1970 & 1980 Fowler Drive, Mississauga, Ontario

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Updated Hydrogeological Investigation

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1 Introduction

1.1 Project Description

EXP Services Inc. (EXP) was retained by IMH 1970 and 1980 Fowler Drive Ltd. to prepare a Updated Hydrogeological Investigation Report associated with the proposed development located at 1970 & 1980 Fowler Drive, Mississauga, Ontario (hereinafter referred to as the 'Site').

Previously EXP submitted a Hydrogeological Investigation report on November 21, 2025, which forms the basis of this updated hydrogeological report for 1970 and 1980 Fowler Drive, Mississauga, Ontario. This updated report addresses the city comments dated February 20, 2026, including the request for groundwater resampling. The Site is currently occupied by two (2) multi-storey residential buildings and associated aboveground parking and landscaped areas. It is our understanding that the proposed development location is currently the landscaping area located between the parking lots of 1970 and 1980 Fowler Drive. Based on the Site plan and information provided, it is our understanding that the Site will be developed to a high-rise development consisting of a 24-storey building and penthouse with up to four (4) levels of underground parking and associated parking area and access road. The architectural drawings are provided in Appendix F. The Site location plan is shown in Figure 1.

EXP conducted a Geotechnical Investigation and Environmental Site Assessment in conjunction with this investigation. The pertinent information gathered from the noted investigations is utilized for this report.

1.2 Project Objectives

The main objectives of the Updated Hydrogeological Investigation are as follows:

- Establish the local hydrogeological settings within the Site;
- Provide Preliminary recommendations on construction and long-term dewatering;
- Assess groundwater quality; and
- Prepare a Updated Hydrogeological Investigation Report.

1.3 Scope of Work

To achieve the investigation objectives, EXP has completed the following scope of work:

- Reviewed available geological and hydrogeological information for the Site;
- Drilled and installed six (6) 50 mm diameter monitoring wells to an approximate depth ranging from 4 meter below ground surface (mbgs) to 7 mbgs;
- Drilled and installed one (1) deep 50 mm diameter monitoring well to an approximate depth of 12 mbgs. One shallow and one deep well (BH1S and BH1D) were installed in a nested configuration;
- Drilled and installed four (4) deep 50 mm diameter monitoring well to an approximate depth ranging from 15 mbgs to 18 mbgs;
- Developed and conducted Single Well Response Tests (SWRT) on all monitoring wells to assess hydraulic conductivities of the saturated soils at the Site;
- Completed seven (7) rounds of groundwater level measurements at all monitoring wells;

- Collected three (3) groundwater samples for analyses of parameters, as listed in the Peel Region Sanitary Sewer By-Law and City of Mississauga Storm Sewer Use By-Law on July 18, 2023, April 21, 2025, and March 25, 2026, and one (1) field filtered sample for dissolved metals on March 25, 2026;
- Evaluated the information collected during the field investigation program, including borehole geological information, Water Well Records (WWR), SWRT results, groundwater level measurements and groundwater water quality;
- Prepared site plans, cross sections, geological mapping and groundwater contour mapping for the Site;
- Provided preliminary recommendations on the requirements for construction and long-term dewatering;
- Provided recommendations on the Ministry of Environment, Conservation and Parks (MECP) Water Taking Permits and Peel Region Sanitary Sewer By-Law and City of Mississauga Sewer Discharge Agreements (SDA) for the construction and post-construction phases; and
- Prepared a Updated Hydrogeological Investigation Report.

The Updated Hydrogeological Investigation was prepared in accordance with the Ontario Water Resources Act, Ontario Regulation 387/04, Peel Region Sewer By-Law (53-2010) and City of Mississauga Storm Sewer By-Law (259-05). The scope of work outlined above was made to assess dewatering and did not include a review of Environmental Site Assessments (ESA).

1.4 Review of Previous Reports

The following reports were reviewed as part of this Updated Hydrogeological Investigation:

- EXP Services Inc. (November 21, 2025), Hydrogeological Investigation, 1970 & 1980 Fowler Drive, Mississauga, ON, prepared for Starlight Developments.
- EXP Services Inc. (November 5, 2025 – Revision 2), Geotechnical Investigation, 1970 & 1980 Fowler Drive, Mississauga, ON, prepared for Starlight Developments.
- EXP Services Inc. (November 27, 2025), Phase Two Environmental Site Assessment, 1970 & 1980 Fowler Drive, Mississauga, ON, prepared for IMH 1970 & 1980 Fowler Drive Ltd.

Any past and/or future geotechnical, hydrogeological, environmental and risk assessments, and updated development/architectural plans should be provided to update this hydrogeological report prior to submission of permits and approvals by the municipalities and agencies.

2 Hydrogeological Setting

2.1 Regional Setting

2.1.1 Regional Physiography

The Site is within a physiographic region known as the Iroquois Plain. The physiographic landform is named Beaches which is located between Shale Plain and Sand Plain physiographic landforms. The South Slope lies to the north of the Iroquois Plain (Chapman & Putnam, 2007).

The Iroquois Plain was created along the shores of former Lake Iroquois, an ancient glacial lake. The noted Plain primarily consists of shallow water sandy deposits.

The topography of the Iroquois Plain is relatively flat with a gradual slope to the south, toward Lake Ontario.

2.1.2 Regional Geology and Hydrogeology

The surficial geology can be described as coarse textured (foreshore-basinal) glaciolacustrine deposits consisting of sand, gravel, minor silt and clay on the far eastern portion of the Site and the surficial geology can be described as Paleozoic Bedrock on the western side of the Site (Ministry of Northern Development and Mines, 2012). The surficial geology of the Site and surrounding areas is shown on Figure 2.

Based on the available regional geology maps, the subsurface stratigraphy of the Site from top to bottom is summarized in Table 2-1 (TRCA, 2008 and Oak Ridge Moraine Groundwater Program, 2023). The overburden thickness is approximately 6 to 7.5 meters (m).

Table 2-1: Summary of Subsurface Stratigraphy

Stratigraphic Unit	General Description	Top Elevation of Stratigraphic Unit
Undifferentiated Upper Sediments	This unit consists of coarse textured (foreshore-basinal) glaciolacustrine deposits consisting of sand, gravel, minor silt and clay	125.5
Halton Till or Equivalent (Aquitard)	This lithologic unit typically consists of sandy silt to clayey silt till interbedded with silt, clay, sand and gravel.	124.0
Georgian Bay Formation	Bedrock primarily consists of interbedded shale, limestone, dolostone and siltstone. It belongs to the Upper Ordovician, (Ministry of Northern Development and Mines, 2012).	118.0

Regional groundwater across the area flows northeast, towards Credit River (Oak Ridge Moraine Groundwater Program, 2023). Local deviation from the regional groundwater flow pattern may occur in response to changes in topography and/or soils, as well as the presence of surface water features and/or existing subsurface infrastructure.

2.1.3 Existing Water Well Survey

Water Well Records (WWRs) were compiled from the database maintained by the Ministry of the Environment, Conservation and Parks (MECP) and reviewed to determine the number of water wells documented within a 500-m radius of the Site

boundaries. The locations of the MECP WWRs within 500 m of the Site are shown on Figure 3. A summary of the WWR is included in Appendix A.

The MECP WWR database indicates that fifty-four (54) records within a 500 m radius from the Site centroid (Figure 3 and Appendix A). Well distances are calculated relative to the Site centroid, therefore 'some distances in Appendix A exceed 500 m.

The database indicates that the offsite wells are at an approximate distance of one hundred ninety-six (196) m or greater from the Site centroid. All offsite wells were reportedly identified as monitoring wells and test holes (33), water supply wells (5), abandoned wells (9) and listed with unknown use (7).

From five (5) water supply wells, three (3) WWRs are reportedly listed for domestic use, one (1) WWRs is listed for industrial use and one (1) WWRs is listed for an irrigation water supply. The Well Identification Numbers (Well ID No.) of the five (5) water supply wells are 4902183, 4902204, 4902206, 4902253 and 4907543, located between 326 m to 536 m from the Site centroid.

The reported water found levels ranged from depths of 2.8 m to 43.3 meters below ground surface (mbgs).

Based on the date of installation of the four (4) water supply wells (1952 July to 1957 July) and since the area is municipally serviced, it is unlikely that the noted four water supply wells are still active. One (1) water supply well (irrigation) was installed in 1990 August. It is recommended to complete a baseline residential well survey to verify results of the MECP WWR searches and to confirm current conditions and use of wells in 500 m zone of the Site.

2.2 Site Setting

2.2.1 Site Topography

The Site is in an urban land use setting. The topography is considered relatively flat with a regional gradual southeast slope towards Turtle Creek and Lake Ontario.

As indicated on the borehole logs included in Appendix B, the surface elevation of the Site ranges between approximately 122.4 to 123.9 meters above sea level (masl).

2.2.2 Local Surface Water Features

The Site is within the Credit River watershed. No surface water features exist onsite. The nearest surface water feature is Loyalist Creek, approximately located 150 meters northwest and Turtle Creek approximately 2.3 km southeast of the Site boundary. Lake Ontario is approximately 3.9 km from the Site boundary to the southeast.

2.2.3 Local Geology and Hydrogeology

A summary of subsurface soil stratigraphy is provided in the following paragraphs. The soil descriptions are based on the geotechnical investigation report (EXP, July 18, 2023). They are summarized for hydrogeological interpretations. As such, the information provided in this section shall not be used for construction design purposes.

The detailed soil profiles encountered in each borehole and the results of moisture content determinations are presented on the attached borehole logs (Appendix B). The soil boundaries indicated on the borehole logs are inferred from non-continuous sampling and observations during drilling. These boundaries are intended to reflect approximate transition zones for the Updated Hydrogeological Investigation and should not be interpreted as exact planes of geological change.

The "Notes on Sample Description" preceding the borehole logs form an integral part of and should be read in conjunction with this report. The following is a brief description of the soil conditions encountered during the investigation.

Based on the results of the geotechnical investigation, the general subsurface soil stratigraphy consists of the following units from top to bottom:

Topsoil

Topsoil was encountered at the ground surface in all boreholes with a thickness ranging from about 200 to 250 mm.

Fill Materials

Fill materials were encountered below the topsoil in all boreholes. The fill typically consisted of brown sand, sand and gravel, and clayey silt with occasional rock fragments. The fill extended to depths ranging from 1.4 to 4.6 m (~Elevation 119.8 to 121.9 m). The moisture contents within the fill samples were found to range from 5 to 19 percent.

Silty Clay Till/Shale Complex

The silty clay till/shale complex was encountered in all boreholes below the fill material, expect for Borehole 4. The till/shale complex extended to depths ranging from about 3.1 to 5.2 m (~Elevation 197.9 to 201.7 m). This deposit consists of a rather heterogeneous mixture of hard silty clay till with extensive amount of broken bedrock (shale and limestone/siltstone) slabs and fragments. This stratum was reportedly difficult to penetrate with the augers due to the fragmented shale/limestone content and given its hard condition. Cobbles and boulders are also anticipated in these deposits. The natural water contents measured in the test samples ranged from about 7% to 20%. This deposit gradually blends into the weathered shale and the transition between the two is difficult to estimate and some contractors may term this transition layer as weathered shale.

Shale Bedrock

Bedrock of the Georgian Bay Formation was encountered below the till/shale complex in all boreholes at depths ranging from about 3.3 to 4.6 m (~Elevation 118.8 to 119.9 m).

The shale bedrock was proven by rock core drilling in Borehole 1. It should be noted that it was often difficult to distinguish where silty clay till/shale complex ends and bedrock begins, particularly where the bedrock surface is weathered. As such, the inferred bedrock surface can vary by approximately ±1.0 m.

Bedrock of the Georgian Bay Formation consists typically of highly weathered to fresh, grey, fine to very fine grained fissile, weak to strong shale, interbedded with siltstone and limestone layers.

Shale bedrock was cored to a depth of 12.4 m below the existing ground surface and detailed coring information is provided on the rock core log. Photographs of rock cores are presented in Appendix B of this report. Total Core Recovery (TCR) achieved with the HQ double tube size core bit ranged from 68 to 100%. The recorded RQD values for weathered shale were generally 14 to 100%, indicating very poor to excellent rock quality.

Based on the visual examination of the rock cores, an attempt was made to identify and record the thickness and percentages of the relatively harder siltstone and limestone layers. At Borehole 1 location, the bedrock consists of 87% shale, 6% limestone, 4% siltstone and 3% clay and rubble layers/seams. The total percentage of the “hard layers” is about 10%. The thickness of these layers varied but was generally less than 50mm. Although not encountered, the Georgian Bay formation is known to contain very strong limestone or siltstone layers of 600 to 900 mm thickness and layers of such thickness should be anticipated during construction. It is also common to encounter closely spaced groupings of thin strong limestone/siltstone layers which individually may only be 25 to 50 mm thick but collectively can be 1 m in thickness.

Although combustible gas was not measured in the open borings, the Georgian Bay Formation, as well as overburden directly above the shale, is known to contain pockets of methane.

The borehole and monitoring well locations are shown on Figure 4. Geological cross-sections were generated based on the available borehole logs completed as part of the previous and current investigations and shown on Figure 5A (Cross section A-A’) and on Figure 5B (Cross section B-B’). The cross section shows a simplified representation of soil conditions and soil deposits

may be interconnected differently than represented. Borehole logs used to generate both cross-sections are provided in Appendix B.

3 Results

3.1 Monitoring Well Details

The monitoring well network was installed as part of the Geotechnical, Hydrogeological and Environmental Investigations at the Site. It consists of the following:

- Six (6) shallow monitoring wells (BH1S, BH2, BH3, BH4, BH5 and BH6) were installed to an approximate depth ranging from approximately 4 to 7 mbgs;
- Five (5) deep bedrock monitoring well (BH1D, BH25-1, BH25-2, BH25-3, BH25-4) was installed to an approximate depth of 12 mbgs to 18 mbgs.

The diameter of all monitoring wells is 50 mm. All wells were installed with a monument protective casing (stick ups). Borehole logs and monitoring well installation details are provided in Appendix B. The monitoring well locations are shown in Figure 4.

3.2 Water Level Monitoring

As part of this Updated Hydrogeological Investigation, static water levels in the monitoring wells were recorded in seven (7) monitoring events conducted on July 11, 17 and 25 of 2023; March 25, April 11, and 21 of 2025; and March 25, 2026. A summary of all static water level data as it relates to the elevation survey is given in Table 3-1 below.

The groundwater elevation recorded in the shallow wells ranged from 117.87 masl (5.48 mbgs at BH5 on July 25, 2023) to 121.00 masl (2.54 mbgs at BH3 on March 25, 2026). The groundwater elevation recorded for the deep well ranged from 114.62 masl (8.68 mbgs at BH1D on July 17, 2023) to 119.42 masl (4.62 mbgs at BH25-4 on April 11, 2025).

Table 3-1: Summary of Measured Groundwater Elevations

Monitoring Well ID	Ground Surface Elevation (masl)	Approximate Measured Well Depth (mbgs)	Depth	11-Jul-23	17-Jul-23	25-Jul-23	25-Mar-25	11-Apr-25	21-Apr-25	25-Mar-26
BH1S	123.30	3.85	mbTOP	4.54	4.56	4.54	9.20	9.04	9.20	9.27
			mbgs	3.68	3.70	3.68	8.34	8.18	8.34	8.41
			masl	119.62	119.60	119.62	114.96	115.12	114.96	114.89
BH1D	123.30	12.19	mbTOP	9.18	9.54	9.52	4.47	4.45	4.49	4.45
			mbgs	8.32	8.68	8.66	3.61	3.59	3.63	3.59
			masl	114.98	114.62	114.64	119.69	119.71	119.67	119.71
BH2	124.44	3.43	mbTOP	Dry	Dry	Dry	Dry	Dry	Dry	Dry
			mbgs							
			masl							
BH3	123.54	4.40	mbTOP	4.65	4.84	4.73	4.54	4.56	4.58	3.39
			mbgs	3.80	3.99	3.88	3.69	3.71	3.73	2.54
			masl	119.74	119.55	119.66	119.85	119.83	119.81	**121.00**
BH4	123.40	4.53	mbTOP	5.33	5.30	5.15	4.41	4.24	4.49	Dry
			mbgs	4.37	4.34	4.19	3.45	3.28	3.53	
			masl	119.03	119.06	119.22	119.95	120.12	119.87	
BH5	123.35	6.01	mbTOP	6.38	6.23	6.39	Dry	Dry	Dry	Dry
			mbgs	5.47	5.32	5.48	-	-	-	-
			masl	117.88	118.03	117.87	-	-	-	-
BH6	123.86	4.79	mbTOP	4.78	4.80	4.75	-	-	-	4.32
			mbgs	3.99	4.01	3.96	-	-	-	3.53
			masl	119.87	119.85	119.90	-	-	-	120.33
BH25-1	121.51	17.51	mbTOP	-	-	-	5.87	6.18	6.30	6.09
			mbgs	-	-	-	5.17	5.48	5.60	5.39
			masl	-	-	-	116.34	116.03	115.91	116.12
BH25-2	121.80	15.40	mbTOP	-	-	-	5.61	5.52	5.65	6.29
			mbgs	-	-	-	5.03	4.94	5.07	5.71
			masl	-	-	-	116.77	116.86	116.73	116.09
BH25-3	124.04	15.59	mbTOP	-	-	-	-	5.24	5.68	5.29
			mbgs	-	-	-	-	4.62	5.06	4.67

Monitoring Well ID	Ground Surface Elevation (masl)	Approximate Measured Well Depth (mbgs)	Depth	11-Jul-23	17-Jul-23	25-Jul-23	25-Mar-25	11-Apr-25	21-Apr-25	25-Mar-26
			masl	-	-	-	-	119.42	118.98	119.37
BH25-4	123.87	15.78	mbTOP	-	-	-	-	7.76	8.66	8.44
			mbgs	-	-	-	-	7.05	7.95	7.73
			masl	-	-	-	-	116.82	115.92	116.14

Notes:
mbTOP – meters below top of the pipe;
mbgs - meters below ground surface;
masl - meters above sea level.

Two (2) maps were created for the Site to show groundwater contours of the shallow overburden and deep shale bedrock (Figures 6A and 6B). Accordingly, the groundwater flow directions in the shallow overburden and deep shale bedrock are interpreted to be northeast of the Site, towards Credit River.

Groundwater levels are expected to show seasonal fluctuations and vary in response to prevailing climate conditions. This may also affect the direction and rate of flow. It is recommended to conduct seasonal groundwater level measurements to provide more information on seasonal groundwater level fluctuations.

3.3 Hydraulic Conductivity Testing

Seven (7) Single Well Response Tests (SWRT's) were completed on monitoring wells BH1S, BH1D, BH2, BH3, BH4, BH5 and BH6 on July 17, 18 and 25, 2023. Four (4) additional Single Well Response Tests (SWRT's) were completed on monitoring wells BH25-1, BH25-2, BH25-3 and BH25-4 on April 21, 2025. The test at BH1S was not corroborated with the soil formation, hence discarded the results. The tests were completed to estimate the saturated hydraulic conductivity (K) of the soils at the well screen depths utilizing data loggers, preprogramed to take measurement on time in half sec intervals.

The static water level within each monitoring well was measured prior to the start of testing. In advance of performing SWRTs, each monitoring well underwent development to remove fines introduced into the screens following construction. The development process involved purging of the monitoring wells to induce the flow of fresh formation water through the screen. Each monitoring well was permitted to fully recover prior to performing SWRTs.

Hydraulic conductivity values were calculated from the SWRT and constant rate test data as per Hvorslev's solution included in the Aqtesolv Pro. V.4.5 software package. The semi-log plots for normalized drawdown versus time are included in Appendix C.

A summary of the hydraulic conductivities (K-values) estimated from the SWRTs are provided in Table 3-2.

Table 3-2: Summary of Hydraulic Conductivity Testing

Monitoring Well	Measured Well Depth (mbgs)	Screen Interval (mbgs)		Soil Formation Screened	Estimated Hydraulic Conductivity (m/s)
		From	to		
BH1D	12.2	9.2	12.2	Shale Bedrock	1.4E-07
BH2	3.43	0.43	3.43	Silty Clay Till/Shale Complex	9.4E-07
BH3	4.40	1.40	4.40	Silty Clay Till/Shale Complex	3.6E-07
BH4	4.53	1.53	4.53	Fill/Possible Shale Bedrock	2.3E-07
BH5	6.01	3.01	6.01	Fill/Possible Shale Bedrock	8.6E-06
BH6	4.79	1.79	4.79	Fill/Silty Clay/Shale Complex/Possible Shale Bedrock	1.3E-07
BH25-1	2.0E-06	2.0E-06	2.0E-06	Bedrock	2.0E-06
BH25-2	3.0E-06	3.0E-06	3.0E-06	Bedrock	3.0E-06
BH25-3	3.6E-06	3.6E-06	3.6E-06	Bedrock	3.6E-06
BH25-4	6.3E-07	6.3E-07	6.3E-07	Bedrock	6.3E-07
				Highest Estimated K Value	8.6E-06
				Arithmetic Mean of Estimated K Values	2.0E-06
				Geometric Mean of Estimated K Values	8.3E-07

SWRTs provide K-estimates of the geological formation surrounding the well screens and may not be representative of bulk formation hydraulic conductivity. As shown in Table 3-2, the highest K-value of the tested water-bearing zone is 8.6E-06 m/s, and the arithmetic mean and the geometric mean of the K-values are 2.0E-06 m/s and 8.3E-07 m/s respectively.

3.4 Groundwater Quality

To assess the suitability for discharging pumped groundwater into the sewers owned by the City of Mississauga during dewatering activities, one (1) groundwater sample was collected from monitoring well BH1D on July 18, 2023, using a peristaltic pump. An additional groundwater sample was collected from monitoring well BH25-2 on April 21, 2025, and from BH25-1 (closest to the building footprint) on March 25, 2026, to address the city comments dated February 20, 2026. Prior to collecting the noted water sample, approximately three (3) standing well volumes of groundwater were purged from the referred well. The samples were collected unfiltered and placed into pre-cleaned laboratory-supplied vials and/or bottles provided with analytical test group specific preservatives, as required. Dedicated nitrile gloves were used during sample handling. The groundwater samples were submitted for analysis to Bureau Veritas Laboratory, a CALA certified independent laboratory in Mississauga, Ontario on July 18, 2023. Samples collected on April 21, 2025, and March 25, 2026, were submitted to ALS Environmental Laboratory, a CALA certified independent laboratory in Waterloo, Ontario. One (1) field filtered sample was also collected for dissolved metals on March 25, 2026. Analytical results are provided in Appendix D.

Table 3-3 summarizes exceedance(s) of the Sanitary (Table 1) and Storm (Table 2) Sewer Use By-Law parameters.

When comparing the chemistry of the collected groundwater samples to the Peel Region Sanitary Sewer Discharge Criteria (Table 1), there were no parameter exceedances to be reported.

(TKN). When comparing the chemistry of the collected groundwater samples to the City of Mississauga Storm Sewer Discharge Criteria (Table 2) the following parameters reported an exceedance: Total Suspended Solids (TSS), Total Aluminum and Total Kjeldahl Nitrogen.

No groundwater exceedances against the Peel Region Sanitary and City of Mississauga Storm Sewer By-Law criteria were identified in the Phase Two Environmental Site Assessment (ESA) completed on November 27, 2025.

Reporting detection limits (RDLs) were below the Sewer Use By-Law parameter criteria of Tables 1 and 2 except for dissolved Phosphorus (P).

Table 3-3: Summary of Analytical Results

Parameter	Units	Peel Region Sanitary Sewer By-Law Sewer Discharge Limit (Table 1)	City of Mississauga Storm Sewer Discharge Limit (Table 2)	Concentration BH/MW 1D July 18, 2023	Concentration BH25-2 April 21, 2025	Concentration BH25-1 March 25, 2026
Total Suspended Solids (TSS)	mg/L	350	15	**55**	**104**	11.4
Total Aluminum (Al)	mg/L	50	1	**2.2**	**1.56-**	0.734
Dissolved Aluminum (Al)	mg/L	-	-	-	-	<0.0100
Dissolved Phosphorus (P)	mg/L	-	0.4	-	-	<0.400
Total Kjeldahl Nitrogen (TKN)	mg/L	100	1	-	0.346	**1.26**

Bold – Exceeds City of Mississauga Storm Sewer Discharge Limit.
Bold & underlined – Exceeds Peel Region Sanitary Sewer By-Law Sewer Discharge Limit.

For the short-term dewatering system (construction phase), it is anticipated that TSS levels and some other parameters (for example, Total Metals) in the pumped groundwater may become elevated and exceed both Sanitary and Storm Sewer Use By-Law limits. To control the concentration of TSS and associated metals, it is recommended that a suitable treatment method be implemented (filtration or decantation facilities and/ or any other applicable treatment system) during construction dewatering activities to discharge to the applicable sewer system. The specifications of the treatment system will need to be adjusted to the reported water quality results by the treatment contractor/process engineer.

For the short-term dewatering discharge to the sanitary sewer system and based on the water quality test results, the water is suitable to be discharged without a treatment system.

For the short-term dewatering discharge to the storm sewer system and based on the water quality results, it is recommended to implement a suitable pre-treatment, as required.

For the long-term dewatering discharge to the sanitary sewer system (post-development phase) and based on the water quality test results, the water is suitable to be discharged without a treatment system.

For the long-term dewatering discharge to the storm sewer system (post-development phase) and based on the water quality results, it is recommended to implement a suitable pre-treatment, as required.

An agreement to discharge into the sewers owned by the Peel Region Sanitary Sewer By-Law and City of Mississauga will be required prior to releasing dewatering effluent.

The Environmental Site Assessment Report(s) shall be reviewed for more information on the groundwater quality conditions at the Site.

4 Dewatering Assessment

The dimensions of the proposed structure to support the dewatering assessment are summarized in Table 4-1 below.

Table 4-1 Building Dimensions for Dewatering Assessment

Input Parameter	Assumption (P4)	Elevator Pit	Units	Notes
Number of Subgrade Levels	Four Levels	-	-	
Ground Elevations	123.31	123.31	masl	Based on the average of the borehole logs
Top of Slab Elevation	110.15	107.55	masl	Based on Architectural drawings issued on November 21, 2025.
Lowest Footing Elevation	108.65	106.05	masl	Assumed to be approximately 1.5 m below the top of slab elevation
Excavation Area (Length x Width)	3,380 (65 x 52)	144 (18 x 8)	m^2 (m x m)	Approximate area (length x width) of Site for the proposed development based on P3/P4 plans (A200 and A201) and site plan (A006) dated November 21, 2025, prepared by Core Architects.

4.1 Dewatering Flow Rate Estimate and Zone of Influence

The Dupuit-Forcheimer equation for radial flow to both sides of an excavation through an unconfined aquifer resting on a horizontal impervious surface was used to obtain a flow rate estimate. Dewatering flow rate is expressed as follows:

$$Q_w = \frac{\pi K(H^2 - h^2)}{Ln\left[\frac{R_o}{r_e}\right]}$$

$$r_e = \frac{a+b}{\pi} \qquad R_o = R_{cj} + r_e$$

Where:

Qw = Rate of pumping (m^3/s)
X = Length of excavation (m)
K = Hydraulic conductivity (m/s)
H = Hydraulic head beyond the influence of pumping (static groundwater elevation) (m)
h = Hydraulic head above the base of aquifer in an excavation (m)
R_0 = Radius of influence (m)
R_{cj} = Cooper-Jacob's radius of influence (m)
r_e = Equivalent perimeter (m)
a = Length of the excavation area (m)

b = Width of the excavation area (m)

It is expected that the initial dewatering rate will be higher to remove groundwater from within the overburden formation. The dewatering rates are expected to decrease once the target water level is achieved in the excavation footprint as groundwater will have been removed, primarily from storage, resulting in lower seepage rates into the excavation.

4.2 Cooper-Jacob's Radius of Influence

The radius of influence (Rcj) for the construction dewatering was calculated based on Cooper-Jacob's equation. This equation is used to predict the distance at which the drawdown resulting from pumping is negligible.

The estimated radius of influence due to pumping is based on Cooper-Jacob's formula as follows:

$$R_{cj} = \sqrt{2.25KDt/s}$$

Where:

Ro = Estimated radius of influence (m)
D = Aquifer thickness (original saturated thickness) (m)
K = Hydraulic conductivity (m/s)
S = Storage coefficient
t = Duration of pumping (s)

4.3 Stormwater

Additional pumping capacity may be required to maintain dry conditions within the excavation during and following significant precipitation events. Therefore, the dewatering rates at the Site should also include removing stormwater from the excavation.

A 25 mm precipitation event was utilized for estimating the stormwater volume. The calculation of the stormwater volume is included in Appendix E.

The estimate of the stormwater volume only accounts for direct precipitation into the excavation. The dimensions of the excavation are considered in the dewatering calculations. Runoff, which originated outside of the excavation's footprint, is excluded and it should be directed away from the excavation.

During precipitation events greater than 25 mm (ex: 100-year storm), measures should be taken by the contractor to retain stormwater onsite in a safe manner to not exceed the allowable water taking and discharge limits, as necessary. A two (2) and a one hundred (100) year storm event over a 24-hour period are 56.2 mm and 122.3 mm (refer to Appendix E).

4.4 Results of Dewatering Rate Estimates

4.4.1 Construction Dewatering Rate Estimate

For this assessment, it was assumed that the proposed construction plans include an excavation with shoring extending to the Site boundaries. EXP should be retained to review the assumptions outlined in this section, should the assumed shoring design change.

Short-term (construction) dewatering calculations are presented in Appendix E. The architectural drawings are presented in Appendix F.

Pits (elevator, sump pits) are assumed to have the same excavation depth and dewatering target as the main excavation; deeper pits may require localized dewatering and revised dewatering estimates.

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

Table 4-2 Summary of Construction Dewatering Rate

Peak Dewatering Flow Rate Including Rain Collection Volume		
Description	**With Four Levels of Underground Parking (L/day)**	**Elevator Pit (L/day)**
Construction dewatering with Safety Factor, including precipitation	323,000	-
Construction dewatering without Safety Factor, including precipitation	204,000	-
Construction dewatering with Safety Factor, excluding Precipitation	238,000	10,000

The peak dewatering flow rates do not account for flow from utility beddings and variations in hydrogeological properties beyond those encountered during this investigation.

Local dewatering may be required for pits (elevator pits, sump pits, raft) and for localized areas with permeable, soft, or wet soil conditions. Local dewatering is not considered to be part of this assessment, but contractor should be ready to install additional system to manage such conditions. Dewatering estimates should be reviewed once the pit dimensions are available.

All grading around the perimeter of the excavation should be graded away from the shoring the systems and ramp/site access to redirect runoff away from excavation.

The dewatering assumptions are based on using shoring system without open cuts and sloped excavations.

If groundwater cutoff systems (ex: caisson walls, sheet piles) are installed, these should be designed for maximal hydrostatic pressure for shallow and deep water levels, without dewatering on the outer side of the groundwater cutoff. Soldier pile and lagging and caisson wall systems should be designed to account for shallow groundwater conditions and take into consideration that dewatering systems may not provide fully dewatered soil conditions.

If groundwater cutoff systems are used for decreasing long-term dewatering rates, these should be designed as permanent structures to cutoff groundwater inflow in the long-term. All perforations should be sealed permanently (ex: tiebacks, breaches, and cold joints) with no leakages and inspected. Fillers should extend into low permeability deposits (ex: sound bedrock or till) to cutoff groundwater from water bearing zones. Inspections should be conducted to confirm the depth of low permeability deposits along shoring system and that fillers are keyed into low permeability soil deposits.

The contractor is responsible for the design of the dewatering systems (depth of wells, screen length, number of wells, spacing sand pack around screens, prevent soil loss etc.) to ensure that dry conditions are always maintained within the excavation at all costs.

Dewatering should be monitored using dedicated monitoring wells within and around the perimeter of the excavation, and these wells should be monitored using manual measurements and with electronic data loggers; records should be maintained on site to track dewatering progress. Discharge rates should be monitored using calibrated flow meters and records of dewatering progress, and daily precipitation as per MECP requirements should be maintained.

4.4.2 Post-Construction Dewatering Rate Estimate

It is our understanding that the development plan includes a permanent foundation sub-drain system that will ultimately discharge to the municipal sewer system if conventional footings are installed.

The long-term dewatering was based on the same equations as construction dewatering shown in Section 4.1.

The calculation for the estimated flow to the future sub-drain system (with no cutoff walls) is provided in Appendix E. The dewatering target for the foundation drainage system is taken at 0.5 m below the lowest slab elevation.

The foundation drain analysis provides a flow rate estimate. Once the foundation drain is built, actual flow rate measurements of the sump discharge will be required to confirm the estimated flow rate.

Based on the assumptions provided in this report, the estimated sub-drain discharge volumes are summarized in Appendix E. Seasonal and daily fluctuations are expected. These estimates may be affected by hydrogeological conditions beyond those encountered at this time, fluctuations in groundwater regimes, surrounding Site alterations, and existing and future infrastructures.

Table 4-3: Summary of Long-Term Dewatering Rate

Long-Term Dewatering Flow Rate	With Four Levels of Underground Parking (L/day)
Total Volume (L/day) Long-Term Drainage of groundwater (from foundation drainage, weeping tiles, sub slab drainage) with Safety Factor Included	79,200
Long-Term Dewatering Rate without Safety Factor	52,800

Intermittent cycling of sump pumps and seasonal fluctuation in groundwater regimes should be considered for pump specifications. A safety factor was applied to the flow rate to account for water level fluctuations due to seasonal changes.

These estimates assume that pits (elevator and/or sump pits) are made as watertight structures (without drainage), if their depths extend below the dewatering target, as previously stated. The dewatering assumptions are based on using shoring system without open cuts. Open cuts can act as preferential groundwater pathways in the long-term and cause foundation drainage volumes to increase.

The sub-drain rate estimate is based on the assumptions outlined in this report. Any variations in hydrogeological conditions beyond those encountered as part of this investigation may significantly influence the sub-drain discharge volumes.

4.5 MECP Water Taking Permits

4.5.1 Short-Term Discharge Rate (Construction Phase)

In accordance with the Ontario Water Resources Act, if the water taking for the construction dewatering is more than 50,000 L/day, then an online registration in the Environmental Activity and Sector Registry (EASR) with the MECP will be required.

As of July 1, 2025, an amendment of O. Reg. 63/16 has come into effect and replaced the former subsection 7 (5) such that the EASR water taking limit of 400,000 L/day would no longer apply to groundwater takings of each dewatered work area only, excluding stormwater.

The dewatering estimate, including a safety factor, is greater than 50,000 L/day as shown in Table 4-2. Based on the MECP construction dewatering an EASR will be required to facilitate the construction dewatering program of the Site.

A Discharge Plan (dewatering sketch, sewer discharge agreement) must be developed and applied for any discharges from the Site. Monitoring of both water quantity and water quality must be carried out for the entire duration of the construction dewatering phase. During this phase, the Discharge Plan and the daily water taking records must be available onsite.

The EASR, Water Taking and Discharge Reports, hydrogeological investigation report, and geotechnical assessment of settlements must also be available at the construction Site during the entire construction dewatering. EXP should be notified immediately about any changes to the construction dewatering schedule or design, since the EASR will need to be updated to reflect these modifications.

4.5.2 Long-Term Discharge Rate (Post Construction Phase)

In accordance with the Ontario Water Resources Act and Ontario Regulation 387/04 as amended (as of July 1, 2025), foundation drainage systems used primarily for residential purposes are exempt for takings of up to 379,000 liters of water per day from requiring MECP approval or self-registration.

Based on the dewatering estimate shown in Table 4-3 is less than 379,000 L/day, a Category 3 Permit to Take Water (PTTW) will not be required to facilitate the post-development phase.

The safety factor for construction (short-term) dewatering is selected larger than for long-term to account for anticipated greater groundwater volumes during initial dewatering. The applied analytical formula is adequate for long-term (steady state) conditions as it omits specific yield and time dependency. When the formula is used for short-term conditions a larger safety factor is recommended to cover a larger initial dewatering rate, which is required to remove stored groundwater. Moreover, a large initial construction dewatering rate is favorable, as it supports reducing the time to reach the dewatering target elevation.

5 Environmental Impact

5.1 Surface Water Features

The Site is located within the Credit River watershed. No surface water features exist onsite. The nearest surface water feature is Loyalist Creek, approximately located 150 meters northwest and Turtle Creek approximately 2.3 km southeast of the Site boundary. Lake Ontario is approximately 3.9 km from the Site boundary to the southeast.

Due to the limited extent of zone of influence and the wide distance to the nearest surface water feature, no detrimental impacts on surface water features are expected during construction activities.

5.2 Groundwater Sources

Well Records from the MECP Water Well Record (WWR) Database were reviewed to determine the presence and number of water supply wells within a 500 m radius of the Site boundaries. Given that the dewatering zone of influence is limited, no dewatering related impact is expected on the water wells in the area. Based on the date of installation of the four water supply wells (1952 July to 1957 July) and since the area is municipally serviced, it is unlikely that the noted four water supply wells are still active. One water supply well (irrigation) was installed in 1990 August and hence It is recommended to complete a baseline residential well survey to verify results of the MECP WWR searches and to confirm current conditions and use of wells in 500 m zone of the Site.

5.3 Geotechnical Considerations

As per the MECP technical requirement for EASR, the geotechnical assessment of the stability of the soils due to water taking (ex: settlement, soil loss, subsidence, etc.) is required. The water taking should not have unacceptable interference on soils and underground structures (foundations, utilities, etc.).

A letter related to geotechnical issues as it pertains to the Site is required to be completed under a separate cover.

5.4 Groundwater Quality

It is our understanding that the potential effluent from the dewatering system during the construction will be released to the municipal sewer system. As such, the quality of groundwater discharge is required to conform the Peel Region Sanitary Sewer By-Law and City of Mississauga Sewer Use By-Law.

Dewatering (short and long-term) may induce migration of contaminants within the zone of influence and beyond due to changing hydraulic gradients, hydrogeological conditions beyond Site boundaries and preferential pathways in utility beddings etc. The water quality sampling conducted as part of this assessment was performed under static conditions. As a result, monitoring may be required during dewatering activities (short and long-term) to monitor potential migration, and this should be performed more frequently during early dewatering stages.

For the short-term (construction) and long-term (post-development phase) dewatering discharge to the sanitary sewer system and based on the water quality test results, the water is suitable to be discharged without a treatment system.

For the short-term dewatering discharge to the storm sewer system and based on the water quality results, it is recommended to implement a suitable pre-treatment, as required.

For the long-term dewatering discharge to the storm sewer system (post-development phase) and based on the water quality results, it is recommended to implement a suitable pre-treatment, as required.

The water quality results presented in this report may not be representative of the long-term condition of groundwater quality onsite.

An agreement to discharge into the sewers owned by the Peel Region Sanitary Sewer By-Law and City of Mississauga will be required prior to releasing dewatering effluent.

The Environmental Site Assessment Report(s) shall be reviewed for more information on the groundwater quality conditions at the Site.

5.5 Well Decommissioning

In conformance with Regulation 903 of the Ontario Water Resources Act, the installation and eventual decommissioning of any dewatering system wells or monitoring wells must be completed by a licensed well contractor. This will be required for all wells that are no longer in use.

6 Conclusions and Recommendations

Based on the findings of the Updated Hydrogeological Investigation, the following conclusions and recommendations are provided:

- Although it is expected that the entire area is provided with municipal water and sewer services and given that the dewatering zone of influence is limited, no dewatering related impact is expected on the water wells in the area. However, since five (5) water supply wells are reportedly noted in the area, it is recommended to complete a baseline residential well survey to verify results of the MECP WWR searches and to confirm current conditions and use of wells in 500 m zone of the Site.
- When comparing the chemistry of the collected groundwater samples to the Peel Region Sanitary Sewer Discharge Criteria (Table 1), there were no parameter exceedances to be reported.
- (TKN). When comparing the chemistry of the collected groundwater samples to the City of Mississauga Storm Sewer Discharge Criteria (Table 2) the following parameters reported an exceedance: Total Suspended Solids (TSS), Total Aluminum and Total Kjeldahl Nitrogen.
- Based on the assumptions outlined in this report, the estimated peak dewatering rate for proposed construction activities is approximately 333,000 for P4 and the elevator pit. This is the rate which will be required to be discharged to the municipal sewer system for the EASR.
- As the dewatering flow rate estimate is greater than 50,000 L/day, an EASR will be required to facilitate the construction dewatering program for the Site.
- The long-term flow rate of the foundation sub-drain is estimated to be approximately 79,200 L/day. It is recommended that once the sub-drain system is in place, a flow meter be installed at the sump(s) to record daily discharge volumes during the commissioning stage of the system. Regular maintenance/cleaning of the sub-drain system is recommended to ensure its proper operation. A PTTW will not be required for long-term discharge as the flow is less than 379,000 L/day.
- The construction dewatering and long-term estimate of sub-drain discharge volumes is based on the assumptions outlined in this report. Any variations in hydrogeological conditions beyond those encountered as part of this preliminary investigation may significantly influence the discharge volumes.
- For the short-term dewatering system (construction phase), it is anticipated that TSS levels and some other parameters (for example, Total Metals) in the pumped groundwater may become elevated and exceed both Sanitary and Storm Sewer Use By-Law limits. To control the concentration of TSS and associated metals, it is recommended that a suitable treatment method be implemented (filtration or decantation facilities and/ or any other applicable treatment system) during construction dewatering activities to discharge to the applicable sewer system. The specifications of the treatment system will need to be adjusted to the reported water quality results by the treatment contractor/process engineer.
- For the short-term dewatering discharge to the sanitary sewer system and based on the water quality test results, the water is suitable to be discharged without a treatment system.
- For the long-term dewatering discharge to the sanitary sewer system (post-development phase) and based on the water quality test results, the water is suitable to be discharged without a treatment system.
- For the short-term dewatering discharge to the storm sewer system and based on the water quality results, it is recommended to implement a suitable pre-treatment, as required.
- For the long-term dewatering discharge to the storm sewer system (post-development phase) and based on the water quality results, it is recommended to implement a suitable pre-treatment, as required.
- As per the MECP technical requirement for EASR, the geotechnical assessment of the stability of the soils due to water taking (ex: settlement, soil loss, subsidence etc.) is required. The water taking should not have unacceptable interference on soils

and underground structures (foundations, utilities etc.). A letter related to geotechnical issues as it pertains to the Site is required to be completed under a separate cover.

- An agreement to discharge into the sewers owned by the Peel Region Sanitary Sewer By-Law and City of Mississauga will be required prior to releasing dewatering effluent.
- A Discharge Plan (dewatering sketch, sewer discharge agreement) must be developed and applied for any discharges from the Site. The Discharge Plan and monitoring for both water quantity and water quality must be carried out at the Site during the entire construction dewatering phase. The daily water taking records must be maintained onsite for the entire construction dewatering phase.
- The EASR, Water Taking and Discharge Report, hydrogeological investigation report, and geotechnical assessment of settlements must always also be available at the construction Site for the entire construction dewatering. EXP should be notified immediately about any changes to the construction dewatering schedule or design, since EASR will need to be updated to reflect these modifications.
- In conformance with Regulation 903 of the Ontario Water Resources Act, the installation and eventual decommissioning of any dewatering system wells or monitoring wells must be completed by a licensed well contractor. This will be required for all wells that are no longer in use.

The conclusions and recommendations provided above should be reviewed in conjunction with the entirety of the report. They assume that the present design concept described throughout the report will proceed to construction. This report is solely intended for the construction and long-term dewatering assessments. Any changes to the design concept may result in a modification to the recommendations provided in this report.

7 Limitations

This report is based on a limited investigation designed to provide information to support an assessment of the current hydrogeological conditions within the study area. The conclusions and recommendations presented within this report reflect Site conditions existing at the time of the assessment. EXP must be contacted immediately, if any unforeseen Site conditions are experienced during construction activities. This will allow EXP to review the new findings and provide appropriate recommendations to allow the construction to proceed in a timely and cost-effective manner.

Our undertaking at EXP, therefore, is to perform our work within limits prescribed by our clients, with the usual thoroughness and competence of the geoscience/engineering profession. No other warranty or representation, either expressed or implied, is included or intended in this report.

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We trust that this information is satisfactory for your purposes. Should you have any questions or comments, please do not hesitate to contact this office.

Sincerely,

EXP Services Inc.



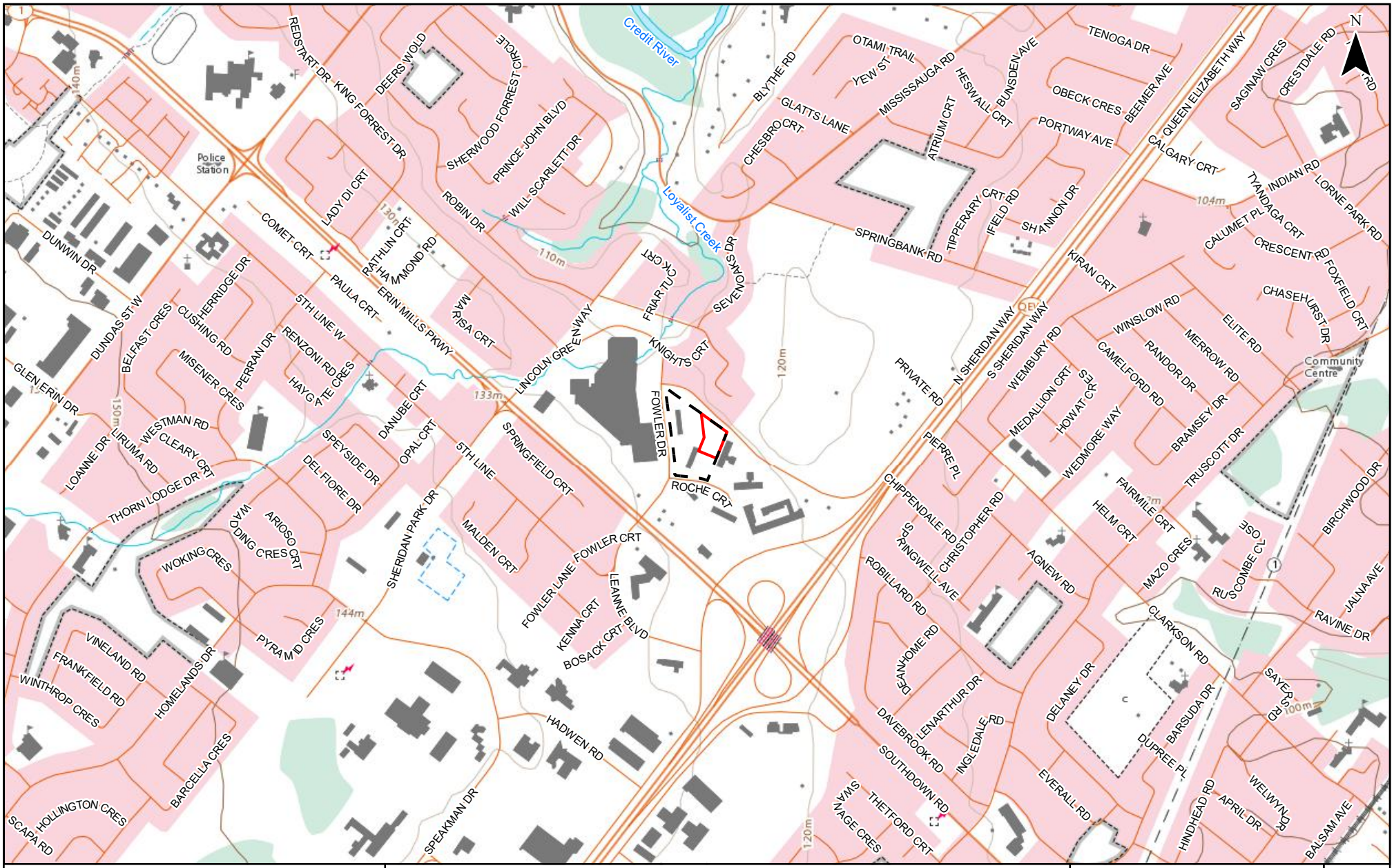
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Environmental Services

Francois Chartier, M.Sc., P.Geo.
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Environmental Services

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- The Credit River Watershed, Credit Valley Conservation Authority.

