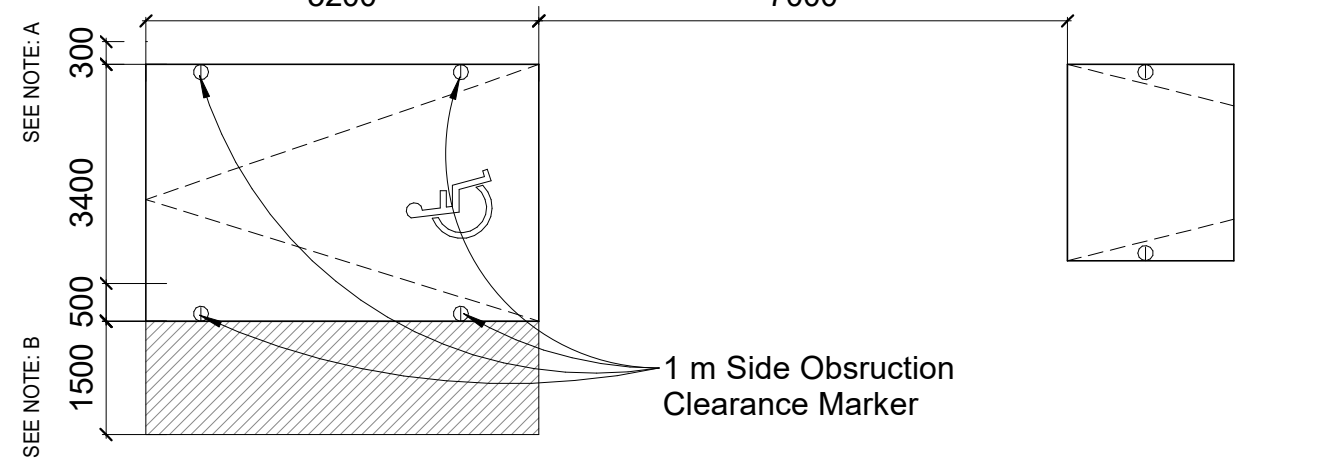
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TYPICAL PARKING SPACE

Drive aisle @ 7m MIN.



Handicap Parking Space

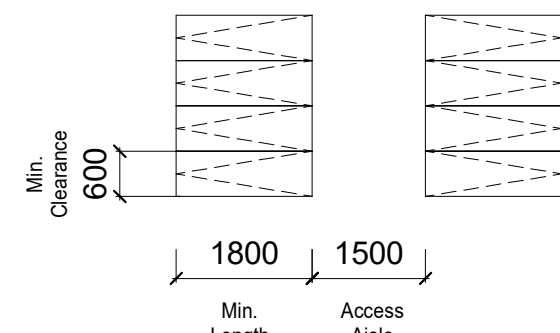


NOTES:
A - PROVIDE AND ADDITIONAL 300mm FOR PARKING SPACE WIDTH WHEN OBSTRUCTIONS OCCUR BETWEEN THE FRONT AND REAR 1000mm.
B - PROVIDE A 1500mm WALKWAY ON AT LEAST ONE SIDE OF A HANDICAP PARKING STALL. THIS WALKWAY MAY BE SHARED WITH ADJOINING HANDICAP SPACE.