Figures



SCALE:

0 150 300 450 600 750 m

LEGEND:

APPROXIMATE SITE BOUNDARY

PROPERTY BOUNDARY

exp.

DRAWN BY:	CHECKED BY:
AC	AN

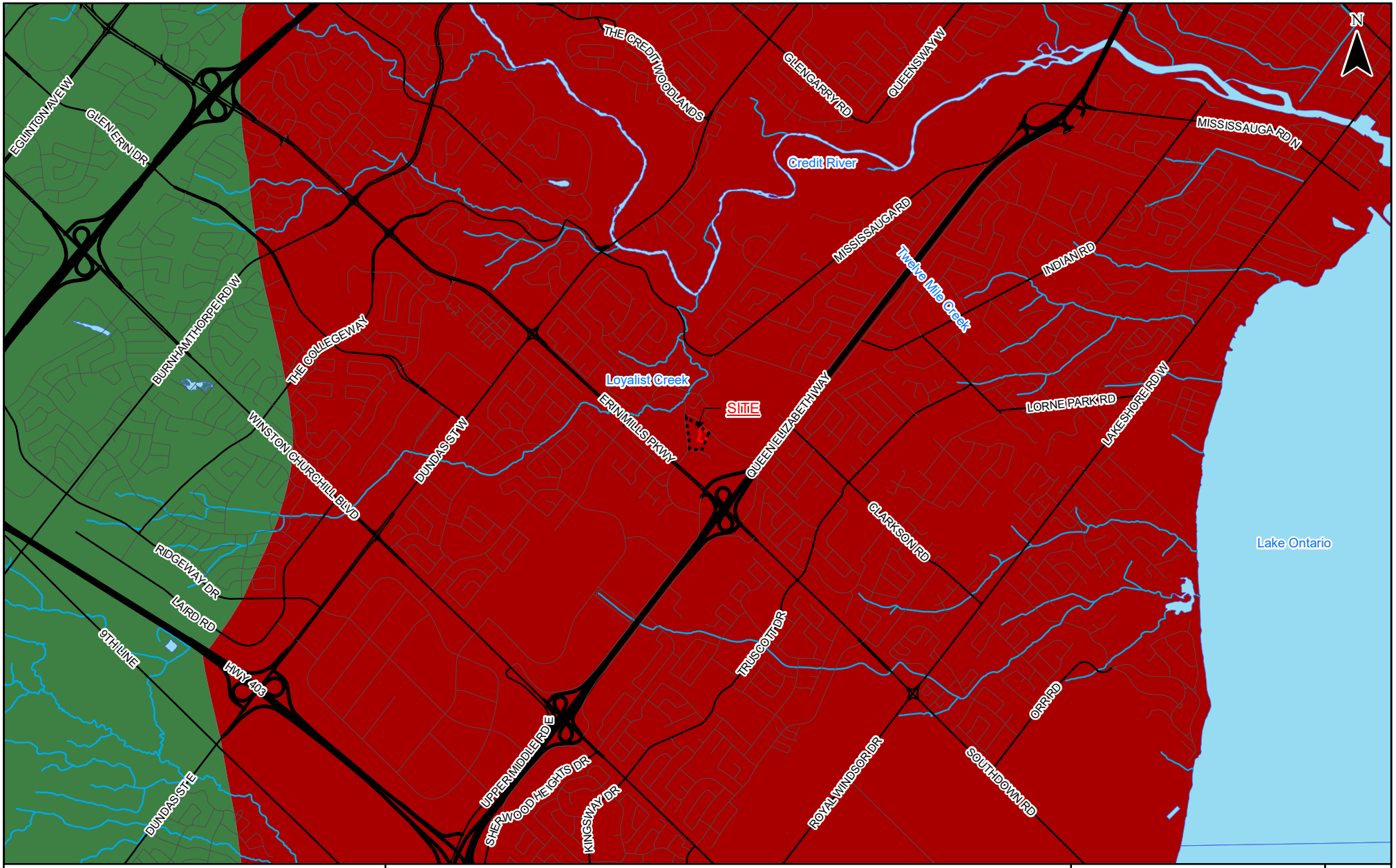
SITE LOCATION PLAN

FIGURE: 1

HYDROGEOLOGICAL INVESTIGATION
1970 AND 1980 FOWLER DRIVE
MISSISSAUGA, ONTARIO

PROJECT NUMBER: GTR-22022660-A0

DATE: JULY 2023



SCALE:
0 500 1,000 1,500 2,000 2,500 m

SOURCE:
BASED ON ONTARIO GEOLOGICAL SURVEY DATA PUBLISHED IN 2007

exp.

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AC	AN

LEGEND:
- APPROXIMATE SITE BOUNDARY
- PROPERTY BOUNDARY
- IROQUOIS PLAIN
- SOUTH SLOPE

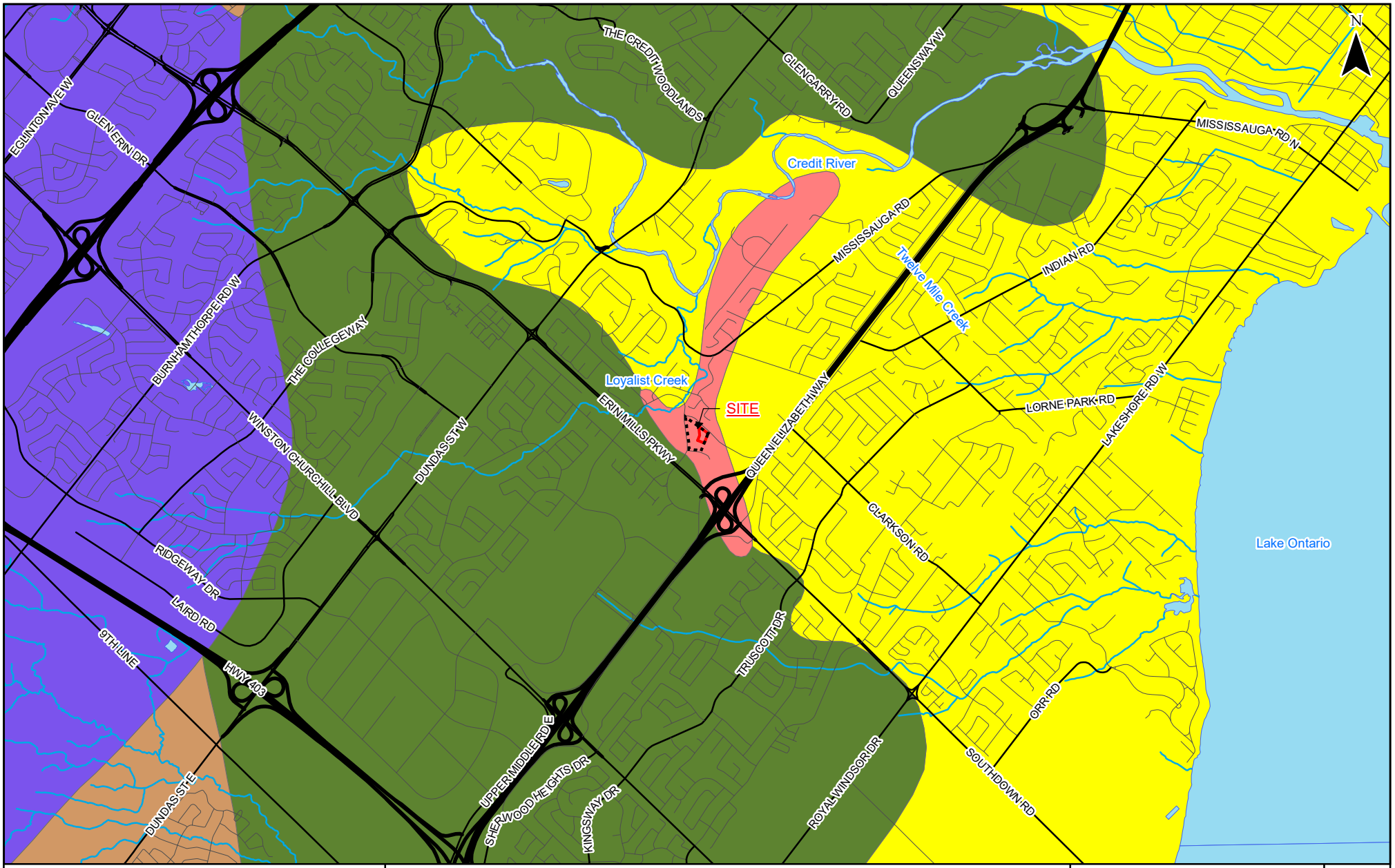
PHYSIOGRAPHIC REGIONS

FIGURE: 2A

HYDROGEOLOGICAL INVESTIGATION
1970 AND 1980 FOWLER DRIVE
MISSISSAUGA, ONTARIO

PROJECT NUMBER: GTR-22022660-A0

DATE: APRIL 2025



SCALE:
0 500 1,000 1,500 2,000 2,500 m

SOURCE:
BASED ON ONTARIO GEOLOGICAL SURVEY DATA PUBLISHED IN 2007

exp.

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AC	AN

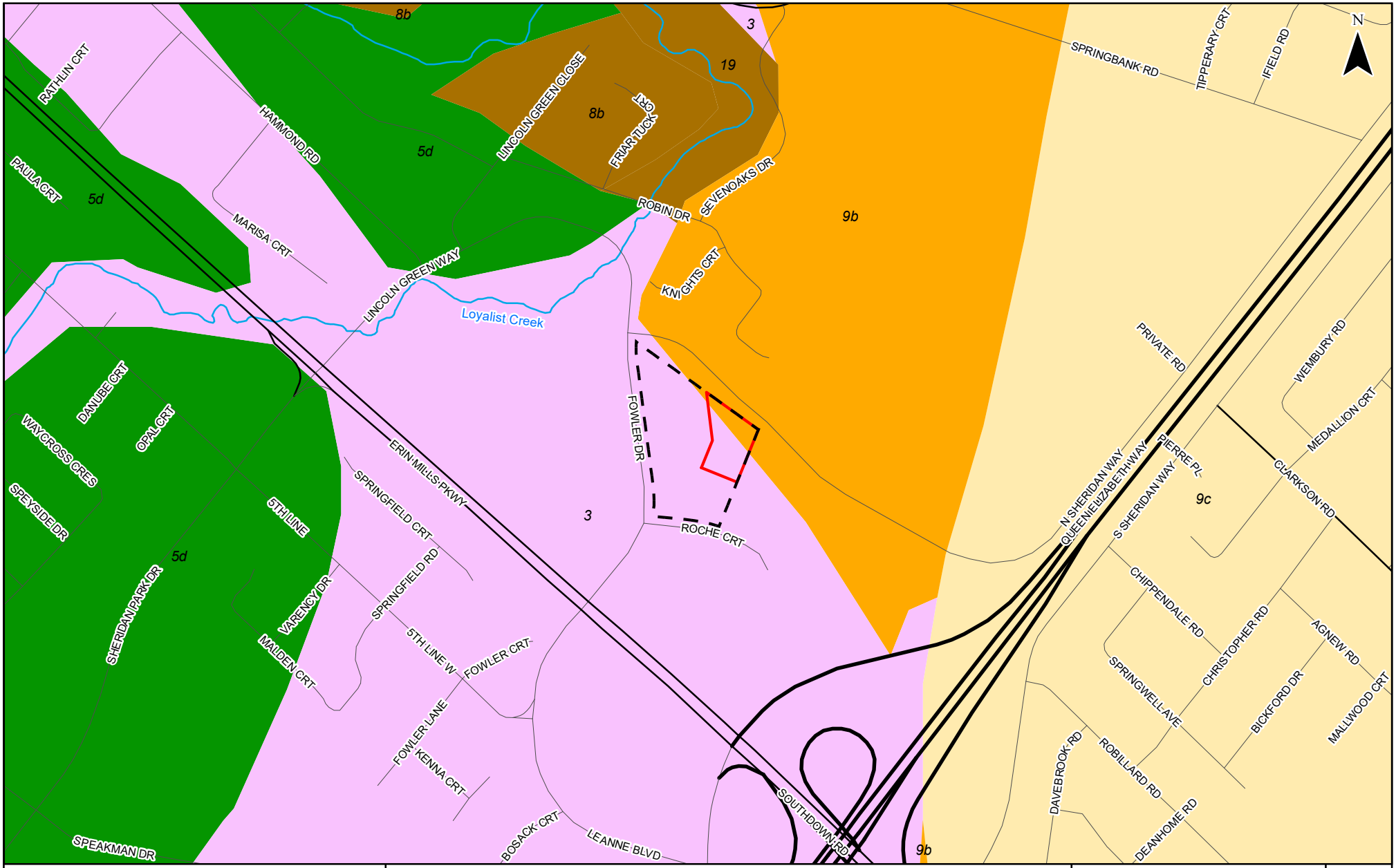
LEGEND:
- APPROXIMATE SITE BOUNDARY
- PROPERTY BOUNDARY
- BEACHES
- SAND PLAINS
- SHALE PLAINS
- TILL MORAINES
- TILL PLAINS (DRUMLINIZED)

PHYSIOGRAPHIC LANDFORMS

FIGURE: 2B

HYDROGEOLOGICAL INVESTIGATION
1970 AND 1980 FOWLER DRIVE
MISSISSAUGA, ONTARIO

PROJECT NUMBER: GTR-22022660-A0 | DATE: APRIL 2025



SCALE:

0 100 200 300 400 500 m

SOURCE:

BASED ON ONTARIO GEOLOGICAL SURVEY DATA PUBLISHED IN 2010

exp.

DRAWN BY:	CHECKED BY:
AC	AN

LEGEND:

- APPROXIMATE SITE BOUNDARY
- PROPERTY BOUNDARY
- 19: MODERN ALLUVIAL DEPOSITS
- 9B: COARSE-TEXTURED GLACIOLACUSTRINE DEPOSITS (LITTORAL-FORESHORE DEPOSITS)
- 9C: COARSE-TEXTURED (FORESHORE-BASINAL) GLACIOLACUSTRINE DEPOSITS
- 8B: FINE-TEXTURED GLACIOLACUSTRINE DEPOSITS
- 5D: GLACIOLACUSTRINE-DERIVED SILTY TO CLAYEY TILL
- 3: PALEOZOIC BEDROCK

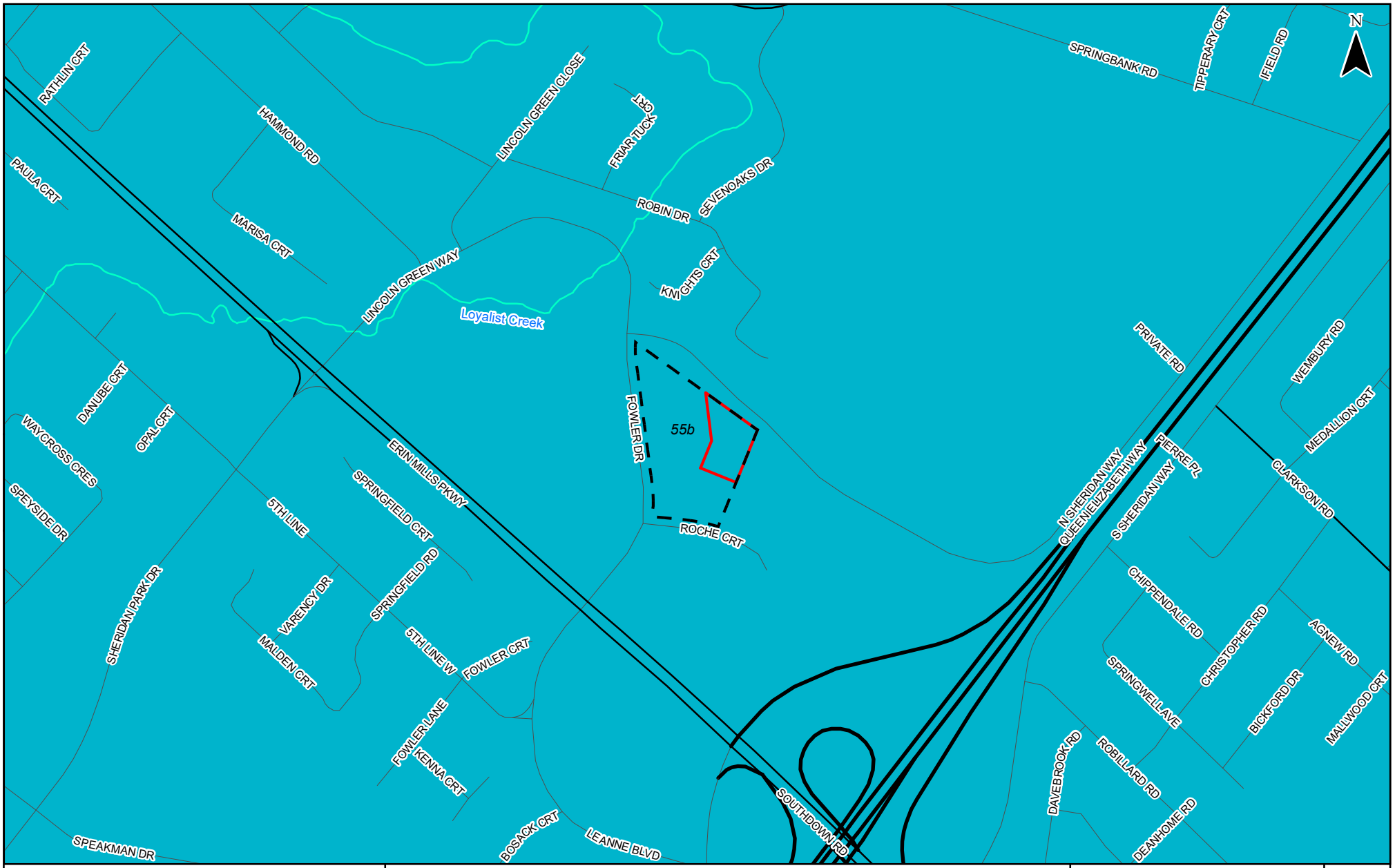
SURFICIAL GEOLOGY

FIGURE: 2C

HYDROGEOLOGICAL INVESTIGATION
1970 AND 1980 FOWLER DRIVE
MISSISSAUGA, ONTARIO

PROJECT NUMBER: GTR-22022660-A0

DATE: APRIL 2025



SCALE:
0 100 200 300 400 500 m

SOURCE:
BASED ON ONTARIO GEOLOGICAL SURVEY DATA PUBLISHED IN 2011

exp.

DRAWN BY:	CHECKED BY:
AC	AN

LEGEND:
- APPROXIMATE SITE BOUNDARY
- 55b: SHALE, LIMESTONE, DOLOSTONE, SILTSTONE
  Georgian Bay Formation; Blue Mountain Formation; Billings Formation; Collingwood Member; Eastview Member

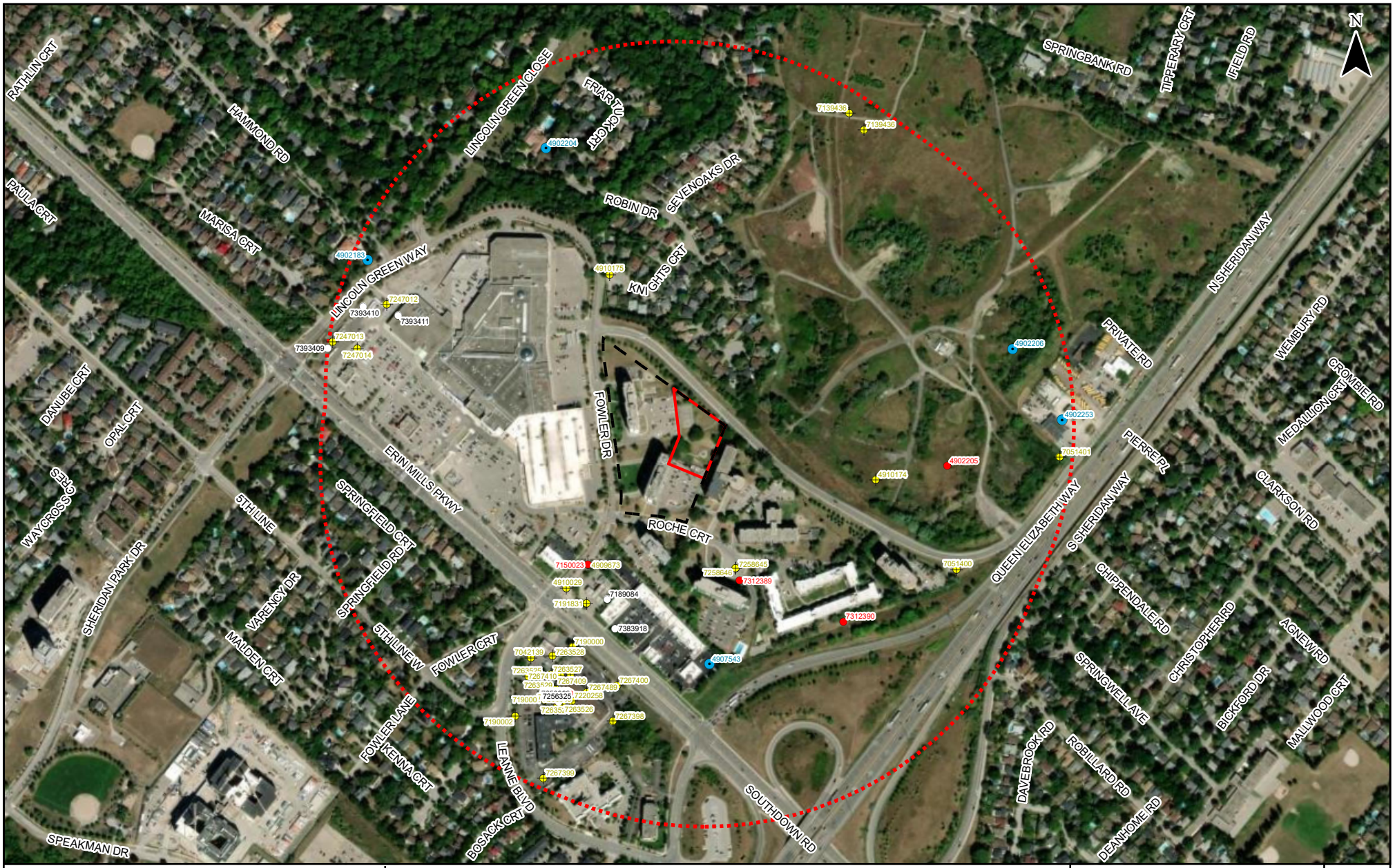
BEDROCK GEOLOGY

FIGURE: 2D

HYDROGEOLOGICAL INVESTIGATION
1970 AND 1980 FOWLER DRIVE
MISSISSAUGA, ONTARIO

PROJECT NUMBER: GTR-22022660-A0

DATE: APRIL 2025



SCALE:
0 100 200 300 400 500 m

SOURCE:
BASED ON GOOGLE EARTH IMAGERY DATED 2022,
AVAILABLE WELL RECORD INFORMATION AS OF JUNE 2022

exp.

DRAWN BY:	CHECKED BY:
AC	AN

LEGEND:

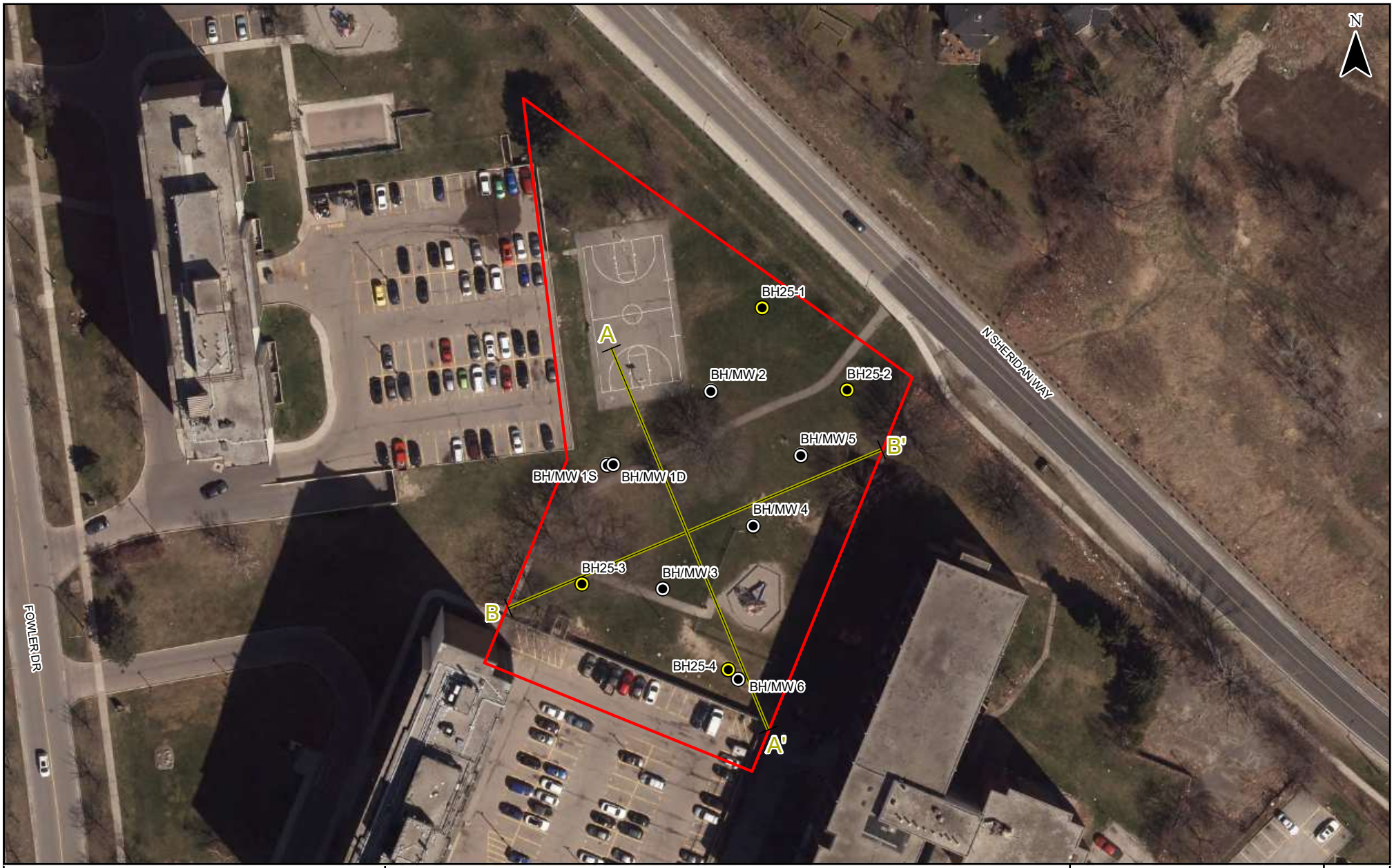
- MONITORING WELL / TEST HOLE
- WATER SUPPLY WELL
- ABANDONED WELL
- UNCLASSIFIED / UNFINISHED WELL
- APPROXIMATE SITE BOUNDARY
- 500 m ZONE
- PROPERTY BOUNDARY

MECP WATER WELL RECORDS MAP

FIGURE: 3

HYDROGEOLOGICAL INVESTIGATION
1970 AND 1980 FOWLER DRIVE
MISSISSAUGA, ONTARIO

PROJECT NUMBER: GTR-22022660-A0 | DATE: JULY 2023



SCALE:

0 10 20 30 40 50 m

LEGEND:

- BOREHOLE / MONITORING WELL (EXP, 2023)
- BOREHOLE / MONITORING WELL (EXP, 2025)
- CROSS SECTION AXIS
- APPROXIMATE SITE BOUNDARY

exp.

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BOREHOLE / MONITORING WELL LOCATION PLAN

FIGURE: 4

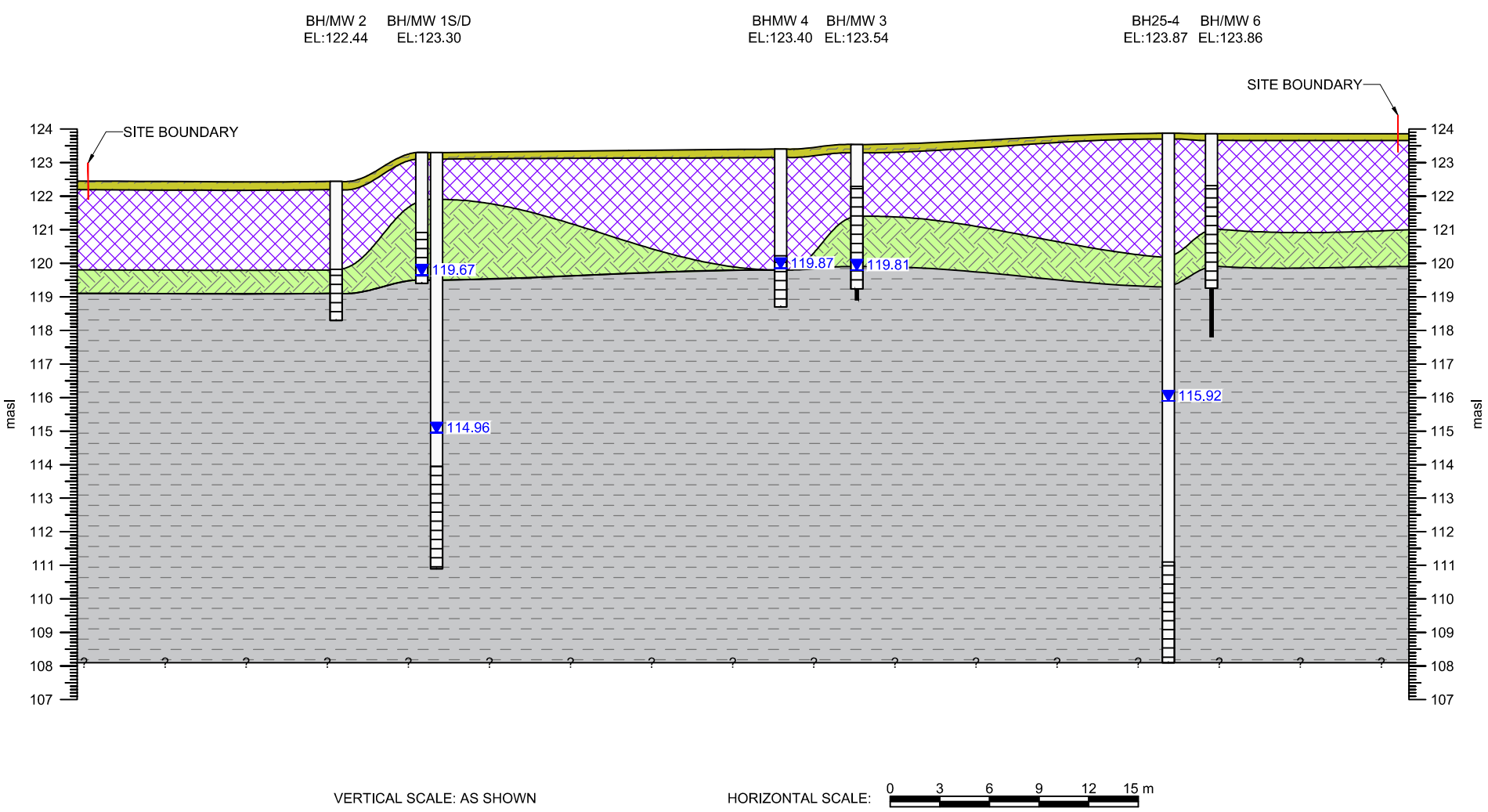
HYDROGEOLOGICAL INVESTIGATION
1970 AND 1980 FOWLER DRIVE
MISSISSAUGA, ONTARIO

PROJECT NUMBER: GTR-22022660-A0

DATE: APRIL 2025

A
NORTH

A'
SOUTH



VERTICAL SCALE: AS SHOWN

HORIZONTAL SCALE: 0 3 6 9 12 15 m

EXP Services Inc.
t: +1.905.695.3217 | f: +1.905.695.0169
220 Commerce Valley Drive West, Suite 110
Markham, ON L3T 0A8
Canada
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• INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY •

LEGEND:

- TOPSOIL
- FILL
- SILTY CLAY TILL / SHALE COMPLEX
- SHALE BEDROCK
- GROUNDWATER ELEVATION (masl) AS MEASURED ON APRIL 21, 2025

TITLE AND LOCATION:

CROSS SECTION A-A'

HYDROGEOLOGICAL INVESTIGATION
1970 AND 1980 FOWLER DRIVE
MISSISSAUGA, ONTARIO

PROJECT NO.:	DWN.:
GTR-22022660-A0	MS
SCALE:	CK:
AS NOTED	AN
DATE:	FIG. NO.:
APRIL 2025	5A

\\exp\data\BRM\GTR-22022660-A0\60 Execution\65 Drawings\HG\Cross Sections\GTR-22022660-A0 - 2025 Update.dwg

B
WEST

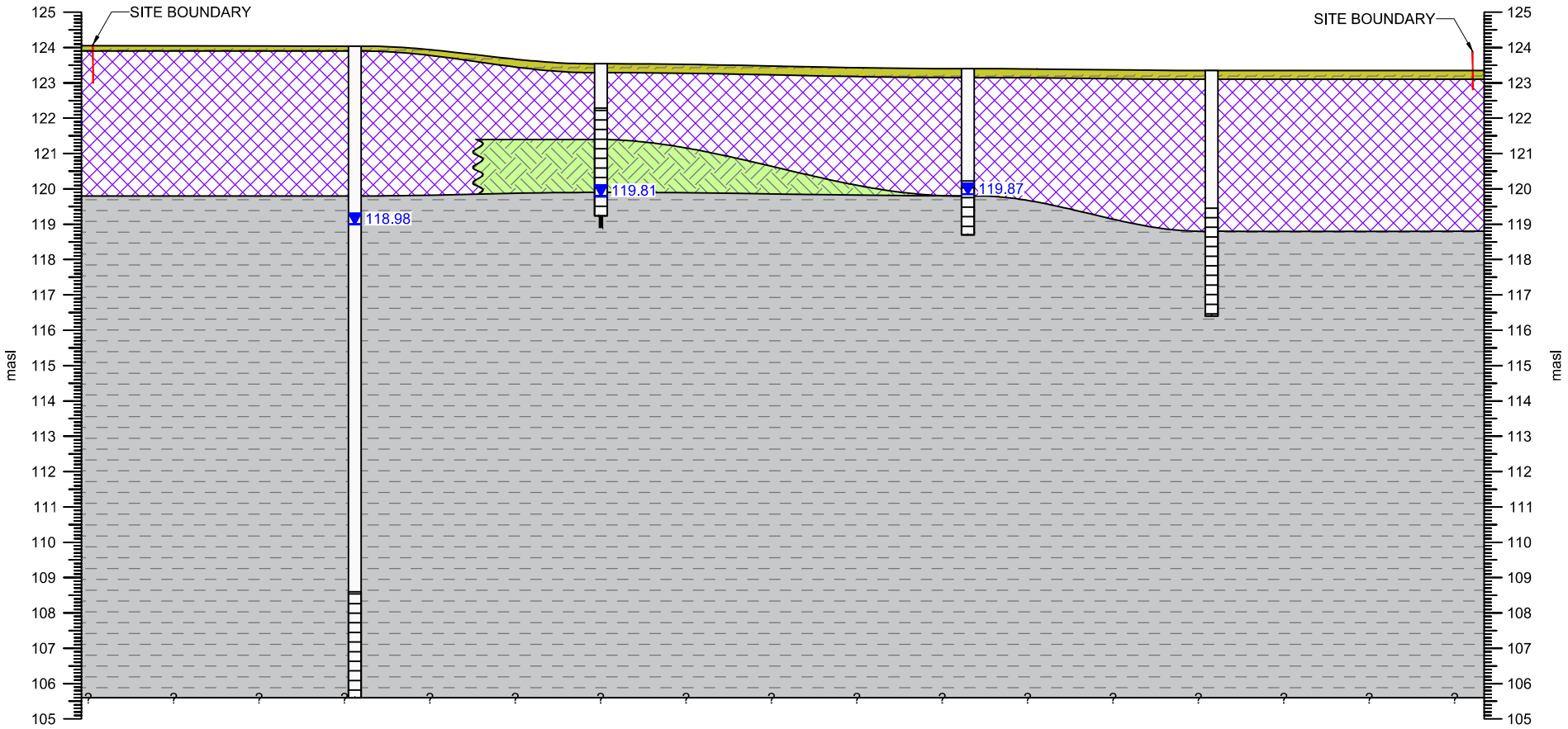
B'
EAST

BH25-3
EL:124.06

BH/MW 3
EL:123.54

BHMW 4
EL:123.40

BHMW 5
EL:123.35



VERTICAL SCALE: AS SHOWN

HORIZONTAL SCALE: 0 3 6 9 12 15 m

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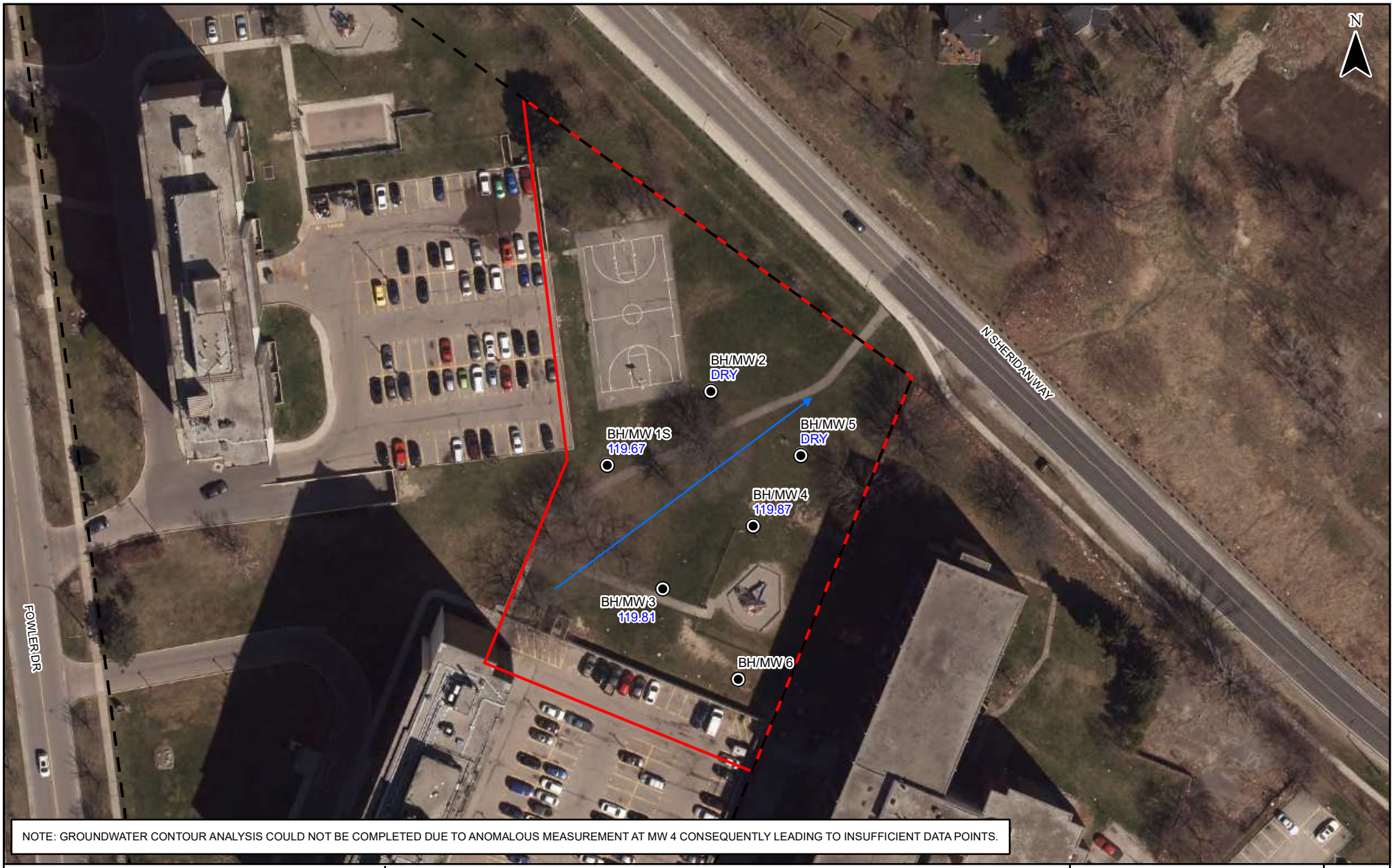
LEGEND:
- TOPSOIL
- FILL
- SILTY CLAY TILL / SHALE COMPLEX
- SHALE BEDROCK
- GROUNDWATER ELEVATION (masl) AS MEASURED ON APRIL 21, 2025

TITLE AND LOCATION:

CROSS SECTION B-B'
HYDROGEOLOGICAL INVESTIGATION
1970 AND 1980 FOWLER DRIVE
MISSISSAUGA, ONTARIO

PROJECT NO.: GTR-22022660-A0	DWN.: MS
SCALE: AS NOTED	CK: AN
DATE: APRIL 2025	FIG. NO.: 5B

\\exp\data\BRM\GTR-22022660-A0\60 Execution\65 Drawings\HG\Cross Sections\GTR-22022660-A0 - 2025 Update.dwg



NOTE: GROUNDWATER CONTOUR ANALYSIS COULD NOT BE COMPLETED DUE TO ANOMALOUS MEASUREMENT AT MW 4 CONSEQUENTLY LEADING TO INSUFFICIENT DATA POINTS.

SCALE:

0 10 20 30 40 50 m

LEGEND:

- BOREHOLE / MONITORING WELL (EXP, 2023)
- INFERRED GROUNDWATER FLOW DIRECTION
- xx.xx GROUNDWATER ELEVATION (m asl) AS MEASURED ON APRIL 21, 2025
- PROPERTY BOUNDARY
- APPROXIMATE SITE BOUNDARY

exp.

DRAWN BY:	CHECKED BY:
AC	AN

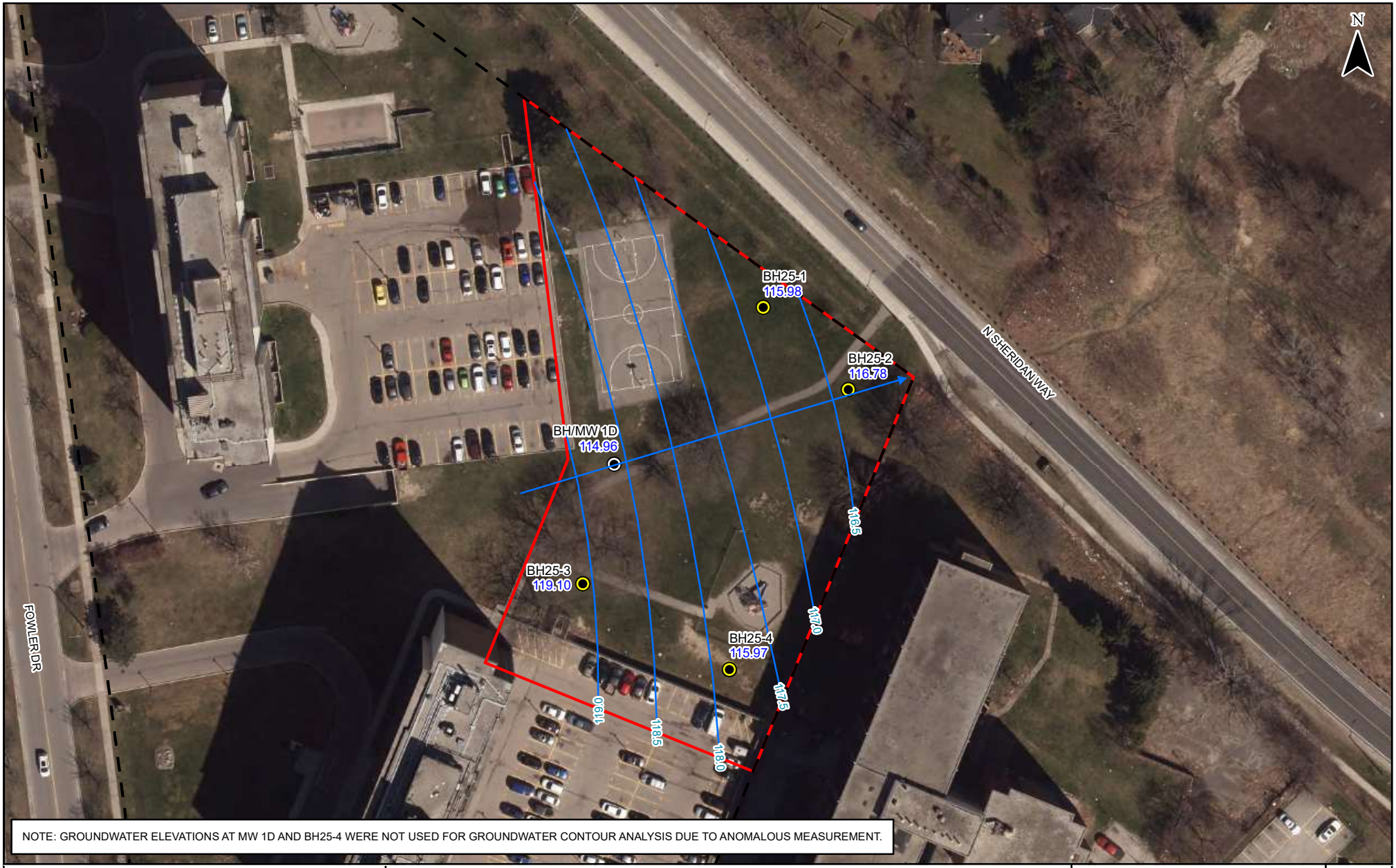
SHALLOW GROUNDWATER ELEVATION PLAN

FIGURE: 6A

HYDROGEOLOGICAL INVESTIGATION
1970 AND 1980 FOWLER DRIVE
MISSISSAUGA, ONTARIO

PROJECT NUMBER: GTR-22022660-A0

DATE: APRIL 2025



NOTE: GROUNDWATER ELEVATIONS AT MW 1D AND BH25-4 WERE NOT USED FOR GROUNDWATER CONTOUR ANALYSIS DUE TO ANOMALOUS MEASUREMENT.

SCALE:

0 10 20 30 40 50 m

LEGEND:

- BOREHOLE / MONITORING WELL (EXP, 2023)
- BOREHOLE / MONITORING WELL (EXP, 2025)
- GROUNDWATER CONTOUR
- GROUNDWATER FLOW DIRECTION
- XX.XX GROUNDWATER CONTOUR (m asl) AS MEASURED ON APRIL 21, 2025
- PROPERTY BOUNDARY
- APPROXIMATE SITE BOUNDARY

exp.