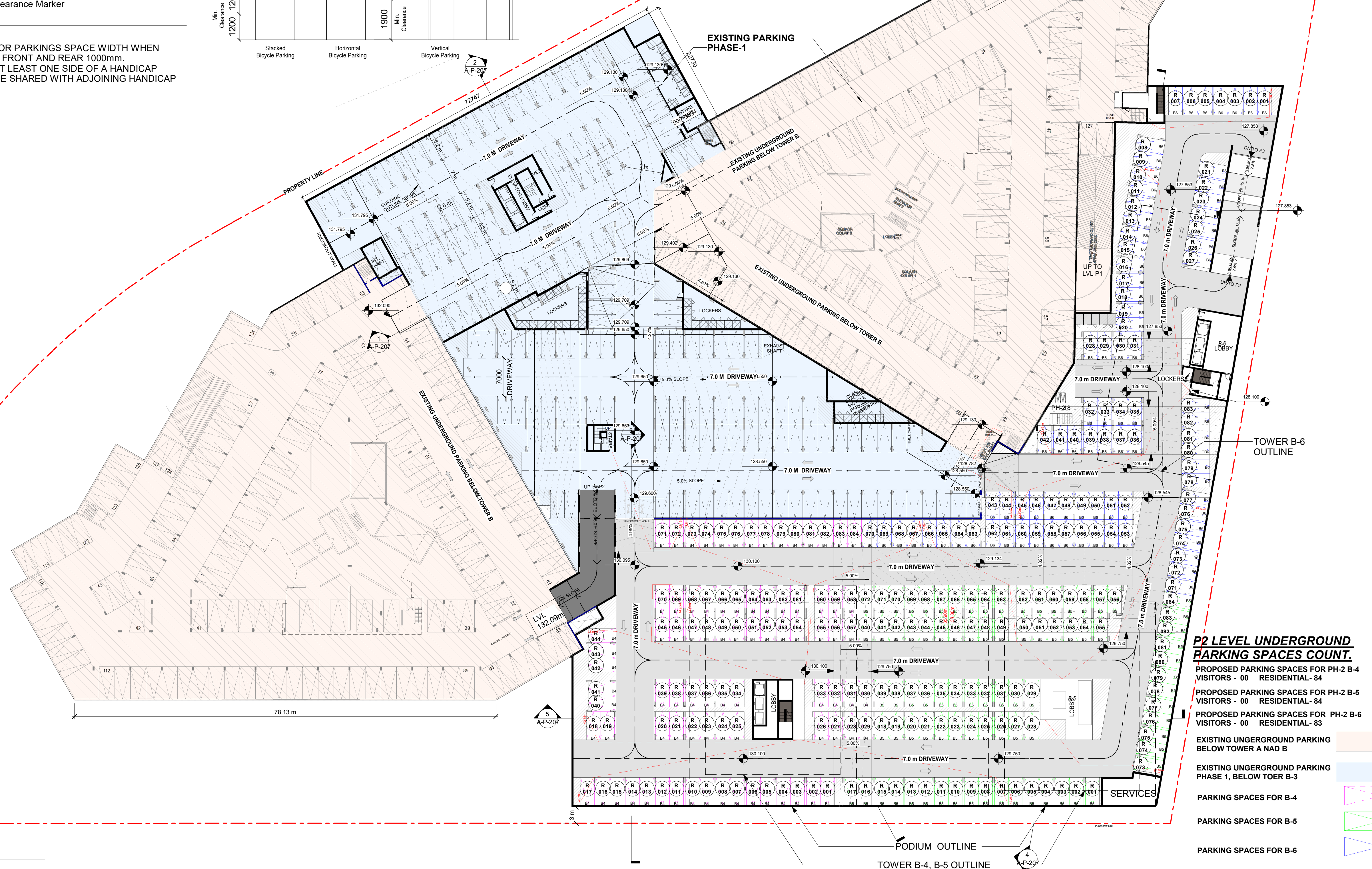
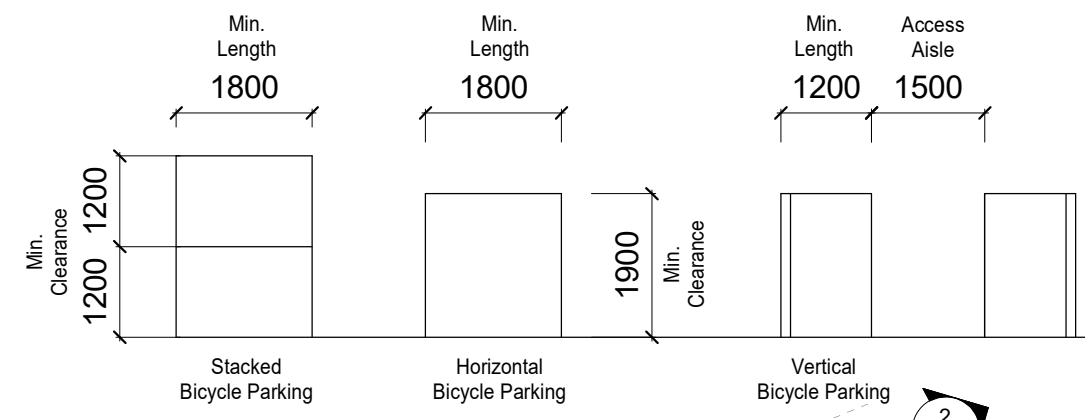
TYPICAL BICYCLE PARKING SPACE

WALKWAY: MINIMUM 1800mm
VERTICAL PARKING SPACE: 1200mm (L) x 600mm (W) x 1900mm (H)
HORIZONTAL PARKING SPACE: 1800mm (L) x 600mm (W) x 1900mm (H)
STACKED PARKING SPACE: 1800mm (L) x 600mm (W) x 1200mm (H)

PLAN VIEW



SIDE VIEW



1 OVERALL PARKING LEVEL 2
1 : 400

- P2 LEVEL UNDERGROUND PARKING SPACES COUNT.**
- PROPOSED PARKING SPACES FOR PH-2 B-4 VISITORS - 00 RESIDENTIAL- B4
 - PROPOSED PARKING SPACES FOR PH-2 B-5 VISITORS - 00 RESIDENTIAL- B4
 - PROPOSED PARKING SPACES FOR PH-2 B-6 VISITORS - 00 RESIDENTIAL- B3
 - EXISTING UNDERGROUND PARKING BELOW TOWER A NAD B
 - EXISTING UNDERGROUND PARKING PHASE 1, BELOW TOWER B-3
 - PARKING SPACES FOR B-4
 - PARKING SPACES FOR B-5
 - PARKING SPACES FOR B-6

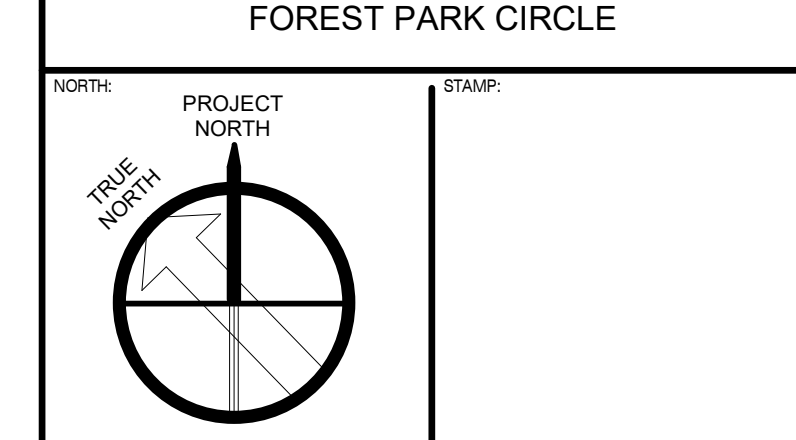
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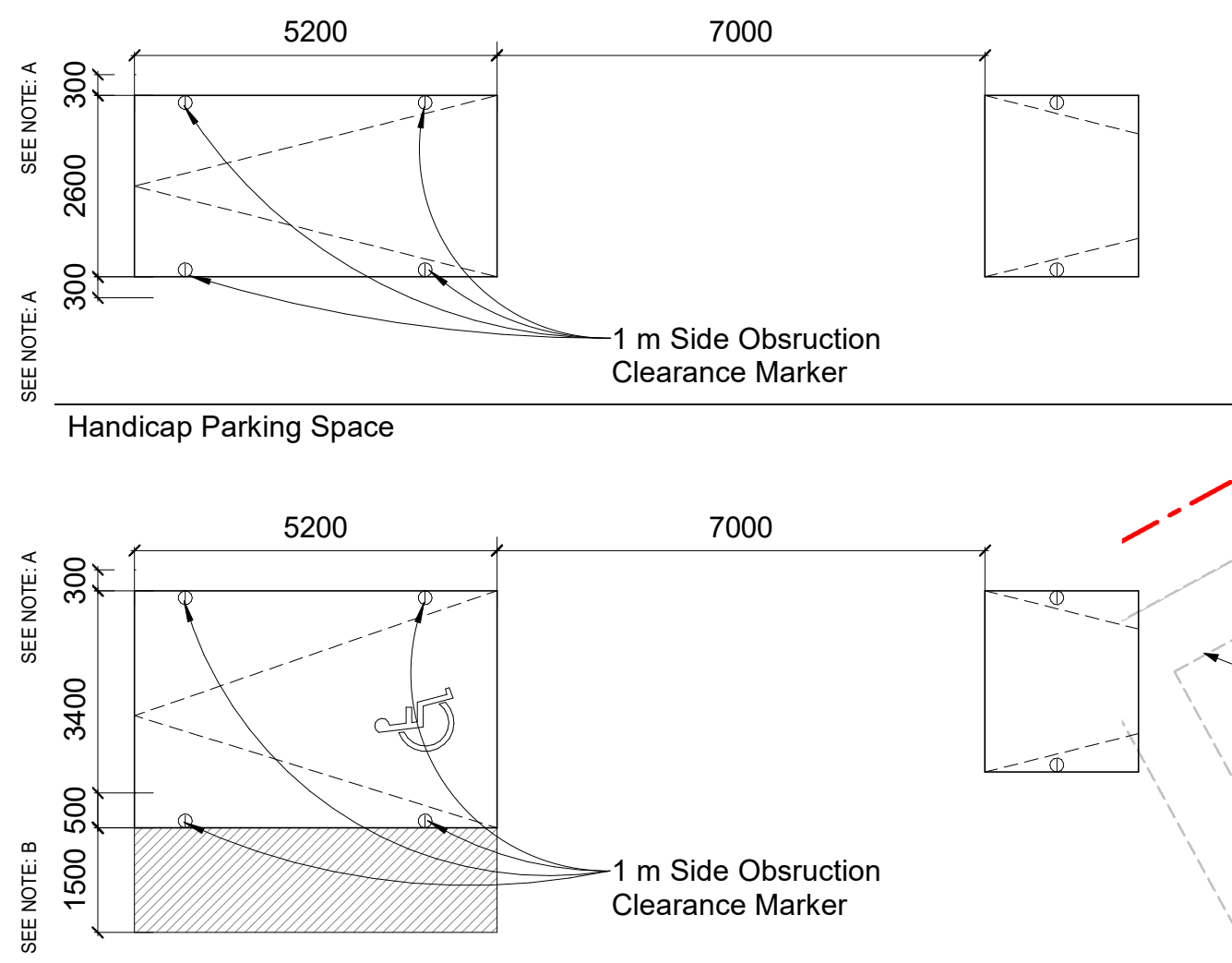
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2025.09.17
As indicated SVDS EM
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TYPICAL PARKING SPACE