DRAWN BY:	CHECKED BY:
AC	AN

DEEP GROUNDWATER CONTOUR PLAN

FIGURE: 6B

HYDROGEOLOGICAL INVESTIGATION
1970 AND 1980 FOWLER DRIVE
MISSISSAUGA, ONTARIO

PROJECT NUMBER: GTR-22022660-A0

DATE: APRIL 2025

Appendix A – MECP WWR Summary Table

Off-Site															
BORE_HOLE_ID	WELL_ID	DATE	EAST83	NORTH83	ELEVATION (m ASL)	LOCATION ACCURACY	STREET	CITY	DISTANCE FROM SITE CENTROID (m)	CONSTRUCTION METHOD	WELL DEPTH (m bgs)	WATER FOUND (m bgs)	CASING DIAMETER (cm)	1st USE	2nd USE	FINAL STATUS
23051400	7051400	6/21/2007	609477	4820315	115.4	margin of error : 10 - 30 m	ORTH SHERIDAN WAY (SOUTHEAST CORNER OF NORTH SH	MISSISSAUGA	420	Other Method	6.3		5.0	Monitoring		Observation Wells
10317026	4902183	7/14/1952	608632	4820760	128.6	UTM very unreliable			536	Cable Tool	24.4	13.7	15.2	Domestic		Water Supply
10317047	4902204	10/17/1955	608888	4820921	110.5	UTM very unreliable			469	Cable Tool	13.7	9.4	15.2	Domestic		Water Supply
10317048	4902205	7/2/1955	609464	4820464	117.9	UTM very unreliable			364	Cable Tool	53.3	43.3	25.4	Not Used		Abandoned-Supply
10317049	4902206	12/23/1958	609558	4820632	120.2	margin of error : 100 m - 300 m			473	Boring	10.1	10.1	91.4	Domestic		Water Supply
10317095	4902253	7/30/1957	609629	4820530	111.7	margin of error : 100 m - 300 m			527	Cable Tool	27.7	25.0	20.3	Industrial		Water Supply
10322102	4907543	8/7/1990	609122	4820179	127.9	margin of error : 10 - 30 m			326	Rotary (Convent.)	29.9	7.9	2.5	Irrigation		Water Supply
11555263	4910029	3/2/2004	608917	4820288	129.0	margin of error : 10 - 30 m	2165 ERIN MILLS PKWY	MISSISSAUGA	284	Rotary (Convent.)	4.0	2.8	5.0			Observation Wells
1003266251	7139436	1/9/2009	609323	4820971	118.4	margin of error : 30 m - 100 m	SPRING BANK RD LOT 8/9	Mississauga	517	BORING		5.1	5.1	Monitoring		Test Hole
1003266260	7139436	1/9/2009	609344	4820947	118.4	margin of error : 30 m - 100 m	SPRING BANK RD LOT 8/9	Mississauga	505	BORING		5.1	5.1	Monitoring		Test Hole
1004186304	7190000	9/25/2012	608926	4820204	130.0	margin of error : 30 m - 100 m	2155 LEANNE BLVD	MISSISSAUGA	348	DIRECT PUSH	3.0		5.1	Monitoring and Test Hole		Observation Wells
1004186307	7190001	9/24/2012	608886	4820128	131.5	margin of error : 30 m - 100 m	2155 LEANNE BLVD	MISSISSAUGA	434	DIRECT PUSH	1.8		2.5	Monitoring and Test Hole		Observation Wells
1004186310	7190002	9/24/2012	608844	4820104	131.7	margin of error : 30 m - 100 m	2155 LEANNE BLVD	MISSISSAUGA	476	DIRECT PUSH	1.7		2.5	Monitoring and Test Hole		Observation Wells
1004208087	7191831	10/5/2012	608946	4820266	129.2	margin of error : 30 m - 100 m	1401 KING ST E	COURTICE	285	Rotary (Convent.)	4.9		5.1	Test Hole		Test Hole
1004753441	7220258	7/8/2013	608925	4820126	131.0	margin of error : 30 m - 100 m	2155 LEANNE BLVD	CLARKSON	417	Boring	6.1		4.6	Monitoring		Observation Wells
23051401	7051401	6/11/2007	609625	4820477	112.2	margin of error : 10 - 30 m	NORTH SHERIDAN WAY SOUTH OF ROBIN DR	MISSISSAUGA	524	H.S.A.	10.7		5.0	Monitoring		Observation Wells
11323406	4909673	1/27/2005	608948	4820322	128.1	margin of error : 30 m - 100 m	2165 ERIN MILLS PKWY	MISSISSAUGA	238	Boring	1.8		5.1			Observation Wells
11555408	4910174	11/3/2005	609361	4820444	121.8	margin of error : 10 - 30 m	NORTH SHENDAM LANDFILL SITE	MISSISSAUGA	266	Other Method	11.0		5.0			Observation Wells
11555409	4910175	11/15/2005	608979	4820739	120.0	margin of error : 10 - 30 m	KNIGHT'S COURT CVL DE SAC	MISSISSAUGA	265	Other Method	16.8		5.0			Observation Wells
11764636	7042139	3/7/2007	608866	4820188	131.2	margin of error : 10 - 30 m	2185 LEANNE BLVD	MISSISSAUGA	394	Boring	5.2		5.0	Not Used		Observation Wells
1003290832	7150023	7/9/2010	608948	4820322	128.1	margin of error : 30 m - 100 m	2165 ERIN MILLS PRWY PEEL	Mississauga	238	Boring				Monitoring		Abandoned-Other
1005636520	7247012	7/28/2015	608659	4820696	128.4	margin of error : 30 m - 100 m	2295 ERIN MILLS PARKWAY	Mississauga	483	Direct Push	2.1			Monitoring and Test Hole		Test Hole
1005636724	7247013	7/28/2015	608582	4820642	130.1	margin of error : 30 m - 100 m	2295 ERIN MILS PARKWAY	Mississauga	538	Direct Push	3.0			Monitoring and Test Hole		Test Hole
1005636924	7247014	7/28/2015	608617	4820633	129.7	margin of error : 30 m - 100 m	2295 ERIN MILLS PARKWAY	Mississauga	502	Direct Push	6.1			Monitoring and Test Hole		Test Hole
1005897322	7258645	12/18/2015	609160	4820317	124.0	margin of error : 30 m - 100 m	2208 ROCH CT	Mississauga	196	Boring	3.0					Observation Wells
1005897325	7258646	12/18/2015	609160	4820317	124.0	margin of error : 30 m - 100 m	2208 ROCH CT	Mississauga	196	Boring	2.4			Monitoring		Observation Wells
1006012940	7263524	4/13/2016	608904	4820122	131.0	margin of error : 30 m - 100 m	2155 LEANNE BOULEVARD	Mississauga	430	Direct Push	3.7			Monitoring and Test Hole		Monitoring and Test Hole
1006012943	7263525	4/13/2016	608863	4820161	132.0	margin of error : 30 m - 100 m	2155 LEANNE BOULEVARD	Mississauga	418	Direct Push	3.7			Monitoring and Test Hole		Monitoring and Test Hole
1006012946	7263526	4/13/2016	608911	4820122	131.0	margin of error : 30 m - 100 m	2155 LEANNE BOULEVARD	Mississauga	427	Direct Push	3.0			Monitoring and Test Hole		Monitoring and Test Hole
1006012949	7263527	4/13/2016	608895	4820164	130.9	margin of error : 30 m - 100 m	2155 LEANNE BOULEVARD	Mississauga	398	Direct Push	3.0			Monitoring and Test Hole		Monitoring and Test Hole
1006012980	7263528	4/13/2016	608897	4820191	130.7	margin of error : 30 m - 100 m	2155 LEANNE BOULEVARD	MISSISSAUGA	374	Direct Push	3.0			Test Hole		Monitoring and Test Hole
1006012983	7263529	4/20/2016	608902	4820143	131.0	margin of error : 30 m - 100 m	2155 LEANNE BLVD	Mississauga	413	Direct Push	5.2			Monitoring and Test Hole		Monitoring and Test Hole
1006012986	7263530	4/20/2016	608902	4820138	131.0	margin of error : 30 m - 100 m	2155 LEANNE BLVD	Mississauga	417	Direct Push	4.0			Monitoring and Test Hole		Monitoring and Test Hole
1006012997	7263531	4/28/2016	608895	4820141	130.9	margin of error : 30 m - 100 m	2155 LEANNE BLVD	Mississauga	418	Direct Push	3.8			Monitoring and Test Hole		Monitoring and Test Hole
1006165430	7267398	6/15/2016	608984	4820097	131.0	margin of error : 30 m - 100 m	2155 LEANNE BLVD	MISSISSAUGA	424	Direct Push	3.7			Monitoring and Test Hole		Monitoring and Test Hole
1006165433	7267399	6/15/2016	608884	4820015	131.0	margin of error : 30 m - 100 m	2155 LEANNE BLVD	MISSISSAUGA	535	Direct Push	3.7			Monitoring and Test Hole		Monitoring and Test Hole
1006165447	7267400	6/15/2016	608990	4820148	130.5	margin of error : 30 m - 100 m	2155 LEANNE BLVD	MISSISSAUGA	373	Direct Push	6.7			Monitoring and Test Hole		Monitoring and Test Hole
1006165620	7267409	6/15/2016	608923	4820164	130.6	margin of error : 30 m - 100 m	2155 LEANNE BLVD	MISSISSAUGA	384	Direct Push	3.7			Monitoring and Test Hole		Monitoring and Test Hole
1006165645	7267410	6/15/2016	608909	4820162	131.0	margin of error : 30 m - 100 m	2155 LEANNE BLVD	MISSISSAUGA	393	Direct Push	3.7			Monitoring and Test Hole		Monitoring and Test Hole
1006165410	7267489	6/27/2016	608946	4820138	130.8	margin of error : 30 m - 100 m	215 LEANNE BLVD	MISSISSAUGA	398	Direct Push	40.0			Monitoring and Test Hole		Monitoring and Test Hole
1006225621	7269907	7/12/2016	608902	4820129	131.0	margin of error : 30 m - 100 m	2155 LEANNE BLVD.	Mississauga	425	Direct Push				Monitoring and Test Hole		Abandoned-Other
1006225624	7269908	7/12/2016	608900	4820131	131.5	margin of error : 30 m - 100 m	2155 LEANNE BLVD.	Mississauga	424	Direct Push				Not Used		Abandoned-Other
1006225627	7269909	7/12/2016	608903	4820127	131.0	margin of error : 30 m - 100 m	2155 LEANNE BLVD.	Mississauga	426	Direct Push				Monitoring and Test Hole		Abandoned-Other
1006225633	7269910	7/12/2016	608905	4820128	131.0	margin of error : 30 m - 100 m	2155 LEANNE BLVD.	Mississauga	424	Direct Push				Monitoring and Test Hole		Abandoned-Other
1006225636	7269911	7/12/2016	608902	4820130	131.0	margin of error : 30 m - 100 m	2155 LEANNE BLVD.	Mississauga	424	Direct Push				Monitoring and Test Hole		Abandoned-Other
1007098784	7312389	5/29/2018	609166	4820299	125.6	margin of error : 30 m - 100 m	ROCHE COURT	MISSISSAUGA	215					Monitoring		Abandoned-Other
1007098787	7312390	5/29/2018	609315	4820240	124.0	margin of error : 30 m - 100 m	NORTH SERVICE RD AND QEW	MISSISSAUGA	339					Monitoring		Abandoned-Other
1004215165	7189084	7/16/2012	608976	4820272	128.2	margin of error : 30 m - 100 m			264							
1005820095	7253066	4/27/2015	608900	4820128	131.5	margin of error : 30 m - 100 m			427							
1005870868	7256325	7/7/2014	608906	4820124	131.0	margin of error : 30 m - 100 m			428							
1008638101	7383918	1/13/2021	608987	4820230	128.2	margin of error : 30 m - 100 m			297							
1008721142	7393409	7/15/2021	608575	4820633	130.1				543							
1008721145	7393410	7/15/2021	608626	4820693	128.6				512							
1008721148	7393411	7/15/2021	608676	4820680	128.4				461							

	COUNT
Monitoring Well / Test Hole	33
Dewatering Well	0
Water Supply Well	5
Abandoned Well	9
Unclassified / Unfinished Well	7
TOTAL	54

Appendix B – Borehole Logs

Log of Borehole 1d

Project No. GTR-22022660-A0

Drawing No. 2

Project: Geotechnical Investigation

Sheet No. 1 of 2

Location: 1970&1980 Fowler Drive, Mississauga, Ontario

See Borehole Location Plan

Date Drilled: Jue 23, 2023

Drill Type: Hollow Stem Auger / Rock Coring

Datum: Geodetic

Auger Sample ☒
SPT (N) Value ○ ▨
Dynamic Cone Test —
Shelby Tube ■
Field Vane Test S

Combustible Vapour Reading □
Natural Moisture ×
Plastic and Liquid Limit ⊢○
Undrained Triaxial at % Strain at Failure ⊕
Penetrometer ▲

Groundwater	Soil/Rock Symbol	Soil Description	ELEV. m	Depth (m)
			123.30	0
		TOPSOIL: ~200 mm	~123.1	
		FILL: sand and gravel to sand, trace silt, trace clay, brown, moist.		1
			~121.9	
		SILTY CLAY TILL/SHALE COMPLEX: trace sand, trace gravel, containing shale fragments, grey moist, very stiff to hard		2
				3
			~119.5	4
		SHALE BEDROCK: Georgian Bay Formation, grey. **Refer to Rock Core Logs**		5
				6
				7
			~115.0	8
				9
				10

SPT (N Value): 20 40 60 80 — Shear Strength: 100 200 kPa

Combustible Vapour Reading (ppm): 25 50 75 — Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30

Sample | Natural Unit Weight kN/m³

10 12 23 44 46 50/25mm

EXPLOGBRAMPTON FOWLER DRIVE-BHLOGS_JW.GPJ NEW.GDT 4/22/25

Continued Next Page

Date	Water Level (m)	Hole Open to (m)
July 11, 2023	8.32	
April 11, 2025	9.04	
April 21, 2025	9.20	

exp.

Log of Borehole 1s

Project No. GTR-22022660-A0

Drawing No. 2

Project: Geotechnical Investigation

Sheet No. 1 of 1

Location: 1970&1980 Fowler Drive, Mississauga, Ontario

See Borehole Location Plan

Date Drilled: Jue 21, 2023

Drill Type: Hollow Stem Auger / Rock Coring

Datum: Geodetic

Auger Sample ☒
SPT (N) Value ○ ▨
Dynamic Cone Test —
Shelby Tube ■
Field Vane Test S

Combustible Vapour Reading □
Natural Moisture ×
Plastic and Liquid Limit —○
Undrained Triaxial at % Strain at Failure ⊕
Penetrometer ▲

Groundwater	Soil/Rock Symbol	Soil Description	ELEV. m	Depth (m)
		TOPSOIL: ~200 mm	123.30	0
		FILL: sand and gravel to sand, trace silt, trace clay, brown, moist.	~123.1	
			~121.9	1
		SILTY CLAY TILL/SHALE COMPLEX: trace sand, trace gravel, containing shale fragments, grey moist.		2
				3
			~119.6	
		SHALE BEDROCK: Georgian Bay Formation, grey.	~119.4	4
		END OF BOREHOLE	~119.3	

Note:
1. A 50 mm dia. monitoring well was installed in the borehole.

SPT (N Value) 20 40 60 80
Shear Strength 100 200 kPa

Combustible Vapour Reading (ppm) 25 50 75
Natural Moisture Content % Atterberg Limits (% Dry Weight) 10 20 30

Sample

Natural Unit Weight kN/m³

Date	Water Level (m)	Hole Open to (m)
July 11, 2023	3.68	
April 11, 2025	4.45	
April 21, 2025	4.49	

EXPLOGBRAMPTON FOWLER DRIVE-BHLOGS_JW.GPJ NEW.GDT 4/22/25

Log of Borehole 2

Project No. GTR-22022660-A0

Drawing No. 3

Project: Geotechnical Investigation

Sheet No. 1 of 1

Location: 1970&1980 Fowler Drive, Mississauga, Ontario

See Borehole Location Plan

Date Drilled: Jun 21, 2023

Drill Type: Soild Stem Auger

Datum: Geodetic

Auger Sample

SPT (N) Value

Dynamic Cone Test

Shelby Tube

Field Vane Test

Combustible Vapour Reading

Natural Moisture

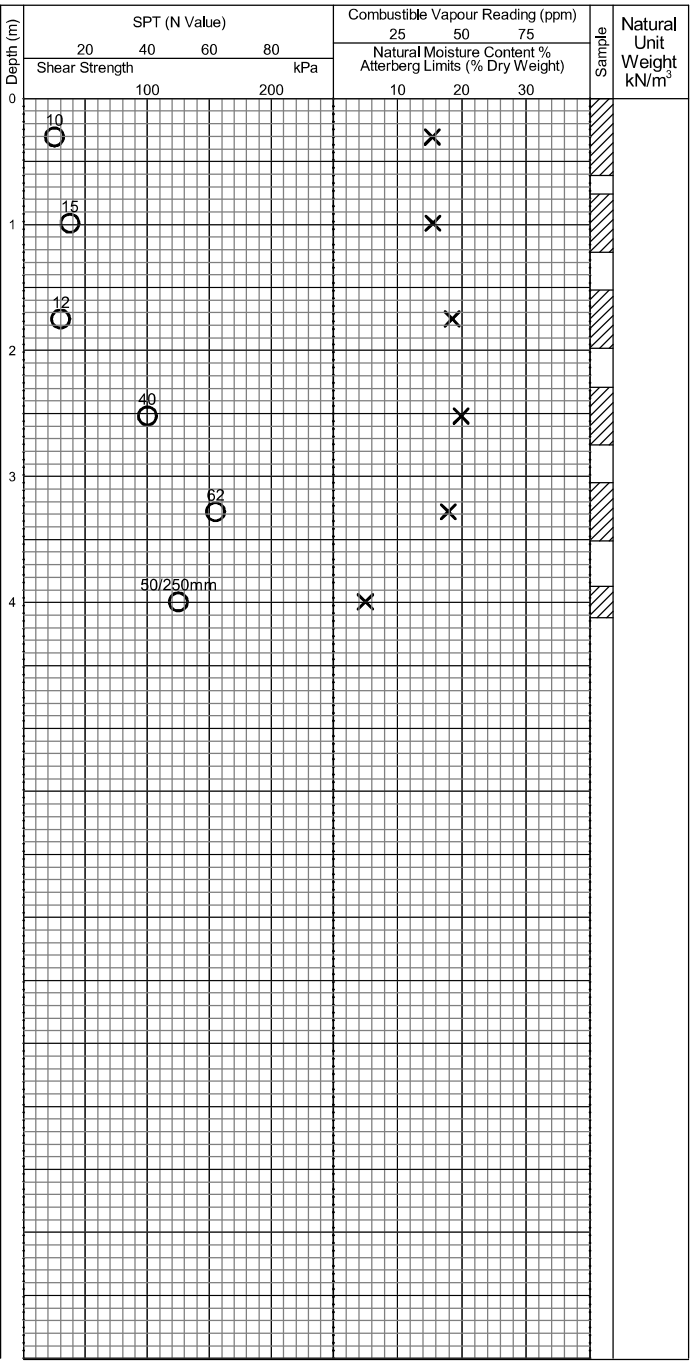
Plastic and Liquid Limit

Undrained Triaxial at % Strain at Failure

Penetrometer

Soil Description	ELEV. m
	122.44
TOPSOIL: ~250 mm	~122.2
FILL: sand to clayey silt, trace gravel, brown, moist.	
	~119.8
SILTY CLAY TILL/SHALE COMPLEX: trace sand, trace gravel, containing shale fragments, grey moist, hard	
	~119.1
POSSIBLE SHALE BEDROCK: grey shale and limestone pieces	
	~118.3
END OF BOREHOLE DUE TO AUGER REFUSAL	

Note:
1. A 50 mm dia. monitoring well was installed in the borehole.



Date	Water Level (m)	Hole Open to (m)

EXPLOGBRAMPTON FOWLER DRIVE-BHLOGS_JW.GPJ NEW.GDT 4/22/25

Log of Borehole 3

Project No. GTR-22022660-A0

Drawing No. 4

Project: Geotechnical Investigation

Sheet No. 1 of 1

Location: 1970&1980 Fowler Drive, Mississauga, Ontario

See Borehole Location Plan

Date Drilled: Jue 20, 2023

Drill Type: Soild Stem Auger

Datum: Geodetic

Auger Sample

SPT (N) Value

Dynamic Cone Test

Shelby Tube

Field Vane Test (S)

Combustible Vapour Reading

Natural Moisture

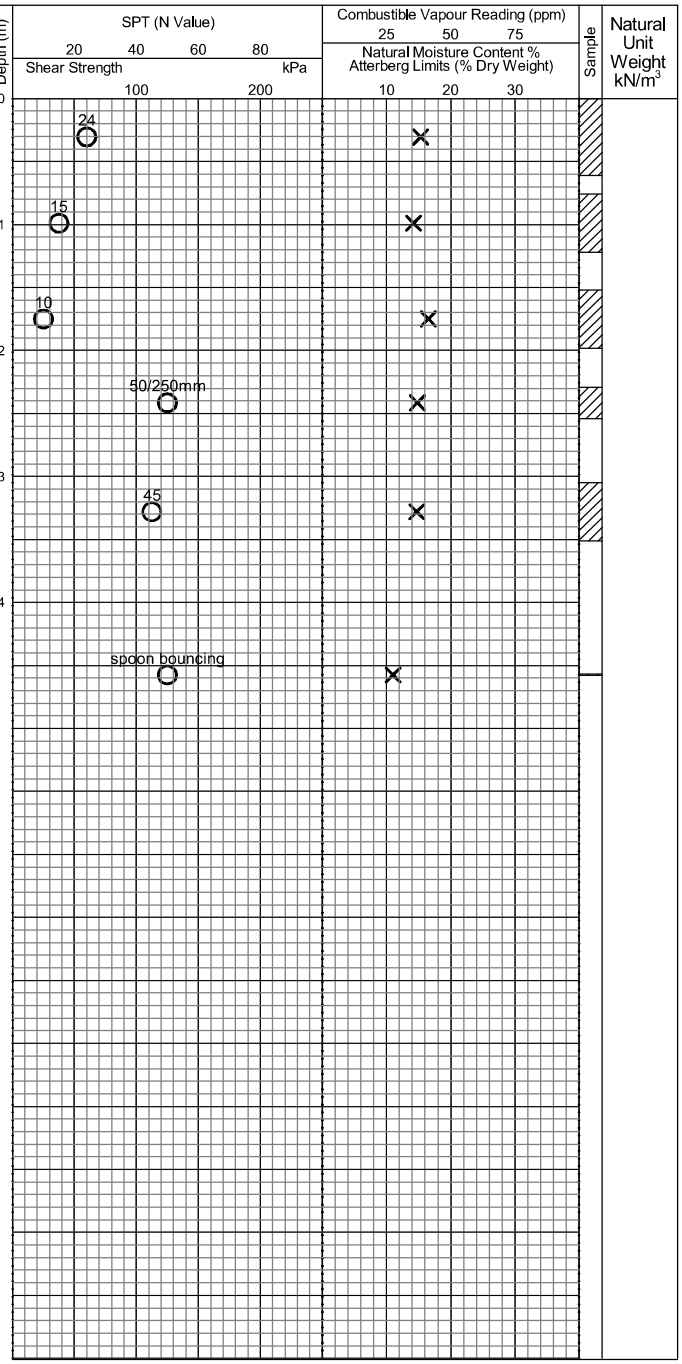
Plastic and Liquid Limit

Undrained Triaxial at % Strain at Failure

Penetrometer

Soil Description	ELEV. m
	123.54
TOPSOIL: ~250 mm	~123.3
FILL: sand to clayey silt, trace gravel, brown, moist.	~121.4
SILTY CLAY TILL/SHALE COMPLEX: trace sand, trace gravel, containing shale fragments, grey moist, hard	~119.9
POSSIBLE SHALE BEDROCK: grey shale and limestone pieces	~119.7
	~118.9
END OF BOREHOLE DUE TO AUGER REFUSAL	

Note:
1. A 50 mm dia. monitoring well was installed in the borehole.



Date	Water Level (m)	Hole Open to (m)
July 11, 2023	3.8	
April 11, 2025	4.56	
April 21, 2025	4.58	

EXPLOGBRAMPTON FOWLER DRIVE-BHLOGS_JW.GPJ NEW.GDT 4/22/25

Log of Borehole 4

Project No. BRM-22022660-A0

Drawing No. 5

Project: Geotechnical Investigation

Sheet No. 1 of 1

Location: 1970&1980 Fowler Drive, Mississauga, Ontario

See Borehole Location Plan

Date Drilled: Jun 21, 2023

Drill Type: Soild Stem Auger

Datum: Geodetic

Auger Sample

SPT (N) Value

Dynamic Cone Test

Shelby Tube

Field Vane Test

Combustible Vapour Reading

Natural Moisture

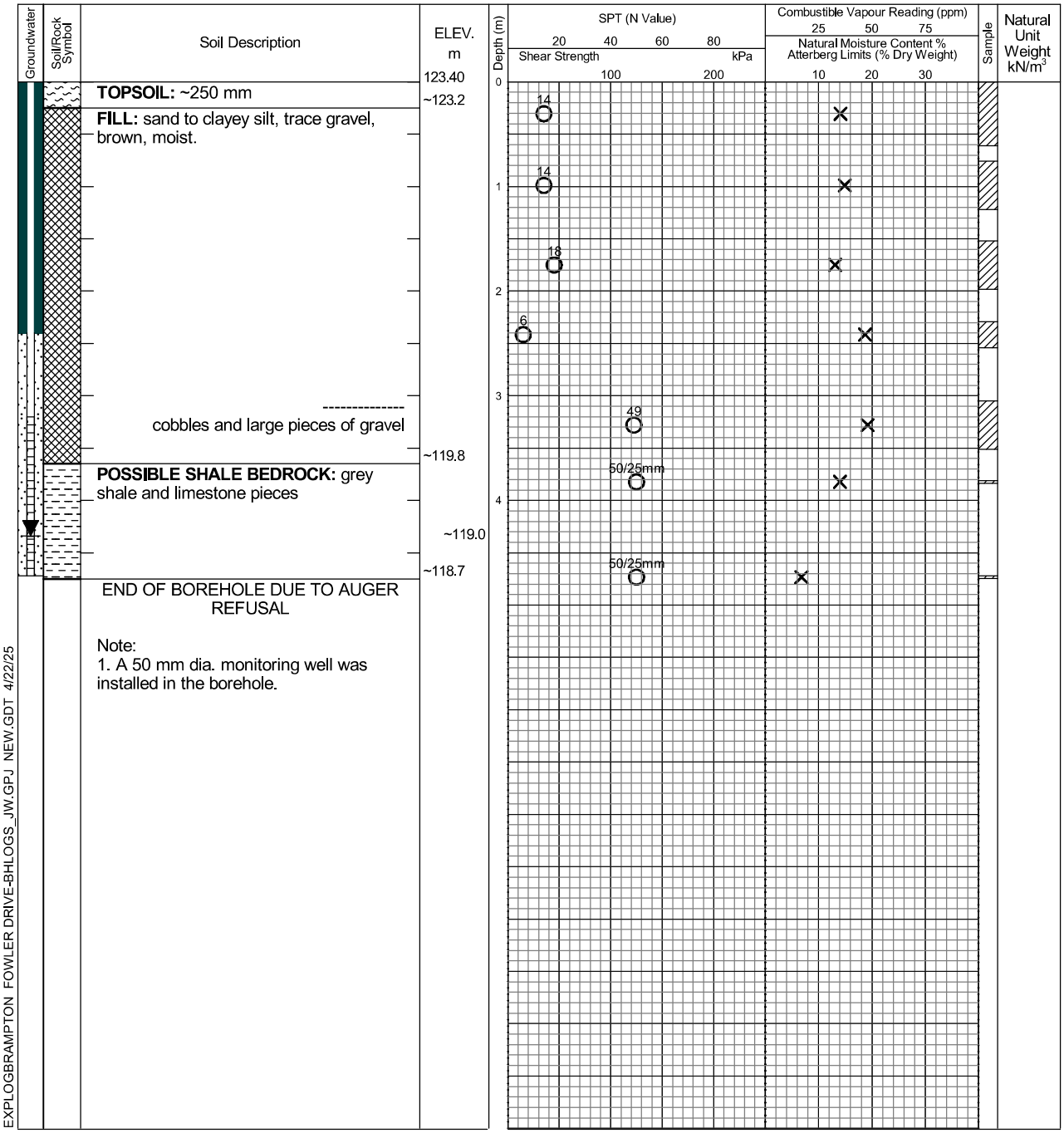
Plastic and Liquid Limit

Undrained Triaxial at % Strain at Failure

Penetrometer

Soil Description	ELEV. m
	123.40
TOPSOIL: ~250 mm	~123.2
FILL: sand to clayey silt, trace gravel, brown, moist.	
cobbles and large pieces of gravel	~119.8
POSSIBLE SHALE BEDROCK: grey shale and limestone pieces	~119.0
	~118.7
END OF BOREHOLE DUE TO AUGER REFUSAL	

Note:
1. A 50 mm dia. monitoring well was installed in the borehole.



Date	Water Level (m)	Hole Open to (m)
July 11, 2023	4.37	
April 11, 2025	4.24	
April 21, 2025	4.49	

EXPLOGBRAMPTON FOWLER DRIVE-BHLOGS_JW.GPJ NEW.GDT 4/22/25

Log of Borehole 5

Project No. GTR-22022660-A0

Drawing No. 6

Project: Geotechnical Investigation

Sheet No. 1 of 1

Location: 1970&1980 Fowler Drive, Mississauga, Ontario

See Borehole Location Plan

Date Drilled: Jun 21, 2023

Drill Type: Soild Stem Auger

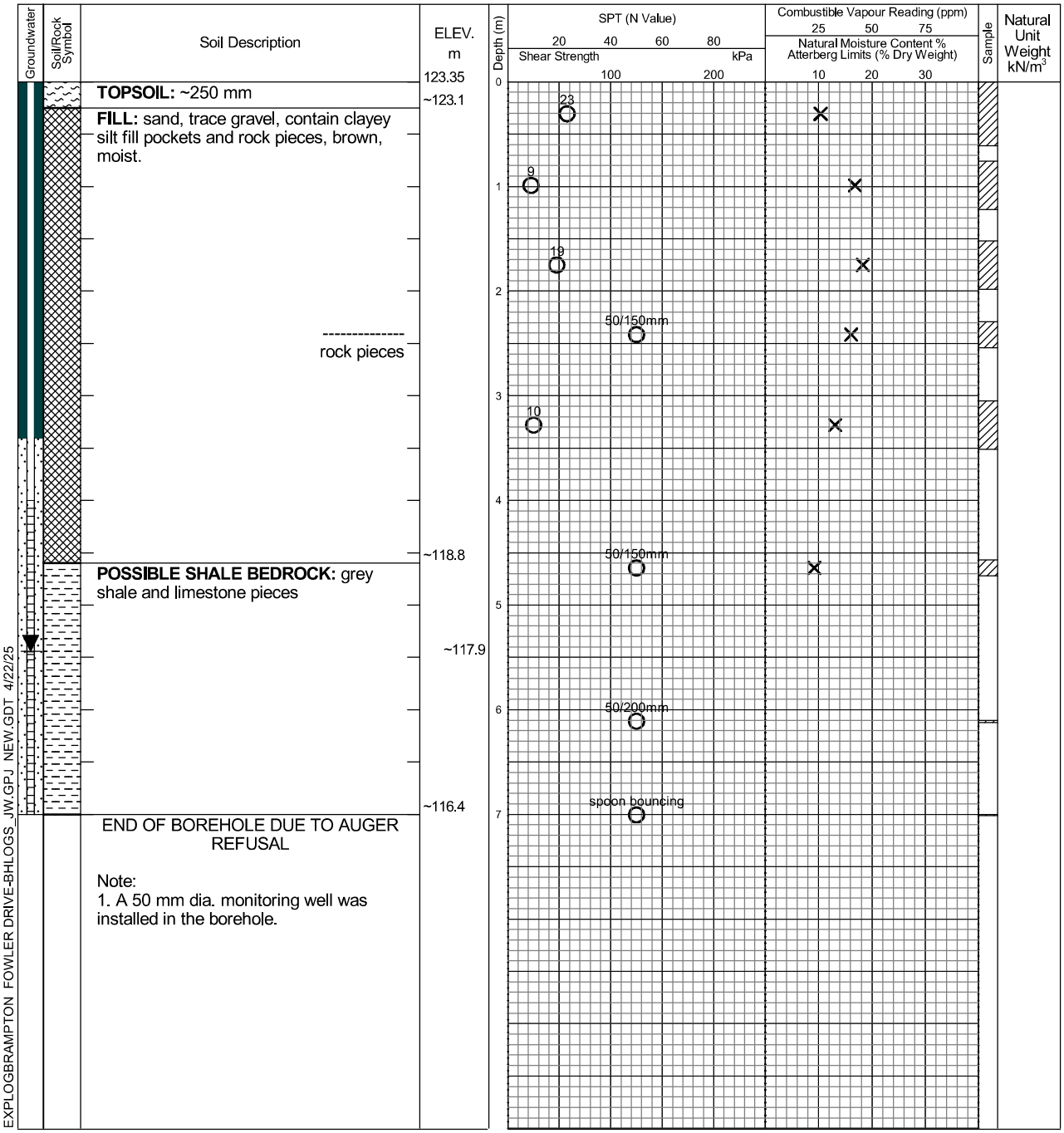
Datum: Geodetic

Auger Sample ☒
SPT (N) Value ○ ▨
Dynamic Cone Test ——
Shelby Tube ■
Field Vane Test ✚ S

Combustible Vapour Reading □
Natural Moisture ×
Plastic and Liquid Limit ⊢○
Undrained Triaxial at % Strain at Failure ⊕
Penetrometer ▲

Soil Description	ELEV. m
	123.35
TOPSOIL: ~250 mm	~123.1
FILL: sand, trace gravel, contain clayey silt fill pockets and rock pieces, brown, moist.	
---------- rock pieces	
	~118.8
POSSIBLE SHALE BEDROCK: grey shale and limestone pieces	
	~117.9
	~116.4
END OF BOREHOLE DUE TO AUGER REFUSAL	

Note:
1. A 50 mm dia. monitoring well was installed in the borehole.



Date	Water Level (m)	Hole Open to (m)
July 11, 2023	5.47	

Log of Borehole 6

Project No. GTR-22022660-A0

Drawing No. 7

Project: Geotechnical Investigation

Sheet No. 1 of 1

Location: 1970&1980 Fowler Drive, Mississauga, Ontario

See Borehole Location Plan

Date Drilled: Jue 20, 2023

Drill Type: Soild Stem Auger

Datum: Geodetic

Auger Sample ☒
SPT (N) Value ○ ▨
Dynamic Cone Test ——
Shelby Tube ■
Field Vane Test S

Combustible Vapour Reading □
Natural Moisture ×
Plastic and Liquid Limit ⊢○
Undrained Triaxial at % Strain at Failure ⊕
Penetrometer ▲

Groundwater	Soil/Rock Symbol	Soil Description	ELEV. m	Depth (m)
			123.86	0
		TOPSOIL: ~200 mm	~123.7	
		FILL: sand and gravel, trace silt, brown, moist.		1
		auger grinding		2
			~121.0	3
		SILTY CLAY TILL/SHALE COMPLEX: trace sand, trace gravel, containing shale fragments, grey moist, hard		4
		POSSIBLE SHALE BEDROCK: grey shale and limestone pieces	~119.9	5
			~117.8	6
		END OF BOREHOLE DUE TO AUGER REFUSAL		

Note:
1. A 50 mm dia. monitoring well was installed in the borehole.

SPT (N Value): 20 40 60 80
Shear Strength: 100 200 kPa

16
22
4
50/25mm
26
50/25mm
spoon bouncing

Combustible Vapour Reading (ppm): 25 50 75
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30

Sample

Natural Unit Weight kN/m³

Date	Water Level (m)	Hole Open to (m)
July 11, 2023	3.99	

EXPLOGBRAMPTON FOWLER DRIVE-BHLOGS_JW.GPJ NEW.GDT 4/22/25

Log of Borehole 25-1

Project No. BRM-22022660-B0 | Drawing No. 8

Project: Geotechnical Investigation | Sheet No. 1 of 2

Location: 1970&1980 Fowler Drive, Mississauga, Ontario

See Borehole Location Plan

Date Drilled: March 19, 2025

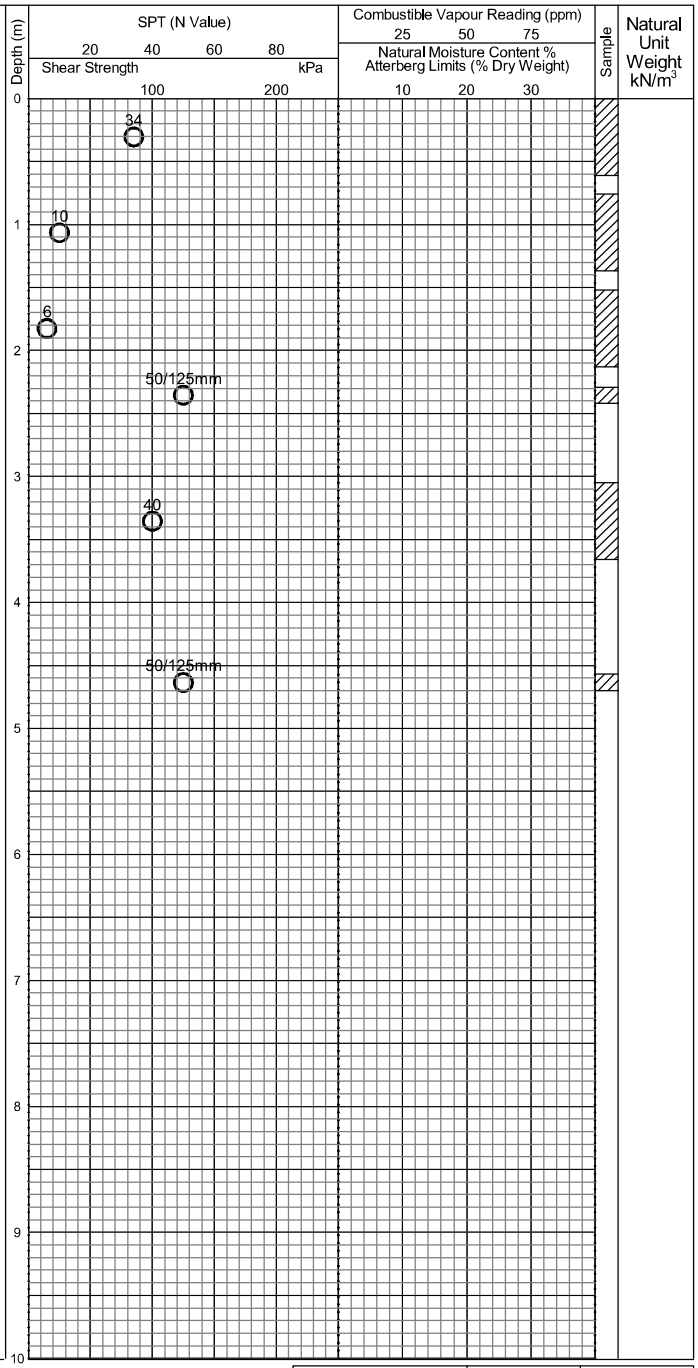
Drill Type: Hollow Stem Auger / Rock Coring

Datum: Geodetic

Auger Sample ☒
SPT (N) Value ○ ▨
Dynamic Cone Test ——
Shelby Tube ■
Field Vane Test S

Combustible Vapour Reading □
Natural Moisture ×
Plastic and Liquid Limit ⊢○
Undrained Triaxial at % Strain at Failure ⊕
Penetrometer ▲

Groundwater	Soil/Rock Symbol	Soil Description	ELEV. m
		TOPSOIL: ~175 mm	121.51 ~121.3
		FILL: sand to clayey silt, trace gravel, some sand, brown to dark brown, moist.	
		SILTY CLAY TILL/SHALE COMPLEX: trace sand, trace gravel, containing shale fragments, grey moist, hard	~119.3
		auger grinding	
		SHALE BEDROCK: Georgian Bay Formation, grey. **Refer to Rock Core Logs**	~117.7



Continued Next Page

Date	Water Level (m)	Hole Open to (m)
April 11, 2025	6.18	
April 21, 2025	6.30	

EXPLOGBRAMPTON FOWLER DRIVE-BHLOGS_JW.GPJ NEW.GDT 4/22/25

Log of Borehole 25-1

Project No. BRM-22022660-B0 Drawing No. 8

Project: Geotechnical Investigation Sheet No. 2 of 2

Groundwater	Soil/Rock Symbol	Soil Description	ELEV. m	Depth (m)	SPT (N Value) / Shear Strength kPa	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	Sample	Natural Unit Weight kN/m³
			111.51	10	20 40 60 80 / 100 200	25 50 75 / 10 20 30		
				11				
				12				
				13				
				14				
				15				
				16				
				17				
				18				
			~103.0					
		END OF BOREHOLE						

Note:
1. A 50 mm dia. monitoring well was installed in the borehole.

Date	Water Level (m)	Hole Open to (m)
April 11, 2025	6.18	
April 21, 2025	6.30	

exp.

EXPLOGBRAMPTON FOWLER DRIVE-BHLOGS_JW.GPJ NEW.GDT 4/22/25

Log of Borehole 25-2

Project No. BRM-22022660-B0 | Drawing No. 9

Project: Geotechnical Investigation | Sheet No. 1 of 2

Location: 1970&1980 Fowler Drive, Mississauga, Ontario

See Borehole Location Plan

Date Drilled: March 18, 2025

Drill Type: Hollow Stem Auger / Rock Coring

Datum: Geodetic

Auger Sample ☒
SPT (N) Value ○ ▨
Dynamic Cone Test ——
Shelby Tube ■
Field Vane Test S

Combustible Vapour Reading □
Natural Moisture ×
Plastic and Liquid Limit ⊢○
Undrained Triaxial at % Strain at Failure ⊕
Penetrometer ▲

Soil Description	ELEV. m	Depth (m)	SPT (N Value) / Shear Strength kPa	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	Sample	Natural Unit Weight kN/m³
TOPSOIL: ~175 mm	121.80	0	10			
FILL: sand to clayey silt, trace gravel, some sand, brown to dark brown, moist.	~121.6	1	13			
		2	11			
SILTY CLAY TILL/SHALE COMPLEX: trace sand, trace gravel, containing shale fragments, grey moist, firm to stiff.	~119.4	3	8			
		4	12			
		5	50/100mm			
SHALE BEDROCK: Georgian Bay Formation, grey. **Refer to Rock Core Logs**	~117.1	6				
		7				
		8				
		9				
		10				

SPT (N Value): 20 40 60 80
Shear Strength: 100 200 kPa
Combustible Vapour Reading (ppm): 25 50 75
Natural Moisture Content % / Atterberg Limits (% Dry Weight): 10 20 30

EXPLOGBRAMPTON FOWLER DRIVE-BHLOGS_JW.GPJ NEW.GDT 4/22/25

Continued Next Page

Date	Water Level (m)	Hole Open to (m)
April 11, 2025	5.52	
April 21, 2025	5.65	

Log of Borehole 25-2

Project No. BRM-22022660-B0 Drawing No. 9

Project: Geotechnical Investigation Sheet No. 2 of 2

Groundwater	Soil/Rock Symbol	Soil Description	ELEV. m	Depth (m)	SPT (N Value) / Shear Strength kPa	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	Sample	Natural Unit Weight kN/m³
			111.80	10	20 40 60 80 / 100 200	25 50 75 / 10 20 30		
				11				
				12				
				13				
				14				
				15				
			~106.4					
		END OF BOREHOLE						
		Note: 1. A 50 mm dia. monitoring well was installed in the borehole.						

Date	Water Level (m)	Hole Open to (m)
April 11, 2025	5.52	
April 21, 2025	5.65	

exp.

EXPLOGBRAMPTON FOWLER DRIVE-BHLOGS_JW.GPJ NEW.GDT 4/22/25

Log of Borehole 25-3

Project No. BRM-22022660-B0 | Drawing No. 10

Project: Geotechnical Investigation | Sheet No. 1 of 2

Location: 1970&1980 Fowler Drive, Mississauga, Ontario

See Borehole Location Plan

Date Drilled: March 25, 2025

Drill Type: Hollow Stem Auger / Rock Coring

Datum: Geodetic

Auger Sample ☒
SPT (N) Value ○ ▨
Dynamic Cone Test ——
Shelby Tube ■
Field Vane Test ✚ S

Combustible Vapour Reading □
Natural Moisture ×
Plastic and Liquid Limit ⊢○
Undrained Triaxial at % Strain at Failure ⊕
Penetrometer ▲

Groundwater	Soil/Rock Symbol	Soil Description	ELEV. m	Depth (m)	SPT (N Value) 20 40 60 80 / Shear Strength kPa 100 200	Combustible Vapour Reading (ppm) 25 50 75 / Natural Moisture Content % Atterberg Limits (% Dry Weight) 10 20 30	Sample	Natural Unit Weight kN/m³
		TOPSOIL: ~150 mm	124.04	0				
		FILL: sand to clayey silt, trace gravel, some sand, brown to dark brown, moist.	~123.9		11			
				1	12			
				2	28			
		auger grinding						
				3	9			
					6			
			~119.8	4				
		SHALE BEDROCK: Georgian Bay Formation, grey. **Refer to Rock Core Logs**		5	50/50mm			
				6				
				7				
				8				
				9				
				10				

Continued Next Page

Date	Water Level (m)	Hole Open to (m)
April 11, 2025	5.24	
April 21, 2025	5.68	

EXPLOGBRAMPTON FOWLER DRIVE-BHLOGS_JW.GPJ NEW.GDT 4/22/25

Log of Borehole 25-3

Project No. BRM-22022660-B0 Drawing No. 10

Project: Geotechnical Investigation Sheet No. 2 of 2

Groundwater	Soil/Rock Symbol	Soil Description	ELEV. m	Depth (m)	SPT (N Value) / Shear Strength kPa	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	Sample	Natural Unit Weight kN/m³
			114.04	10	20 40 60 80 / 100 200	25 50 75 / 10 20 30		
				11				
				12				
				13				
				14				
				15				
				16				
				17				
				18				
			~105.6					
		END OF BOREHOLE Note: 1. A 50 mm dia. monitoring well was installed in the borehole.						