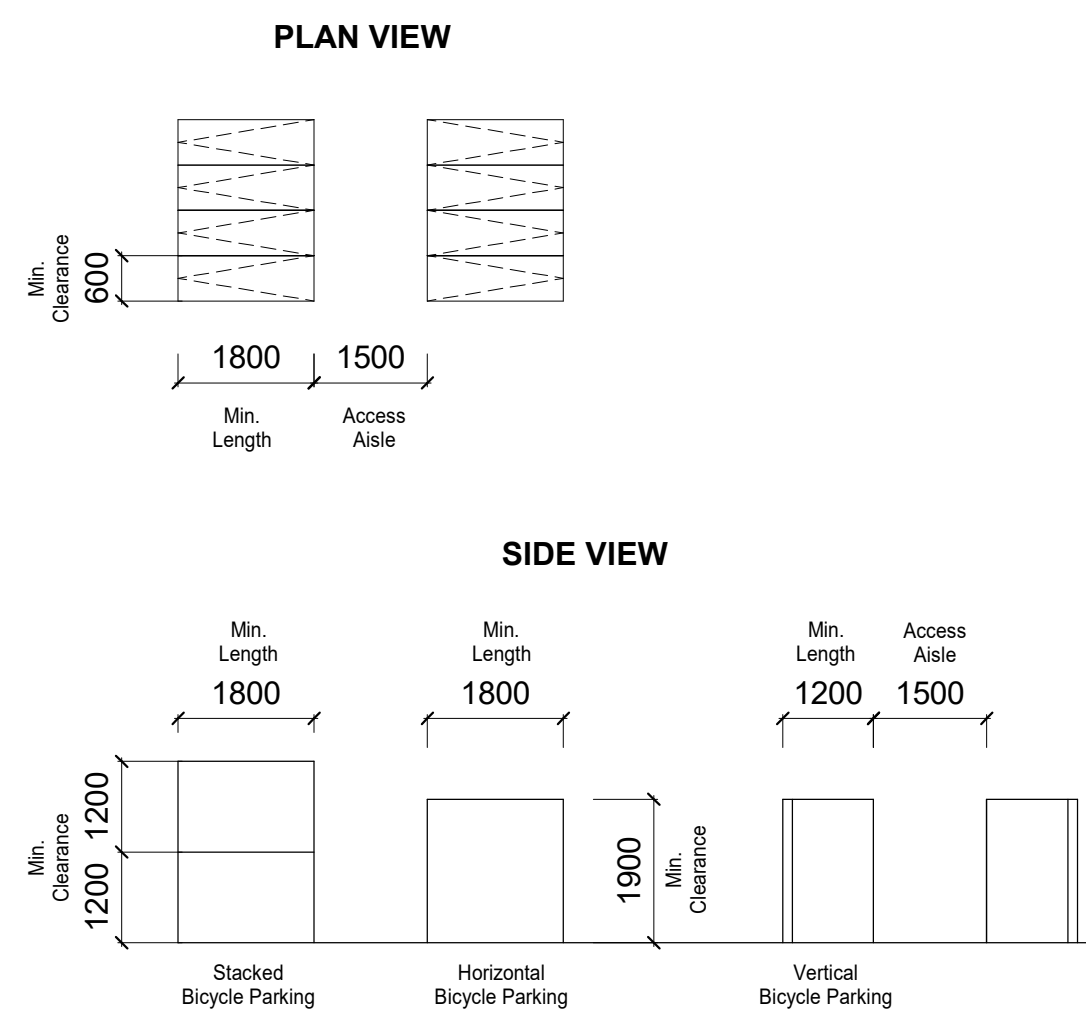
Drive aisle @ 7m MIN.



NOTES:
A - PROVIDE AN ADDITIONAL 300mm FOR PARKING SPACE WIDTH WHEN OBSTRUCTIONS OCCUR BETWEEN THE FRONT AND REAR 1000mm.
B - PROVIDE A 1500mm WALKWAY ON AT LEAST ONE SIDE OF A HANDICAP PARKING STALL. THIS WALKWAY MAY BE SHARED WITH ADJOINING HANDICAP SPACE.

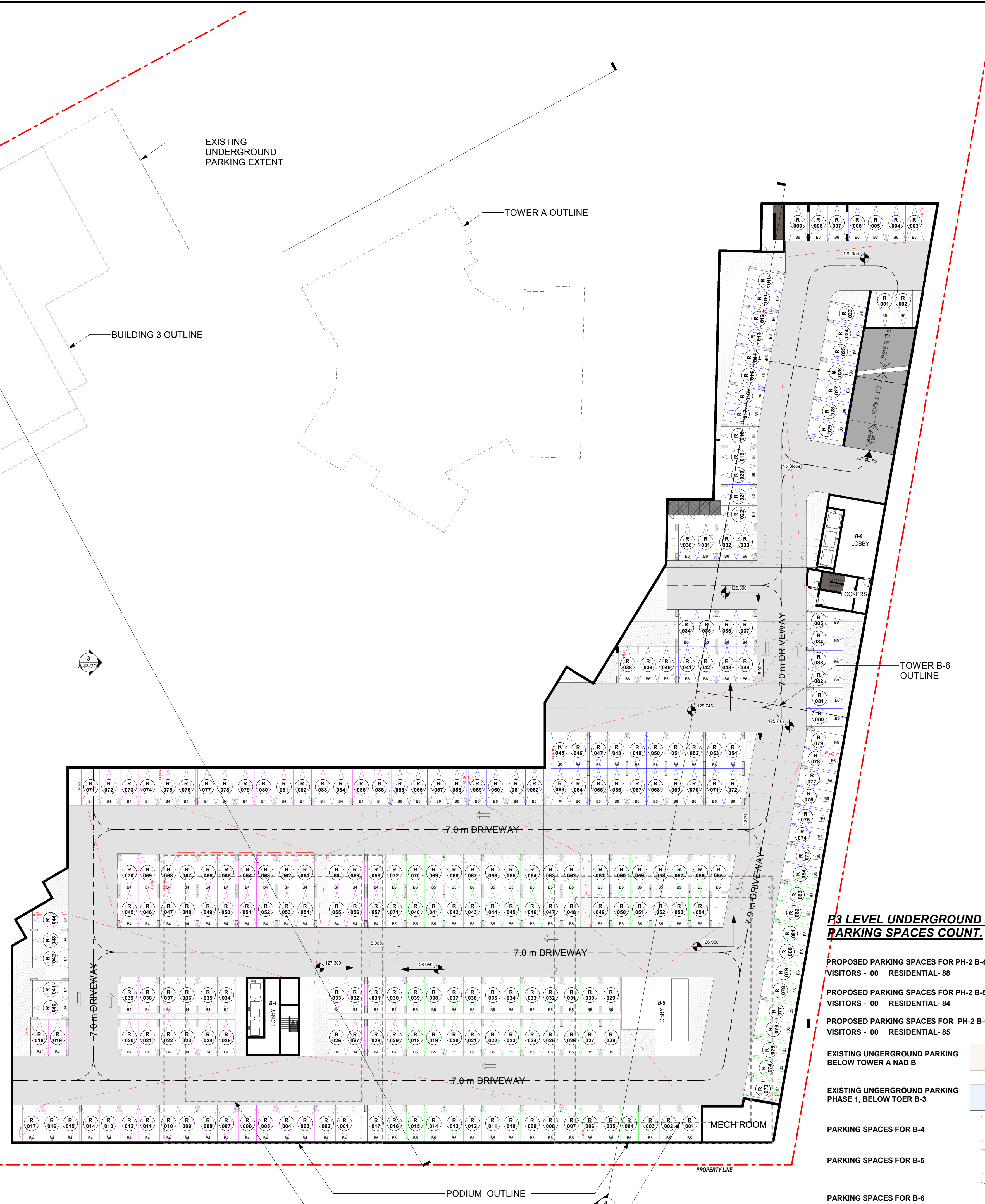
TYPICAL BICYCLE PARKING SPACE

WALKWAY: MINIMUM 1800mm
VERTICAL PARKING SPACE: 1200mm (L) x 600mm (W) x 1900mm (H)
HORIZONTAL PARKING SPACE: 1800mm (L) x 600mm (W) x 1900mm (H)
STACKED PARKING SPACE: 1800mm (L) x 600mm (W) x 1200 mm (H)



PARKING TAG LEGEND

- R** RESIDENT PARKING SPACE
- AR-A** ACCESSIBLE RESIDENT SPACE TYPE A
- AR-B** ACCESSIBLE RESIDENT SPACE TYPE B
- V** VISITOR PARKING SPACE
- AV-A** ACCESSIBLE VISITOR SPACE TYPE A
- R EV** RESIDENT ELECTRIC VEHICLE PARKING



P3 LEVEL UNDERGROUND PARKING SPACES COUNT.