EXPLOGBRAMPTON FOWLER DRIVE-BHLOGS_JW.GPJ NEW.GDT 4/22/25

Date	Water Level (m)	Hole Open to (m)
April 11, 2025	5.24	
April 21, 2025	5.68	

Log of Borehole 25-4

Project No. BRM-22022660-B0 | Drawing No. 11

Project: Geotechnical Investigation | Sheet No. 1 of 2

Location: 1970&1980 Fowler Drive, Mississauga, Ontario

See Borehole Location Plan

Date Drilled: March 21, 2025

Drill Type: Hollow Stem Auger / Rock Coring

Datum: Geodetic

Auger Sample ☒
SPT (N) Value ○ ▨
Dynamic Cone Test ——
Shelby Tube ■
Field Vane Test ✚ S

Combustible Vapour Reading □
Natural Moisture ×
Plastic and Liquid Limit ⊢○
Undrained Triaxial at % Strain at Failure ⊕
Penetrometer ▲

Soil Description	ELEV. m
123.87	
TOPSOIL: ~150 mm	~123.7
FILL: sand and gravel to silty sand, trace silt, brown, moist.	
auger grinding	
	~120.2
SILTY CLAY TILL/SHALE COMPLEX: trace sand, trace gravel, containing shale fragments, grey moist, hard	
	~119.3
SHALE BEDROCK: Georgian Bay Formation, grey. **Refer to Rock Core Logs**	

SPT (N Value): 20 40 60 80
Shear Strength: 100 200 kPa
Combustible Vapour Reading (ppm): 25 50 75
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30

Depth (m): 0 1 2 3 4 5 6 7 8 9 10

14
6
4
50/50mm
50/125mm
50/40mm

Continued Next Page

Date	Water Level (m)	Hole Open to (m)
April 11, 2025	7.76	
April 21, 2025	8.66	

EXPLOGBRAMPTON FOWLER DRIVE-BHLOGS_JW.GPJ NEW.GDT 4/22/25

Log of Borehole 25-4

Project No. BRM-22022660-B0 Drawing No. 11

Project: Geotechnical Investigation Sheet No. 2 of 2

Groundwater	Soil/Rock Symbol	Soil Description	ELEV. m	Depth (m)
			113.87	10
				11
				12
				13
				14
				15
			~108.1	
		END OF BOREHOLE		

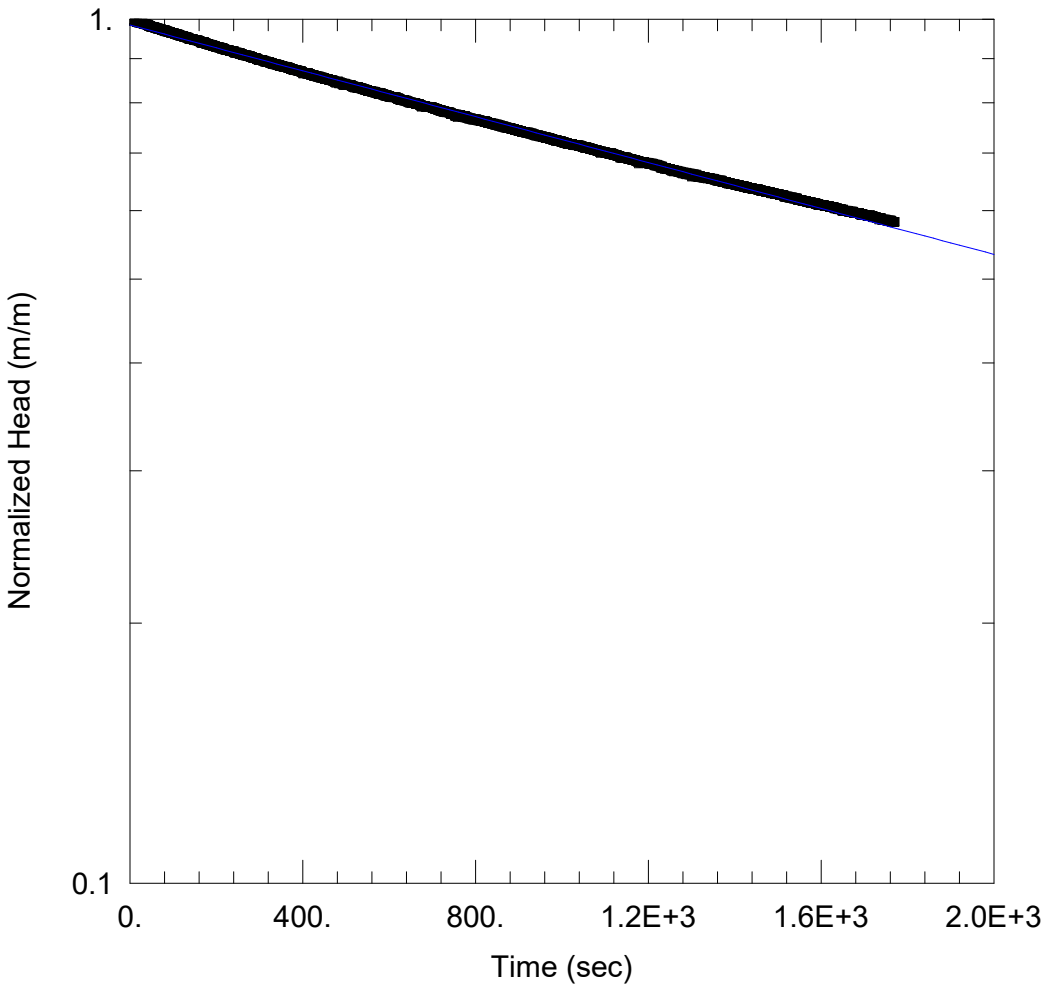
Note:
1. A 50 mm dia. monitoring well was installed in the borehole.

SPT (N Value): 20 40 60 80
Shear Strength kPa: 100 200
Combustible Vapour Reading (ppm): 25 50 75
Natural Moisture Content % / Atterberg Limits (% Dry Weight): 10 20 30
Sample
Natural Unit Weight kN/m³

Date	Water Level (m)	Hole Open to (m)
April 11, 2025	7.76	
April 21, 2025	8.66	

EXPLOGBRAMPTON FOWLER DRIVE-BHLOGS_JW.GPJ NEW.GDT 4/22/25

Appendix C – SWRT Procedures and Results



BH 1D FALLING HEAD

Data Set: \...\BH 1D.aqt
Date: 07/24/23 Time: 14:17:43

PROJECT INFORMATION

Company: EXP Services Inc.
Client: Starlight Developments
Project: GTR-22022660-A0
Location: 1970 & 1980 Fowler Dr.
Test Well: BH 1D Falling Head
Test Date: July 17, 2023

AQUIFER DATA

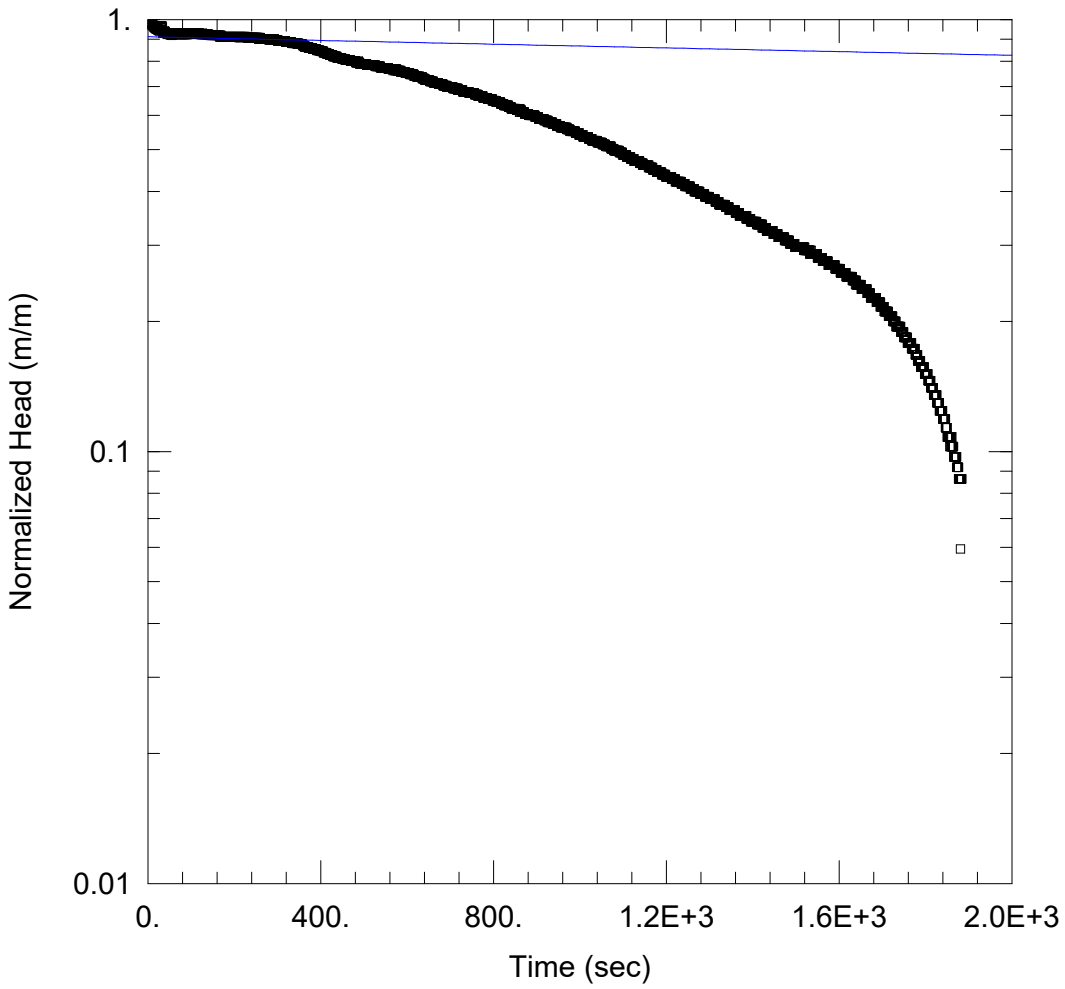
Saturated Thickness: 3.15 m Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (BH 1D Falling Head)

Initial Displacement: 1.689 m
Total Well Penetration Depth: 3.15 m
Casing Radius: 0.0254 m
Static Water Column Height: 3.15 m
Screen Length: 3. m
Well Radius: 0.0762 m

SOLUTION

Aquifer Model: Unconfined
Solution Method: Hvorslev
K = 1.435E-7 m/sec
y0 = 1.663 m



BH 2 FALLING HEAD

Data Set: \...\BH 2.aqt
Date: 07/26/23 Time: 12:40:04

PROJECT INFORMATION

Company: EXP Services Inc.
Client: Starlight Developments
Project: GTR-22022660-A0
Location: 1970 & 1980 Fowler Dr.
Test Well: BH 2 Falling Head
Test Date: July 18, 2023

AQUIFER DATA

Saturated Thickness: 0.09 m Anisotropy Ratio (Kz/Kr): 1.

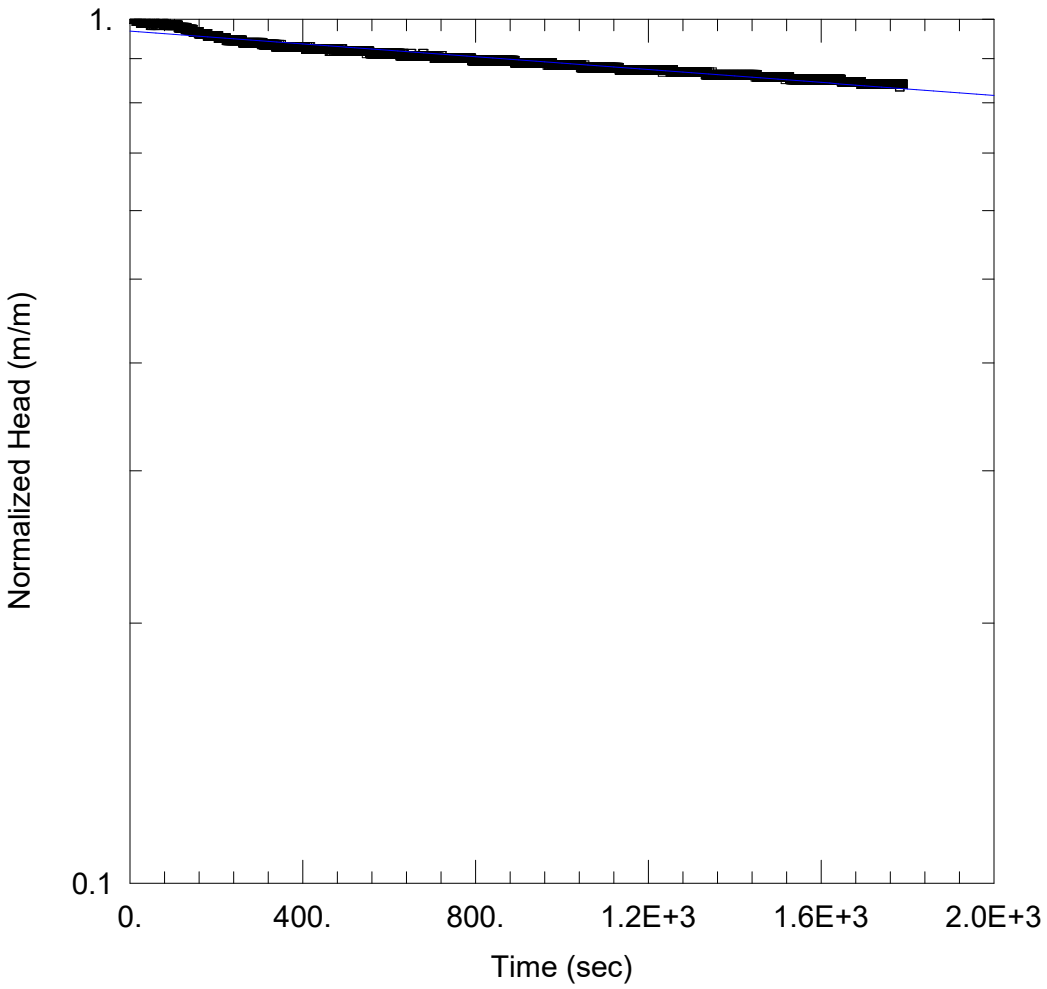
WELL DATA (BH 2 Falling Head)

Initial Displacement: 0.555 m
Total Well Penetration Depth: 3. m
Casing Radius: 0.0254 m
Static Water Column Height: 0.09 m
Screen Length: 3. m
Well Radius: 0.0762 m

SOLUTION

Aquifer Model: Unconfined Solution Method: Hvorslev

K = 9.412E-7 m/sec y0 = 0.5063 m



BH 3 FALLING HEAD

Data Set: \...\BH 3.aqt
Date: 07/24/23 Time: 14:28:40

PROJECT INFORMATION

Company: EXP Services Inc.
Client: Starlight Developments
Project: GTR-22022660-A0
Location: 1970 & 1980 Fowler Dr.
Test Well: BH 3 Falling Head
Test Date: July 17, 2023

AQUIFER DATA

Saturated Thickness: 0.41 m Anisotropy Ratio (Kz/Kr): 1.

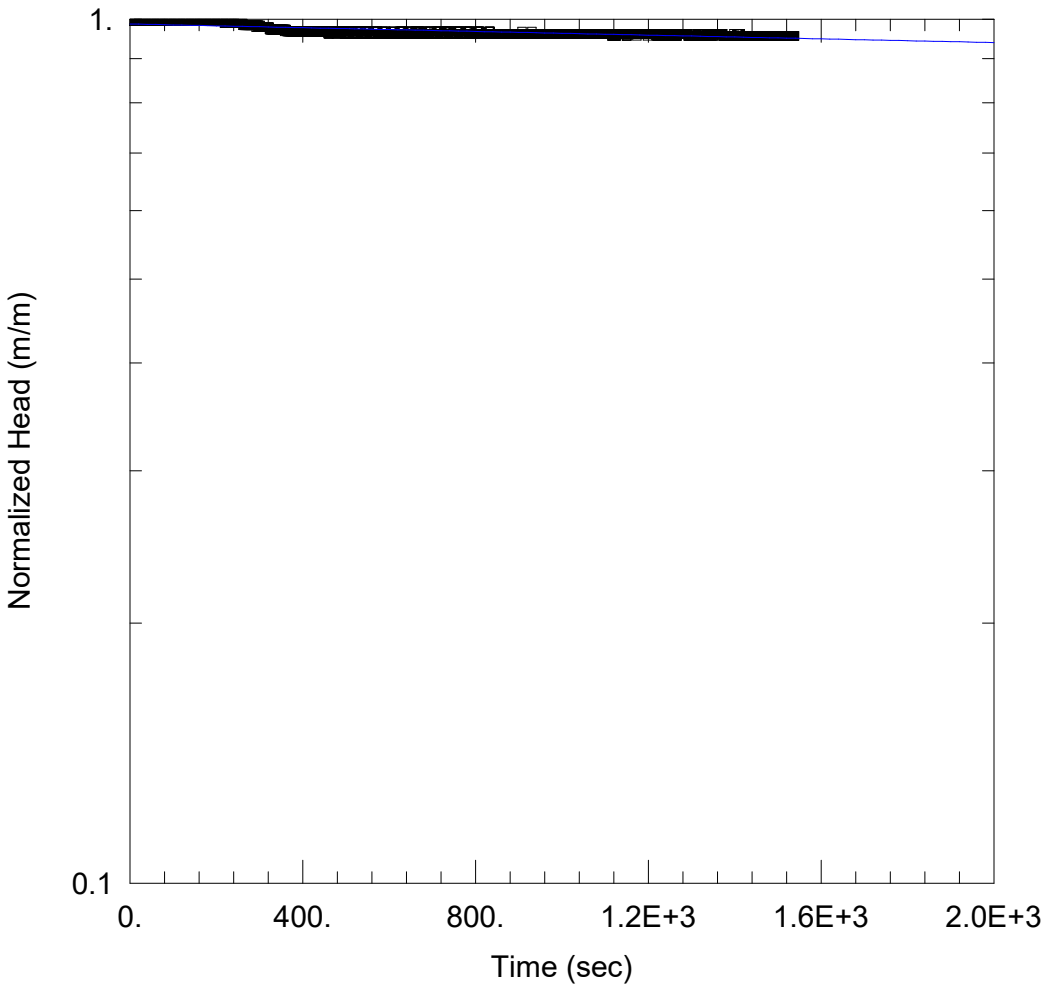
WELL DATA (BH 3 Falling Head)

Initial Displacement: 0.546 m
Total Well Penetration Depth: 3. m
Casing Radius: 0.0254 m
Static Water Column Height: 0.41 m
Screen Length: 3. m
Well Radius: 0.0762 m

SOLUTION

Aquifer Model: Unconfined Solution Method: Hvorslev

K = 3.568E-7 m/sec y0 = 0.5289 m



BH 4 FALLING HEAD

Data Set: \...\BH 4.aqt
Date: 07/24/23 Time: 14:28:13

PROJECT INFORMATION

Company: EXP Services Inc.
Client: Starlight Developments
Project: GTR-22022660-A0
Location: 1970 & 1980 Fowler Dr.
Test Well: BH 4 Falling Head
Test Date: July 17, 2023

AQUIFER DATA

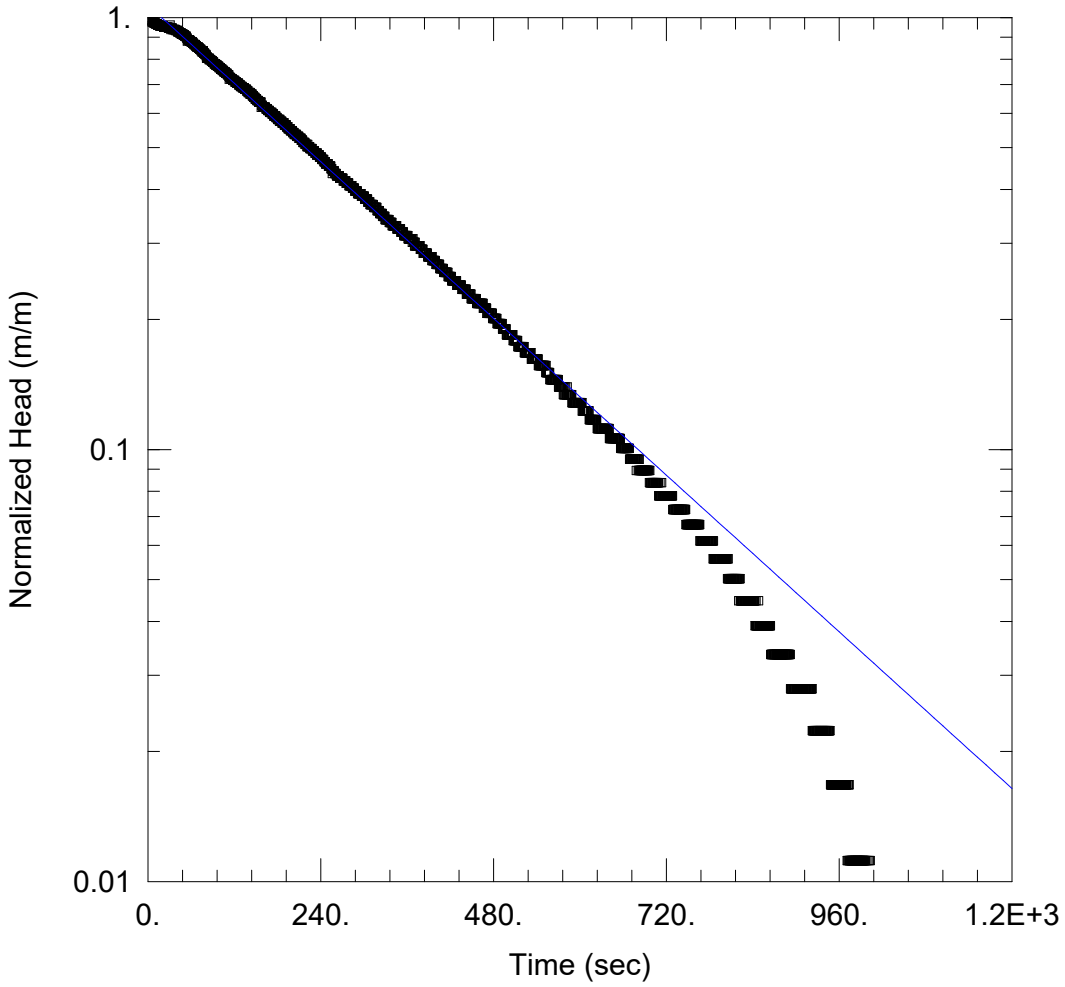
Saturated Thickness: 0.19 m Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (BH 4 Falling Head)

Initial Displacement: 0.552 m
Total Well Penetration Depth: 3. m
Casing Radius: 0.0254 m
Static Water Column Height: 0.19 m
Screen Length: 3. m
Well Radius: 0.0762 m

SOLUTION

Aquifer Model: Unconfined
Solution Method: Hvorslev
K = 2.228E-7 m/sec
y0 = 0.5449 m



BH 5 FALLING HEAD

Data Set: \...\BH 5.aqt
Date: 07/26/23 Time: 12:14:41

PROJECT INFORMATION

Company: EXP Services Inc.
Client: Starlight Developments
Project: GTR-22022660-A0
Location: 1970 & 1980 Fowler Dr.
Test Well: BH 5 Falling Head
Test Date: July 17, 2023

AQUIFER DATA

Saturated Thickness: 0.69 m Anisotropy Ratio (Kz/Kr): 1.

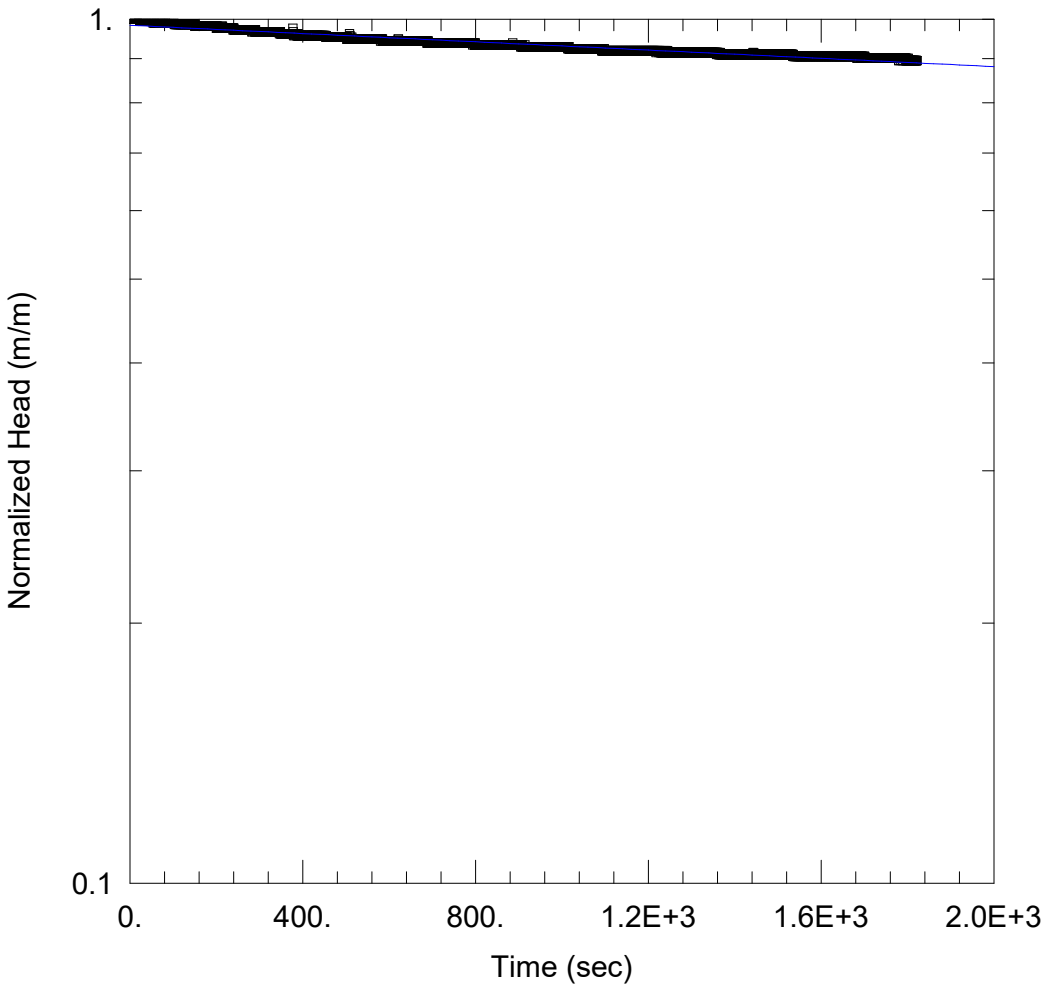
WELL DATA (BH 5 Falling Head)

Initial Displacement: 0.537 m
Total Well Penetration Depth: 3. m
Casing Radius: 0.0254 m
Static Water Column Height: 0.69 m
Screen Length: 3. m
Well Radius: 0.0762 m

SOLUTION

Aquifer Model: Unconfined Solution Method: Hvorslev

K = 8.62E-6 m/sec y0 = 0.5738 m



BH 6 FALLING HEAD

Data Set: \...\BH 6.aqt
Date: 07/24/23 Time: 14:27:44

PROJECT INFORMATION

Company: EXP Services Inc.
Client: Starlight Developments
Project: GTR-22022660-A0
Location: 1970 & 1980 Fowler Dr.
Test Well: BH 6 Falling Head
Test Date: July 18, 2023

AQUIFER DATA

Saturated Thickness: 0.73 m Anisotropy Ratio (Kz/Kr): 1.

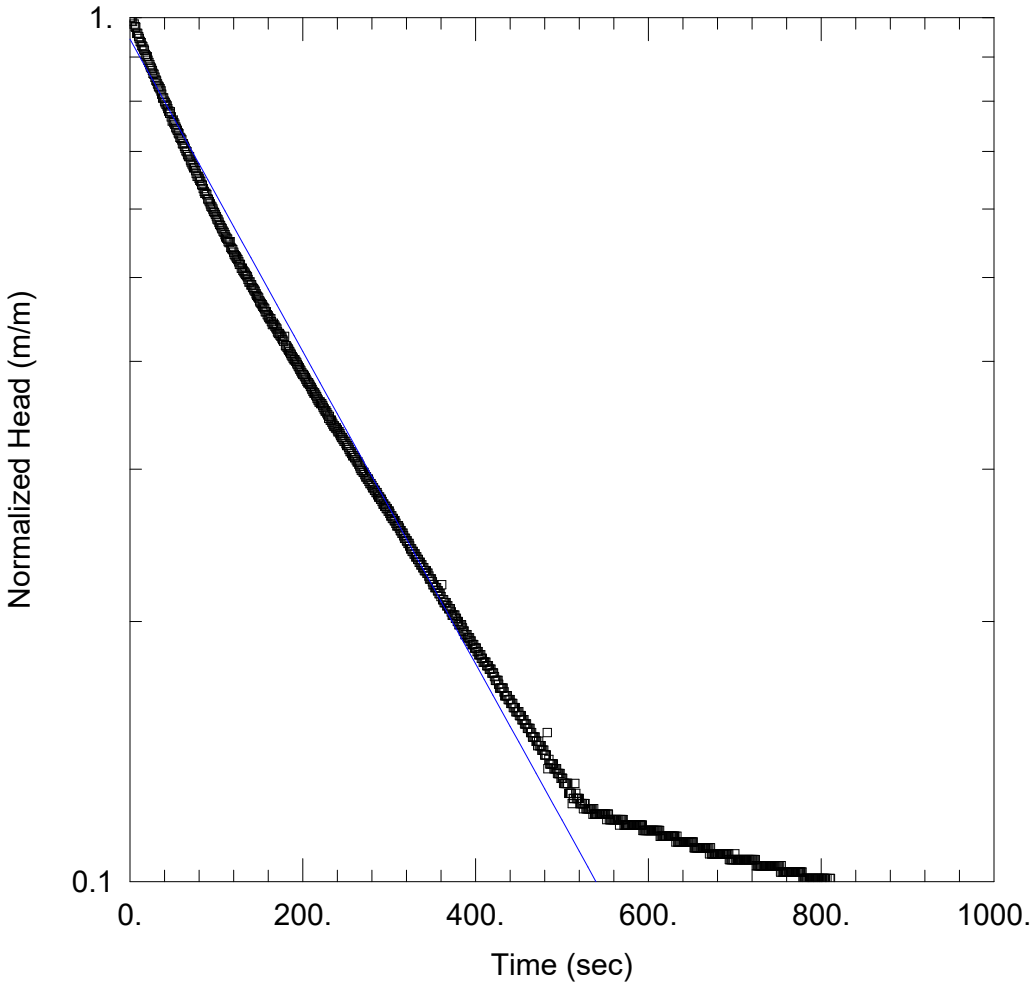
WELL DATA (BH 6 Falling Head)

Initial Displacement: 0.633 m
Total Well Penetration Depth: 3. m
Casing Radius: 0.0254 m
Static Water Column Height: 0.73 m
Screen Length: 3. m
Well Radius: 0.762 m

SOLUTION

Aquifer Model: Unconfined Solution Method: Hvorslev

K = 1.288E-7 m/sec y0 = 0.6227 m



FALLING HEAD SWRT - BH25-1

Data Set: E:\...\BH25-1.aqt
Date: 04/23/25 Time: 12:35:22

PROJECT INFORMATION

Company: EXP Services Inc
Client: Starlight Developments
Project: GTR-22022660-A0
Location: 1970-1980 Fowler Dr
Test Well: BH25-1
Test Date: April 22, 2025

AQUIFER DATA

Saturated Thickness: 11.91 m Anisotropy Ratio (Kz/Kr): 1.

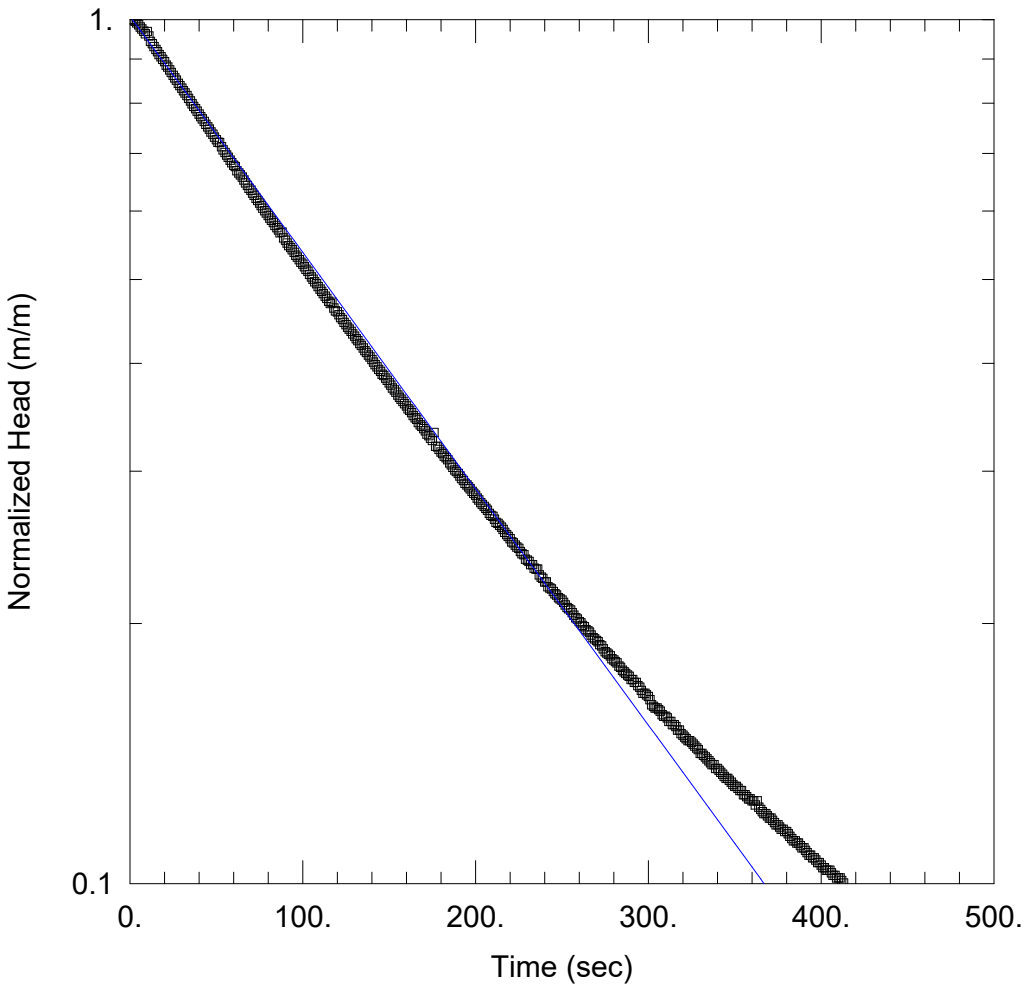
WELL DATA (BH25-1)

Initial Displacement: 1.755 m
Total Well Penetration Depth: 11.91 m
Casing Radius: 0.0254 m
Static Water Column Height: 11.91 m
Screen Length: 3. m
Well Radius: 0.0762 m

SOLUTION

Aquifer Model: Unconfined Solution Method: Hvorslev

K = 1.954E-6 m/sec y0 = 1.657 m



FALLING HEAD SWRT - BH25-2

Data Set: E:\...\BH25-2.aqt
Date: 04/23/25 Time: 12:37:37

PROJECT INFORMATION

Company: EXP Services Inc
Client: Starlight Developments
Project: GTR-22022660-A0
Location: 1970-1980 Fowler Dr
Test Well: BH25-2
Test Date: April 22, 2025

AQUIFER DATA

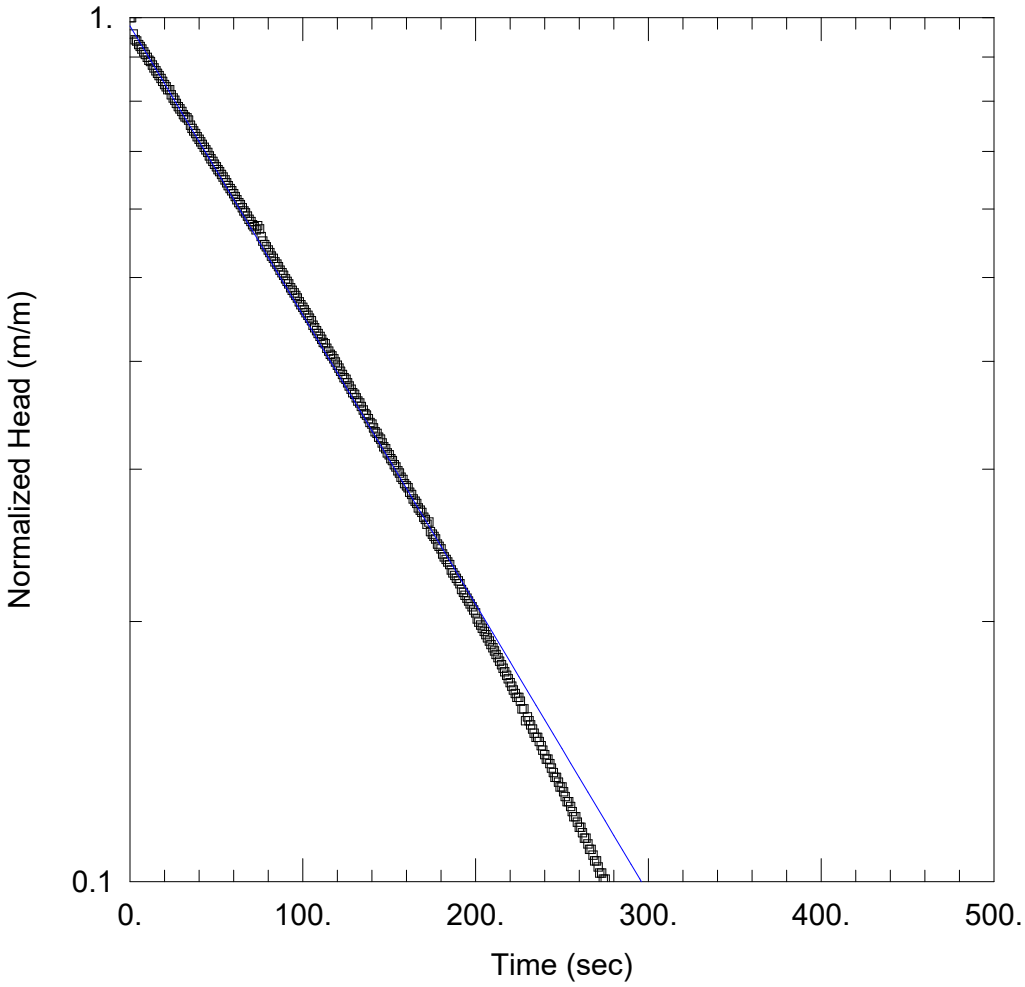
Saturated Thickness: 10.34 m Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (BH25-2)

Initial Displacement: 1.428 m
Total Well Penetration Depth: 10.34 m
Casing Radius: 0.0254 m
Static Water Column Height: 10.34 m
Screen Length: 3. m
Well Radius: 0.0762 m

SOLUTION

Aquifer Model: Unconfined
Solution Method: Hvorslev
K = 2.957E-6 m/sec
y0 = 1.441 m



FALLING HEAD SWRT - BH25-3

Data Set: E:\...\BH25-3.aqt
Date: 04/23/25 Time: 12:40:04

PROJECT INFORMATION

Company: EXP Services Inc
Client: Starlight Developments
Project: GTR-22022660-A0
Location: 1970-1980 Fowler Dr
Test Well: BH25-3
Test Date: April 22, 2025

AQUIFER DATA

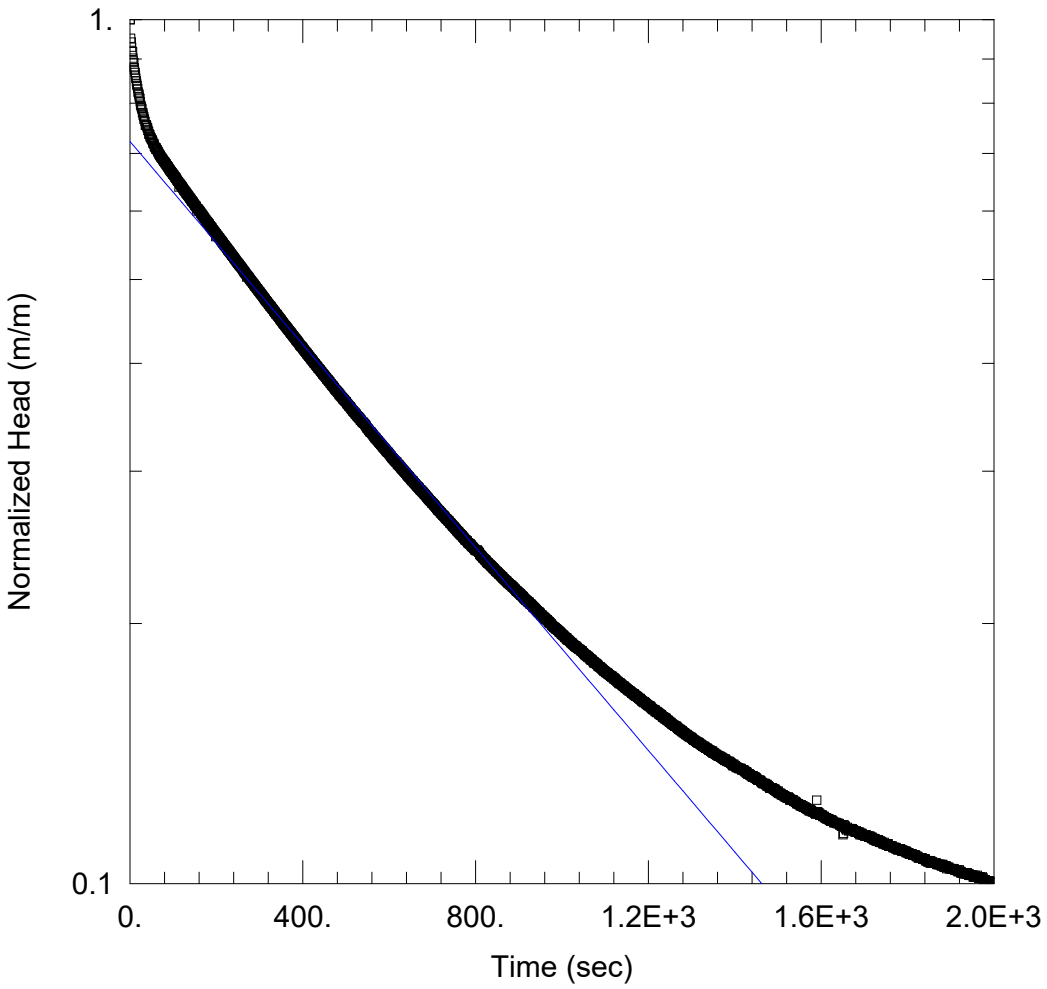
Saturated Thickness: 13.49 m Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (BH25-3)

Initial Displacement: 1.818 m
Total Well Penetration Depth: 13.49 m
Casing Radius: 0.0254 m
Static Water Column Height: 13.49 m
Screen Length: 3. m
Well Radius: 0.0762 m

SOLUTION

Aquifer Model: Unconfined
Solution Method: Hvorslev
K = 3.618E-6 m/sec
y0 = 1.778 m



RISING HEAD SWRT - BH25-4

Data Set: E:\...\BH25-4.aqt
Date: 04/23/25 Time: 12:41:56

PROJECT INFORMATION

Company: EXP Services Inc
Client: Starlight Developments
Project: GTR-22022660-A0
Location: 1970-1980 Fowler Dr
Test Well: BH25-4
Test Date: April 22, 2025

AQUIFER DATA

Saturated Thickness: 7.84 m Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (BH25-4)

Initial Displacement: 2.643 m
Total Well Penetration Depth: 7.84 m
Casing Radius: 0.0254 m
Static Water Column Height: 7.84 m
Screen Length: 3. m
Well Radius: 0.0762 m

SOLUTION

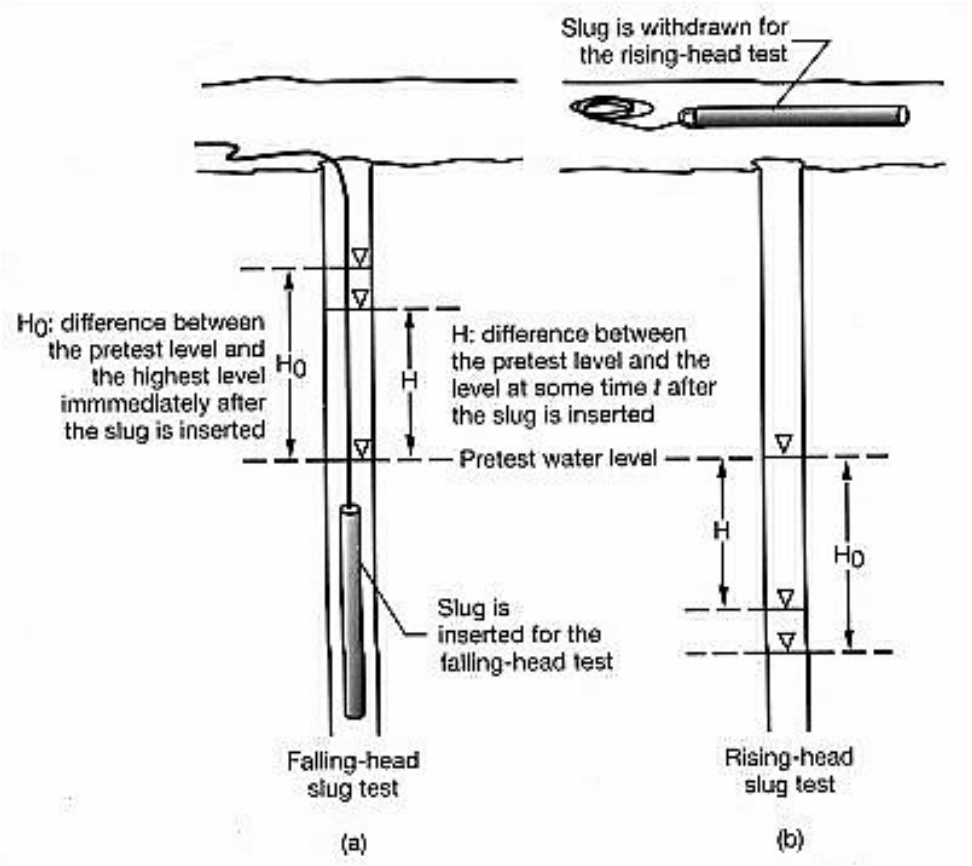
Aquifer Model: Unconfined
Solution Method: Hvorslev
K = 6.349E-7 m/sec
y0 = 1.91 m

Single Well Response Test Procedure

A Single Well Response Test (SWRT), also known as a bail test or a slug test, is conducted in order to determine the saturated hydraulic conductivity (K) of an aquifer. The method of the SWRT is to characterize the change of groundwater level in a well or borehole over time.

In order to ensure consistency and repeatability, all **exp** employees are to follow the procedure outlined in this document when conducting SWRTs.

The figure below depicts a schematic of a slug and bail test and the respective water level changes.



Initials ___

Slug Test Procedure

Equipment Required

- Copy of a signed health and safety plan
- Copy of the work program
- PPE as required by Site-Specific HASP
- Copy of the monitoring well location plan/site plan
- Waterproof pen and bound field note book
- SWRT field data Entry form
- Disposable gloves
- Duct tape
- Deionized water
- Alconox (phosphate free detergent)
- Spray bottles
- Electronic water level meter and spare batteries
- Solid PVC or stainless steel slug of known volume or clean water
- String (nylon)
- Water pressure transducer (data logger) and baro-logger
- Watch or stop watch with second hand
- Plastic sheeting

Testing Procedure

1. Remove cap from well and collect static water level
2. Remove waterra tubing/bailer and place in garbage bag. Record static water level measurement again.
3. Lower the slug into the well and record the dynamic water level.
4. Record the drawdown (for the slug test) at set five (5) second intervals for the first five (5) minutes, then reduce to every one (1) minute.
5. Continue recording the drawdown until 95% recovery is reached. To calculate this value: Find the difference between the dynamic water level and the static water level, then multiply by 95% (.95). Add the resulting value to the dynamic water level.

   (Static Water Level – Dynamic Water Level).95 + Static Water Level = 95% Recovery Value
6. Once complete, replace the waterra tubing/bailer and re-secure the well cap.

Note: If the well is deep, more than one slug may be inserted by attaching the slugs to a series.

Slugs must be washed with methanol, then lab grade soap, and then rinsed with de-ionized water after each use.

Based on the recorded observations, the hydraulic conductivity (in m/s) of the aquifer will be determined. In order to determine the hydraulic conductivity; the well diameter, radius of the borehole and length of the screen will also be required.

Bail Test Procedure

Equipment Required

- 20 L (5 gal) Graduated pail
- Stop watch or watch with seconds
- Garbage bags
- Water level meter
- Field sheets/log book
- Latex Gloves
- Bailer and Rope

Procedure

1. Remove cap from well and collect static water level.
2. If using a **bailer**:
    a. Affix the rope to the bailer.
    b. Remove the waterra tubing and place in garbage bag
    c. Record static water level measurement again.
    d. Record how much water was removed by either counting the number of full bailers or emptying removed water into a container.
    e. Quickly lower the bailer into the well and remove.
    f. Continue this process until the water level will reduce no further.
    g. Record the dynamic water level.
3. If using **waterra** to bail the water:
    a. Pump the water into graduated bucket until the water level will reduce no further.
    b. Record how much water has been removed.
    c. Record the dynamic water level.
4. Record the recovery at set five (5) second intervals for the first (5) minutes, then reduce to every one (1) minute.
5. Continue recording the drawdown/recovery until 95% recovery is reached.
6. Once complete, replace any waterra tubing that may have been removed from the well and re-secure the well cap.

Appendix D – Laboratory's Certificates of Analysis

CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

Work Order	:	**WT2606835**			
Client	:	**EXP Services Inc.**	Laboratory	:	ALS Environmental - Waterloo
Contact	:	Amar Neku	Account Manager	:	Mathy Mahadeva
Address	:	1595 Clark Blvd. Brampton Ontario Canada L6T 4V1	Address	:	60 Northland Road, Unit 1 Waterloo ON Canada N2V 2B8
Telephone	:	----	Telephone	:	+1 519 886 6910
Project	:	1980 Fowler - GTR-22022660-A0	Date Samples Received	:	26-Mar-2026 09:00
PO	:	----	Date Analysis Commenced	:	27-Mar-2026
C-O-C number	:	23-1154298	Issue Date	:	02-Apr-2026 14:58
Sampler	:	RA			
Site	:	----			
Quote number	:	Sanitary & Storm By-Laws			
No. of samples received	:	1			
No. of samples analysed	:	1			

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Danielle Gravel	Supervisor - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario
David Tremblett	VOC Section Supervisor	VOC, Waterloo, Ontario
Hannah Lewis	Inorganics Analyst	Inorganics, Waterloo, Ontario
Jeminikumari Patel	Analyst	Microbiology, Waterloo, Ontario
Jocelyn Kennedy	Department Manager - Semi-Volatile Organics	Organics, Waterloo, Ontario
Parth Goswami	Team Leader - LCMS	LCMS, Waterloo, Ontario
Rachel Cameron	Supervisor - Semi-Volatile Extractions	Organics, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Inorganics, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Metals, Waterloo, Ontario

Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
BH25-1 ----	Water	Kjeldahl nitrogen, total [TKN]		MISSUB	STM	1.26 mg/L	1 mg/L

Key:

RMPSUB	Ontario Reg.Mun. of Peel Sewer Bylaw #53-2010 (APR, 2019)
SAN	Peel Sanitary Sewer (53-2010)
MISSUB	Ontario Mississauga Storm Sewer Use By-Law (0046-2022) (March 2022)
STM	Mississauga Storm Sewer (0046-2022)

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guidelines are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Key: CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances.

LOR: Limit of Reporting (detection limit).

Unit	*Description*
mg/L	milligrams per litre
MPN/100mL	most probable number per hundred millilitres
pH units	pH units
µg/L	micrograms per litre

>: greater than.

<: less than.

Red shading is applied where the result or the LOR is greater than the Guideline Upper Limit (or lower than the Guideline Lower Limit, if applicable).
For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Workorder Comments

WT2606835-001; RRR: Detection limit raised due to suspected bias high results at or near the detection limit.

Qualifiers

Qualifier	Description
BODL	Limit of Reporting for BOD was increased to account for the largest volume of sample tested.
DLDS	Detection Limit Raised: Dilution required due to high Dissolved Solids / Electrical Conductivity.
DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
DLUI	Detection Limit Raised: Unknown interference generated an apparent false positive test result.
PEHR	Parameter exceeded recommended holding time on receipt: Proceeded with analysis as requested.
RRR	Refer to report comments for issues regarding this analysis.

Analytical Results

SubMatrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID: BH25-1 ----	MISSUB STM	RMPSUB SAN	---- ----	---- ----	---- ----
					Client sampling date / time: 25-Mar-2026 15:35					
					WT2606835-001					
Physical Tests										
pH	----	E108/WT	0.10	pH units	7.77	6 - 9 pH units	5.5 - 10 pH units	----	----	----
Solids, total suspended [TSS]	----	E160/WT	3.0	mg/L	11.4	15 mg/L	350 mg/L	----	----	----
Anions and Nutrients										
Fluoride	16984-48-8	E235.F/WT	0.020	mg/L	<0.200 DLDS	----	10 mg/L	----	----	----
Kjeldahl nitrogen, total [TKN]	----	E318/WT	0.050	mg/L	1.26	1 mg/L	100 mg/L	----	----	----
Phosphorus, total	7723-14-0	E372-U/WT	0.0020	mg/L	0.0177	0.4 mg/L	10 mg/L	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/WT	0.30	mg/L	157 DLDS	----	1500 mg/L	----	----	----
Cyanides										
Cyanide, strong acid dissociable (Total)	----	E333/WT	0.0020	mg/L	<0.0020	0.02 mg/L	2 mg/L	----	----	----
Inorganics										
Chlorine, total	7782-50-5	E326/WT	0.050	mg/L	<0.050 PEHR	1 mg/L	----	----	----	----
Microbiological Tests										
Coliforms, Escherichia coli [E. coli]	----	E010.QT97/WT	1	MPN/100mL	<1	200 MPN/100mL	----	----	----	----
Total Metals										
Aluminum, total	7429-90-5	E420/WT	0.0030	mg/L	0.734 DLHC	1 mg/L	50 mg/L	----	----	----
Antimony, total	7440-36-0	E420/WT	0.00010	mg/L	<0.00100 DLHC	----	5 mg/L	----	----	----
Arsenic, total	7440-38-2	E420/WT	0.00010	mg/L	<0.00100 DLHC	0.02 mg/L	1 mg/L	----	----	----
Cadmium, total	7440-43-9	E420/WT	0.0000050	mg/L	<0.0000500 DLHC	0.008 mg/L	0.7 mg/L	----	----	----
Chromium, total	7440-47-3	E420/WT	0.00050	mg/L	<0.00500 DLHC	0.08 mg/L	5 mg/L	----	----	----
Cobalt, total	7440-48-4	E420/WT	0.00010	mg/L	<0.00100 DLHC	----	5 mg/L	----	----	----
Copper, total	7440-50-8	E420/WT	0.00050	mg/L	<0.00500 DLHC	0.04 mg/L	3 mg/L	----	----	----
Lead, total	7439-92-1	E420/WT	0.000050	mg/L	0.000585 DLHC	0.12 mg/L	3 mg/L	----	----	----
Manganese, total	7439-96-5	E420/WT	0.00010	mg/L	0.0886 DLHC	2 mg/L	5 mg/L	----	----	----
Mercury, total	7439-97-6	E508/WT	0.0000050	mg/L	<0.0000050	0.0004 mg/L	0.01 mg/L	----	----	----
Molybdenum, total	7439-98-7	E420/WT	0.000050	mg/L	0.000615 DLHC	----	5 mg/L	----	----	----
Nickel, total	7440-02-0	E420/WT	0.00050	mg/L	<0.00500 DLHC	0.08 mg/L	3 mg/L	----	----	----
Potassium, total	7440-09-7	E420/WT	0.050	mg/L	27.9 DLHC	----	----	----	----	----
Selenium, total	7782-49-2	E420/WT	0.000050	mg/L	<0.000500 DLHC	0.02 mg/L	1 mg/L	----	----	----
Silver, total	7440-22-4	E420/WT	0.000010	mg/L	<0.000100 DLHC	0.12 mg/L	5 mg/L	----	----	----
Tin, total	7440-31-5	E420/WT	0.00010	mg/L	<0.00100 DLHC	----	5 mg/L	----	----	----
Titanium, total	7440-32-6	E420/WT	0.00030	mg/L	<0.0180 DLHC, DLUI	----	5 mg/L	----	----	----
Zinc, total	7440-66-6	E420/WT	0.0030	mg/L	<0.0300 DLHC	0.2 mg/L	3 mg/L	----	----	----
Speciated Metals										
Chromium, hexavalent [Cr VI], total	18540-29-9	E532/WT	0.00050	mg/L	<0.00050	----	----	----	----	----

SubMatrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID: BH25-1 ----	MISSUB STM	RMPSUB SAN	---- ----	---- ----	---- ----
					Client sampling date / time: 25-Mar-2026 15:35					
					WT2606835-001					
Aggregate Organics										
Biochemical oxygen demand [BOD]	----	E550/WT	2.0	mg/L	<3.0 BODL	15 mg/L	300 mg/L	----	----	----
Carbonaceous biochemical oxygen demand [CBOD]	----	E555/WT	2.0	mg/L	<3.0 BODL	----	300 mg/L	----	----	----
Oil & grease (gravimetric)	----	E567/WT	5.0	mg/L	<5.0	----	----	----	----	----
Oil & grease, animal/vegetable (gravimetric)	----	EC567A.SG/WT	5.0	mg/L	<5.0	----	150 mg/L	----	----	----
Oil & grease, mineral (gravimetric)	----	E567SG/WT	5.0	mg/L	<5.0	----	15 mg/L	----	----	----
Phenols, total (4AAP)	----	E562/WT	0.0010	mg/L	<0.0010	0.008 mg/L	1 mg/L	----	----	----
Volatile Organic Compounds										
Benzene	71-43-2	E611D/WT	0.50	µg/L	<0.50	2 µg/L	10 µg/L	----	----	----
Chloroform	67-66-3	E611D/WT	0.50	µg/L	<0.50	----	40 µg/L	----	----	----
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	0.50	µg/L	<0.50	----	50 µg/L	----	----	----
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	0.50	µg/L	<0.50	----	80 µg/L	----	----	----
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	0.50	µg/L	<0.50	----	4000 µg/L	----	----	----
Dichloromethane	75-09-2	E611D/WT	1.0	µg/L	<1.0	----	2000 µg/L	----	----	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	0.30	µg/L	<0.30	----	140 µg/L	----	----	----
Ethylbenzene	100-41-4	E611D/WT	0.50	µg/L	<0.50	2 µg/L	160 µg/L	----	----	----
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	20	µg/L	<20	----	8000 µg/L	----	----	----
Styrene	100-42-5	E611D/WT	0.50	µg/L	<0.50	----	200 µg/L	----	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	0.50	µg/L	<0.50	----	1400 µg/L	----	----	----
Tetrachloroethylene	127-18-4	E611D/WT	0.50	µg/L	<0.50	----	1000 µg/L	----	----	----
Toluene	108-88-3	E611D/WT	0.50	µg/L	<0.50	2 µg/L	270 µg/L	----	----	----
Trichloroethylene	79-01-6	E611D/WT	0.50	µg/L	<0.50	----	400 µg/L	----	----	----
Xylene, m+p-	179601-23-1	E611D/WT	0.40	µg/L	<0.40	----	----	----	----	----
Xylene, o-	95-47-6	E611D/WT	0.30	µg/L	<0.30	----	----	----	----	----
Xylenes, total	1330-20-7	E611D/WT	0.50	µg/L	<0.50	4.4 µg/L	1400 µg/L	----	----	----
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611D/WT	1.0	%	106	----	----	----	----	----
Difluorobenzene, 1,4-	540-36-3	E611D/WT	1.0	%	99.7	----	----	----	----	----
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A/WT	0.010	µg/L	<0.010	----	----	----	----	----
Acenaphthylene	208-96-8	E641A/WT	0.010	µg/L	<0.010	----	----	----	----	----
Anthracene	120-12-7	E641A/WT	0.010	µg/L	<0.010	----	----	----	----	----
Benz(a)anthracene	56-55-3	E641A/WT	0.010	µg/L	<0.010	----	----	----	----	----
Benzo(a)pyrene	50-32-8	E641A/WT	0.0050	µg/L	<0.0050	----	----	----	----	----
Benzo(b+j)fluoranthene	n/a	E641A/WT	0.010	µg/L	<0.010	----	----	----	----	----

SubMatrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID: BH25-1 ----					
					Client sampling date / time: 25-Mar-2026 15:35					
					WT2606835-001	MISSUB STM	RMPSUB SAN	---- ----	---- ----	---- ----
Polycyclic Aromatic Hydrocarbons										
Benzo(g,h,i)perylene	191-24-2	E641A/WT	0.010	µg/L	<0.010	----	----	----	----	----
Benzo(k)fluoranthene	207-08-9	E641A/WT	0.010	µg/L	<0.010	----	----	----	----	----
Chrysene	218-01-9	E641A/WT	0.010	µg/L	<0.010	----	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	E641A/WT	0.0050	µg/L	<0.0050	----	----	----	----	----
Fluoranthene	206-44-0	E641A/WT	0.010	µg/L	<0.010	----	----	----	----	----
Fluorene	86-73-7	E641A/WT	0.010	µg/L	<0.010	----	----	----	----	----
Indeno(1,2,3-cd)pyrene	193-39-5	E641A/WT	0.010	µg/L	<0.010	----	----	----	----	----
Methylnaphthalene, 1-	90-12-0	E641A/WT	0.010	µg/L	<0.010	----	----	----	----	----
Methylnaphthalene, 2-	91-57-6	E641A/WT	0.010	µg/L	<0.010	----	----	----	----	----
Naphthalene	91-20-3	E641A/WT	0.050	µg/L	<0.050	----	----	----	----	----
Phenanthrene	85-01-8	E641A/WT	0.020	µg/L	<0.020	----	----	----	----	----
Pyrene	129-00-0	E641A/WT	0.010	µg/L	<0.010	----	----	----	----	----
PAHs, total (CCME sewer 18)	n/a	E641A/WT	0.070	µg/L	<0.070	2 µg/L	----	----	----	----
Polycyclic Aromatic Hydrocarbons Surrogates										
Chrysene-d12	1719-03-5	E641A/WT	0.1	%	106	----	----	----	----	----
Naphthalene-d8	1146-65-2	E641A/WT	0.1	%	95.3	----	----	----	----	----
Phenanthrene-d10	1517-22-2	E641A/WT	0.1	%	105	----	----	----	----	----
Phthalate Esters										
bis(2-Ethylhexyl) phthalate [DEHP]	117-81-7	E625A/WT	0.60	µg/L	<0.70 RRR	----	12 µg/L	----	----	----
Di-n-butyl phthalate	84-74-2	E625A/WT	1.0	µg/L	<1.0	----	80 µg/L	----	----	----
Semi-Volatile Organics Surrogates										
Fluorobiphenyl, 2-	321-60-8	E625A/WT	1.0	%	81.2	----	----	----	----	----
Nitrobenzene-d5	4165-60-0	E625A/WT	1.0	%	83.6	----	----	----	----	----
Terphenyl-d14, p-	1718-51-0	E625A/WT	1.0	%	87.4	----	----	----	----	----
Phenolics Surrogates										
Tribromophenol, 2,4,6-	118-79-6	E625A/WT	0.50	%	83.0	----	----	----	----	----
Nonylphenols										
Nonylphenol [NP]	84852-15-3	E749A/WT	0.40	µg/L	1.26	----	20 µg/L	----	----	----
Nonylphenol diethoxylate [NP2EO]	20427-84-3	E749B/WT	0.10	µg/L	<0.12 DLM	----	----	----	----	----
Nonylphenol ethoxylates, mono+di	n/a	E749B/WT	2.0	µg/L	<2.0	----	200 µg/L	----	----	----
Nonylphenol monoethoxylate [NP1EO]	27986-36-3	E749B/WT	0.40	µg/L	<0.40	----	----	----	----	----
Polychlorinated Biphenyls										
Aroclor 1016	12674-11-2	E687/WT	0.020	µg/L	<0.020	----	----	----	----	----
Aroclor 1221	11104-28-2	E687/WT	0.020	µg/L	<0.020	----	----	----	----	----
Aroclor 1232	11141-16-5	E687/WT	0.020	µg/L	<0.020	----	----	----	----	----

SubMatrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID: BH25-1 ---- / Client sampling date / time: 25-Mar-2026 15:35 WT2606835-001	MISSUB STM	RMPSUB SAN	---- ----	---- ----	---- ----
Polychlorinated Biphenyls										
Aroclor 1242	53469-21-9	E687/WT	0.020	µg/L	<0.020	----	----	----	----	----
Aroclor 1248	12672-29-6	E687/WT	0.020	µg/L	<0.020	----	----	----	----	----
Aroclor 1254	11097-69-1	E687/WT	0.020	µg/L	<0.020	----	----	----	----	----
Aroclor 1260	11096-82-5	E687/WT	0.020	µg/L	<0.020	----	----	----	----	----
Aroclor 1262	37324-23-5	E687/WT	0.020	µg/L	<0.020	----	----	----	----	----
Aroclor 1268	11100-14-4	E687/WT	0.020	µg/L	<0.020	----	----	----	----	----
Polychlorinated biphenyls [PCBs], total	1336-36-3	E687/WT	0.060	µg/L	<0.060	----	1 µg/L	----	----	----
Polychlorinated Biphenyls Surrogates										
Decachlorobiphenyl	2051-24-3	E687/WT	0.1	%	73.6	----	----	----	----	----
Tetrachloro-m-xylene	877-09-8	E687/WT	0.1	%	95.8	----	----	----	----	----

Please refer to the General Comments section for an explanation of any result qualifiers detected.

ALS Canada Ltd.

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Quality Control Interpretive Report

Work Order	:	**WT2606835**			
Client	:	EXP Services Inc.	Laboratory	:	ALS Environmental - Waterloo
Contact	:	Amar Neku	Account Manager	:	Mathy Mahadeva
Address	:	1595 Clark Blvd. Brampton ON Canada L6T 4V1	Address	:	60 Northland Road, Unit 1 Waterloo Ontario Canada N2V 2B8
Telephone	:	----	Telephone	:	+1 519 886 6910
Project	:	1980 Fowler - GTR-22022660-A0	Date Samples Received	:	26-Mar-2026 09:00
PO	:	----	Issue Date	:	02-Apr-2026 14:58
C-O-C number	:	23-1154298			
Sampler	:	RA			
Site	:	----			
Quote number	:	Sanitary & Storm By-Laws			
No. of samples received	:	1			
No. of samples analysed	:	1			

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances.
DQO: Data Quality Objective.
LOR: Limit of Reporting (detection limit).
RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Laboratory Control Sample Duplicate (LCSD) outliers occur
- No Matrix Spike outliers occur.
- No Matrix Spike Duplicate (MSD) outliers occur.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and/or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: Water

Evaluation: × = Holding time exceedance; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client sample ID	ALS Sample ID	QC Lot	Method	Sampling Date	Extraction / Preparation				Analysis			
					Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
						Rec	Actual			Rec	Actual	
Aggregate Organics : Biochemical Oxygen Demand - 5 day												
HDPE [BOD HT-4d]												
BH25-1	001	2516621	E550	25-Mar-2026	----	----	----		28-Mar-2026	4 days	2 days	✓
Aggregate Organics : Biochemical Oxygen Demand (Carbonaceous) - 5 day												
HDPE [BOD HT-4d]												
BH25-1	001	2516620	E555	25-Mar-2026	----	----	----		28-Mar-2026	4 days	2 days	✓
Aggregate Organics : Mineral Oil & Grease by Gravimetry												
Amber glass total (hydrochloric acid)												
BH25-1	001	2520217	E567SG	25-Mar-2026	31-Mar-2026	28 days	6 days	✓	01-Apr-2026	28 days	7 days	✓
Aggregate Organics : Oil & Grease by Gravimetry												
Amber glass total (hydrochloric acid)												
BH25-1	001	2520216	E567	25-Mar-2026	31-Mar-2026	28 days	6 days	✓	01-Apr-2026	28 days	7 days	✓
Aggregate Organics : Phenols (4AAP) in Water by Colorimetry												
Amber glass total (sulfuric acid) [ON MECP]												
BH25-1	001	2520702	E562	25-Mar-2026	01-Apr-2026	28 days	7 days	✓	01-Apr-2026	28 days	7 days	✓

Matrix: Water

Evaluation: × = Holding time exceedance; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client sample ID	ALS Sample ID	QC Lot	Method	Sampling Date	Extraction / Preparation				Analysis			
					Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
						Rec	Actual			Rec	Actual	
Anions and Nutrients : Fluoride in Water by IC												
HDPE [ON MECP]												
BH25-1	001	2519023	E235.F	25-Mar-2026	31-Mar-2026	28 days	6 days	✓	31-Mar-2026	28 days	6 days	✓
Anions and Nutrients : Sulfate in Water by IC												
HDPE [ON MECP]												
BH25-1	001	2519022	E235.SO4	25-Mar-2026	31-Mar-2026	28 days	6 days	✓	31-Mar-2026	28 days	6 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)												
Amber glass total (sulfuric acid) [ON MECP]												
BH25-1	001	2520703	E318	25-Mar-2026	01-Apr-2026	28 days	7 days	✓	01-Apr-2026	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)												
Amber glass total (sulfuric acid) [ON MECP]												
BH25-1	001	2520704	E372-U	25-Mar-2026	02-Apr-2026	28 days	8 days	✓	02-Apr-2026	28 days	8 days	✓
Cyanides : Total Cyanide												
Opaque HDPE - total (sodium hydroxide)												
BH25-1	001	2517877	E333	25-Mar-2026	01-Apr-2026	14 days	7 days	✓	01-Apr-2026	14 days	7 days	✓
Inorganics : Total Chlorine (Residual) by DPD Colourimetry												
Amber glass/Teflon lined septa cap -Chlorine												
BH25-1	001	2518804	E326	25-Mar-2026	----	----	----		31-Mar-2026	0.25 hrs	135 hrs	× EHTR-FM
Microbiological Tests : Total Coliforms and E. coli (Enzyme Substrate, 97 Well Tray)												
Sterile HDPE (sodium thiosulfate) [ON MECP]												
BH25-1	001	2514515	E010.QT97	25-Mar-2026	----	----	----		27-Mar-2026	48 hrs	41 hrs	✓

Matrix: Water

Evaluation: × = Holding time exceedance; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client sample ID	ALS Sample ID	QC Lot	Method	Sampling Date	Extraction / Preparation				Analysis			
					Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
						Rec	Actual			Rec	Actual	
Nonylphenols : Nonylphenol Ethoxylates in Water by LC-MS-MS Positive Mode												
Amber glass/Teflon lined cap - LCMS												
BH25-1	001	2514816	E749B	25-Mar-2026	27-Mar-2026	7 days	2 days	✓	31-Mar-2026	7 days	3 days	✓
Nonylphenols : Nonylphenol, Octylphenol and BPA in Water by LC-MS-MS Negative Mode												
Amber glass/Teflon lined cap - LCMS												
BH25-1	001	2514817	E749A	25-Mar-2026	27-Mar-2026	7 days	2 days	✓	31-Mar-2026	7 days	3 days	✓
Phthalate Esters : BNA (Routine List) by GC-MS-MS												
Amber glass/Teflon lined septa cap - SVOCs (sodium thiosulfate) [ON MECP]												
BH25-1	001	2520465	E625A	25-Mar-2026	01-Apr-2026	14 days	6 days	✓	01-Apr-2026	40 days	0 days	✓
Physical Tests : pH by Meter												
HDPE [ON MECP]												
BH25-1	001	2519017	E108	25-Mar-2026	31-Mar-2026	14 days	6 days	✓	31-Mar-2026	14 days	6 days	✓
Physical Tests : TSS by Gravimetry												
HDPE [ON MECP]												
BH25-1	001	2519136	E160	25-Mar-2026	----	----	----		31-Mar-2026	7 days	6 days	✓
Polychlorinated Biphenyls : PCB Aroclors by GC-MS												
Amber glass/Teflon lined septa cap - SVOCs (sodium thiosulfate) [ON MECP]												
BH25-1	001	2519745	E687	25-Mar-2026	01-Apr-2026	14 days	6 days	✓	01-Apr-2026	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS												
Amber glass/Teflon lined cap (sodium bisulfate)												
BH25-1	001	2520648	E641A	25-Mar-2026	01-Apr-2026	14 days	7 days	✓	01-Apr-2026	40 days	0 days	✓

Matrix: Water

Evaluation: × = Holding time exceedance; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client sample ID	ALS Sample ID	QC Lot	Method	Sampling Date	Extraction / Preparation				Analysis			
					Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
						Rec	Actual			Rec	Actual	
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC												
Opaque HDPE - total (sodium hydroxide)												
BH25-1	001	2514287	E532	25-Mar-2026	----	----	----		27-Mar-2026	28 days	1 days	✓
Total Metals : Total Mercury in Water by CVAAS												
Glass vial total (hydrochloric acid) [ON MECP]												
BH25-1	001	2514531	E508	25-Mar-2026	27-Mar-2026	28 days	1 days	✓	30-Mar-2026	28 days	5 days	✓
Total Metals : Total Metals in Water by CRC ICPMS												
HDPE total (nitric acid)												
BH25-1	001	2514080	E420	25-Mar-2026	27-Mar-2026	180 days	1 days	✓	27-Mar-2026	180 days	1 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS												
Glass vial (sodium bisulfate)												
BH25-1	001	2518231	E611D	25-Mar-2026	30-Mar-2026	14 days	5 days	✓	30-Mar-2026	14 days	5 days	✓

Legend & Qualifier Definitions

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended

Rec. HT: ALS recommended hold time (see units).

Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: Water

Evaluation: × = QC frequency outside specification; ✓ = QC frequency within specification

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	Method	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Laboratory Duplicates (DUP)							
Total Coliforms and E. coli (Enzyme Substrate, 97 Well Tray)	E010.QT97	2514515	1	15	6.7	5.0	✓
pH by Meter	E108	2519017	1	20	5.0	5.0	✓
TSS by Gravimetry	E160	2519136	1	20	5.0	4.8	✓
Fluoride in Water by IC	E235.F	2519023	1	11	9.1	5.0	✓
Sulfate in Water by IC	E235.SO4	2519022	1	19	5.3	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2520703	1	15	6.7	5.0	✓
Total Chlorine (Residual) by DPD Colourimetry	E326	2518804	1	8	12.5	5.0	✓
Total Cyanide	E333	2517877	1	16	6.2	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2520704	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	2514080	1	19	5.3	5.0	✓
Total Mercury in Water by CVAAS	E508	2514531	1	16	6.2	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	2514287	1	10	10.0	5.0	✓
Biochemical Oxygen Demand - 5 day	E550	2516621	1	20	5.0	5.0	✓
Biochemical Oxygen Demand (Carbonaceous) - 5 day	E555	2516620	1	17	5.9	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	2520702	1	18	5.6	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2518231	1	20	5.0	5.0	✓
Nonylphenol, Octylphenol and BPA in Water by LC-MS-MS Negative Mode	E749A	2514817	1	16	6.2	5.0	✓
Nonylphenol Ethoxylates in Water by LC-MS-MS Positive Mode	E749B	2514816	1	16	6.2	5.0	✓
Laboratory Control Samples (LCS)							
pH by Meter	E108	2519017	1	20	5.0	5.0	✓
TSS by Gravimetry	E160	2519136	1	20	5.0	4.8	✓
Fluoride in Water by IC	E235.F	2519023	1	11	9.1	5.0	✓
Sulfate in Water by IC	E235.SO4	2519022	1	19	5.3	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2520703	1	15	6.7	5.0	✓
Total Chlorine (Residual) by DPD Colourimetry	E326	2518804	1	8	12.5	5.0	✓
Total Cyanide	E333	2517877	1	16	6.2	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2520704	1	20	5.0	5.0	✓

Matrix: Water

Evaluation: × = QC frequency outside specification; ✓ = QC frequency within specification

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	Method	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Laboratory Control Samples (LCS)							
Total Metals in Water by CRC ICPMS	E420	2514080	1	19	5.3	5.0	✓
Total Mercury in Water by CVAAS	E508	2514531	1	16	6.2	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	2514287	1	10	10.0	5.0	✓
Biochemical Oxygen Demand - 5 day	E550	2516621	1	20	5.0	5.0	✓
Biochemical Oxygen Demand (Carbonaceous) - 5 day	E555	2516620	1	17	5.9	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	2520702	1	18	5.6	5.0	✓
Oil & Grease by Gravimetry	E567	2520216	1	7	14.3	5.0	✓
Mineral Oil & Grease by Gravimetry	E567SG	2520217	1	7	14.3	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2518231	1	20	5.0	5.0	✓
BNA (Routine List) by GC-MS-MS	E625A	2520465	1	16	6.2	5.0	✓
PAHs in Water by Hexane LVI GC-MS	E641A	2520648	1	12	8.3	5.0	✓
PCB Aroclors by GC-MS	E687	2519745	1	15	6.7	4.8	✓
Nonylphenol, Octylphenol and BPA in Water by LC-MS-MS Negative Mode	E749A	2514817	1	16	6.2	5.0	✓
Nonylphenol Ethoxylates in Water by LC-MS-MS Positive Mode	E749B	2514816	1	16	6.2	5.0	✓
Method Blanks (MB)							
Total Coliforms and E. coli (Enzyme Substrate, 97 Well Tray)	E010.QT97	2514515	1	15	6.7	5.0	✓
TSS by Gravimetry	E160	2519136	1	20	5.0	4.8	✓
Fluoride in Water by IC	E235.F	2519023	1	11	9.1	5.0	✓
Sulfate in Water by IC	E235.SO4	2519022	1	19	5.3	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2520703	1	15	6.7	5.0	✓
Total Chlorine (Residual) by DPD Colourimetry	E326	2518804	1	8	12.5	5.0	✓
Total Cyanide	E333	2517877	1	16	6.2	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2520704	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	2514080	1	19	5.3	5.0	✓
Total Mercury in Water by CVAAS	E508	2514531	1	16	6.2	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	2514287	1	10	10.0	5.0	✓
Biochemical Oxygen Demand - 5 day	E550	2516621	1	20	5.0	5.0	✓
Biochemical Oxygen Demand (Carbonaceous) - 5 day	E555	2516620	1	17	5.9	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	2520702	1	18	5.6	5.0	✓
Oil & Grease by Gravimetry	E567	2520216	1	7	14.3	5.0	✓

Matrix: Water

Evaluation: × = QC frequency outside specification; ✓ = QC frequency within specification

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	Method	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Method Blanks (MB)							
Mineral Oil & Grease by Gravimetry	E567SG	2520217	1	7	14.3	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2518231	1	20	5.0	5.0	✓
BNA (Routine List) by GC-MS-MS	E625A	2520465	1	16	6.2	5.0	✓
PAHs in Water by Hexane LVI GC-MS	E641A	2520648	1	12	8.3	5.0	✓
PCB Aroclors by GC-MS	E687	2519745	1	15	6.7	4.8	✓
Nonylphenol, Octylphenol and BPA in Water by LC-MS-MS Negative Mode	E749A	2514817	1	16	6.2	5.0	✓
Nonylphenol Ethoxylates in Water by LC-MS-MS Positive Mode	E749B	2514816	1	16	6.2	5.0	✓
Matrix Spikes (MS)							
Fluoride in Water by IC	E235.F	2519023	1	11	9.1	5.0	✓
Sulfate in Water by IC	E235.SO4	2519022	1	19	5.3	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2520703	1	15	6.7	5.0	✓
Total Chlorine (Residual) by DPD Colourimetry	E326	2518804	1	8	12.5	5.0	✓
Total Cyanide	E333	2517877	1	16	6.2	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2520704	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	2514080	1	19	5.3	5.0	✓
Total Mercury in Water by CVAAS	E508	2514531	1	16	6.2	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	2514287	1	10	10.0	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	2520702	1	18	5.6	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2518231	1	20	5.0	5.0	✓
Nonylphenol, Octylphenol and BPA in Water by LC-MS-MS Negative Mode	E749A	2514817	1	16	6.2	5.0	✓
Nonylphenol Ethoxylates in Water by LC-MS-MS Positive Mode	E749B	2514816	1	16	6.2	5.0	✓

Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Animal & Vegetable Oil & Grease by Gravimetry	EC567A.SG ALS Environmental - Waterloo	Water	APHA 5520 (mod)	Animal & vegetable oil and grease is calculated as follows: Oil & Grease (gravimetric) minus Mineral Oil & Grease (gravimetric)
Biochemical Oxygen Demand - 5 day	E550 ALS Environmental - Waterloo	Water	APHA 5210 B (mod)	Samples are diluted and incubated for a specified time period, after which the oxygen depletion is measured using a dissolved oxygen meter. Free chlorine is a negative interference in the BOD method; please advise ALS when free chlorine is present in samples.
Biochemical Oxygen Demand (Carbonaceous) - 5 day	E555 ALS Environmental - Waterloo	Water	APHA 5210 B (mod)	Samples are diluted and incubated for a specified time period, after which the oxygen depletion is measured using a dissolved oxygen meter. Nitrification inhibitor is added to samples to prevent nitrogenous compounds from consuming oxygen resulting in only carbonaceous oxygen demand being reported by this method. Free chlorine is a negative interference in the BOD method; please advise ALS when free chlorine is present in samples.
BNA (Routine List) by GC-MS-MS	E625A ALS Environmental - Waterloo	Water	EPA 8270E (mod)	BNA are analyzed by GC-MS-MS.
Conductivity Screen (Internal Use Only)	ES100 ALS Environmental - Waterloo	Water	APHA 2510 (mod)	Qualitative analysis of conductivity where required during preparation of other tests - e.g. TDS, metals, etc.
Fluoride in Water by IC	E235.F ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Mineral Oil & Grease by Gravimetry	E567SG ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane, followed by silica gel treatment after which the extract is evaporated to dryness. The residue is then weighed to determine Mineral Oil and Grease.
Nonylphenol Ethoxylates in Water by LC-MS-MS Positive Mode	E749B ALS Environmental - Waterloo	Water	ASTM D7485-16 (mod)	An aliquot of 5.0 mL of sample is spiked with internal standards and analyzed by Direct Aqueous Injection and LC-MS-MS.
Nonylphenol, Octylphenol and BPA in Water by LC-MS-MS Negative Mode	E749A ALS Environmental - Waterloo	Water	ASTM D7485-16 (mod)	An aliquot of 5.0 mL of sample is spiked with internal standards and analyzed by Direct Aqueous Injection and LC-MS-MS-Negative mode.
Oil & Grease by Gravimetry	E567 ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	This method involves extracting the sample with n□hexane, evaporating the extract to dryness, and gravimetrically determining the residue as oil and grease. It is based on EPA Method 1664 and is equivalent to BC MOE Laboratory Manual (Oil and Grease) and APHA Standard Methods 5520 B .
PAHs in Water by Hexane LVI GC-MS	E641A ALS Environmental - Waterloo	Water	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are analyzed by large-volume injection (LVI) GC-MS. Totals and sub-totals (e.g., ΣPAH, low and high MW PAHs) are reported as the sum of the individual target compounds detected; the detection limit for any sum is calculated by the root-sum-of-squares (RSS) of the individual analyte limits (per CCME Vol. 4 Analytical Methods). Benzo[a]pyrene total potency equivalents (B[a]P-TEQ/TPEQ) are calculated in accordance with CCME using the published potency-equivalency factors; non-detects are assigned one-half of the limit of reporting (LOR) in the TEQ calculation.

PCB Aroclors by GC-MS	E687 ALS Environmental - Waterloo	Water	EPA 8270E (mod)	PCB Aroclors are analyzed by GC-MS. Total PCBs are reported as the sum of all detected Aroclors. The detection limit for the total is determined using the root-sum-of-squares (RSS) approach, as defined in CCME, Volume 4: Analytical Methods.
pH by Meter	E108 ALS Environmental - Waterloo	Water	APHA 4500-H (mod)	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally 20 ± 5°C). For high accuracy test results, pH should be measured in the field within the recommended 15 minute hold time.
Phenols (4AAP) in Water by Colorimetry	E562 ALS Environmental - Waterloo	Water	EPA 9066	This automated method is based on the distillation of phenol and subsequent reaction of the distillate with alkaline ferricyanide (K3Fe(CN)6) and 4-amino-antipyrine (4-AAP) to form a red complex which is measured colorimetrically.
Sulfate in Water by IC	E235.SO4 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Total Chlorine (Residual) by DPD Colourimetry	E326 ALS Environmental - Waterloo	Water	APHA 4500-Cl G (mod)	Chlorine (residual), as free or total, is analyzed using the DPD colourimetric method. The recommended hold time for this test is 15 minutes and field testing is recommended when determining Chlorine concentrations at the time of sampling. Chlorine if present in a sample container after sampling can be rapidly consumed by any inorganic or organic matter in the sample and dissipates rapidly into headspace. Laboratory results may be requested when chlorine concentrations that may be present at the time of laboratory analysis are required for the interpretation of other laboratory analysis where the presence of Chlorine may affect results. e.g. laboratory toxicity testing
Total Coliforms and E. coli (Enzyme Substrate, 97 Well Tray)	E010.QT97 ALS Environmental - Waterloo	Water	APHA 9223 (mod)	The enzyme substrate test simultaneously detects Total Coliforms and E. coli in a 100 mL sample after incubation at 35.0 ±0.5°C for either 18 or 24 hours (dependent on reagent used). This method uses the 97 well Quanti-Tray.
Total Cyanide	E333 ALS Environmental - Waterloo	Water	ISO 14403 (mod)	Total or Strong Acid Dissociable (SAD) Cyanide is determined by Continuous Flow Analyzer (CFA) with in-line UV digestion followed by colourmetric analysis. Method Limitation: High levels of thiocyanate (SCN) may cause positive interference (up to 0.5% of SCN concentration).
Total Hexavalent Chromium (Cr VI) by IC	E532 ALS Environmental - Waterloo	Water	APHA 3500-Cr C (Ion Chromatography)	Hexavalent Chromium is measured by Ion chromatography-Post column reaction and UV detection. Results are based on an un-filtered, field-preserved sample.
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318 ALS Environmental - Waterloo	Water	Method Fialab 100, 2018	TKN in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021).
Total Mercury in Water by CVAAS	E508 ALS Environmental - Waterloo	Water	EPA 1631E (mod)	Water samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS
Total Metals in Water by CRC ICPMS	E420 ALS Environmental - Waterloo	Water	EPA 200.2/6020B (mod)	Water samples are digested with nitric and hydrochloric acids, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Total Phosphorus is determined colourimetrically using a discrete analyzer after heated persulfate digestion of the sample.

TSS by Gravimetry	E160 ALS Environmental - Waterloo	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at 104 ± 1°C, with gravimetric measurement of the filtered solids. Samples containing very high dissolved solid content (i.e. seawaters, brackish waters) may produce a positive bias by this method. Alternate analysis methods are available for these types of samples.
VOCs (Eastern Canada List) by Headspace GC-MS	E611D ALS Environmental - Waterloo	Water	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
Preparation Methods	***Method / Lab***	***Matrix***	***Method Reference***	***Method Descriptions***
BNA Extraction	EP625 ALS Environmental - Waterloo	Water	EPA 3510C (mod)	SVOCs are extracted from aqueous sample using DCM liquid-liquid extraction.
Digestion for TKN in water	EP318 ALS Environmental - Waterloo	Water	APHA 4500-Norg D (mod)	Samples are digested at high temperature using Sulfuric Acid with Copper catalyst, which converts organic nitrogen sources to Ammonia, which is then quantified by the analytical method as TKN. This method is unsuitable for samples containing high levels of nitrate. If nitrate exceeds TKN concentration by ten times or more, results may be biased low.
Digestion for Total Phosphorus in water	EP372 ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Samples are heated with a persulfate digestion reagent.
Mercury Water BrCl Digestion	EP508 ALS Environmental - Waterloo	Water	EPA 1631E (mod)	Water samples are digested with BrCl.
Oil & Grease Extraction for Gravimetry	EP567 ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane by liquid-liquid extraction.
Pesticides, PCB, and Neutral Extractable Chlorinated Hydrocarbons Extraction	EP660 ALS Environmental - Waterloo	Water	EPA 3511 (mod)	Samples are extracted from aqueous sample using an organic solvent liquid-liquid extraction.
PHCs and PAHs Hexane Extraction	EP601 ALS Environmental - Waterloo	Water	EPA 3511 (mod)	Petroleum Hydrocarbons (PHCs) and Polycyclic Aromatic Hydrocarbons (PAHs) are extracted using a hexane liquid-liquid extraction.
Preparation for Autotitrator	EP108-TITR ALS Environmental - Waterloo	Water		Sample preparation for parameters analysed by Autotitrator
Preparation for Cyanide analysis	EP333 ALS Environmental - Waterloo	Water		Preparation for Cyanide in water
Preparation for Ion Chromatography	EP235-IC ALS Environmental - Waterloo	Water		Sample preparation for ion chromatography
Preparation for Phenols (4AAP) by Colorimetry	EP562 ALS Environmental - Waterloo	Water		Phenols (4AAP) in Water by Colorimetry
Preparation of Nonylphenol and Nonylphenol Ethoxylates	EP749 ALS Environmental - Waterloo	Water	ASTM D7485-16 (mod)	An aliquot of 5.0 mL of sample is spiked with internal standards and analyzed by Direct Aqueous Injection and LC-MS/MS.

Total Metals Water Digestion	EP420 ALS Environmental - Waterloo	Water	EPA 200.2 (mod)	Water samples are digested with HNO3 and HCl to liberate "total recoverable" metals.
VOCs Preparation for Headspace Analysis	EP581 ALS Environmental - Waterloo	Water	EPA 5021A (mod)	Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler. An aliquot of the headspace is then injected into a GC-MS-FID.

QUALITY CONTROL REPORT

Work Order	: **WT2606835**		
Client	: EXP Services Inc.	Laboratory	: ALS Environmental - Waterloo
Contact	: Amar Neku	Account Manager	: Mathy Mahadeva
Address	: 1595 Clark Blvd. Brampton ON Canada L6T 4V1	Address	: 60 Northland Road, Unit 1 Waterloo ON Canada N2V 2B8
Telephone	: ----	Telephone	: +1 519 886 6910
Project	: 1980 Fowler - GTR-22022660-A0	Date Samples Received	: 26-Mar-2026 09:00
PO	: ----	Date Analysis Commenced	: 27-Mar-2026
C-O-C number	: 23-1154298	Issue Date	: 02-Apr-2026 14:58
Sampler	: RA		
Site	: ----		
Quote number	: Sanitary & Storm By-Laws		
No. of samples received	: 1		
No. of samples analysed	: 1		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Danielle Gravel	Supervisor - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
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Hannah Lewis	Inorganics Analyst	Waterloo Inorganics, Waterloo, Ontario
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Rachel Cameron	Supervisor - Semi-Volatile Extractions	Waterloo Organics, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Metals, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Inorganics, Waterloo, Ontario

General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key:
Anonymous=Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number=Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO=Data Quality Objective.
LOR=Limit of Reporting (detection limit).
RPD=Relative Percent Difference
# =Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test specific).