- PROPOSED PARKING SPACES FOR PH-2 B-4 VISITORS - 00 RESIDENTIAL- 88
- PROPOSED PARKING SPACES FOR PH-2 B-5 VISITORS - 00 RESIDENTIAL- 84
- PROPOSED PARKING SPACES FOR PH-2 B-6 VISITORS - 00 RESIDENTIAL- 85
- EXISTING UNDERGROUND PARKING BELOW TOWER A AND B
- EXISTING UNDERGROUND PARKING PHASE 1, BELOW TOWER B-3
- PARKING SPACES FOR B-4
- PARKING SPACES FOR B-5
- PARKING SPACES FOR B-6

1 PARKING LEVEL 3 (PHASE-2)
1 : 300

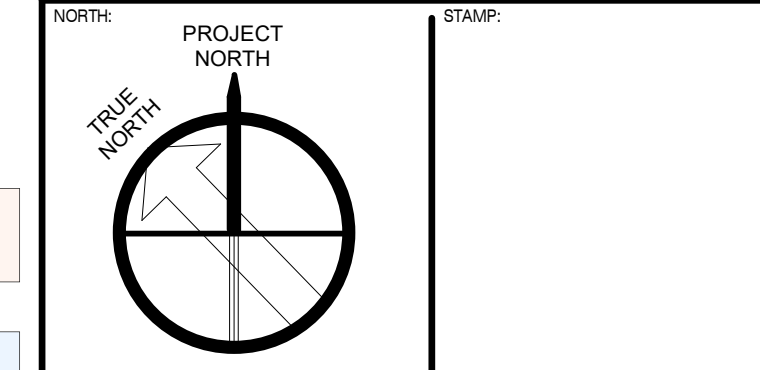
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APPLICATION NUMBER:
APPLICATION NUMBER:
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REVISIONS	

SUBMITTALS	

1. IN-PROGRESS SET FOR CO-ORDINATION 2025.07.07 EM
No. Description YYYYMMDD



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FOREST PARK CIRCLE - 424028
4100 PONYTRAIL DRIVE AND 1850 RATHBURN RD EAST, MISSISSAUGA

PHASE 2 PARKING LEVEL 3
2025.09.17
As indicated S/VS DS EM
A-P-201

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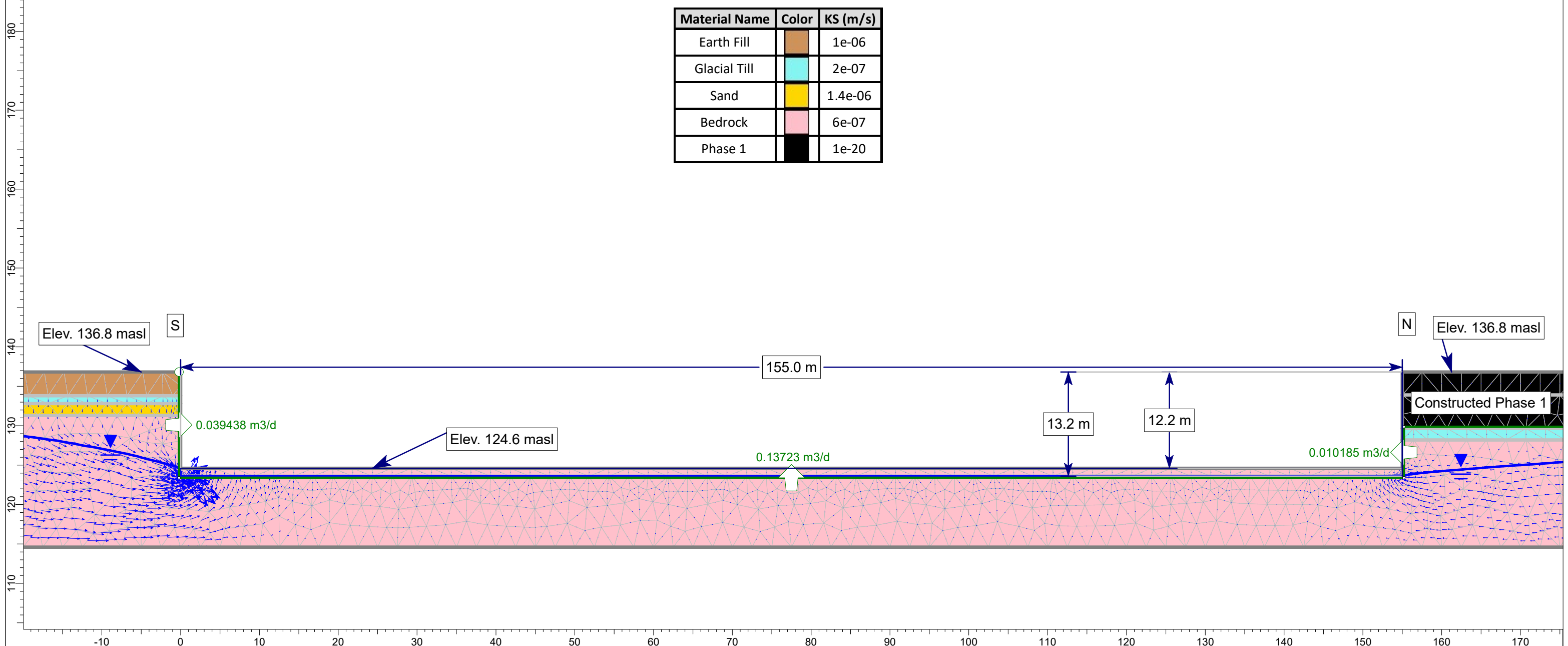
APPENDIX F

SHORT-TERM CONSTRUCTION DEWATERING AND LONG-TERM FOUNDATION DRAINAGE FLOW RATE ESTIMATIONS

REFERENCE NO. 2505-W117B

**Groundwater Control Needs
Summary of Assumptions and Proposed Excavation Details**

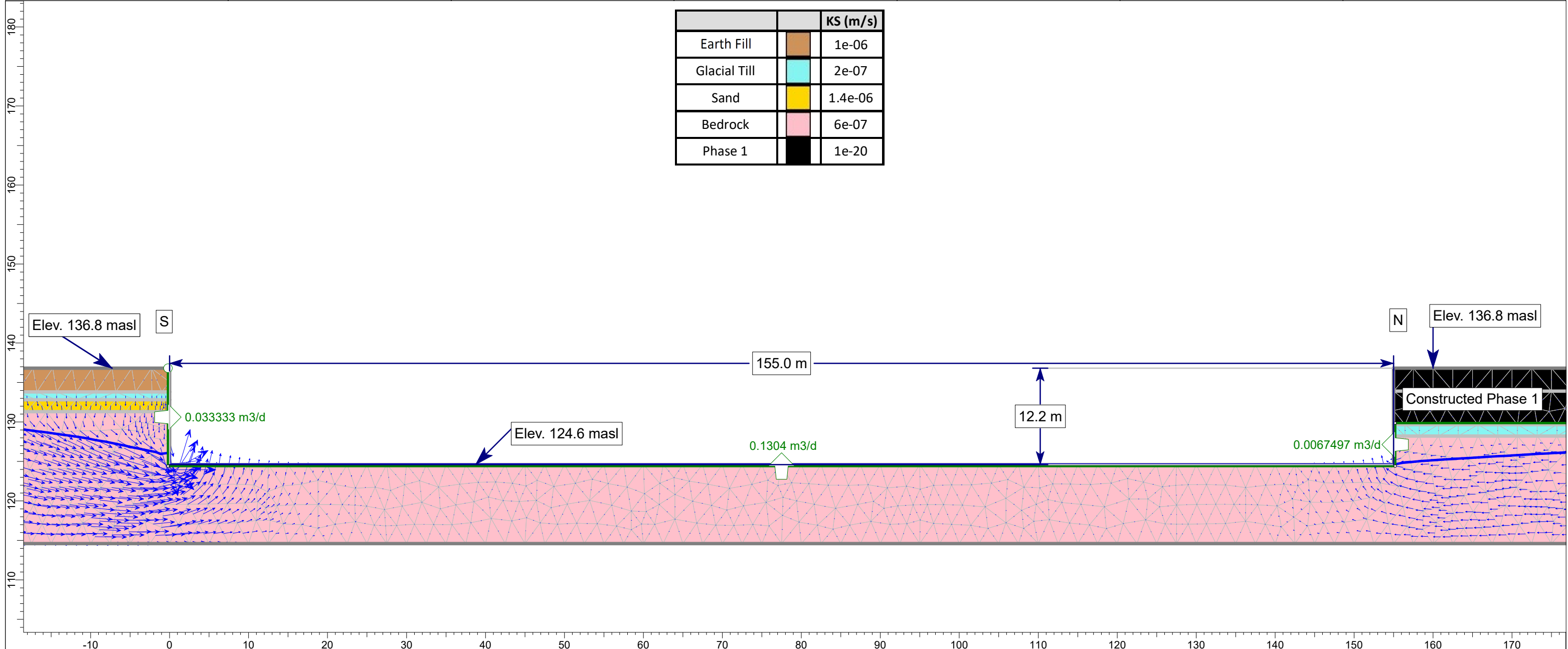
Proposed Excavation Location					4100 Ponytrail Drive, Mississauga			
Shoring System					Permeable			
Excavation Dimensions (m)					155.0 x 53.7			
Ground Surface Elevation (masl)	Assumed P3 Finished Floor Elevation (masl)	Assumed Base of Excavation (masl)	Assumed Base of Footings (masl)	Assumed Base of Elevator Pit (masl)	Groundwater Table (masl)	Groundwater Flow Rate (L/Day) (with a S.F. of 2)	Storm Event Flow Rate (L/Day)	Total Construction Dewatering Flow Rate (L/Day) (with a S.F. of 2)
136.8	125.1	124.6	125.1	123.6	132.4	39,000.0	251,500.0	290,500.0



Project Title			Proposed Condominium Development (Phase 2)			Load Case			Construction Dewatering		
Location			4100 Ponytrail Drive, Mississauga								
Drawn By	DZ	Checked By	NA	Scale	1:480						
Date	2025-08-28, 8:29:58 AM			Reference No.	2505-W117B		Drawing No.	1			

**Groundwater Control Needs
Summary of Assumptions and Proposed Excavation Details**

Proposed Excavation Location				4100 Ponytrail Drive, Mississauga		
Shoring System				Permeable		
Excavation Dimensions (m)				155.0 x 53.7		
Ground Surface Elevation (masl)	Assumed P3 Finished Floor Elevation (masl)	Assumed Base of Drainage Layer (masl)	GroundWater Table (masl)	Groundwater Flow Rate (L/Day) (with a S.F. of 2)	Storm Event Flow Rate (L/Day)	Total Foundation Drainage Flow Rate (L/Day) (with a S.F. of 2)
136.8	125.1	124.6	132.4	34,000.0	4,000.0	38,000.0



Project Title				Proposed Condominium Development (Phase 2)		Load Case		Foundation Drainage	
Location				4100 Ponytrail Drive, Mississauga					
Drawn By	DZ	Checked By	NA	Scale	1:480				
Date	2025-08-28, 8:29:58 AM			Reference No.	2505-W117B		Drawing No.	2	