Sub-Matrix: Groundwater

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests(QC Lot: 2519017)											
WT2606871-012	Anonymous	pH	----	E108	0.10	pH units	7.46	7.51	0.668 %	4%	---

Sub-Matrix: Internal Proofing

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Inorganics(QC Lot: 2518804)											
HA2601329-001	Anonymous	Chlorine, total	7782-50-5	E326	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	---

Sub-Matrix: Surface Water

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Total Metals(QC Lot: 2514080)											
WT2606781-001	Anonymous	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.518	0.524	1.19 %	20%	---
		Antimony, total	7440-36-0	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	---
		Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00069	0.00070	0.00001	Diff <2x LOR	---
		Cadmium, total	7440-43-9	E420	0.0000050	mg/L	0.0000167	0.0000189	0.0000022	Diff <2x LOR	---
		Chromium, total	7440-47-3	E420	0.00050	mg/L	0.00090	0.00087	0.00003	Diff <2x LOR	---
		Cobalt, total	7440-48-4	E420	0.00010	mg/L	0.00042	0.00041	0.00001	Diff <2x LOR	---
		Copper, total	7440-50-8	E420	0.00050	mg/L	0.00260	0.00206	0.00054	Diff <2x LOR	---
		Lead, total	7439-92-1	E420	0.000050	mg/L	0.000566	0.000536	5.35 %	20%	---
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.0534	0.0529	0.883 %	20%	---
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.000374	0.000371	0.000003	Diff <2x LOR	---
		Nickel, total	7440-02-0	E420	0.00050	mg/L	0.00108	0.00110	0.00002	Diff <2x LOR	---
		Potassium, total	7440-09-7	E420	0.050	mg/L	2.62	2.64	0.672 %	20%	---
		Selenium, total	7782-49-2	E420	0.000050	mg/L	0.000218	0.000239	0.000021	Diff <2x LOR	---
		Silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	---
		Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	---
		Titanium, total	7440-32-6	E420	0.00030	mg/L	0.0108	0.0115	6.27 %	20%	---
		Zinc, total	7440-66-6	E420	0.0030	mg/L	0.0063	0.0059	0.0004	Diff <2x LOR	---

Sub-Matrix: Water

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests(QC Lot: 2519136)											
WT2606853-001	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	7.2	5.6	1.6	Diff <2x LOR	---
Anions and Nutrients(QC Lot: 2519022)											
WT2606959-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	101	102	0.251 %	20%	---
Anions and Nutrients(QC Lot: 2519023)											
WT2606959-001	Anonymous	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.881	0.868	1.56 %	20%	---
Anions and Nutrients(QC Lot: 2520703)											
WT2606673-001	Anonymous	Kjeldahl nitrogen, total [TKN]	----	E318	0.050	mg/L	0.198	0.209	0.011	Diff <2x LOR	---
Anions and Nutrients(QC Lot: 2520704)											
WT2606657-006	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0094	0.0095	0.0002	Diff <2x LOR	---
Cyanides(QC Lot: 2517877)											
EO2602029-001	Anonymous	Cyanide, strong acid dissociable	----	E333	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	---
Microbiological Tests(QC Lot: 2514515)											
WT2606835-001	BH25-1	Coliforms, Escherichia coli [E. coli]	----	E010.QT97	1	MPN/100mL	<1	<1	0	Diff <2x LOR	---
Total Metals(QC Lot: 2514531)											
WT2606575-001	Anonymous	Mercury, total	7439-97-6	E508	0.0000500	mg/L	2.63 µg/L	0.00257	2.31 %	20%	---
Speciated Metals(QC Lot: 2514287)											
WT2606751-001	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	---
Aggregate Organics(QC Lot: 2516620)											
WT2606832-001	Anonymous	Carbonaceous biochemical oxygen	----	E555	2.0	mg/L	<2.0	<2.0	0.0 %	30%	---
Aggregate Organics(QC Lot: 2516621)											
WT2606927-001	Anonymous	Biochemical oxygen demand [BOD]	----	E550	3.0	mg/L	<3.0	<3.0	0.0 %	30%	---
Aggregate Organics(QC Lot: 2520702)											
RG2600281-005	Anonymous	Phenols, total (4AAP)	----	E562	-	mg/L	Not Authorised	Not Authorised	Not Authorised	Not Authorised	---
Volatile Organic Compounds(QC Lot: 2518231)											
WT2606789-004	Anonymous	Benzene	71-43-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Chloroform	67-66-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Dichlorobenzene, 1,2-	95-50-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Dichlorobenzene, 1,4-	106-46-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Dichloroethylene, cis-1,2-	156-59-2	E611D	0.50	µg/L	2.39	2.44	0.06	Diff <2x LOR	---
		Dichloromethane	75-09-2	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	---
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	---
		Ethylbenzene	100-41-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	---
		Styrene	100-42-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Tetrachloroethylene	127-18-4	E611D	0.50	µg/L	195	197	0.988 %	30%	---
		Toluene	108-88-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	---
		Trichloroethylene	79-01-6	E611D	0.50	µg/L	7.51	7.62	1.44 %	30%	---

Sub-Matrix: Water

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Volatile Organic Compounds(QC Lot: 2518231)											
		Xylene, m+p-	179601-23-1	E611D	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	---
		Xylene, o-	95-47-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	---
Nonylphenols(QC Lot: 2514816)											
WT2606765-001	Anonymous	Nonylphenol diethoxylate [NP2EO]	20427-84-3	E749B	0.10	µg/L	<0.10	<0.10	0	Diff <2x LOR	---
		Nonylphenol monoethoxylate	27986-36-3	E749B	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	---
Nonylphenols(QC Lot: 2514817)											
WT2606765-001	Anonymous	Nonylphenol [NP]	84852-15-3	E749A	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	---

Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests(QC Lot: 2519017)						
pH	----	E108	----	pH units	----	----
Physical Tests(QC Lot: 2519136)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Anions and Nutrients(QC Lot: 2519022)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients(QC Lot: 2519023)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients(QC Lot: 2520703)						
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	<0.050	----
Anions and Nutrients(QC Lot: 2520704)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Cyanides(QC Lot: 2517877)						
Cyanide, strong acid dissociable (Total)	----	E333	0.002	mg/L	<0.0020	----
Inorganics(QC Lot: 2518804)						
Chlorine, total	7782-50-5	E326	0.05	mg/L	<0.050	----
Microbiological Tests(QC Lot: 2514515)						
Coliforms, Escherichia coli [E. coli]	----	E010.QT97	1	MPN/100mL	<1	----

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals(QC Lot: 2514080)						
Aluminum, total	7429-90-5	E420	0.003	mg/L	<0.0030	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	<0.00010	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	<0.00010	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	<0.0000050	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	<0.00050	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	<0.00010	----
Copper, total	7440-50-8	E420	0.0005	mg/L	<0.00050	----
Lead, total	7439-92-1	E420	0.00005	mg/L	<0.000050	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	<0.00010	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	<0.000050	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	<0.00050	----
Potassium, total	7440-09-7	E420	0.05	mg/L	<0.050	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	<0.000050	----
Silver, total	7440-22-4	E420	0.00001	mg/L	<0.000010	----
Tin, total	7440-31-5	E420	0.0001	mg/L	<0.00010	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	<0.00030	----
Zinc, total	7440-66-6	E420	0.003	mg/L	<0.0030	----
Total Metals(QC Lot: 2514531)						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
Speciated Metals(QC Lot: 2514287)						
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	<0.00050	----
Aggregate Organics(QC Lot: 2516620)						
Carbonaceous biochemical oxygen demand [CBOD]	----	E555	2	mg/L	<2.0	----
Aggregate Organics(QC Lot: 2516621)						
Biochemical oxygen demand [BOD]	----	E550	2	mg/L	<2.0	----
Aggregate Organics(QC Lot: 2520216)						
Oil & grease (gravimetric)	----	E567	5	mg/L	<5.0	----
Aggregate Organics(QC Lot: 2520217)						
Oil & grease, mineral (gravimetric)	----	E567SG	5	mg/L	<5.0	----
Aggregate Organics(QC Lot: 2520702)						
Phenols, total (4AAP)	----	E562	0.001	mg/L	<0.0010	----
Volatile Organic Compounds(QC Lot: 2518231)						
Benzene	71-43-2	E611D	0.5	µg/L	<0.50	----
Chloroform	67-66-3	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	<0.50	----

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds(QC Lot: 2518231)						
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	<0.50	----
Dichloromethane	75-09-2	E611D	1	µg/L	<1.0	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	<0.30	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	<0.50	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	----
Styrene	100-42-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	<0.50	----
Toluene	108-88-3	E611D	0.5	µg/L	<0.50	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	<0.50	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	<0.40	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	<0.30	----
Polycyclic Aromatic Hydrocarbons(QC Lot: 2520648)						
Acenaphthene	83-32-9	E641A	0.01	µg/L	<0.010	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	<0.010	----
Anthracene	120-12-7	E641A	0.01	µg/L	<0.010	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	<0.010	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	<0.0050	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	<0.010	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	<0.010	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	<0.010	----
Chrysene	218-01-9	E641A	0.01	µg/L	<0.010	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	<0.0050	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	<0.010	----
Fluorene	86-73-7	E641A	0.01	µg/L	<0.010	----
Indeno(1,2,3-cd)pyrene	193-39-5	E641A	0.01	µg/L	<0.010	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	<0.010	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	<0.010	----
Naphthalene	91-20-3	E641A	0.05	µg/L	<0.050	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	<0.020	----
Pyrene	129-00-0	E641A	0.01	µg/L	<0.010	----
Phthalate Esters(QC Lot: 2520465)						
bis(2-Ethylhexyl) phthalate [DEHP]	117-81-7	E625A	0.6	µg/L	<0.60	----
Di-n-butyl phthalate	84-74-2	E625A	1	µg/L	<1.0	----
Nonylphenols(QC Lot: 2514816)						
Nonylphenol diethoxylate [NP2EO]	20427-84-3	E749B	0.1	µg/L	<0.10	----
Nonylphenol monoethoxylate [NP1EO]	27986-36-3	E749B	0.4	µg/L	<0.40	----

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Nonylphenols(QC Lot: 2514817)						
Nonylphenol [NP]	84852-15-3	E749A	0.4	µg/L	<0.40	----
Polychlorinated Biphenyls(QC Lot: 2519745)						
Aroclor 1016	12674-11-2	E687	0.02	µg/L	<0.020	----
Aroclor 1221	11104-28-2	E687	0.02	µg/L	<0.020	----
Aroclor 1232	11141-16-5	E687	0.02	µg/L	<0.020	----
Aroclor 1242	53469-21-9	E687	0.02	µg/L	<0.020	----
Aroclor 1248	12672-29-6	E687	0.02	µg/L	<0.020	----
Aroclor 1254	11097-69-1	E687	0.02	µg/L	<0.020	----
Aroclor 1260	11096-82-5	E687	0.02	µg/L	<0.020	----
Aroclor 1262	37324-23-5	E687	0.02	µg/L	<0.020	----
Aroclor 1268	11100-14-4	E687	0.02	µg/L	<0.020	----

Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests(QC Lot: 2519017)									
pH	----	E108	----	pH units	7 pH units	101	98.0	102	----
Physical Tests(QC Lot: 2519136)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	105	85.0	115	----
Anions and Nutrients(QC Lot: 2519022)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	101	90.0	110	----
Anions and Nutrients(QC Lot: 2519023)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	103	90.0	110	----
Anions and Nutrients(QC Lot: 2520703)									
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	4 mg/L	101	75.0	125	----
Anions and Nutrients(QC Lot: 2520704)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.333 mg/L	95.9	80.0	120	----
Cyanides(QC Lot: 2517877)									
Cyanide, strong acid dissociable (Total)	----	E333	0.002	mg/L	0.25 mg/L	94.5	80.0	120	----
Inorganics(QC Lot: 2518804)									
Chlorine, total	7782-50-5	E326	0.05	mg/L	0.264 mg/L	90.9	75.0	125	----

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Target Concentration	LCS	Low	High	Qualifier
Total Metals(QC Lot: 2514080)									
Aluminum, total	7429-90-5	E420	0.003	mg/L	0.1 mg/L	102	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	0.05 mg/L	103	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	0.05 mg/L	105	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.005 mg/L	94.9	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.0125 mg/L	99.9	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.0125 mg/L	97.9	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.0125 mg/L	97.8	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.025 mg/L	101	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.0125 mg/L	102	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.0125 mg/L	99.6	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.025 mg/L	97.7	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	2.5 mg/L	94.6	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	0.05 mg/L	100	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.005 mg/L	102	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.025 mg/L	97.9	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.0125 mg/L	98.2	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.025 mg/L	96.7	80.0	120	----
Total Metals(QC Lot: 2514531)									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0.0001 mg/L	98.9	80.0	120	----
Speciated Metals(QC Lot: 2514287)									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	0.025 mg/L	91.4	80.0	120	----
Aggregate Organics(QC Lot: 2516620)									
Carbonaceous biochemical oxygen demand [CBOD]	----	E555	2	mg/L	198 mg/L	89.5	85.0	115	----
Aggregate Organics(QC Lot: 2516621)									
Biochemical oxygen demand [BOD]	----	E550	2	mg/L	198 mg/L	95.4	85.0	115	----
Aggregate Organics(QC Lot: 2520216)									
Oil & grease (gravimetric)	----	E567	5	mg/L	200 mg/L	95.3	70.0	130	----
Aggregate Organics(QC Lot: 2520217)									
Oil & grease, mineral (gravimetric)	----	E567SG	5	mg/L	100 mg/L	77.0	70.0	130	----
Aggregate Organics(QC Lot: 2520702)									
Phenols, total (4AAP)	----	E562	0.001	mg/L	0.02 mg/L	101	85.0	115	----
Volatile Organic Compounds(QC Lot: 2518231)									
Benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
Chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	109	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	111	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Target Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds(QC Lot: 2518231)									
Dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	110	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	88.1	70.0	130	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	81.4	70.0	130	----
Styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	93.3	70.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	93.4	70.0	130	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	109	70.0	130	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	95.0	70.0	130	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	102	70.0	130	----
Volatile Organic Compounds Surrogates(QC Lot: 2518231)									
Bromofluorobenzene, 4-	460-00-4	E611D	1	µg/L	10 µg/L	108	70	130	----
Difluorobenzene, 1,4-	540-36-3	E611D	1	µg/L	10 µg/L	102	70	130	----
Polycyclic Aromatic Hydrocarbons(QC Lot: 2520648)									
Acenaphthene	83-32-9	E641A	0.01	µg/L	0.5263 µg/L	92.2	50.0	140	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	0.5263 µg/L	94.1	50.0	140	----
Anthracene	120-12-7	E641A	0.01	µg/L	0.5263 µg/L	96.9	50.0	140	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	0.5263 µg/L	110	50.0	140	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	0.5263 µg/L	102	50.0	140	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	0.5263 µg/L	91.0	50.0	140	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	0.5263 µg/L	95.2	50.0	140	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	0.5263 µg/L	104	50.0	140	----
Chrysene	218-01-9	E641A	0.01	µg/L	0.5263 µg/L	102	50.0	140	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	0.5263 µg/L	86.5	50.0	140	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	0.5263 µg/L	93.9	50.0	140	----
Fluorene	86-73-7	E641A	0.01	µg/L	0.5263 µg/L	105	50.0	140	----
Indeno(1,2,3-cd)pyrene	193-39-5	E641A	0.01	µg/L	0.5263 µg/L	97.8	50.0	140	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	0.5263 µg/L	91.5	50.0	140	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	0.5263 µg/L	94.3	50.0	140	----
Naphthalene	91-20-3	E641A	0.05	µg/L	0.5263 µg/L	92.4	50.0	140	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	0.5263 µg/L	104	50.0	140	----
Pyrene	129-00-0	E641A	0.01	µg/L	0.5263 µg/L	96.5	50.0	140	----
Polycyclic Aromatic Hydrocarbons Surrogates(QC Lot: 2520648)									
Chrysene-d12	1719-03-5	E641A	0.1	µg/L	0.8421 µg/L	102	50	150	----
Naphthalene-d8	1146-65-2	E641A	0.1	µg/L	0.8421 µg/L	91.7	60	140	----
Phenanthrene-d10	1517-22-2	E641A	0.1	µg/L	0.8421 µg/L	104	60	140	----

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Target Concentration	LCS	Low	High	Qualifier
Phthalate Esters(QC Lot: 2520465)									
bis(2-Ethylhexyl) phthalate [DEHP]	117-81-7	E625A	0.6	µg/L	33.68 µg/L	138	50.0	140	----
Di-n-butyl phthalate	84-74-2	E625A	1	µg/L	33.68 µg/L	101	50.0	140	----
Semi-Volatile Organics Surrogates(QC Lot: 2520465)									
Fluorobiphenyl, 2-	321-60-8	E625A	1	µg/L	21.05 µg/L	66.0	50	140	----
Nitrobenzene-d5	4165-60-0	E625A	1	µg/L	21.05 µg/L	80.1	50	140	----
Terphenyl-d14, p-	1718-51-0	E625A	1	µg/L	21.05 µg/L	90.2	60	140	----
Phenolics Surrogates(QC Lot: 2520465)									
Tribromophenol, 2,4,6-	118-79-6	E625A	0.5	µg/L	21.05 µg/L	97.2	50	140	----
Nonylphenols(QC Lot: 2514816)									
Nonylphenol diethoxylate [NP2EO]	20427-84-3	E749B	0.1	µg/L	2 µg/L	91.1	60.0	140	----
Nonylphenol monoethoxylate [NP1EO]	27986-36-3	E749B	0.4	µg/L	10 µg/L	88.6	60.0	140	----
Nonylphenols(QC Lot: 2514817)									
Nonylphenol [NP]	84852-15-3	E749A	0.4	µg/L	10 µg/L	95.3	60.0	140	----
Polychlorinated Biphenyls(QC Lot: 2519745)									
Aroclor 1016	12674-11-2	E687	0.02	µg/L	0.2 µg/L	101	60.0	140	----
Aroclor 1221	11104-28-2	E687	0.02	µg/L	0.2 µg/L	101	60.0	140	----
Aroclor 1232	11141-16-5	E687	0.02	µg/L	0.2 µg/L	101	60.0	140	----
Aroclor 1242	53469-21-9	E687	0.02	µg/L	0.2 µg/L	101	60.0	140	----
Aroclor 1248	12672-29-6	E687	0.02	µg/L	0.2 µg/L	97.5	60.0	140	----
Aroclor 1254	11097-69-1	E687	0.02	µg/L	0.2 µg/L	96.1	60.0	140	----
Aroclor 1260	11096-82-5	E687	0.02	µg/L	0.2 µg/L	95.4	60.0	140	----
Aroclor 1262	37324-23-5	E687	0.02	µg/L	0.2 µg/L	95.4	60.0	140	----
Aroclor 1268	11100-14-4	E687	0.02	µg/L	0.2 µg/L	95.4	60.0	140	----
Polychlorinated Biphenyls Surrogates(QC Lot: 2519745)									
Decachlorobiphenyl	2051-24-3	E687	0.1	µg/L	0.2 µg/L	87.9	50	140	----
Tetrachloro-m-xylene	877-09-8	E687	0.1	µg/L	0.2 µg/L	95.6	50	140	----

Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for

Sub-Matrix: Internal Proofing

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery (%)		Qualifier
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	
Anions and Nutrients(QC Lot: 2519022)										
WT2606959-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	ND	----	ND	75.0	125	---
Anions and Nutrients(QC Lot: 2519023)										
WT2606959-001	Anonymous	Fluoride	16984-48-8	E235.F	0.925 mg/L	1 mg/L	92.5	75.0	125	---
Anions and Nutrients(QC Lot: 2520703)										
WT2606673-001	Anonymous	Kjeldahl nitrogen, total [TKN]	----	E318	2.58 mg/L	2.5 mg/L	103	70.0	130	---
Anions and Nutrients(QC Lot: 2520704)										
WT2606657-006	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0997 mg/L	0.1 mg/L	99.7	70.0	130	---
Cyanides(QC Lot: 2517877)										
EO2602029-001	Anonymous	Cyanide, strong acid dissociable (Total)	----	E333	0.248 mg/L	0.25 mg/L	99.1	75.0	125	---
Inorganics(QC Lot: 2518804)										
HA2601329-001	Anonymous	Chlorine, total	7782-50-5	E326	0.250 mg/L	0.264 mg/L	94.7	70.0	130	---
Total Metals(QC Lot: 2514080)										
WT2606781-002	Anonymous	Aluminum, total	7429-90-5	E420	ND	----	ND	70.0	130	---
		Antimony, total	7440-36-0	E420	0.0512 mg/L	0.05 mg/L	102	70.0	130	---
		Arsenic, total	7440-38-2	E420	0.0521 mg/L	0.05 mg/L	104	70.0	130	---
		Cadmium, total	7440-43-9	E420	0.00479 mg/L	0.005 mg/L	95.7	70.0	130	---
		Chromium, total	7440-47-3	E420	0.0127 mg/L	0.0125 mg/L	101	70.0	130	---
		Cobalt, total	7440-48-4	E420	0.0120 mg/L	0.0125 mg/L	96.2	70.0	130	---
		Copper, total	7440-50-8	E420	0.0115 mg/L	0.0125 mg/L	92.4	70.0	130	---
		Lead, total	7439-92-1	E420	0.0238 mg/L	0.025 mg/L	95.2	70.0	130	---
		Manganese, total	7439-96-5	E420	ND	----	ND	70.0	130	---
		Molybdenum, total	7439-98-7	E420	0.0129 mg/L	0.0125 mg/L	103	70.0	130	---
		Nickel, total	7440-02-0	E420	0.0235 mg/L	0.025 mg/L	93.9	70.0	130	---
		Potassium, total	7440-09-7	E420	2.39 mg/L	2.5 mg/L	95.7	70.0	130	---
		Selenium, total	7782-49-2	E420	0.0503 mg/L	0.05 mg/L	101	70.0	130	---
		Silver, total	7440-22-4	E420	0.00498 mg/L	0.005 mg/L	99.6	70.0	130	---
		Tin, total	7440-31-5	E420	0.0247 mg/L	0.025 mg/L	98.7	70.0	130	---
		Titanium, total	7440-32-6	E420	0.0128 mg/L	0.0125 mg/L	103	70.0	130	---
		Zinc, total	7440-66-6	E420	0.0228 mg/L	0.025 mg/L	91.3	70.0	130	---
Total Metals(QC Lot: 2514531)										
WT2606575-002	Anonymous	Mercury, total	7439-97-6	E508	ND	----	ND	70.0	130	---
Speciated Metals(QC Lot: 2514287)										
WT2606751-001	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0377 mg/L	0.04 mg/L	94.2	70.0	130	---
Aggregate Organics(QC Lot: 2520702)										
RG2600281-005	Anonymous	Phenols, total (4AAP)	----	E562	----	----	Not Authorised	75.0	125	---
Volatile Organic Compounds(QC Lot: 2518231)										
WT2606789-004	Anonymous	Benzene	71-43-2	E611D	103 µg/L	100 µg/L	103	60.0	140	---

Sub-Matrix: Internal Proofing

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery (%)		Qualifier
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	
Volatile Organic Compounds(QC Lot: 2518231)										
		Chloroform	67-66-3	E611D	111 µg/L	100 µg/L	111	60.0	140	---
		Dichlorobenzene, 1,2-	95-50-1	E611D	106 µg/L	100 µg/L	106	60.0	140	---
		Dichlorobenzene, 1,4-	106-46-7	E611D	113 µg/L	100 µg/L	113	60.0	140	---
		Dichloroethylene, cis-1,2-	156-59-2	E611D	106 µg/L	100 µg/L	106	60.0	140	---
		Dichloromethane	75-09-2	E611D	111 µg/L	100 µg/L	111	60.0	140	---
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	86.7 µg/L	100 µg/L	86.7	60.0	140	---
		Ethylbenzene	100-41-4	E611D	105 µg/L	100 µg/L	105	60.0	140	---
		Methyl ethyl ketone [MEK]	78-93-3	E611D	85 µg/L	100 µg/L	85.2	60.0	140	---
		Styrene	100-42-5	E611D	95.2 µg/L	100 µg/L	95.2	60.0	140	---
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	97.4 µg/L	100 µg/L	97.4	60.0	140	---
		Tetrachloroethylene	127-18-4	E611D	ND	----	ND	60.0	140	---
		Toluene	108-88-3	E611D	104 µg/L	100 µg/L	104	60.0	140	---
		Trichloroethylene	79-01-6	E611D	111 µg/L	100 µg/L	111	60.0	140	---
		Xylene, m+p-	179601-23-1	E611D	193 µg/L	200 µg/L	96.6	60.0	140	---
		Xylene, o-	95-47-6	E611D	104 µg/L	100 µg/L	104	60.0	140	---
Volatile Organic Compounds Surrogates(QC Lot: 2518231)										
		Bromofluorobenzene, 4-	460-00-4	E611D	10.9 µg/L	10 µg/L	109	70.0	130	---
		Difluorobenzene, 1,4-	540-36-3	E611D	10.2 µg/L	10 µg/L	102	70.0	130	---
Nonylphenols(QC Lot: 2514816)										
WT2606765-001	Anonymous	Nonylphenol diethoxylate [NP2EO]	20427-84-3	E749B	1.82 µg/L	2 µg/L	90.8	50.0	140	---
		Nonylphenol monoethoxylate [NP1EO]	27986-36-3	E749B	7.64 µg/L	10 µg/L	76.4	50.0	140	---
Nonylphenols(QC Lot: 2514817)										
WT2606765-001	Anonymous	Nonylphenol [NP]	84852-15-3	E749A	9.34 µg/L	10 µg/L	93.4	50.0	140	---

GTC - 769
OHA - 313
OR - 835
MM - 834
VM - 037
www.alsglobal.com

SC - 717
L - 114
N - 726

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

COC Number: 23 - 1154298

Page 1 of 1

Environmental Division
Waterloo
Work Order Reference
WT2606835

Telephone : + 1 519 886 6910

Report To	Contact and company name below will appear on the final report
Company:	EXP Services Inc
Contact:	Amar Neku
Phone:	905 793 9800
	Company address below will appear on the final report
Street:	1595 Clark Blvd
City/Province:	Brampton ON
Postal Code:	L6T 4V1
Invoice To	Same as Report To ☐ YES ☐ NO
	Copy of Invoice with Report ☐ YES ☐ NO
Company:	
Contact:	

Project Information	
ALS Client Code / QUOTE #:	
Job / Project #:	1980 Fowler, GTR-220266-AP
PO / AFE:	
LSD:	
ALS Lab Work Order # (ALS use only):	WT2606835PTB

Reports / Recipients	
Select Report Format:	☑ PDF ☐ EXCEL ☐ EDD (DIGITAL)
Merge QC/QCI Reports with COA	☑ YES ☐ NO ☐ N/A
	☑ Compare Results to Criteria on Report - provide details below if box checked
Select Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax	Amar.Neku
Email 2	Ryan.Alexander@EXP.com
Email 3	Edwin.Chessell

Invoice Recipients	
Select Invoice Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax	AP@exp.com
Email 2	

Oil and Gas Required Fields (client use)	
AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	
ALS Contact: Mothy	Sampler: RA

Turnaround Time (TAT) Requested

- ☑ Routine [R] if received by 3pm M-F - no surcharges apply
- ☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum
- ☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum
- ☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum
- ☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum
- ☐ Same day [E2] if received by 10am M-S - 200% rush surcharge.

Additional fees may apply to rush requests on weekends, sta

Date and Time Required for all E&P TATs:

For all tests with rush TATs requested, please contac

Analysis Reques

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	Peel Sanitary	Mississauga Storm	SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	BH 25-1	25/mar/26	15:35	WATER	19	✓	✓			

Drinking Water (DW) Samples[1] (client use)	Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)
Are samples taken from a Regulated DW System? ☐ YES ☑ NO	Please include CoC in final report
Are samples for human consumption/ use? ☐ YES ☑ NO	Please compare results to peel sanitary and mississauga storm bylaws

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☐ ICE ☑ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED

Cooler Custody Seals Intact: ☑ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
1.9				6.6			

SHIPMENT RELEASE (client use)		
Released by: RYAN ALEXANDER	Date: march 25, 2026	Time: 8:30

INITIAL SHIPMENT RECEPTION (ALS use only)		
Received by: AM	Date: 03/26/26	Time: 9:00

FINAL SHIPMENT RECEPTION (ALS use only)		
Received by: SM	Date: 3/26/26	Time: 11:30

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

JAN 2023 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.

ALS Canada Ltd.

right solutions.
right partner.

CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

Work Order	:	**WT2606840**			
Amendment	:	**2**			
Client	:	**EXP Services Inc.**	Laboratory	:	ALS Environmental - Waterloo
Contact	:	Amar Neku	Account Manager	:	Mathy Mahadeva
Address	:	1595 Clark Blvd. Brampton Ontario Canada L6T 4V1	Address	:	60 Northland Road, Unit 1 Waterloo ON Canada N2V 2B8
Telephone	:	----	Telephone	:	+1 519 886 6910
Project	:	1980 Fowler - GTR-22022660-A0	Date Samples Received	:	26-Mar-2026 09:00
PO	:	----	Date Analysis Commenced	:	27-Mar-2026
C-O-C number	:	23-1154297	Issue Date	:	08-Apr-2026 15:57
Sampler	:	RA			
Site	:	----			
Quote number	:	Sanitary & Storm By-Laws			
No. of samples received	:	1			
No. of samples analysed	:	1			

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Greg Pokocky	Manager - Inorganics	Metals, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Metals, Waterloo, Ontario

Key:

MISSUB	Ontario Mississauga Storm Sewer Use By-Law (0046-2022) (March 2022)
STM	Mississauga Storm Sewer (0046-2022)

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guidelines are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Key: CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances.

LOR: Limit of Reporting (detection limit).

Unit	*Description*
-	no units
mg/L	milligrams per litre

>: greater than.

<: less than.

Red shading is applied where the result or the LOR is greater than the Guideline Upper Limit (or lower than the Guideline Lower Limit, if applicable).
For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Workorder Comments

Amendment (08/04/2026): This report has been amended and re-released to allow the reporting of additional analytical data.

Amendment (08/04/2026): This report has been amended following changes to the analytical data reported. The quality system is being utilised to resolve this issue. The specific data affected includes Phosphorous.

Qualifiers

Qualifier	Description
DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).
DLMDL	Reported detection limit is at or near the Method Detection Limit (MDL). Measurement uncertainty is high at this level.

Analytical Results

SubMatrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID: BH25-1 (F) ----					
					Client sampling date / time: 25-Mar-2026 15:50					
					WT2606840-001	MISSUB STM	---- ----	---- ----	---- ----	---- ----
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/WT	0.0010	mg/L	<0.0100 DLHC	----	----	----	----	----
Antimony, dissolved	7440-36-0	E421/WT	0.00010	mg/L	<0.00100 DLHC	----	----	----	----	----
Arsenic, dissolved	7440-38-2	E421/WT	0.00010	mg/L	<0.00100 DLHC	----	----	----	----	----
Barium, dissolved	7440-39-3	E421/WT	0.00010	mg/L	0.186 DLHC	----	----	----	----	----
Beryllium, dissolved	7440-41-7	E421/WT	0.000020	mg/L	<0.000200 DLHC	----	----	----	----	----
Bismuth, dissolved	7440-69-9	E421/WT	0.000050	mg/L	<0.000500 DLHC	----	----	----	----	----
Boron, dissolved	7440-42-8	E421/WT	0.010	mg/L	0.871 DLHC	----	----	----	----	----
Cadmium, dissolved	7440-43-9	E421/WT	0.0000050	mg/L	<0.0000500 DLHC	----	----	----	----	----
Calcium, dissolved	7440-70-2	E421/WT	0.050	mg/L	354 DLHC	----	----	----	----	----
Cesium, dissolved	7440-46-2	E421/WT	0.000010	mg/L	0.000184 DLHC	----	----	----	----	----
Chromium, dissolved	7440-47-3	E421/WT	0.00050	mg/L	<0.00500 DLHC	----	----	----	----	----
Cobalt, dissolved	7440-48-4	E421/WT	0.00010	mg/L	<0.00100 DLHC	----	----	----	----	----
Copper, dissolved	7440-50-8	E421/WT	0.00020	mg/L	<0.00200 DLHC	----	----	----	----	----
Iron, dissolved	7439-89-6	E421/WT	0.010	mg/L	<0.100 DLHC	----	----	----	----	----
Lead, dissolved	7439-92-1	E421/WT	0.000050	mg/L	<0.000500 DLHC	----	----	----	----	----
Lithium, dissolved	7439-93-2	E421/WT	0.0010	mg/L	0.211 DLHC	----	----	----	----	----
Magnesium, dissolved	7439-95-4	E421/WT	0.0050	mg/L	124 DLHC	----	----	----	----	----
Manganese, dissolved	7439-96-5	E421/WT	0.00010	mg/L	0.0751 DLHC	----	----	----	----	----
Molybdenum, dissolved	7439-98-7	E421/WT	0.000050	mg/L	0.000566 DLHC	----	----	----	----	----
Nickel, dissolved	7440-02-0	E421/WT	0.00050	mg/L	<0.00500 DLHC	----	----	----	----	----
Phosphorus, dissolved	7723-14-0	E421/WT	0.050	mg/L	<0.400 DLHC, DLMDL	0.4 mg/L	----	----	----	----
Potassium, dissolved	7440-09-7	E421/WT	0.050	mg/L	27.1 DLHC	----	----	----	----	----
Rubidium, dissolved	7440-17-7	E421/WT	0.00020	mg/L	0.0193 DLHC	----	----	----	----	----
Selenium, dissolved	7782-49-2	E421/WT	0.000050	mg/L	<0.000500 DLHC	----	----	----	----	----
Silicon, dissolved	7440-21-3	E421/WT	0.050	mg/L	4.73 DLHC	----	----	----	----	----
Silver, dissolved	7440-22-4	E421/WT	0.000010	mg/L	<0.000100 DLHC	----	----	----	----	----
Sodium, dissolved	7440-23-5	E421/WT	0.050	mg/L	744 DLHC	----	----	----	----	----
Strontium, dissolved	7440-24-6	E421/WT	0.00020	mg/L	16.3 DLHC	----	----	----	----	----
Sulfur, dissolved	7704-34-9	E421/WT	0.50	mg/L	57.6 DLHC	----	----	----	----	----
Tellurium, dissolved	13494-80-9	E421/WT	0.00020	mg/L	<0.00200 DLHC	----	----	----	----	----
Thallium, dissolved	7440-28-0	E421/WT	0.000010	mg/L	<0.000100 DLHC	----	----	----	----	----

SubMatrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID: BH25-1 (F) ----					
					Client sampling date / time: 25-Mar-2026 15:50					
					WT2606840-001	MISSUB STM	---- ----	---- ----	---- ----	---- ----
Dissolved Metals										
Thorium, dissolved	7440-29-1	E421/WT	0.00010	mg/L	<0.00100 DLHC	----	----	----	----	----
Tin, dissolved	7440-31-5	E421/WT	0.00010	mg/L	<0.00100 DLHC	----	----	----	----	----
Titanium, dissolved	7440-32-6	E421/WT	0.00030	mg/L	<0.00300 DLHC	----	----	----	----	----
Tungsten, dissolved	7440-33-7	E421/WT	0.00010	mg/L	<0.00100 DLHC	----	----	----	----	----
Uranium, dissolved	7440-61-1	E421/WT	0.000010	mg/L	0.000421 DLHC	----	----	----	----	----
Vanadium, dissolved	7440-62-2	E421/WT	0.00050	mg/L	<0.00500 DLHC	----	----	----	----	----
Zinc, dissolved	7440-66-6	E421/WT	0.0010	mg/L	0.0127 DLHC	----	----	----	----	----
Zirconium, dissolved	7440-67-7	E421/WT	0.00030	mg/L	<0.00300 DLHC	----	----	----	----	----
Dissolved metals filtration location	----	EP421/WT	-	-	Field	----	----	----	----	----

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Quality Control Interpretive Report

Work Order	: **WT2606840**			
Amendment	: **2**			
Client	: EXP Services Inc.	Laboratory	: ALS Environmental - Waterloo	
Contact	: Amar Neku	Account Manager	: Mathy Mahadeva	
Address	: 1595 Clark Blvd. Brampton ON Canada L6T 4V1	Address	: 60 Northland Road, Unit 1 Waterloo Ontario Canada N2V 2B8	
Telephone	: ----	Telephone	: +1 519 886 6910	
Project	: 1980 Fowler - GTR-22022660-A0	Date Samples Received	: 26-Mar-2026 09:00	
PO	: ----	Issue Date	: 08-Apr-2026 15:57	
C-O-C number	: 23-1154297			
Sampler	: RA			
Site	: ----			
Quote number	: Sanitary & Storm By-Laws			
No. of samples received	: 1			
No. of samples analysed	: 1			

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances.
DQO: Data Quality Objective.
LOR: Limit of Reporting (detection limit).
RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Laboratory Control Sample Duplicate (LCSD) outliers occur
- No Matrix Spike outliers occur.
- No Matrix Spike Duplicate (MSD) outliers occur.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and/or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: Water

Evaluation: × = Holding time exceedance; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client sample ID	ALS Sample ID	QC Lot	Method	Sampling Date	Extraction / Preparation				Analysis			
					Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
						Rec	Actual			Rec	Actual	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS												
HDPE dissolved (nitric acid)												
BH25-1 (F)	001	2514128	E421	25-Mar-2026	27-Mar-2026	180 days	1 days	✓	27-Mar-2026	180 days	1 days	✓

Rec. HT: ALS recommended hold time (see units).

Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: Water

Evaluation: × = QC frequency outside specification; ✓ = QC frequency within specification

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	Method	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Laboratory Duplicates (DUP)							
Dissolved Metals in Water by CRC ICPMS	E421	2514128	1	14	7.1	5.0	✓
Laboratory Control Samples (LCS)							
Dissolved Metals in Water by CRC ICPMS	E421	2514128	1	14	7.1	5.0	✓
Method Blanks (MB)							
Dissolved Metals in Water by CRC ICPMS	E421	2514128	1	14	7.1	5.0	✓
Matrix Spikes (MS)							
Dissolved Metals in Water by CRC ICPMS	E421	2514128	1	14	7.1	5.0	✓

Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Dissolved Metals in Water by CRC ICPMS	E421 ALS Environmental - Waterloo	Water	APHA 3030B/EPA 6020B (mod)	Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Preparation Methods	**Method / Lab**	**Matrix**	**Method Reference**	**Method Descriptions**
Dissolved Metals Water Filtration	EP421 ALS Environmental - Waterloo	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO3.

QUALITY CONTROL REPORT

Work Order	: **WT2606840**		
Amendment	: **2**		
Client	: EXP Services Inc.	Laboratory	: ALS Environmental - Waterloo
Contact	: Amar Neku	Account Manager	: Mathy Mahadeva
Address	: 1595 Clark Blvd. Brampton ON Canada L6T 4V1	Address	: 60 Northland Road, Unit 1 Waterloo ON Canada N2V 2B8
Telephone	: ----	Telephone	: +1 519 886 6910
Project	: 1980 Fowler - GTR-22022660-A0	Date Samples Received	: 26-Mar-2026 09:00
PO	: ----	Date Analysis Commenced	: 27-Mar-2026
C-O-C number	: 23-1154297	Issue Date	: 08-Apr-2026 15:57
Sampler	: RA		
Site	: ----		
Quote number	: Sanitary & Storm By-Laws		
No. of samples received	: 1		
No. of samples analysed	: 1		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Greg Pokocky	Manager - Inorganics	Waterloo Metals, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Metals, Waterloo, Ontario

General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key:
Anonymous=Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number=Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO=Data Quality Objective.
LOR=Limit of Reporting (detection limit).
RPD=Relative Percent Difference
# =Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test specific).

Sub-Matrix: Water

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Laboratory Duplicate (DUP) Report						
					LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Dissolved Metals(QC Lot: 2514128)											
WT2606820-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0832	0.0813	2.29 %	20%	---
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	---
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00014	0.00014	0	Diff <2x LOR	---
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0119	0.0116	2.83 %	20%	---
		Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	---
		Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	---
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	---
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	---
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	3.16	3.16	0.271 %	20%	---
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	---
		Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	---
		Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	0.00017	0.00017	0.000006	Diff <2x LOR	---
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00034	0.00033	0.000007	Diff <2x LOR	---
		Iron, dissolved	7439-89-6	E421	0.010	mg/L	0.941	0.946	0.524 %	20%	---
		Lead, dissolved	7439-92-1	E421	0.000050	mg/L	0.000110	0.000108	0.000002	Diff <2x LOR	---
		Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	---
		Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	1.45	1.48	1.83 %	20%	---
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.0245	0.0239	2.72 %	20%	---
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	---
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	---
		Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	---
		Potassium, dissolved	7440-09-7	E421	0.050	mg/L	0.994	0.976	1.77 %	20%	---
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00253	0.00258	1.81 %	20%	---
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000053	<0.000050	0.000003	Diff <2x LOR	---
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	5.40	5.49	1.59 %	20%	---
		Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	---
		Sodium, dissolved	7440-23-5	E421	0.050	mg/L	1.70	1.69	0.503 %	20%	---
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.0221	0.0220	0.452 %	20%	---
		Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	1.67	1.66	0.01	Diff <2x LOR	---
		Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	---
		Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	---
		Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	---
		Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	---

Sub-Matrix: Water

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Dissolved Metals(QC Lot: 2514128)											
		Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	0.00111	0.00108	0.00004	Diff <2x LOR	---
		Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	---
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	---
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	---
		Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0028	0.0027	0.00006	Diff <2x LOR	---
		Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	---

Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals(QC Lot: 2514128)						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	<0.050	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	<0.000010	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	<0.010	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	<0.0010	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	<0.0050	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	<0.00010	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals(QC Lot: 2514128)						
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	<0.050	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	<0.050	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	<0.00020	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	<0.050	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	<0.00020	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	<0.50	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	<0.00020	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	<0.00010	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----

Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Dissolved Metals(QC Lot: 2514128)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	0.1 mg/L	107	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	0.05 mg/L	105	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	0.05 mg/L	108	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.0125 mg/L	105	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.005 mg/L	102	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	0.05 mg/L	106	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	0.05 mg/L	99.0	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.005 mg/L	102	80.0	120	----

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Target Concentration	LCS	Low	High	Qualifier
Dissolved Metals(QC Lot: 2514128)									
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	2.5 mg/L	103	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.0025 mg/L	110	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.0125 mg/L	103	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.0125 mg/L	101	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.0125 mg/L	99.2	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	0.05 mg/L	97.1	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.025 mg/L	105	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.0125 mg/L	103	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	2.5 mg/L	111	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.0125 mg/L	105	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.0125 mg/L	104	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.025 mg/L	100	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	0.5 mg/L	111	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	2.5 mg/L	97.3	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.005 mg/L	110	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	0.05 mg/L	103	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	0.5 mg/L	96.1	60.0	140	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.005 mg/L	109	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	2.5 mg/L	108	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.0125 mg/L	112	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	2.5 mg/L	103	80.0	120	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.005 mg/L	105	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	0.05 mg/L	104	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.005 mg/L	102	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.025 mg/L	105	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.0125 mg/L	98.4	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.005 mg/L	107	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.0002 mg/L	106	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.025 mg/L	103	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.025 mg/L	102	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.005 mg/L	106	80.0	120	----

Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for

Sub-Matrix: Water

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery (%)		Qualifier
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	
Dissolved Metals(QC Lot: 2514128)										
WT2606820-002	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0958 mg/L	0.1 mg/L	95.8	70.0	130	---
		Antimony, dissolved	7440-36-0	E421	0.0505 mg/L	0.05 mg/L	101	70.0	130	---
		Arsenic, dissolved	7440-38-2	E421	0.0553 mg/L	0.05 mg/L	111	70.0	130	---
		Barium, dissolved	7440-39-3	E421	ND	----	ND	70.0	130	---
		Beryllium, dissolved	7440-41-7	E421	0.00493 mg/L	0.005 mg/L	98.6	70.0	130	---
		Bismuth, dissolved	7440-69-9	E421	0.0439 mg/L	0.05 mg/L	87.7	70.0	130	---
		Boron, dissolved	7440-42-8	E421	0.047 mg/L	0.05 mg/L	93.2	70.0	130	---
		Cadmium, dissolved	7440-43-9	E421	0.00505 mg/L	0.005 mg/L	101	70.0	130	---
		Calcium, dissolved	7440-70-2	E421	ND	----	ND	70.0	130	---
		Cesium, dissolved	7440-46-2	E421	0.00259 mg/L	0.0025 mg/L	104	70.0	130	---
		Chromium, dissolved	7440-47-3	E421	0.0120 mg/L	0.0125 mg/L	96.1	70.0	130	---
		Cobalt, dissolved	7440-48-4	E421	0.0120 mg/L	0.0125 mg/L	96.0	70.0	130	---
		Copper, dissolved	7440-50-8	E421	0.0121 mg/L	0.0125 mg/L	96.8	70.0	130	---
		Iron, dissolved	7439-89-6	E421	ND	----	ND	70.0	130	---
		Lead, dissolved	7439-92-1	E421	0.0251 mg/L	0.025 mg/L	100	70.0	130	---
		Lithium, dissolved	7439-93-2	E421	0.0122 mg/L	0.0125 mg/L	97.9	70.0	130	---
		Magnesium, dissolved	7439-95-4	E421	2.64 mg/L	2.5 mg/L	106	70.0	130	---
		Manganese, dissolved	7439-96-5	E421	0.0120 mg/L	0.0125 mg/L	96.2	70.0	130	---
		Molybdenum, dissolved	7439-98-7	E421	0.0116 mg/L	0.0125 mg/L	93.0	70.0	130	---
		Nickel, dissolved	7440-02-0	E421	0.0236 mg/L	0.025 mg/L	94.4	70.0	130	---
		Phosphorus, dissolved	7723-14-0	E421	0.498 mg/L	0.5 mg/L	99.7	70.0	130	---
		Potassium, dissolved	7440-09-7	E421	2.30 mg/L	2.5 mg/L	91.9	70.0	130	---
		Rubidium, dissolved	7440-17-7	E421	0.00517 mg/L	0.005 mg/L	103	70.0	130	---
		Selenium, dissolved	7782-49-2	E421	0.0609 mg/L	0.05 mg/L	122	70.0	130	---
		Silicon, dissolved	7440-21-3	E421	ND	----	ND	70.0	130	---
		Silver, dissolved	7440-22-4	E421	0.00497 mg/L	0.005 mg/L	99.4	70.0	130	---
		Sodium, dissolved	7440-23-5	E421	2.39 mg/L	2.5 mg/L	95.7	70.0	130	---
		Strontium, dissolved	7440-24-6	E421	ND	----	ND	70.0	130	---
		Sulfur, dissolved	7704-34-9	E421	2.55 mg/L	2.5 mg/L	102	70.0	130	---
		Tellurium, dissolved	13494-80-9	E421	0.00565 mg/L	0.005 mg/L	113	70.0	130	---
		Thallium, dissolved	7440-28-0	E421	0.0479 mg/L	0.05 mg/L	95.8	70.0	130	---
		Thorium, dissolved	7440-29-1	E421	0.00475 mg/L	0.005 mg/L	95.0	70.0	130	---
		Tin, dissolved	7440-31-5	E421	0.0232 mg/L	0.025 mg/L	93.0	70.0	130	---
		Titanium, dissolved	7440-32-6	E421	0.0121 mg/L	0.0125 mg/L	96.8	70.0	130	---
		Tungsten, dissolved	7440-33-7	E421	0.00484 mg/L	0.005 mg/L	96.9	70.0	130	---
		Uranium, dissolved	7440-61-1	E421	0.000255 mg/L	0.0002 mg/L	102	70.0	130	---
		Vanadium, dissolved	7440-62-2	E421	0.0242 mg/L	0.025 mg/L	97.0	70.0	130	---

Sub-Matrix: Water

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery (%)		Qualifier
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	
Dissolved Metals(QC Lot: 2514128)										
		Zinc, dissolved	7440-66-6	E421	0.0259 mg/L	0.025 mg/L	104	70.0	130	---
		Zirconium, dissolved	7440-67-7	E421	0.00483 mg/L	0.005 mg/L	96.6	70.0	130	---

MM-834

Chain of Custody (COC) / Analytical Request Form

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

COC Number: 23 - 1154297

Page 1 of 1

Environmental Division Waterloo

Work Order Reference WT2606840

Telephone: +1 519 886 6910

Report To	Contact and company name below will appear on the final report
Company:	Exp Services Inc
Contact:	Amar Neku
Phone:	~~Cell~~ 905 793 9800
	Company address below will appear on the final report
Street:	1595 Clark Blvd
City/Province:	Brampton ON
Postal Code:	L6T 4V1
Invoice To	Same as Report To ☐ YES ☐ NO
	Copy of Invoice with Report ☐ YES ☐ NO
Company:	
Contact:	

Reports / Recipients

Select Report Format: ☑ PDF ☐ EXCEL ☐ EDD (DIGITAL)

Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A

☐ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Amar.Neku@exp.com

Email 2: Ryan.Alexander@exp.com

Email 3: Edwin.Chessell@exp.com

Invoice Recipients

Select Invoice Distribution: ☐ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax:

Email 2:

Turnaround Time (TAT) Requested

☑ Routine [R] if received by 3pm M-F - no surcharges apply

☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum

☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum

☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum

☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum

☐ Same day [E2] if received by 10am M-S - 200% rush surcharge.

Additional fees may apply to rush requests on weekends

Date and Time Required for all E&P TATs:

For all tests with rush TATs requested, please c...

Project Information

ALS Client Code / QUOTE #:

Job / Project #: 1980 Fowler, GTR-220226600-A0

PO / AFE:

LSD:

ALS Lab Work Order # (ALS use only): WT2606840

Oil and Gas Required Fields (client use)

AFE/Cost Center: PO#

Major/Minor Code: Routing Code:

Requisitioner:

Location:

ALS Contact: Mathy Sampler: LA

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	Dissolved metals	SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	BH 25-1 (F)	25/mar/26	15:50	Water	1	F/P			

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☑ NO

Are samples for human consumption/ use? ☐ YES ☑ NO

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

Please compare to Peel sanitary and Mississauga bylaws

please include Cd in final report

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☐ ICE ☑ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED

Cooler Custody Seals Intact: ☑ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
1.9				6.6			

SHIPMENT RELEASE (client use)

Released by:	Date:	Time:
RYAN ALEXANDER	March 25, 26	18:30

INITIAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:
AM	03/26/26	9:00

FINAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:
SM	3/26/26	11:30

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

JAN 2023 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form.**

ALS Canada Ltd.

right solutions.
right partner.

CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

Work Order	:	**WT2508827**			
Amendment	:	**1**			
Client	:	**EXP Services Inc.**	Laboratory	:	ALS Environmental - Waterloo
Contact	:	Francois Chartier	Account Manager	:	Gayle Braun
Address	:	1595 CLARK BLVD Brampton Ontario Canada L6T 4V1	Address	:	60 Northland Road, Unit 1 Waterloo ON Canada N2V 2B8
Telephone	:		Telephone	:	+1 519 886 6910
Project	:	1970 & 1980 Fowler Dr - GTR-22022660-A0	Date Samples Received	:	22-Apr-2025 09:00
PO	:	----	Date Analysis Commenced	:	22-Apr-2025
C-O-C number	:	23-1123854	Issue Date	:	29-Apr-2025 14:37
Sampler	:	----			
Site	:	----			
Quote number	:	Sanitary & Storm By-laws & Environmental			
No. of samples received	:	1			
No. of samples analysed	:	1			

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Danielle Gravel	Supervisor - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario
David Tremblett	VOC Section Supervisor	VOC, Waterloo, Ontario
Greg Pokocky	Manager - Inorganics	Inorganics, Waterloo, Ontario
Jeminikumari Patel	Analyst	Microbiology, Waterloo, Ontario
Jocelyn Kennedy	Department Manager - Semi-Volatile Organics	Organics, Waterloo, Ontario
Kelly Fischer	Technical Specialist	Metals, Waterloo, Ontario
Kelly Fischer	Technical Specialist	Inorganics, Waterloo, Ontario
Nik Perkio	Senior Analyst	Inorganics, Waterloo, Ontario
Stephanie Pinheiro	Team Leader - LCMS	LCMS, Waterloo, Ontario

Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
BH25-2	Water	Solids, total suspended [TSS]		MISSUB	STM	104 mg/L	15 mg/L
	Water	Aluminum, total		MISSUB	STM	1.56 mg/L	1 mg/L

Key:

RMPSUB	Ontario Reg.Mun. of Peel Sewer Bylaw #53-2010 (APR, 2019)
SAN	Peel Sanitary Sewer (53-2010)
MISSUB	Ontario Mississauga Storm Sewer Use By-Law (0046-2022) (March 2022)
STM	Mississauga Storm Sewer (0046-2022)

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guidelines are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Key: CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances.

LOR: Limit of Reporting (detection limit).

Unit	*Description*
CFU/100mL	colony forming units per hundred millilitres
mg/L	milligrams per litre
pH units	pH units
µg/L	micrograms per litre

>: greater than.

<: less than.

Red shading is applied where the result or the LOR is greater than the Guideline Upper Limit (or lower than the Guideline Lower Limit, if applicable).
For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Workorder Comments

Amendment (29/04/2025): This report has been amended to alter the site details, project reference code or order number. All analysis results are as per the previous report.

Qualifiers

Qualifier	Description
BODL	Limit of Reporting for BOD was increased to account for the largest volume of sample tested.
DLDS	Detection Limit Raised: Dilution required due to high Dissolved Solids / Electrical Conductivity.
PEHR	Parameter exceeded recommended holding time on receipt: Proceeded with analysis as requested.

Analytical Results

SubMatrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID: BH25-2	MISSUB / STM	RMPSUB / SAN	----	----	----	----
					Client sampling date / time: 21-Apr-2025 11:50						
					WT2508827-001						
Physical Tests											
pH	----	E108/WT	0.10	pH units	7.42	6 - 9 pH units	5.5 - 10 pH units	----	----	----	----
Solids, total suspended [TSS]	----	E160/WT	3.0	mg/L	104	15 mg/L	350 mg/L	----	----	----	----
Anions and Nutrients											
Fluoride	16984-48-8	E235.F/WT	0.020	mg/L	<0.100 DLDS	----	10 mg/L	----	----	----	----
Kjeldahl nitrogen, total [TKN]	----	E318/WT	0.050	mg/L	0.346	1 mg/L	100 mg/L	----	----	----	----
Phosphorus, total	7723-14-0	E372-U/WT	0.0020	mg/L	0.117	0.4 mg/L	10 mg/L	----	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/WT	0.30	mg/L	79.3 DLDS	----	1500 mg/L	----	----	----	----
Cyanides											
Cyanide, strong acid dissociable (Total)	----	E333/WT	0.0020	mg/L	<0.0020	0.02 mg/L	2 mg/L	----	----	----	----
Inorganics											
Chlorine, total	7782-50-5	E326/WT	0.050	mg/L	<0.050 PEHR	1 mg/L	----	----	----	----	----
Microbiological Tests											
Coliforms, Escherichia coli [E. coli]	----	E012A.EC/WT	1	CFU/100mL	1	200 CFU/100mL	----	----	----	----	----
Total Metals											
Aluminum, total	7429-90-5	E420/WT	0.0030	mg/L	1.56	1 mg/L	50 mg/L	----	----	----	----
Antimony, total	7440-36-0	E420/WT	0.00010	mg/L	0.00012	----	5 mg/L	----	----	----	----
Arsenic, total	7440-38-2	E420/WT	0.00010	mg/L	0.00080	0.02 mg/L	1 mg/L	----	----	----	----
Cadmium, total	7440-43-9	E420/WT	0.0000050	mg/L	0.0000092	0.008 mg/L	0.7 mg/L	----	----	----	----
Chromium, total	7440-47-3	E420/WT	0.00050	mg/L	0.00353	0.08 mg/L	5 mg/L	----	----	----	----
Cobalt, total	7440-48-4	E420/WT	0.00010	mg/L	0.00102	----	5 mg/L	----	----	----	----
Copper, total	7440-50-8	E420/WT	0.00050	mg/L	0.00316	0.04 mg/L	3 mg/L	----	----	----	----
Lead, total	7439-92-1	E420/WT	0.000050	mg/L	0.000471	0.12 mg/L	3 mg/L	----	----	----	----
Manganese, total	7439-96-5	E420/WT	0.00010	mg/L	0.0563	2 mg/L	5 mg/L	----	----	----	----
Mercury, total	7439-97-6	E508/WT	0.0000050	mg/L	<0.0000050	0.0004 mg/L	0.01 mg/L	----	----	----	----
Molybdenum, total	7439-98-7	E420/WT	0.000050	mg/L	0.000530	----	5 mg/L	----	----	----	----
Nickel, total	7440-02-0	E420/WT	0.00050	mg/L	0.00235	0.08 mg/L	3 mg/L	----	----	----	----
Potassium, total	7440-09-7	E420/WT	0.050	mg/L	6.32	----	----	----	----	----	----
Selenium, total	7782-49-2	E420/WT	0.000050	mg/L	0.00153	0.02 mg/L	1 mg/L	----	----	----	----
Silver, total	7440-22-4	E420/WT	0.000010	mg/L	0.000108	0.12 mg/L	5 mg/L	----	----	----	----
Tin, total	7440-31-5	E420/WT	0.00010	mg/L	0.00018	----	5 mg/L	----	----	----	----
Titanium, total	7440-32-6	E420/WT	0.00030	mg/L	0.0183	----	5 mg/L	----	----	----	----
Zinc, total	7440-66-6	E420/WT	0.0030	mg/L	0.0252	0.2 mg/L	3 mg/L	----	----	----	----
Speciated Metals											
Chromium, hexavalent [Cr VI], total	18540-29-9	E532/WT	0.00050	mg/L	<0.00050	----	----	----	----	----	----
Aggregate Organics											
Biochemical oxygen demand [BOD]	----	E550/WT	2.0	mg/L	<3.0 BODL	15 mg/L	300 mg/L	----	----	----	----
Carbonaceous biochemical oxygen demand [CBOD]	----	E555/WT	2.0	mg/L	<3.0 BODL	----	300 mg/L	----	----	----	----
Oil & grease (gravimetric)	----	E567/WT	5.0	mg/L	<5.0	----	----	----	----	----	----
Oil & grease, animal/vegetable (gravimetric)	----	EC567A.SG/WT	5.0	mg/L	<5.0	----	150 mg/L	----	----	----	----

SubMatrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID: BH25-2 Client sampling date / time: 21-Apr-2025 11:50 WT2508827-001	MISSUB STM	RMPSUB SAN	---- ----	---- ----	---- ----	---- ----
Aggregate Organics											
Oil & grease, mineral (gravimetric)	----	E567SG/WT	5.0	mg/L	<5.0	----	15 mg/L	----	----	----	----
Phenols, total (4AAP)	----	E562/WT	0.0010	mg/L	<0.0010	0.008 mg/L	1 mg/L	----	----	----	----
Volatile Organic Compounds											
Benzene	71-43-2	E611D/WT	0.50	µg/L	<0.50	0.002 mg/L	10 µg/L	----	----	----	----
Chloroform	67-66-3	E611D/WT	0.50	µg/L	<0.50	----	40 µg/L	----	----	----	----
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	0.50	µg/L	<0.50	----	50 µg/L	----	----	----	----
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	0.50	µg/L	<0.50	----	80 µg/L	----	----	----	----
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	0.50	µg/L	<0.50	----	4000 µg/L	----	----	----	----
Dichloromethane	75-09-2	E611D/WT	1.0	µg/L	<1.0	----	2000 µg/L	----	----	----	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	0.30	µg/L	<0.30	----	140 µg/L	----	----	----	----
Ethylbenzene	100-41-4	E611D/WT	0.50	µg/L	<0.50	0.002 mg/L	160 µg/L	----	----	----	----
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	20	µg/L	<20	----	8000 µg/L	----	----	----	----
Styrene	100-42-5	E611D/WT	0.50	µg/L	<0.50	----	200 µg/L	----	----	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	0.50	µg/L	<0.50	----	1400 µg/L	----	----	----	----
Tetrachloroethylene	127-18-4	E611D/WT	0.50	µg/L	<0.50	----	1000 µg/L	----	----	----	----
Toluene	108-88-3	E611D/WT	0.50	µg/L	<0.50	0.002 mg/L	270 µg/L	----	----	----	----
Trichloroethylene	79-01-6	E611D/WT	0.50	µg/L	<0.50	----	400 µg/L	----	----	----	----
Xylene, m+p-	179601-23-1	E611D/WT	0.40	µg/L	<0.40	----	----	----	----	----	----
Xylene, o-	95-47-6	E611D/WT	0.30	µg/L	<0.30	----	----	----	----	----	----
Xylenes, total	1330-20-7	E611D/WT	0.50	µg/L	<0.50	0.0044 mg/L	1400 µg/L	----	----	----	----
Volatile Organic Compounds Surrogates											
Bromofluorobenzene, 4-	460-00-4	E611D/WT	1.0	%	97.6	----	----	----	----	----	----
Difluorobenzene, 1,4-	540-36-3	E611D/WT	1.0	%	99.5	----	----	----	----	----	----
Polycyclic Aromatic Hydrocarbons											
Acenaphthene	83-32-9	E641A/WT	0.010	µg/L	<0.010	----	----	----	----	----	----
Acenaphthylene	208-96-8	E641A/WT	0.010	µg/L	<0.010	----	----	----	----	----	----
Anthracene	120-12-7	E641A/WT	0.010	µg/L	<0.010	----	----	----	----	----	----
Benz(a)anthracene	56-55-3	E641A/WT	0.010	µg/L	<0.010	----	----	----	----	----	----
Benzo(a)pyrene	50-32-8	E641A/WT	0.0050	µg/L	<0.0050	----	----	----	----	----	----
Benzo(b+j)fluoranthene	n/a	E641A/WT	0.010	µg/L	<0.010	----	----	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	E641A/WT	0.010	µg/L	<0.010	----	----	----	----	----	----
Benzo(k)fluoranthene	207-08-9	E641A/WT	0.010	µg/L	<0.010	----	----	----	----	----	----
Chrysene	218-01-9	E641A/WT	0.010	µg/L	<0.010	----	----	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	E641A/WT	0.0050	µg/L	<0.0050	----	----	----	----	----	----
Fluoranthene	206-44-0	E641A/WT	0.010	µg/L	<0.010	----	----	----	----	----	----
Fluorene	86-73-7	E641A/WT	0.010	µg/L	<0.010	----	----	----	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A/WT	0.010	µg/L	<0.010	----	----	----	----	----	----
Methylnaphthalene, 1-	90-12-0	E641A/WT	0.010	µg/L	<0.010	----	----	----	----	----	----
Methylnaphthalene, 2-	91-57-6	E641A/WT	0.010	µg/L	<0.010	----	----	----	----	----	----

SubMatrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID: BH25-2 Client sampling date / time: 21-Apr-2025 11:50 WT2508827-001	MISSUB STM	RMPSUB SAN	---- ----	---- ----	---- ----	---- ----
Polycyclic Aromatic Hydrocarbons											
Naphthalene	91-20-3	E641A/WT	0.050	µg/L	<0.050	----	----	----	----	----	----
Phenanthrene	85-01-8	E641A/WT	0.020	µg/L	<0.020	----	----	----	----	----	----
Pyrene	129-00-0	E641A/WT	0.010	µg/L	<0.010	----	----	----	----	----	----
PAHs, total (CCME sewer 18)	n/a	E641A/WT	0.070	µg/L	<0.070	0.002 mg/L	----	----	----	----	----
Polycyclic Aromatic Hydrocarbons Surrogates											
Chrysene-d12	1719-03-5	E641A/WT	0.1	%	107	----	----	----	----	----	----
Naphthalene-d8	1146-65-2	E641A/WT	0.1	%	107	----	----	----	----	----	----
Phenanthrene-d10	1517-22-2	E641A/WT	0.1	%	118	----	----	----	----	----	----
Phthalate Esters											
bis(2-Ethylhexyl) phthalate [DEHP]	117-81-7	E625A/WT	0.60	µg/L	<0.60	----	12 µg/L	----	----	----	----
Di-n-butyl phthalate	84-74-2	E625A/WT	1.0	µg/L	<1.0	----	80 µg/L	----	----	----	----
Semi-Volatile Organics Surrogates											
Fluorobiphenyl, 2-	321-60-8	E625A/WT	1.0	%	96.4	----	----	----	----	----	----
Nitrobenzene-d5	4165-60-0	E625A/WT	1.0	%	98.7	----	----	----	----	----	----
Terphenyl-d14, p-	1718-51-0	E625A/WT	1.0	%	111	----	----	----	----	----	----
Phenolics Surrogates											
Tribromophenol, 2,4,6-	118-79-6	E625A/WT	0.50	%	76.7	----	----	----	----	----	----
Nonylphenols											
Nonylphenol [NP]	84852-15-3	E749A/WT	0.40	µg/L	<0.40	----	20 µg/L	----	----	----	----
Nonylphenol diethoxylate [NP2EO]	20427-84-3	E749B/WT	0.10	µg/L	<0.10	----	----	----	----	----	----
Nonylphenol ethoxylates, mono+di	n/a	E749B/WT	2.0	µg/L	<2.0	----	200 µg/L	----	----	----	----
Nonylphenol monoethoxylate [NP1EO]	27986-36-3	E749B/WT	0.40	µg/L	<0.40	----	----	----	----	----	----
Polychlorinated Biphenyls											
Aroclor 1016	12674-11-2	E687/WT	0.020	µg/L	<0.020	----	----	----	----	----	----
Aroclor 1221	11104-28-2	E687/WT	0.020	µg/L	<0.020	----	----	----	----	----	----
Aroclor 1232	11141-16-5	E687/WT	0.020	µg/L	<0.020	----	----	----	----	----	----
Aroclor 1242	53469-21-9	E687/WT	0.020	µg/L	<0.020	----	----	----	----	----	----
Aroclor 1248	12672-29-6	E687/WT	0.020	µg/L	<0.020	----	----	----	----	----	----
Aroclor 1254	11097-69-1	E687/WT	0.020	µg/L	<0.020	----	----	----	----	----	----
Aroclor 1260	11096-82-5	E687/WT	0.020	µg/L	<0.020	----	----	----	----	----	----
Aroclor 1262	37324-23-5	E687/WT	0.020	µg/L	<0.020	----	----	----	----	----	----
Aroclor 1268	11100-14-4	E687/WT	0.020	µg/L	<0.020	----	----	----	----	----	----
Polychlorinated biphenyls [PCBs], total	n/a	E687/WT	0.060	µg/L	<0.060	----	1 µg/L	----	----	----	----
Polychlorinated Biphenyls Surrogates											
Decachlorobiphenyl	2051-24-3	E687/WT	0.1	%	101	----	----	----	----	----	----
Tetrachloro-m-xylene	877-09-8	E687/WT	0.1	%	93.5	----	----	----	----	----	----

Please refer to the General Comments section for an explanation of any result qualifiers detected.

ALS Canada Ltd.

right solutions.
right partner.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **WT2508827**	Page	: 1 of 12
Amendment	: **1**		
Client	: **EXP Services Inc.**	Laboratory	: ALS Environmental - Waterloo
Contact	: Francois Chartier	Account Manager	: Gayle Braun
Address	: 1595 CLARK BLVD Brampton ON Canada L6T 4V1	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: ----	Telephone	: +1 519 886 6910
Project	: 1970 & 1980 Fowler Dr - GTR-22022660-A0	Date Samples Received	: 22-Apr-2025 09:00
PO	: ----	Issue Date	: 29-Apr-2025 14:36
C-O-C number	: 23-1123854		
Sampler	: ----		
Site	: ----		
Quote number	: Sanitary & Storm By-laws & Environmental		
No. of samples received	: 1		
No. of samples analysed	: 1		

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO: Data Quality Objective.
LOR: Limit of Reporting (detection limit).
RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Matrix Spike outliers occur.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- Analysis Holding Time Outliers exist - please see following pages for full details.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	*Method*	*Sampling Date*	*Extraction / Preparation*				*Analysis*			
			Preparation Date	*Holding Times* Rec	*Holding Times* Actual	*Eval*	*Analysis Date*	*Holding Times* Rec	*Holding Times* Actual	*Eval*
Aggregate Organics : Biochemical Oxygen Demand - 5 day										
HDPE [BOD HT-4d] BH25-2	E550	21-Apr-2025	----	----	----		28-Apr-2025	4 days	7 days	× EHT
Aggregate Organics : Biochemical Oxygen Demand (Carbonaceous) - 5 day										
HDPE [BOD HT-4d] BH25-2	E555	21-Apr-2025	----	----	----		23-Apr-2025	4 days	2 days	✓
Aggregate Organics : Mineral Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid) BH25-2	E567SG	21-Apr-2025	25-Apr-2025	28 days	4 days	✓	28-Apr-2025	28 days	4 days	✓
Aggregate Organics : Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid) BH25-2	E567	21-Apr-2025	25-Apr-2025	28 days	4 days	✓	28-Apr-2025	28 days	4 days	✓
Aggregate Organics : Phenols (4AAP) in Water by Colorimetry										
Amber glass total (sulfuric acid) [ON MECP] BH25-2	E562	21-Apr-2025	23-Apr-2025	28 days	2 days	✓	23-Apr-2025	28 days	2 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE [ON MECP] BH25-2	E235.F	21-Apr-2025	24-Apr-2025	28 days	3 days	✓	25-Apr-2025	28 days	3 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE [ON MECP] BH25-2	E235.SO4	21-Apr-2025	24-Apr-2025	28 days	3 days	✓	25-Apr-2025	28 days	3 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	*Method*	*Sampling Date*	*Extraction / Preparation*				*Analysis*			
			Preparation Date	*Holding Times*		*Eval*	*Analysis Date*	*Holding Times*		*Eval*
				Rec	*Actual*			*Rec*	*Actual*	
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
HDPE [ON MECP] BH25-2	E318	21-Apr-2025	24-Apr-2025	3 days	3 days	✓	24-Apr-2025	3 days	3 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) [ON MECP] BH25-2	E372-U	21-Apr-2025	24-Apr-2025	28 days	3 days	✓	24-Apr-2025	28 days	3 days	✓
Cyanides : Total Cyanide										
Opaque HDPE - total (sodium hydroxide) BH25-2	E333	21-Apr-2025	23-Apr-2025	14 days	2 days	✓	23-Apr-2025	14 days	2 days	✓
Inorganics : Total Chlorine (Residual) by DPD Colourimetry										
HDPE [ON MECP] BH25-2	E326	21-Apr-2025	----	----	----		23-Apr-2025	0.25 hrs	43 hrs	× EHTR-FM
Microbiological Tests : E. coli (MF-mFC-BCIG)										
Sterile HDPE (Sodium thiosulphate) [ON MECP] BH25-2	E012A.EC	21-Apr-2025	----	----	----		22-Apr-2025	48 hrs	28 hrs	✓
Nonylphenols : Nonylphenol Ethoxylates in Water by LC-MS-MS Positive Mode										
Amber glass/Teflon lined septa cap - LCMS [ON MECP] BH25-2	E749B	21-Apr-2025	23-Apr-2025	7 days	2 days	✓	23-Apr-2025	7 days	2 days	✓
Nonylphenols : Nonylphenol, Octylphenol and BPA in Water by LC-MS-MS Negative Mode										
Amber glass/Teflon lined septa cap - LCMS [ON MECP] BH25-2	E749A	21-Apr-2025	23-Apr-2025	7 days	2 days	✓	23-Apr-2025	7 days	2 days	✓
Phthalate Esters : BNA (Routine List) by GC-MS-MS										
Amber glass/Teflon lined septa cap - SVOCs (sodium thiosulfate) [ON MECP] BH25-2	E625A	21-Apr-2025	26-Apr-2025	14 days	5 days	✓	26-Apr-2025	40 days	0 days	✓
Physical Tests : pH by Meter										
HDPE [ON MECP] BH25-2	E108	21-Apr-2025	24-Apr-2025	14 days	3 days	✓	24-Apr-2025	14 days	3 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	*Method*	*Sampling Date*	*Extraction / Preparation*				*Analysis*			
			Preparation Date	*Holding Times* Rec	*Holding Times* Actual	*Eval*	*Analysis Date*	*Holding Times* Rec	*Holding Times* Actual	*Eval*
Physical Tests : TSS by Gravimetry										
HDPE [ON MECP]										
BH25-2	E160	21-Apr-2025	----	----	----		24-Apr-2025	7 days	3 days	✓
Polychlorinated Biphenyls : PCB Aroclors by GC-MS										
Amber glass/Teflon lined cap [ON MECP]										
BH25-2	E687	21-Apr-2025	28-Apr-2025	14 days	7 days	✓	29-Apr-2025	40 days	1 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined septa cap - SVOCs (sodium thiosulfate) [ON MECP]										
BH25-2	E641A	21-Apr-2025	25-Apr-2025	7 days	4 days	✓	28-Apr-2025	7 days	4 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
HDPE - total (NaOH+Buf) [ON MECP]										
BH25-2	E532	21-Apr-2025	----	----	----		22-Apr-2025	28 days	1 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) [ON MECP]										
BH25-2	E508	21-Apr-2025	23-Apr-2025	28 days	2 days	✓	24-Apr-2025	28 days	2 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid)										
BH25-2	E420	21-Apr-2025	23-Apr-2025	180 days	2 days	✓	23-Apr-2025	180 days	2 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
BH25-2	E611D	21-Apr-2025	24-Apr-2025	14 days	3 days	✓	24-Apr-2025	14 days	3 days	✓

Legend & Qualifier Definitions

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended

EHT: Exceeded ALS recommended hold time prior to analysis.

Rec. HT: ALS recommended hold time (see units).

Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water**

Evaluation: × = QC frequency outside specification; ✓ = QC frequency within specification.

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
E. coli (MF-mFC-BCIG)	E012A.EC	1960978	1	12	8.3	5.0	✓
pH by Meter	E108	1963517	1	20	5.0	5.0	✓
TSS by Gravimetry	E160	1963546	1	20	5.0	4.7	✓
Fluoride in Water by IC	E235.F	1963512	1	10	10.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1963513	1	10	10.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	1961579	1	19	5.2	5.0	✓
Total Chlorine (Residual) by DPD Colourimetry	E326	1961536	1	2	50.0	5.0	✓
Total Cyanide	E333	1961733	1	15	6.6	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1961580	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1961311	1	18	5.5	5.0	✓
Total Mercury in Water by CVAAS	E508	1962283	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1960843	1	17	5.8	5.0	✓
Biochemical Oxygen Demand - 5 day	E550	1962131	1	17	5.8	5.0	✓
Biochemical Oxygen Demand (Carbonaceous) - 5 day	E555	1962140	1	7	14.2	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1961581	1	20	5.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	1963429	1	20	5.0	5.0	✓
Nonylphenol, Octylphenol and BPA in Water by LC-MS-MS Negative Mode	E749A	1961557	1	9	11.1	5.0	✓
Nonylphenol Ethoxylates in Water by LC-MS-MS Positive Mode	E749B	1961556	1	9	11.1	5.0	✓
Laboratory Control Samples (LCS)							
pH by Meter	E108	1963517	1	20	5.0	5.0	✓
TSS by Gravimetry	E160	1963546	1	20	5.0	4.7	✓
Fluoride in Water by IC	E235.F	1963512	1	10	10.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1963513	1	10	10.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	1961579	1	19	5.2	5.0	✓
Total Chlorine (Residual) by DPD Colourimetry	E326	1961536	1	2	50.0	5.0	✓
Total Cyanide	E333	1961733	1	15	6.6	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1961580	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1961311	1	18	5.5	5.0	✓
Total Mercury in Water by CVAAS	E508	1962283	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1960843	1	17	5.8	5.0	✓
Biochemical Oxygen Demand - 5 day	E550	1962131	1	17	5.8	5.0	✓
Biochemical Oxygen Demand (Carbonaceous) - 5 day	E555	1962140	1	7	14.2	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1961581	1	20	5.0	5.0	✓
Oil & Grease by Gravimetry	E567	1966593	1	10	10.0	5.0	✓
Mineral Oil & Grease by Gravimetry	E567SG	1966594	1	5	20.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	1963429	1	20	5.0	5.0	✓

Matrix: **Water**

Evaluation: × = QC frequency outside specification; ✓ = QC frequency within specification.

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Control Samples (LCS) - Continued							
BNA (Routine List) by GC-MS-MS	E625A	1967392	1	20	5.0	5.0	✓
PAHs in Water by Hexane LVI GC-MS	E641A	1966507	1	1	100.0	5.0	✓
PCB Aroclors by GC-MS	E687	1969598	1	20	5.0	4.7	✓
Nonylphenol, Octylphenol and BPA in Water by LC-MS-MS Negative Mode	E749A	1961557	1	9	11.1	5.0	✓
Nonylphenol Ethoxylates in Water by LC-MS-MS Positive Mode	E749B	1961556	1	9	11.1	5.0	✓
Method Blanks (MB)							
E. coli (MF-mFC-BCIG)	E012A.EC	1960978	1	12	8.3	5.0	✓
TSS by Gravimetry	E160	1963546	1	20	5.0	4.7	✓
Fluoride in Water by IC	E235.F	1963512	1	10	10.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1963513	1	10	10.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	1961579	1	19	5.2	5.0	✓
Total Chlorine (Residual) by DPD Colourimetry	E326	1961536	1	2	50.0	5.0	✓
Total Cyanide	E333	1961733	1	15	6.6	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1961580	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1961311	1	18	5.5	5.0	✓
Total Mercury in Water by CVAAS	E508	1962283	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1960843	1	17	5.8	5.0	✓
Biochemical Oxygen Demand - 5 day	E550	1962131	1	17	5.8	5.0	✓
Biochemical Oxygen Demand (Carbonaceous) - 5 day	E555	1962140	1	7	14.2	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1961581	1	20	5.0	5.0	✓
Oil & Grease by Gravimetry	E567	1966593	1	10	10.0	5.0	✓
Mineral Oil & Grease by Gravimetry	E567SG	1966594	1	5	20.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	1963429	1	20	5.0	5.0	✓
BNA (Routine List) by GC-MS-MS	E625A	1967392	1	20	5.0	5.0	✓
PAHs in Water by Hexane LVI GC-MS	E641A	1966507	1	1	100.0	5.0	✓
PCB Aroclors by GC-MS	E687	1969598	1	20	5.0	4.7	✓
Nonylphenol, Octylphenol and BPA in Water by LC-MS-MS Negative Mode	E749A	1961557	1	9	11.1	5.0	✓
Nonylphenol Ethoxylates in Water by LC-MS-MS Positive Mode	E749B	1961556	1	9	11.1	5.0	✓
Matrix Spikes (MS)							
Fluoride in Water by IC	E235.F	1963512	1	10	10.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1963513	1	10	10.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	1961579	1	19	5.2	5.0	✓
Total Chlorine (Residual) by DPD Colourimetry	E326	1961536	1	2	50.0	5.0	✓
Total Cyanide	E333	1961733	1	15	6.6	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1961580	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1961311	1	18	5.5	5.0	✓
Total Mercury in Water by CVAAS	E508	1962283	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1960843	1	17	5.8	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1961581	1	20	5.0	5.0	✓

Matrix: **Water**

Evaluation: × = *QC frequency outside specification*; ✓ = *QC frequency within specification.*

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Matrix Spikes (MS) - Continued							
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	1963429	1	20	5.0	5.0	✓
Nonylphenol, Octylphenol and BPA in Water by LC-MS-MS Negative Mode	E749A	1961557	1	9	11.1	5.0	✓
Nonylphenol Ethoxylates in Water by LC-MS-MS Positive Mode	E749B	1961556	1	9	11.1	5.0	✓

Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
E. coli (MF-mFC-BCIG)	E012A.EC ALS Environmental - Waterloo	Water	APHA 9222D (mod)	Following filtration (0.45 µm), and incubation at 44.5±0.2°C for 24 hours, colonies exhibiting characteristic morphology of the target organism are enumerated.
pH by Meter	E108 ALS Environmental - Waterloo	Water	APHA 4500-H (mod)	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally 20 ± 5°C). For high accuracy test results, pH should be measured in the field within the recommended 15 minute hold time.
TSS by Gravimetry	E160 ALS Environmental - Waterloo	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at 104 ± 1°C, with gravimetric measurement of the filtered solids. Samples containing very high dissolved solid content (i.e. seawaters, brackish waters) may produce a positive bias by this method. Alternate analysis methods are available for these types of samples.
Fluoride in Water by IC	E235.F ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Sulfate in Water by IC	E235.SO4 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318 ALS Environmental - Waterloo	Water	Method Fialab 100, 2018	TKN in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021).
Total Chlorine (Residual) by DPD Colourimetry	E326 ALS Environmental - Waterloo	Water	APHA 4500-Cl G (mod)	Chlorine (residual), as free or total, is analyzed using the DPD colourimetric method. The recommended hold time for this test is 15 minutes and field testing is recommended when determining Chlorine concentrations at the time of sampling. Chlorine if present in a sample container after sampling can be rapidly consumed by any inorganic or organic matter in the sample and dissipates rapidly into headspace. Laboratory results may be requested when chlorine concentrations that may be present at the time of laboratory analysis are required for the interpretation of other laboratory analysis where the presence of Chlorine may affect results. e.g. laboratory toxicity testing

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Total Cyanide	E333 ALS Environmental - Waterloo	Water	ISO 14403 (mod)	Total or Strong Acid Dissociable (SAD) Cyanide is determined by Continuous Flow Analyzer (CFA) with in-line UV digestion followed by colourmetric analysis. Method Limitation: High levels of thiocyanate (SCN) may cause positive interference (up to 0.5% of SCN concentration).
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Total Phosphorus is determined colourimetrically using a discrete analyzer after heated persulfate digestion of the sample.
Total Metals in Water by CRC ICPMS	E420 ALS Environmental - Waterloo	Water	EPA 200.2/6020B (mod)	Water samples are digested with nitric and hydrochloric acids, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Total Mercury in Water by CVAAS	E508 ALS Environmental - Waterloo	Water	EPA 1631E (mod)	Water samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS
Total Hexavalent Chromium (Cr VI) by IC	E532 ALS Environmental - Waterloo	Water	APHA 3500-Cr C (Ion Chromatography)	Hexavalent Chromium is measured by Ion chromatography-Post column reaction and UV detection. Results are based on an un-filtered, field-preserved sample.
Biochemical Oxygen Demand - 5 day	E550 ALS Environmental - Waterloo	Water	APHA 5210 B (mod)	Samples are diluted and incubated for a specified time period, after which the oxygen depletion is measured using a dissolved oxygen meter. Free chlorine is a negative interference in the BOD method; please advise ALS when free chlorine is present in samples.
Biochemical Oxygen Demand (Carbonaceous) - 5 day	E555 ALS Environmental - Waterloo	Water	APHA 5210 B (mod)	Samples are diluted and incubated for a specified time period, after which the oxygen depletion is measured using a dissolved oxygen meter. Nitrification inhibitor is added to samples to prevent nitrogenous compounds from consuming oxygen resulting in only carbonaceous oxygen demand being reported by this method. Free chlorine is a negative interference in the BOD method; please advise ALS when free chlorine is present in samples.
Phenols (4AAP) in Water by Colorimetry	E562 ALS Environmental - Waterloo	Water	EPA 9066	This automated method is based on the distillation of phenol and subsequent reaction of the distillate with alkaline ferricyanide (K3Fe(CN)6) and 4-amino-antipyrine (4-AAP) to form a red complex which is measured colorimetrically.
Oil & Grease by Gravimetry	E567 ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane and the extract is evaporated to dryness. The residue is then weighed to determine Oil and Grease.

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Mineral Oil & Grease by Gravimetry	E567SG ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane, followed by silica gel treatment after which the extract is evaporated to dryness. The residue is then weighed to determine Mineral Oil and Grease.
VOCs (Eastern Canada List) by Headspace GC-MS	E611D ALS Environmental - Waterloo	Water	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
BNA (Routine List) by GC-MS-MS	E625A ALS Environmental - Waterloo	Water	EPA 8270E (mod)	BNA are analyzed by GC-MS-MS.
PAHs in Water by Hexane LVI GC-MS	E641A ALS Environmental - Waterloo	Water	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are analyzed by large volume injection (LVI) GC-MS.
PCB Aroclors by GC-MS	E687 ALS Environmental - Waterloo	Water	EPA 8270E (mod)	PCB Aroclors are analyzed by GC-MS
Nonylphenol, Octylphenol and BPA in Water by LC-MS-MS Negative Mode	E749A ALS Environmental - Waterloo	Water	ASTM D7485-16 (mod)	An aliquot of 5.0 mL of sample is spiked with internal standards and analyzed by Direct Aqueous Injection and LC-MS-MS-Negative mode.
Nonylphenol Ethoxylates in Water by LC-MS-MS Positive Mode	E749B ALS Environmental - Waterloo	Water	ASTM D7485-16 (mod)	An aliquot of 5.0 mL of sample is spiked with internal standards and analyzed by Direct Aqueous Injection and LC-MS-MS.
Animal & Vegetable Oil & Grease by Gravimetry	EC567A.SG ALS Environmental - Waterloo	Water	APHA 5520 (mod)	Animal & vegetable oil and grease is calculated as follows: Oil & Grease (gravimetric) minus Mineral Oil & Grease (gravimetric)

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Digestion for TKN in water	EP318 ALS Environmental - Waterloo	Water	APHA 4500-Norg D (mod)	Samples are digested at high temperature using Sulfuric Acid with Copper catalyst, which converts organic nitrogen sources to Ammonia, which is then quantified by the analytical method as TKN. This method is unsuitable for samples containing high levels of nitrate. If nitrate exceeds TKN concentration by ten times or more, results may be biased low.
Digestion for Total Phosphorus in water	EP372 ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Samples are heated with a persulfate digestion reagent.

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Oil & Grease Extraction for Gravimetry	EP567 ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane by liquid-liquid extraction.
VOCs Preparation for Headspace Analysis	EP581 ALS Environmental - Waterloo	Water	EPA 5021A (mod)	Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler. An aliquot of the headspace is then injected into a GC-MS-FID.
PHCs and PAHs Hexane Extraction	EP601 ALS Environmental - Waterloo	Water	EPA 3511 (mod)	Petroleum Hydrocarbons (PHCs) and Polycyclic Aromatic Hydrocarbons (PAHs) are extracted using a hexane liquid-liquid extraction.
BNA Extraction	EP625 ALS Environmental - Waterloo	Water	EPA 3510C (mod)	SVOCs are extracted from aqueous sample using DCM liquid-liquid extraction.
Pesticides, PCB, and Neutral Extractable Chlorinated Hydrocarbons Extraction	EP660 ALS Environmental - Waterloo	Water	EPA 3511 (mod)	Samples are extracted from aqueous sample using an organic solvent liquid-liquid extraction.
Preparation of Nonylphenol and Nonylphenol Ethoxylates	EP749 ALS Environmental - Waterloo	Water	ASTM D7485-16 (mod)	An aliquot of 5.0 mL of sample is spiked with internal standards and analyzed by Direct Aqueous Injection and LC-MS/MS.

QUALITY CONTROL REPORT

Work Order	: **WT2508827**	Page	: 1 of 15
Amendment	: **1**		
Client	: EXP Services Inc.	Laboratory	: ALS Environmental - Waterloo
Contact	: Francois Chartier	Account Manager	: Gayle Braun
Address	: 1595 CLARK BLVD Brampton ON Canada L6T 4V1	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: ----	Telephone	: +1 519 886 6910
Project	: 1970 & 1980 Fowler Dr - GTR-22022660-A0	Date Samples Received	: 22-Apr-2025 09:00
PO	: ----	Date Analysis Commenced	: 22-Apr-2025
C-O-C number	: 23-1123854	Issue Date	: 29-Apr-2025 14:36
Sampler	: ----		
Site	: ----		
Quote number	: Sanitary & Storm By-laws & Environmental		
No. of samples received	: 1		
No. of samples analysed	: 1		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Danielle Gravel	Supervisor - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
David Tremblett	VOC Section Supervisor	Waterloo VOC, Waterloo, Ontario
Greg Pokocky	Manager - Inorganics	Waterloo Inorganics, Waterloo, Ontario
Jeminikumari Patel	Analyst	Waterloo Microbiology, Waterloo, Ontario
Jocelyn Kennedy	Department Manager - Semi-Volatile Organics	Waterloo Organics, Waterloo, Ontario
Kelly Fischer	Technical Specialist	Waterloo Inorganics, Waterloo, Ontario
Kelly Fischer	Technical Specialist	Waterloo Metals, Waterloo, Ontario
Nik Perkio	Senior Analyst	Waterloo Inorganics, Waterloo, Ontario
Stephanie Pinheiro	Team Leader - LCMS	Waterloo LCMS, Waterloo, Ontario

General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO = Data Quality Objective.
LOR = Limit of Reporting (detection limit).
RPD = Relative Percent Difference
# = Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests (QC Lot: 1963517)											
WT2508869-001	Anonymous	pH	----	E108	0.10	pH units	7.55	7.56	0.132%	4%	----
Physical Tests (QC Lot: 1963546)											
WT2508827-001	BH25-2	Solids, total suspended [TSS]	----	E160	3.0	mg/L	104	109	4.31%	20%	----
Anions and Nutrients (QC Lot: 1961579)											
WT2508573-001	Anonymous	Kjeldahl nitrogen, total [TKN]	----	E318	0.200	mg/L	0.753	0.985	0.232	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1961580)											
WT2506992-002	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0195	0.0200	0.0005	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1963512)											
WT2508816-001	Anonymous	Fluoride	16984-48-8	E235.F	0.200	mg/L	0.368	0.371	0.003	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1963513)											
WT2508816-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	3.00	mg/L	255	255	0.162%	20%	----
Cyanides (QC Lot: 1961733)											
WT2508812-001	Anonymous	Cyanide, strong acid dissociable (Total)	----	E333	0.0200	mg/L	1.38	1.35	2.47%	20%	----
Inorganics (QC Lot: 1961536)											
WT2508827-001	BH25-2	Chlorine, total	7782-50-5	E326	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
Microbiological Tests (QC Lot: 1960978)											
WT2508827-001	BH25-2	Coliforms, Escherichia coli [E. coli]	----	E012A.EC	1	CFU/100mL	1	<1	0	Diff <2x LOR	----
Total Metals (QC Lot: 1961311)											
WT2508903-001	Anonymous	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.0632	0.0673	6.26%	20%	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	0.00011	0.00012	0.000001	Diff <2x LOR	----
		Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00045	0.00044	0.000007	Diff <2x LOR	----
		Cadmium, total	7440-43-9	E420	0.0000050	mg/L	0.0000066	0.0000076	0.0000010	Diff <2x LOR	----
		Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, total	7440-48-4	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Copper, total	7440-50-8	E420	0.00050	mg/L	0.00143	0.00143	0.000005	Diff <2x LOR	----
		Lead, total	7439-92-1	E420	0.000050	mg/L	0.000103	0.000103	0.0000002	Diff <2x LOR	----
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.0149	0.0152	1.73%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.000595	0.000592	0.556%	20%	----
		Nickel, total	7440-02-0	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Total Metals (QC Lot: 1961311) - continued											
WT2508903-001	Anonymous	Potassium, total	7440-09-7	E420	0.050	mg/L	2.80	2.86	2.03%	20%	----
		Selenium, total	7782-49-2	E420	0.000050	mg/L	0.000086	0.000100	0.000014	Diff <2x LOR	----
		Silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Tin, total	7440-31-5	E420	0.00010	mg/L	0.00011	<0.00010	0.000007	Diff <2x LOR	----
		Titanium, total	7440-32-6	E420	0.00030	mg/L	0.00180	0.00177	0.00003	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0030	mg/L	<0.0030	<0.0030	0	Diff <2x LOR	----
Total Metals (QC Lot: 1962283)											
WT2508732-022	Anonymous	Mercury, total	7439-97-6	E508	0.0000050	mg/L	0.0000201	0.0000197	0.0000004	Diff <2x LOR	----
Speciated Metals (QC Lot: 1960843)											
HA2501098-001	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	0.00069	0.00057	0.00012	Diff <2x LOR	----
Aggregate Organics (QC Lot: 1961581)											
WT2506992-001	Anonymous	Phenols, total (4AAP)	----	E562	0.0010	mg/L	0.0011	0.0012	0.00005	Diff <2x LOR	----
Aggregate Organics (QC Lot: 1962131)											
WT2508799-013	Anonymous	Biochemical oxygen demand [BOD]	----	E550	3.0	mg/L	<3.0	<3.0	0.0%	30%	----
Aggregate Organics (QC Lot: 1962140)											
WT2508842-001	Anonymous	Carbonaceous biochemical oxygen demand [CBOD]	----	E555	2.0	mg/L	<2.0	<2.0	0.0%	30%	----
Volatile Organic Compounds (QC Lot: 1963429)											
WT2508847-002	Anonymous	Benzene	71-43-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroform	67-66-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloromethane	75-09-2	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Styrene	100-42-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethylene	127-18-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Toluene	108-88-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethylene	79-01-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611D	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Xylene, o-	95-47-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Nonylphenols (QC Lot: 1961556)											
WT2508772-001	Anonymous	Nonylphenol diethoxylate [NP2EO]	20427-84-3	E749B	0.10	µg/L	<0.10	<0.10	0	Diff <2x LOR	----
		Nonylphenol monoethoxylate [NP1EO]	27986-36-3	E749B	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
Nonylphenols (QC Lot: 1961557)											
WT2508772-001	Anonymous	Nonylphenol [NP]	84852-15-3	E749A	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----

Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 1963546)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Anions and Nutrients (QCLot: 1961579)						
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 1961580)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 1963512)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 1963513)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Cyanides (QCLot: 1961733)						
Cyanide, strong acid dissociable (Total)	----	E333	0.002	mg/L	<0.0020	----
Inorganics (QCLot: 1961536)						
Chlorine, total	7782-50-5	E326	0.05	mg/L	<0.050	----
Microbiological Tests (QCLot: 1960978)						
Coliforms, Escherichia coli [E. coli]	----	E012A.EC	1	CFU/100mL	<1	----
Total Metals (QCLot: 1961311)						
Aluminum, total	7429-90-5	E420	0.003	mg/L	<0.0030	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	<0.00010	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	<0.00010	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	<0.0000050	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	<0.00050	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	<0.00010	----
Copper, total	7440-50-8	E420	0.0005	mg/L	<0.00050	----
Lead, total	7439-92-1	E420	0.00005	mg/L	<0.000050	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	<0.00010	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	<0.000050	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	<0.00050	----
Potassium, total	7440-09-7	E420	0.05	mg/L	<0.050	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	<0.000050	----
Silver, total	7440-22-4	E420	0.00001	mg/L	<0.000010	----
Tin, total	7440-31-5	E420	0.0001	mg/L	<0.00010	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	<0.00030	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1961311) - continued						
Zinc, total	7440-66-6	E420	0.003	mg/L	<0.0030	----
Total Metals (QCLot: 1962283)						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
Speciated Metals (QCLot: 1960843)						
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	<0.00050	----
Aggregate Organics (QCLot: 1961581)						
Phenols, total (4AAP)	----	E562	0.001	mg/L	<0.0010	----
Aggregate Organics (QCLot: 1962131)						
Biochemical oxygen demand [BOD]	----	E550	2	mg/L	<2.0	----
Aggregate Organics (QCLot: 1962140)						
Carbonaceous biochemical oxygen demand [CBOD]	----	E555	2	mg/L	<2.0	----
Aggregate Organics (QCLot: 1966593)						
Oil & grease (gravimetric)	----	E567	5	mg/L	<5.0	----
Aggregate Organics (QCLot: 1966594)						
Oil & grease, mineral (gravimetric)	----	E567SG	5	mg/L	<5.0	----
Volatile Organic Compounds (QCLot: 1963429)						
Benzene	71-43-2	E611D	0.5	µg/L	<0.50	----
Chloroform	67-66-3	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	<0.50	----
Dichloromethane	75-09-2	E611D	1	µg/L	<1.0	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	<0.30	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	<0.50	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	----
Styrene	100-42-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	<0.50	----
Toluene	108-88-3	E611D	0.5	µg/L	<0.50	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	<0.50	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	<0.40	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	<0.30	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1966507)						
Acenaphthene	83-32-9	E641A	0.01	µg/L	<0.010	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	<0.010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 1966507) - continued						
Anthracene	120-12-7	E641A	0.01	µg/L	<0.010	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	<0.010	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	<0.0050	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	<0.010	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	<0.010	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	<0.010	----
Chrysene	218-01-9	E641A	0.01	µg/L	<0.010	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	<0.0050	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	<0.010	----
Fluorene	86-73-7	E641A	0.01	µg/L	<0.010	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	<0.010	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	<0.010	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	<0.010	----
Naphthalene	91-20-3	E641A	0.05	µg/L	<0.050	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	<0.020	----
Pyrene	129-00-0	E641A	0.01	µg/L	<0.010	----
Phthalate Esters (QCLot: 1967392)						
bis(2-Ethylhexyl) phthalate [DEHP]	117-81-7	E625A	0.6	µg/L	<0.60	----
Di-n-butyl phthalate	84-74-2	E625A	1	µg/L	<1.0	----
Nonylphenols (QCLot: 1961556)						
Nonylphenol diethoxylate [NP2EO]	20427-84-3	E749B	0.1	µg/L	<0.10	----
Nonylphenol monoethoxylate [NP1EO]	27986-36-3	E749B	0.4	µg/L	<0.40	----
Nonylphenols (QCLot: 1961557)						
Nonylphenol [NP]	84852-15-3	E749A	0.4	µg/L	<0.40	----
Polychlorinated Biphenyls (QCLot: 1969598)						
Aroclor 1016	12674-11-2	E687	0.02	µg/L	<0.020	----
Aroclor 1221	11104-28-2	E687	0.02	µg/L	<0.020	----
Aroclor 1232	11141-16-5	E687	0.02	µg/L	<0.020	----
Aroclor 1242	53469-21-9	E687	0.02	µg/L	<0.020	----
Aroclor 1248	12672-29-6	E687	0.02	µg/L	<0.020	----
Aroclor 1254	11097-69-1	E687	0.02	µg/L	<0.020	----
Aroclor 1260	11096-82-5	E687	0.02	µg/L	<0.020	----
Aroclor 1262	37324-23-5	E687	0.02	µg/L	<0.020	----
Aroclor 1268	11100-14-4	E687	0.02	µg/L	<0.020	----

Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 1963517)									
pH	----	E108	----	pH units	7 pH units	100	98.0	102	----
Physical Tests (QCLot: 1963546)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	98.0	85.0	115	----
Anions and Nutrients (QCLot: 1961579)									
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	4 mg/L	103	75.0	125	----
Anions and Nutrients (QCLot: 1961580)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.333 mg/L	100	80.0	120	----
Anions and Nutrients (QCLot: 1963512)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	99.7	90.0	110	----
Anions and Nutrients (QCLot: 1963513)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	98.5	90.0	110	----
Cyanides (QCLot: 1961733)									
Cyanide, strong acid dissociable (Total)	----	E333	0.002	mg/L	0.25 mg/L	99.2	80.0	120	----
Inorganics (QCLot: 1961536)									
Chlorine, total	7782-50-5	E326	0.05	mg/L	0.272 mg/L	103	75.0	125	----
Total Metals (QCLot: 1961311)									
Aluminum, total	7429-90-5	E420	0.003	mg/L	0.1 mg/L	101	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	0.05 mg/L	104	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	0.05 mg/L	108	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.005 mg/L	102	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.012 mg/L	102	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.012 mg/L	102	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.012 mg/L	102	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.025 mg/L	101	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.012 mg/L	101	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.012 mg/L	99.5	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.025 mg/L	102	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	2.5 mg/L	98.9	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	0.05 mg/L	105	80.0	120	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report: Spike: Target Concentration	Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High	Qualifier
Total Metals (QCLot: 1961311) - continued									
Silver, total	7440-22-4	E420	0.00001	mg/L	0.005 mg/L	97.8	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.025 mg/L	104	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.012 mg/L	98.9	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.025 mg/L	102	80.0	120	----
Total Metals (QCLot: 1962283)									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	99.2	80.0	120	----
Speciated Metals (QCLot: 1960843)									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	0.025 mg/L	98.8	80.0	120	----
Aggregate Organics (QCLot: 1961581)									
Phenols, total (4AAP)	----	E562	0.001	mg/L	0.02 mg/L	106	85.0	115	----
Aggregate Organics (QCLot: 1962131)									
Biochemical oxygen demand [BOD]	----	E550	2	mg/L	198 mg/L	103	85.0	115	----
Aggregate Organics (QCLot: 1962140)									
Carbonaceous biochemical oxygen demand [CBOD]	----	E555	2	mg/L	198 mg/L	104	85.0	115	----
Aggregate Organics (QCLot: 1966593)									
Oil & grease (gravimetric)	----	E567	5	mg/L	200 mg/L	93.0	70.0	130	----
Aggregate Organics (QCLot: 1966594)									
Oil & grease, mineral (gravimetric)	----	E567SG	5	mg/L	100 mg/L	85.9	70.0	130	----
Volatile Organic Compounds (QCLot: 1963429)									
Benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	99.3	70.0	130	----
Chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	100	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	98.2	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	99.5	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	96.7	70.0	130	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	97.4	70.0	130	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	90.4	70.0	130	----
Styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	98.6	70.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	98.0	70.0	130	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report: Spike: Target Concentration	Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High	Qualifier
Volatile Organic Compounds (QCLot: 1963429) - continued									
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	97.8	70.0	130	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	98.8	70.0	130	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1966507)									
Acenaphthene	83-32-9	E641A	0.01	µg/L	0.526 µg/L	98.0	50.0	140	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	0.526 µg/L	92.0	50.0	140	----
Anthracene	120-12-7	E641A	0.01	µg/L	0.526 µg/L	87.3	50.0	140	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	0.526 µg/L	120	50.0	140	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	0.526 µg/L	93.5	50.0	140	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	0.526 µg/L	93.0	50.0	140	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	0.526 µg/L	116	50.0	140	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	0.526 µg/L	107	50.0	140	----
Chrysene	218-01-9	E641A	0.01	µg/L	0.526 µg/L	113	50.0	140	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	0.526 µg/L	98.2	50.0	140	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	0.526 µg/L	113	50.0	140	----
Fluorene	86-73-7	E641A	0.01	µg/L	0.526 µg/L	105	50.0	140	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	0.526 µg/L	112	50.0	140	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	0.526 µg/L	97.4	50.0	140	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	0.526 µg/L	98.9	50.0	140	----
Naphthalene	91-20-3	E641A	0.05	µg/L	0.526 µg/L	93.0	50.0	140	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	0.526 µg/L	111	50.0	140	----
Pyrene	129-00-0	E641A	0.01	µg/L	0.526 µg/L	106	50.0	140	----
Phthalate Esters (QCLot: 1967392)									
bis(2-Ethylhexyl) phthalate [DEHP]	117-81-7	E625A	0.6	µg/L	33.7 µg/L	101	50.0	140	----
Di-n-butyl phthalate	84-74-2	E625A	1	µg/L	33.7 µg/L	105	50.0	140	----
Nonylphenols (QCLot: 1961556)									
Nonylphenol diethoxylate [NP2EO]	20427-84-3	E749B	0.1	µg/L	2 µg/L	91.7	60.0	140	----
Nonylphenol monoethoxylate [NP1EO]	27986-36-3	E749B	0.4	µg/L	10 µg/L	84.1	60.0	140	----
Nonylphenols (QCLot: 1961557)									
Nonylphenol [NP]	84852-15-3	E749A	0.4	µg/L	10 µg/L	89.7	60.0	140	----
Polychlorinated Biphenyls (QCLot: 1969598)									
Aroclor 1016	12674-11-2	E687	0.02	µg/L	0.2 µg/L	105	60.0	140	----
Aroclor 1221	11104-28-2	E687	0.02	µg/L	0.2 µg/L	105	60.0	140	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Polychlorinated Biphenyls (QCLot: 1969598) - continued									
Aroclor 1232	11141-16-5	E687	0.02	µg/L	0.2 µg/L	105	60.0	140	----
Aroclor 1242	53469-21-9	E687	0.02	µg/L	0.2 µg/L	105	60.0	140	----
Aroclor 1248	12672-29-6	E687	0.02	µg/L	0.2 µg/L	84.4	60.0	140	----
Aroclor 1254	11097-69-1	E687	0.02	µg/L	0.2 µg/L	99.3	60.0	140	----
Aroclor 1260	11096-82-5	E687	0.02	µg/L	0.2 µg/L	113	60.0	140	----
Aroclor 1262	37324-23-5	E687	0.02	µg/L	0.2 µg/L	113	60.0	140	----
Aroclor 1268	11100-14-4	E687	0.02	µg/L	0.2 µg/L	113	60.0	140	----

Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 1961579)										
WT2508573-001	Anonymous	Kjeldahl nitrogen, total [TKN]	----	E318	2.98 mg/L	2.5 mg/L	119	70.0	130	----
Anions and Nutrients (QCLot: 1961580)										
WT2506992-002	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0996 mg/L	0.1 mg/L	99.6	70.0	130	----
Anions and Nutrients (QCLot: 1963512)										
WT2508816-001	Anonymous	Fluoride	16984-48-8	E235.F	10.1 mg/L	10 mg/L	101	75.0	125	----
Anions and Nutrients (QCLot: 1963513)										
WT2508816-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	961 mg/L	1000 mg/L	96.1	75.0	125	----
Cyanides (QCLot: 1961733)										
WT2508812-001	Anonymous	Cyanide, strong acid dissociable (Total)	----	E333	ND mg/L	----	ND	75.0	125	----
Inorganics (QCLot: 1961536)										
WT2508827-001	BH25-2	Chlorine, total	7782-50-5	E326	0.240 mg/L	0.272 mg/L	88.2	70.0	130	----
Total Metals (QCLot: 1961311)										
WT2508903-002	Anonymous	Aluminum, total	7429-90-5	E420	0.110 mg/L	0.1 mg/L	110	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0500 mg/L	0.05 mg/L	100	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0552 mg/L	0.05 mg/L	110	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00496 mg/L	0.005 mg/L	99.2	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0133 mg/L	0.012 mg/L	106	70.0	130	----
		Cobalt, total	7440-48-4	E420	0.0129 mg/L	0.012 mg/L	103	70.0	130	----
		Copper, total	7440-50-8	E420	0.0123 mg/L	0.012 mg/L	98.7	70.0	130	----
		Lead, total	7439-92-1	E420	0.0240 mg/L	0.025 mg/L	96.0	70.0	130	----
		Manganese, total	7439-96-5	E420	ND mg/L	----	ND	70.0	130	----
		Molybdenum, total	7439-98-7	E420	0.0129 mg/L	0.012 mg/L	103	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0252 mg/L	0.025 mg/L	101	70.0	130	----
		Potassium, total	7440-09-7	E420	ND mg/L	----	ND	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0516 mg/L	0.05 mg/L	103	70.0	130	----
		Silver, total	7440-22-4	E420	0.00455 mg/L	0.005 mg/L	91.0	70.0	130	----
		Tin, total	7440-31-5	E420	0.0255 mg/L	0.025 mg/L	102	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0141 mg/L	0.012 mg/L	112	70.0	130	----
		Zinc, total	7440-66-6	E420	0.0237 mg/L	0.025 mg/L	94.8	70.0	130	----
Total Metals (QCLot: 1962283)										
WT2508747-001	Anonymous	Mercury, total	7439-97-6	E508	0.0000927 mg/L	0 mg/L	92.7	70.0	130	----
Speciated Metals (QCLot: 1960843)										
HA2501098-001	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0414 mg/L	0.04 mg/L	104	70.0	130	----
Aggregate Organics (QCLot: 1961581)										

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Aggregate Organics (QCLot: 1961581) - continued										
WT2506992-001	Anonymous	Phenols, total (4AAP)	----	E562	0.0232 mg/L	0.02 mg/L	116	75.0	125	----
Volatile Organic Compounds (QCLot: 1963429)										
WT2508847-002	Anonymous	Benzene	71-43-2	E611D	99.4 µg/L	100 µg/L	99.4	60.0	140	----
		Chloroform	67-66-3	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	100 µg/L	100 µg/L	100	60.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	95.8 µg/L	100 µg/L	95.8	60.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		Dichloromethane	75-09-2	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	97.8 µg/L	100 µg/L	97.8	60.0	140	----
		Ethylbenzene	100-41-4	E611D	93.2 µg/L	100 µg/L	93.2	60.0	140	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		Styrene	100-42-5	E611D	96.8 µg/L	100 µg/L	96.8	60.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	107 µg/L	100 µg/L	107	60.0	140	----
		Tetrachloroethylene	127-18-4	E611D	97.0 µg/L	100 µg/L	97.0	60.0	140	----
		Toluene	108-88-3	E611D	94.9 µg/L	100 µg/L	94.9	60.0	140	----
		Trichloroethylene	79-01-6	E611D	103 µg/L	100 µg/L	103	60.0	140	----
		Xylene, m+p-	179601-23-1	E611D	190 µg/L	200 µg/L	94.9	60.0	140	----
		Xylene, o-	95-47-6	E611D	96.2 µg/L	100 µg/L	96.2	60.0	140	----
Nonylphenols (QCLot: 1961556)										
WT2508772-001	Anonymous	Nonylphenol diethoxylate [NP2EO]	20427-84-3	E749B	2.01 µg/L	2 µg/L	101	50.0	140	----
		Nonylphenol monoethoxylate [NP1EO]	27986-36-3	E749B	8.70 µg/L	10 µg/L	87.0	50.0	140	----
Nonylphenols (QCLot: 1961557)										
WT2508772-001	Anonymous	Nonylphenol [NP]	84852-15-3	E749A	8.35 µg/L	10 µg/L	83.5	50.0	140	----

BR-320 B-379 (N-821
OGG-386 N-726
OS-013 L-243
VIN-085 MM-803
GC-259 SC-213

Chain of Custody (COC) / Analytical Request Form

COC Number: 23 - 1123854

Page 1 of 1

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

Environmental Division
Waterloo
Work Order Reference
WT2508827

Telephone : +1 519 886 6910

Report To	Contact and company name below will appear on the final report
Company:	EXP Services INC
Contact:	Francois Charbonneau
Phone:	905-793-9800
	Company address below will appear on the final report
Street:	1595 Clark Blvd
City/Province:	Brampton ON
Postal Code:	L6T 4V1
Invoice To	Same as Report To ☐ YES ☑ NO
	Copy of Invoice with Report ☐ YES ☑ NO
Company:	
Contact:	

Project Information

ALS Client Code / QUOTE #:	
Job / Project #:	1470 & 1480 Fonthill Dr - GTR-22022660-A0
PO / AFE:	
LSD:	

Reports / Recipients

Select Report Format: ☑ PDF ☐ EXCEL ☐ EDD (DIGITAL)
Merge QC/QCI Reports with COA ☐ YES ☐ NO ☐ N/A
☑ Compare Results to Criteria on Report - provide details below if box checked
Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax	Francois.Charbonneau@exp.com
Email 2	Ekam.Lidder@exp.com
Email 3	Edwin.Chessell@exp.com

Invoice Recipients

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax	ap@exp.com
Email 2	

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

Turnaround Time (TAT) Requested

- ☑ Routine [R] if received by 3pm M-F - no surcharges apply
- ☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum
- ☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum
- ☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum
- ☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum
- ☐ Same day [E2] if received by 10am M-S - 200% rush surcharge.

Additional fees may apply to rush requests on weekends, st

Date and Time Required for all E&P TATs:

For all tests with rush TATs requested, please contact

ALS Lab Work Order # (ALS use only): WT2508827

ALS Contact: | Sampler:

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	Regulated Storm Sewer	Mississauga Storm	Peel Sanitary bylaw	SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	BH25-2	21-Apr-25	11:50	GW	2	✓		✓			

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☑ NO
Are samples for human consumption/ use? ☐ YES ☑ NO

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

Compare to ~~Peel~~ Storm and ~~Storm~~ Peel Sanitary bylaw Mississauga

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☐ ICE ☑ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED
Cooler Custody Seals Intact: ☑ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
5.3				9.1			

SHIPMENT RELEASE (client use)

Released by:	Date:	Time:
	21 Apr 25	17:10

INITIAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:
AM	04/22/25	9:00

FINAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:
RJ	Apr 22/25	1145

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

JAN 2023 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.

Your P.O. #: ENV-BRM
Your Project #: GTR-22022660-A0
Site#: 1970 and 1980 Fowler Dr, ON
Site Location: 1970 and 1980 Fowler Dr, ON
Your C.O.C. #: 943541-01-01

Attention: Amar Neku

exp Services Inc
1595 Clark Blvd
Brampton, ON
CANADA L6T 4V1

Report Date: 2023/07/27
Report #: R7737102
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C3L3454
Received: 2023/07/18, 20:06

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Biochemical Oxygen Demand (BOD)	1	2023/07/21	2023/07/26	CAM SOP-00427	SM 23 5210B m
Total Chlorine	1	2023/07/19	2023/07/19	CAM SOP 00425	SM 23 4500-CL G m
Chromium (VI) in Water	1	N/A	2023/07/19	CAM SOP-00436	EPA 7199 m
Total Cyanide	1	2023/07/19	2023/07/19	CAM SOP-00457	OMOE E3015 5 m
Mercury in Water by CVAA	1	2023/07/19	2023/07/20	CAM SOP-00453	EPA 7470A m
Total Metals Analysis by ICPMS	1	2023/07/20	2023/07/20	CAM SOP-00447	EPA 6020B m
E.coli, (CFU/100mL)	1	N/A	2023/07/19	CAM SOP-00552	MECP E3371
PAH Compounds in Water by GC/MS (SIM)	1	2023/07/19	2023/07/22	CAM SOP-00318	EPA 8270E
Polychlorinated Biphenyl in Water	1	2023/07/21	2023/07/22	CAM SOP-00309	EPA 8082A m
pH	1	2023/07/19	2023/07/19	CAM SOP-00413	SM 4500H+ B m
Phenols (4AAP)	1	N/A	2023/07/21	CAM SOP-00444	OMOE E3179 m
Total PAHs: Barrie/Mississauga Sewer Use (1)	1	N/A	2023/07/26	CAM SOP - 00301	
Total Suspended Solids	1	2023/07/20	2023/07/21	CAM SOP-00428	SM 23 2540D m
Volatile Organic Compounds in Water	1	N/A	2023/07/21	CAM SOP-00228	EPA 8260D

Remarks:

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

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Your P.O. #: ENV-BRM
Your Project #: GTR-22022660-A0
Site#: 1970 and 1980 Fowler Dr, ON
Site Location: 1970 and 1980 Fowler Dr, ON
Your C.O.C. #: 943541-01-01

Attention: Amar Neku

exp Services Inc
1595 Clark Blvd
Brampton, ON
CANADA L6T 4V1

Report Date: 2023/07/27
Report #: R7737102
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C3L3454
Received: 2023/07/18, 20:06

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) Total PAHs include only those PAHs specified in the sewer use by-by-law.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Patricia Legette, Project Manager
Email: Patricia.Legette@bureauveritas.com
Phone# (905)817-5799

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

Bureau Veritas Job #: C3L3454
Report Date: 2023/07/27

exp Services Inc
Client Project #: GTR-22022660-A0
Site Location: 1970 and 1980 Fowler Dr, ON
Your P.O. #: ENV-BRM
Sampler Initials: RA

MISSISSAUGA STORM SEWER BYLAW (46-2022)

Bureau Veritas ID				WKS336			WKS336		
Sampling Date				2023/07/18 10:50			2023/07/18 10:50		
COC Number				943541-01-01			943541-01-01		
	UNITS	Criteria	Criteria-2	BH/MW 1D	RDL	QC Batch	BH/MW 1D Lab-Dup	RDL	QC Batch
Inorganics									
Total BOD	mg/L	-	15	ND	2	8803235			
Total Chlorine	mg/L	-	1.0	ND	0.1	8799634	ND	0.1	8799634
pH	pH	5.5:10.0	6:9	7.66		8798135			
Phenols-4AAP	mg/L	1	0.008	ND	0.0010	8805683			
Total Suspended Solids	mg/L	350	15	**55**	10	8801798	**54**	10	8801798
Total Cyanide (CN)	mg/L	2	0.02	ND	0.0050	8797868			
Metals									
Chromium (VI)	ug/L	-	40	ND	0.50	8799161			
Mercury (Hg)	mg/L	0.01	0.0004	ND	0.00010	8798390			
Total Aluminum (Al)	ug/L	50000	1000	**2200**	4.9	8800700	**2200**	4.9	8800700
Total Arsenic (As)	ug/L	1000	20	1.1	1.0	8800700	1.0	1.0	8800700
Total Cadmium (Cd)	ug/L	700	8	ND	0.090	8800700	ND	0.090	8800700
Total Chromium (Cr)	ug/L	5000	80	ND	5.0	8800700	ND	5.0	8800700
Total Copper (Cu)	ug/L	3000	40	6.5	0.90	8800700	6.1	0.90	8800700
Total Lead (Pb)	ug/L	3000	120	0.50	0.50	8800700	0.56	0.50	8800700
Total Manganese (Mn)	ug/L	5000	2000	270	2.0	8800700	290	2.0	8800700
Total Nickel (Ni)	ug/L	3000	80	4.0	1.0	8800700	4.2	1.0	8800700
Total Phosphorus (P)	ug/L	10000	400	100	100	8800700	ND	100	8800700
Total Selenium (Se)	ug/L	1000	20	ND	2.0	8800700	ND	2.0	8800700
Total Silver (Ag)	ug/L	5000	120	0.30	0.090	8800700	0.31	0.090	8800700
Total Zinc (Zn)	ug/L	3000	200	8.2	5.0	8800700	8.3	5.0	8800700
Calculated Parameters									
Total PAHs	ug/L	-	2	ND	0.28	8797596			

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

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

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

Bureau Veritas Job #: C3L3454
Report Date: 2023/07/27

exp Services Inc
Client Project #: GTR-22022660-A0
Site Location: 1970 and 1980 Fowler Dr, ON
Your P.O. #: ENV-BRM
Sampler Initials: RA

MISSISSAUGA STORM SEWER BYLAW (46-2022)

Bureau Veritas ID				WKS336			WKS336		
Sampling Date				2023/07/18 10:50			2023/07/18 10:50		
COC Number				943541-01-01			943541-01-01		
	UNITS	Criteria	Criteria-2	BH/MW 1D	RDL	QC Batch	BH/MW 1D Lab-Dup	RDL	QC Batch
Polyaromatic Hydrocarbons									
Acenaphthene	ug/L	-	-	ND	0.050	8798924			
Acenaphthylene	ug/L	-	-	ND	0.050	8798924			
Anthracene	ug/L	-	-	ND	0.050	8798924			
Benzo(a)anthracene	ug/L	-	-	ND	0.050	8798924			
Benzo(a)pyrene	ug/L	-	-	ND	0.0090	8798924			
Benzo(g,h,i)perylene	ug/L	-	-	ND	0.050	8798924			
Benzo(k)fluoranthene	ug/L	-	-	ND	0.050	8798924			
Chrysene	ug/L	-	-	ND	0.050	8798924			
Dibenzo(a,h)anthracene	ug/L	-	-	ND	0.050	8798924			
Fluoranthene	ug/L	-	-	ND	0.050	8798924			
Fluorene	ug/L	-	-	ND	0.050	8798924			
Indeno(1,2,3-cd)pyrene	ug/L	-	-	ND	0.050	8798924			
1-Methylnaphthalene	ug/L	-	-	ND (1)	0.20	8798924			
2-Methylnaphthalene	ug/L	-	-	ND	0.050	8798924			
Naphthalene	ug/L	-	-	ND	0.050	8798924			
Phenanthrene	ug/L	-	-	ND	0.030	8798924			
Pyrene	ug/L	-	-	ND	0.050	8798924			
Benzo(b)fluoranthene	ug/L	-	-	ND	0.030	8798924			
Volatile Organics									
Benzene	ug/L	10	2	ND	0.20	8800790			
1,2-Dichlorobenzene	ug/L	50	5.6	ND	0.40	8800790			
1,4-Dichlorobenzene	ug/L	80	6.8	ND	0.40	8800790			
Ethylbenzene	ug/L	160	2	ND	0.20	8800790			
Methylene Chloride(Dichloromethane)	ug/L	2000	5.2	ND	2.0	8800790			

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

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
Criteria: The Regional Municipality of Peel Sanitary Sewer Discharge.
By-Law Number 53-2010.
Criteria-2: City of Mississauga Storm Sewer Use By-Law 0046-2022
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.
(1) Detection Limit was raised due to matrix interferences.

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Bureau Veritas Job #: C3L3454
Report Date: 2023/07/27

exp Services Inc
Client Project #: GTR-22022660-A0
Site Location: 1970 and 1980 Fowler Dr, ON
Your P.O. #: ENV-BRM
Sampler Initials: RA

MISSISSAUGA STORM SEWER BYLAW (46-2022)

Bureau Veritas ID				WKS336			WKS336		
Sampling Date				2023/07/18 10:50			2023/07/18 10:50		
COC Number				943541-01-01			943541-01-01		
	UNITS	Criteria	Criteria-2	BH/MW 1D	RDL	QC Batch	BH/MW 1D Lab-Dup	RDL	QC Batch
1,1,1,2-Tetrachloroethane	ug/L	-	-	ND	0.50	8800790			
1,1,2,2-Tetrachloroethane	ug/L	1400	17	ND	0.40	8800790			
Tetrachloroethylene	ug/L	1000	4.4	ND	0.20	8800790			
Toluene	ug/L	270	2	ND	0.20	8800790			
Trichloroethylene	ug/L	400	7.6	ND	0.20	8800790			
p+m-Xylene	ug/L	-	-	ND	0.20	8800790			
o-Xylene	ug/L	-	-	ND	0.20	8800790			
Total Xylenes	ug/L	1400	4.4	ND	0.20	8800790			
PCBs									
Total PCB	ug/L	1	0.4	ND	0.05	8805142			
Microbiological									
Escherichia coli	CFU/100mL	-	200	<10	10	8799258			
Surrogate Recovery (%)									
D10-Anthracene	%	-	-	114		8798924			
D14-Terphenyl (FS)	%	-	-	90		8798924			
D8-Acenaphthylene	%	-	-	97		8798924			
Decachlorobiphenyl	%	-	-	97		8805142			
4-Bromofluorobenzene	%	-	-	100		8800790			
D4-1,2-Dichloroethane	%	-	-	115		8800790			
D8-Toluene	%	-	-	94		8800790			

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

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

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Bureau Veritas Job #: C3L3454
Report Date: 2023/07/27

exp Services Inc
Client Project #: GTR-22022660-A0
Site Location: 1970 and 1980 Fowler Dr, ON
Your P.O. #: ENV-BRM
Sampler Initials: RA

TEST SUMMARY

Bureau Veritas ID: WKS336
Sample ID: BH/MW 1D
Matrix: Water

Collected: 2023/07/18
Shipped:
Received: 2023/07/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Biochemical Oxygen Demand (BOD)	DO	8803235	2023/07/21	2023/07/26	Nusrat Naz
Total Chlorine	SPEC	8799634	2023/07/19	2023/07/19	Leily Karimi
Chromium (VI) in Water	IC	8799161	N/A	2023/07/19	Theodora Luck
Total Cyanide	SKAL/CN	8797868	2023/07/19	2023/07/19	Prgya Panchal
Mercury in Water by CVAA	CV/AA	8798390	2023/07/19	2023/07/20	Thuy Linh Nguyen
Total Metals Analysis by ICPMS	ICP/MS	8800700	2023/07/20	2023/07/20	Nan Raykha
E.coli, (CFU/100mL)	PL	8799258	N/A	2023/07/19	Farhana Rahman
PAH Compounds in Water by GC/MS (SIM)	GC/MS	8798924	2023/07/19	2023/07/22	Jonghan Yoon
Polychlorinated Biphenyl in Water	GC/ECD	8805142	2023/07/21	2023/07/22	Farag Mansour
pH	AT	8798135	2023/07/19	2023/07/19	Kien Tran
Phenols (4AAP)	TECH/PHEN	8805683	N/A	2023/07/21	Mandeep Kaur
Total PAHs: Barrie/Mississauga Sewer Use	CALC	8797596	N/A	2023/07/26	Automated Statchk
Total Suspended Solids	BAL	8801798	2023/07/20	2023/07/21	Razieh Tabesh
Volatile Organic Compounds in Water	GC/MS	8800790	N/A	2023/07/21	Skylar Canning

Bureau Veritas ID: WKS336 Dup
Sample ID: BH/MW 1D
Matrix: Water

Collected: 2023/07/18
Shipped:
Received: 2023/07/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Chlorine	SPEC	8799634	2023/07/19	2023/07/19	Leily Karimi
Total Metals Analysis by ICPMS	ICP/MS	8800700	2023/07/20	2023/07/20	Nan Raykha
Total Suspended Solids	BAL	8801798	2023/07/20	2023/07/21	Razieh Tabesh

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Bureau Veritas Job #: C3L3454
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exp Services Inc
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Site Location: 1970 and 1980 Fowler Dr, ON
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GENERAL COMMENTS

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

Package 1	15.0°C

Revised Report (2023/07/27): Peel Sanitary Sewer Bylaw criteria policy has been included in this CofA as per Amar Neku's request.

Results relate only to the items tested.

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Bureau Veritas Job #: C3L3454
Report Date: 2023/07/27

QUALITY ASSURANCE REPORT

exp Services Inc
Client Project #: GTR-22022660-A0
Site Location: 1970 and 1980 Fowler Dr, ON
Your P.O. #: ENV-BRM
Sampler Initials: RA

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
8798924	D10-Anthracene	2023/07/21	110	50 - 130	103	50 - 130	117	%				
8798924	D14-Terphenyl (FS)	2023/07/21	95	50 - 130	93	50 - 130	103	%				
8798924	D8-Acenaphthylene	2023/07/21	98	50 - 130	94	50 - 130	100	%				
8800790	4-Bromofluorobenzene	2023/07/21	102	70 - 130	101	70 - 130	100	%				
8800790	D4-1,2-Dichloroethane	2023/07/21	110	70 - 130	107	70 - 130	109	%				
8800790	D8-Toluene	2023/07/21	105	70 - 130	106	70 - 130	96	%				
8805142	Decachlorobiphenyl	2023/07/21	99	60 - 130	90	60 - 130	90	%				
8797868	Total Cyanide (CN)	2023/07/19	99	80 - 120	100	80 - 120	ND, RDL=0.0050	mg/L	NC	20		
8798135	pH	2023/07/19			102	98 - 103			0.19	N/A		
8798390	Mercury (Hg)	2023/07/20	100	75 - 125	102	80 - 120	ND, RDL=0.00010	mg/L	NC	20		
8798924	1-Methylnaphthalene	2023/07/21	120	50 - 130	114	50 - 130	ND, RDL=0.050	ug/L	NC	30		
8798924	2-Methylnaphthalene	2023/07/21	107	50 - 130	101	50 - 130	ND, RDL=0.050	ug/L	NC	30		
8798924	Acenaphthene	2023/07/21	112	50 - 130	109	50 - 130	ND, RDL=0.050	ug/L	NC	30		
8798924	Acenaphthylene	2023/07/21	111	50 - 130	106	50 - 130	ND, RDL=0.050	ug/L	NC	30		
8798924	Anthracene	2023/07/21	116	50 - 130	110	50 - 130	ND, RDL=0.050	ug/L	NC	30		
8798924	Benzo(a)anthracene	2023/07/21	111	50 - 130	96	50 - 130	ND, RDL=0.050	ug/L	NC	30		
8798924	Benzo(a)pyrene	2023/07/21	104	50 - 130	85	50 - 130	ND, RDL=0.0090	ug/L	25	30		
8798924	Benzo(b)fluoranthene	2023/07/21	106	50 - 130	89	50 - 130	ND, RDL=0.030	ug/L				
8798924	Benzo(g,h,i)perylene	2023/07/21	118	50 - 130	92	50 - 130	ND, RDL=0.050	ug/L	NC	30		
8798924	Benzo(k)fluoranthene	2023/07/21	103	50 - 130	85	50 - 130	ND, RDL=0.050	ug/L	NC	30		

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
8798924	Chrysene	2023/07/21	112	50 - 130	92	50 - 130	ND, RDL=0.050	ug/L	NC	30		
8798924	Dibenzo(a,h)anthracene	2023/07/21	99	50 - 130	81	50 - 130	ND, RDL=0.050	ug/L	NC	30		
8798924	Fluoranthene	2023/07/21	118	50 - 130	114	50 - 130	ND, RDL=0.050	ug/L	NC	30		
8798924	Fluorene	2023/07/21	105	50 - 130	102	50 - 130	ND, RDL=0.050	ug/L	NC	30		
8798924	Indeno(1,2,3-cd)pyrene	2023/07/21	116	50 - 130	93	50 - 130	ND, RDL=0.050	ug/L	NC	30		
8798924	Naphthalene	2023/07/21	106	50 - 130	102	50 - 130	ND, RDL=0.050	ug/L	NC	30		
8798924	Phenanthrene	2023/07/21	111	50 - 130	106	50 - 130	ND, RDL=0.030	ug/L	29	30		
8798924	Pyrene	2023/07/21	116	50 - 130	108	50 - 130	ND, RDL=0.050	ug/L	NC	30		
8799161	Chromium (VI)	2023/07/19	102	80 - 120	102	80 - 120	ND, RDL=0.50	ug/L	NC	20		
8799634	Total Chlorine	2023/07/19	111	85 - 115	103	85 - 115	ND, RDL=0.1	mg/L	NC	25		
8800700	Total Aluminum (Al)	2023/07/20	NC	80 - 120	104	80 - 120	ND, RDL=4.9	ug/L	0.30	20		
8800700	Total Arsenic (As)	2023/07/20	107	80 - 120	104	80 - 120	ND, RDL=1.0	ug/L	5.2	20		
8800700	Total Cadmium (Cd)	2023/07/20	101	80 - 120	100	80 - 120	ND, RDL=0.090	ug/L	NC	20		
8800700	Total Chromium (Cr)	2023/07/20	108	80 - 120	100	80 - 120	ND, RDL=5.0	ug/L	NC	20		
8800700	Total Copper (Cu)	2023/07/20	115	80 - 120	102	80 - 120	ND, RDL=0.90	ug/L	6.4	20		
8800700	Total Lead (Pb)	2023/07/20	99	80 - 120	102	80 - 120	ND, RDL=0.50	ug/L	9.8	20		
8800700	Total Manganese (Mn)	2023/07/20	105	80 - 120	102	80 - 120	ND, RDL=2.0	ug/L	4.8	20		
8800700	Total Nickel (Ni)	2023/07/20	96	80 - 120	98	80 - 120	ND, RDL=1.0	ug/L	3.5	20		
8800700	Total Phosphorus (P)	2023/07/20	130 (1)	80 - 120	113	80 - 120	ND, RDL=100	ug/L	1.7	20		
8800700	Total Selenium (Se)	2023/07/20	105	80 - 120	108	80 - 120	ND, RDL=2.0	ug/L	NC	20		
8800700	Total Silver (Ag)	2023/07/20	97	80 - 120	98	80 - 120	ND, RDL=0.090	ug/L	2.3	20		
8800700	Total Zinc (Zn)	2023/07/20	97	80 - 120	106	80 - 120	ND, RDL=5.0	ug/L	1.3	20		

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
8800790	1,1,1,2-Tetrachloroethane	2023/07/21	111	70 - 130	113	70 - 130	ND, RDL=0.50	ug/L				
8800790	1,1,2,2-Tetrachloroethane	2023/07/21	113	70 - 130	111	70 - 130	ND, RDL=0.40	ug/L	NC	30		
8800790	1,2-Dichlorobenzene	2023/07/21	94	70 - 130	98	70 - 130	ND, RDL=0.40	ug/L	NC	30		
8800790	1,4-Dichlorobenzene	2023/07/21	109	70 - 130	116	70 - 130	ND, RDL=0.40	ug/L	NC	30		
8800790	Benzene	2023/07/21	94	70 - 130	97	70 - 130	ND, RDL=0.20	ug/L	NC	30		
8800790	Ethylbenzene	2023/07/21	82	70 - 130	88	70 - 130	ND, RDL=0.20	ug/L	NC	30		
8800790	Methylene Chloride(Dichloromethane)	2023/07/21	112	70 - 130	114	70 - 130	ND, RDL=2.0	ug/L	NC	30		
8800790	o-Xylene	2023/07/21	80	70 - 130	89	70 - 130	ND, RDL=0.20	ug/L	NC	30		
8800790	p+m-Xylene	2023/07/21	84	70 - 130	91	70 - 130	ND, RDL=0.20	ug/L	NC	30		
8800790	Tetrachloroethylene	2023/07/21	94	70 - 130	97	70 - 130	ND, RDL=0.20	ug/L	NC	30		
8800790	Toluene	2023/07/21	96	70 - 130	100	70 - 130	ND, RDL=0.20	ug/L	NC	30		
8800790	Total Xylenes	2023/07/21					ND, RDL=0.20	ug/L	NC	30		
8800790	Trichloroethylene	2023/07/21	103	70 - 130	106	70 - 130	ND, RDL=0.20	ug/L	NC	30		
8801798	Total Suspended Solids	2023/07/21			100	85 - 115	ND, RDL=10	mg/L	1.8	20		
8803235	Total BOD	2023/07/26					ND,RDL=2	mg/L	2.8	30	93	80 - 120
8805142	Total PCB	2023/07/21	104	60 - 130	91	60 - 130	ND, RDL=0.05	ug/L	NC	40		

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

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
8805683	Phenols-4AAP	2023/07/21	105	80 - 120	100	80 - 120	ND, RDL=0.0010	mg/L	NC	20		

N/A = Not Applicable

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

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

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

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

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

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

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

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

(1) Matrix Spike exceeds acceptance limits. Probable Matrix interference

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

Bureau Veritas Job #: C3L3454
Report Date: 2023/07/27

exp Services Inc
Client Project #: GTR-22022660-A0
Site Location: 1970 and 1980 Fowler Dr, ON
Your P.O. #: ENV-BRM
Sampler Initials: RA

VALIDATION SIGNATURE PAGE

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

Anastassia Hamanov, Scientific Specialist

Farhana Rahman, Senior Analyst

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by {0}, {1} responsible for {2} {3} laboratory operations.

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Page 1 of 1

CHAIN OF CUSTODY RECORD

18-Jul-23 20:06
Patricia Legette
C3L3454
SWP ENV-1180

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
Company Name:	#30554 exp Services Inc	Company Name:	EXP Services Inc.	Quotation #:	C31675 Stream 2
Attention:	Accounts Payable	Attention:	Amar Neku	P.O. #:	ENV-RRM
Address:	1595 Clark Blvd Brampton ON L6T 4V1	Address:	Jeffrey.Lean@exp.com	Project:	GTR-22022660-A0
Tel:	(905) 793-9800 Fax: (905) 793-0641	Tel:	Fax:	Project Name:	
Email:	AP@exp.com; Karen.Burke@exp.com	Email:	amar.neku@exp.com Ryan.Alexander@exp.com	Site #:	1970 and 1980 Fowler Dr, ON
				Sampled By:	RA

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

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

Other Regulations
- ☐ CCME ~~Sanitary Sewer Bylaw~~
- ☒ Storm Sewer Bylaw
- ☐ MISA Municipality Mississauga
- ☐ PWQO ☐ Reg 406 Table
- ☐ Other

Special Instructions

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

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	Mississauga Storm Sewer Bylaw (45-2022)	# of Bottles	Comments
1		BH\MW ID	23/07/18	10:50	GW	NO	X	15	Please include COC in final report
2									
3									
4									Ignore checked box for Sanitary Sewer by law
5									
6									
7									
8									
9									
10									

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

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

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

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
ROB RYAN ALEXANDER	23/07/18	20:00	SHAMIRA DAMJI	2023/07/18	20:06	

Laboratory Use Only

Time Sensitive	Temperature (°C) on Rece	Custody Seal Present	Yes	No
	15/15/15	Intact	✓	

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

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

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

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

White: Bureau Veritas Yellow: Client

Office

Bureau Veritas Canada (2019) Inc.

Bureau Veritas Job #: C3L3454
Report Date: 2023/07/27

exp Services Inc
Client Project #: GTR-22022660-A0
Site Location: 1970 and 1980 Fowler Dr, ON
Your P.O. #: ENV-BRM
Sampler Initials: RA

Exceedance Summary Table – Peel Region Sanitary 2010

Result Exceedances

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

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

Exceedance Summary Table – Mississauga Storm Sewer

Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
BH/MW 1D	WKS336-04-Lab Dup	Total Aluminum (Al)	1000	2200	4.9	ug/L
BH/MW 1D	WKS336-04	Total Aluminum (Al)	1000	2200	4.9	ug/L
BH/MW 1D	WKS336-01-Lab Dup	Total Suspended Solids	15	54	10	mg/L
BH/MW 1D	WKS336-01	Total Suspended Solids	15	55	10	mg/L

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

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AGAT Laboratories

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http://www.agatlabs.com

CLIENT NAME: EXP SERVICES INC
1595 CLARK BLVD.
BRAMPTON, ON L6T4V1
(905) 793-9809
ATTENTION TO: Alessandro Girardo
PROJECT: GTR-22022660-C0
AGAT WORK ORDER: 25T373320
TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist
DATE REPORTED: Nov 20, 2025
PAGES (INCLUDING COVER): 8
VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

Notes

Disclaimer:

- *All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.*
- *All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.*
- *AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.*
- *This Certificate shall not be reproduced except in full, without the written approval of the laboratory.*
- *The test results reported herewith relate only to the samples as received by the laboratory.*
- *Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.*
- *All reportable information is available on request from AGAT Laboratories, in accordance with ISO/IEC 17025:2017, ISO/IEC 17025:2005 (Quebec), DR-12-PALA and/or NELAP Standards.*
- *This document is signed by an authorized signatory who meets the requirements of the MELCCFP, CALA, CCN and NELAP.*
- *For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.*

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Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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Certificate of Analysis

AGAT WORK ORDER: 25T373320

PROJECT: GTR-22022660-C0

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Alessandro Girardo

SAMPLING SITE:1970 and 1980 Fowler Dr.

SAMPLED BY:M.L.

O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2025-11-19

DATE REPORTED: 2025-11-20

		SAMPLE DESCRIPTION:		MW25-105	Trip Blank
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2025-11-19 10:00	2025-11-19 10:00
Parameter	Unit	G / S	RDL	7262975	7262976
Dichlorodifluoromethane	µg/L		0.40	<0.40	<0.40
Vinyl Chloride	µg/L		0.17	<0.17	<0.17
Bromomethane	µg/L		0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L		0.40	<0.40	<0.40
Acetone	µg/L		1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L		0.30	<0.30	<0.30
Methylene Chloride	µg/L		0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L		0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L		0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L		0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L		1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L		0.20	<0.20	<0.20
Chloroform	µg/L		0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L		0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L		0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L		0.20	<0.20	<0.20
Benzene	µg/L		0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L		0.20	<0.20	<0.20
Trichloroethylene	µg/L		0.20	<0.20	<0.20
Bromodichloromethane	µg/L		0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L		1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L		0.20	<0.20	<0.20
Toluene	µg/L		0.20	<0.20	<0.20
Dibromochloromethane	µg/L		0.10	<0.10	<0.10
Ethylene Dibromide	µg/L		0.10	<0.10	<0.10
Tetrachloroethylene	µg/L		0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L		0.10	<0.10	<0.10
Chlorobenzene	µg/L		0.10	<0.10	<0.10
Ethylbenzene	µg/L		0.10	<0.10	<0.10

Certified By: N Popnikolof

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 25T373320

PROJECT: GTR-22022660-C0

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Alessandro Girardo

SAMPLING SITE:1970 and 1980 Fowler Dr.

SAMPLED BY:M.L.

O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2025-11-19

DATE REPORTED: 2025-11-20

				SAMPLE DESCRIPTION:	MW25-105	Trip Blank
				SAMPLE TYPE:	Water	Water
				DATE SAMPLED:	2025-11-19 10:00	2025-11-19 10:00
Parameter	**Unit**	**G / S**	**RDL**		**7262975**	**7262976**
m & p-Xylene	µg/L		0.20		<0.20	<0.20
Bromoform	µg/L		0.10		<0.10	<0.10
Styrene	µg/L	200	0.10		<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	1400	0.10		<0.10	<0.10
o-Xylene	µg/L		0.10		<0.10	<0.10
1,3-Dichlorobenzene	µg/L		0.10		<0.10	<0.10
1,4-Dichlorobenzene	µg/L		0.10		<0.10	<0.10
1,2-Dichlorobenzene	µg/L		0.10		<0.10	<0.10
1,3-Dichloropropene	µg/L		0.30		<0.30	<0.30
Xylenes (Total)	µg/L		0.20		<0.20	<0.20
n-Hexane	µg/L		0.20		<0.20	<0.20
Surrogate	**Unit**	**Acceptable Limits**				
Toluene-d8	% Recovery	50-140			102	107
4-Bromofluorobenzene	% Recovery	50-140			104	122

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Peel Sanitary By-Law 53-2010
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

7262975-7262976 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popowkolof

Results relate only to the items tested. Results apply to samples as received.

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Quality Assurance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 25T373320

PROJECT: GTR-22022660-C0

ATTENTION TO: Alessandro Girardo

SAMPLING SITE:1970 and 1980 Fowler Dr.

SAMPLED BY:M.L.

Trace Organics Analysis

RPT Date: Nov 20, 2025			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - VOCs (Water)															
Dichlorodifluoromethane	7258046		<0.40	<0.40	NA	< 0.40	98%	60%	140%	71%	50%	140%	93%	50%	140%
Vinyl Chloride	7258046		<0.17	<0.17	NA	< 0.17	88%	60%	140%	85%	50%	140%	103%	50%	140%
Bromomethane	7258046		<0.20	<0.20	NA	< 0.20	99%	60%	140%	109%	50%	140%	103%	50%	140%
Trichlorofluoromethane	7258046		<0.40	<0.40	NA	< 0.40	107%	60%	140%	81%	50%	140%	97%	50%	140%
Acetone	7258046		<1.0	<1.0	NA	< 1.0	83%	60%	140%	73%	50%	140%	82%	50%	140%
1,1-Dichloroethylene	7258046		<0.30	<0.30	NA	< 0.30	77%	60%	140%	95%	50%	140%	81%	50%	140%
Methylene Chloride	7258046		<0.30	<0.30	NA	< 0.30	92%	60%	140%	75%	50%	140%	80%	50%	140%
trans- 1,2-Dichloroethylene	7258046		<0.20	<0.20	NA	< 0.20	94%	60%	140%	65%	50%	140%	85%	50%	140%
Methyl tert-butyl ether	7258046		<0.20	<0.20	NA	< 0.20	87%	60%	140%	83%	50%	140%	67%	50%	140%
1,1-Dichloroethane	7258046		<0.30	<0.30	NA	< 0.30	64%	60%	140%	90%	50%	140%	80%	50%	140%
Methyl Ethyl Ketone	7258046		<1.0	<1.0	NA	< 1.0	85%	60%	140%	76%	50%	140%	91%	50%	140%
cis- 1,2-Dichloroethylene	7258046		<0.20	<0.20	NA	< 0.20	98%	60%	140%	95%	50%	140%	77%	50%	140%
Chloroform	7258046		<0.20	<0.20	NA	< 0.20	90%	60%	140%	96%	50%	140%	91%	50%	140%
1,2-Dichloroethane	7258046		<0.20	<0.20	NA	< 0.20	86%	60%	140%	94%	50%	140%	94%	50%	140%
1,1,1-Trichloroethane	7258046		<0.30	<0.30	NA	< 0.30	85%	60%	140%	79%	50%	140%	85%	50%	140%
Carbon Tetrachloride	7258046		<0.20	<0.20	NA	< 0.20	90%	60%	140%	79%	50%	140%	98%	50%	140%
Benzene	7258046		<0.20	<0.20	NA	< 0.20	78%	60%	140%	91%	50%	140%	86%	50%	140%
1,2-Dichloropropane	7258046		<0.20	<0.20	NA	< 0.20	63%	60%	140%	76%	50%	140%	90%	50%	140%
Trichloroethylene	7258046		<0.20	<0.20	NA	< 0.20	89%	60%	140%	93%	50%	140%	109%	50%	140%
Bromodichloromethane	7258046		<0.20	<0.20	NA	< 0.20	88%	60%	140%	82%	50%	140%	71%	50%	140%
Methyl Isobutyl Ketone	7258046		<1.0	<1.0	NA	< 1.0	86%	60%	140%	93%	50%	140%	86%	50%	140%
1,1,2-Trichloroethane	7258046		<0.20	<0.20	NA	< 0.20	98%	60%	140%	69%	50%	140%	97%	50%	140%
Toluene	7258046		<0.20	<0.20	NA	< 0.20	62%	60%	140%	79%	50%	140%	90%	50%	140%
Dibromochloromethane	7258046		<0.10	<0.10	NA	< 0.10	79%	60%	140%	83%	50%	140%	75%	50%	140%
Ethylene Dibromide	7258046		<0.10	<0.10	NA	< 0.10	81%	60%	140%	87%	50%	140%	95%	50%	140%
Tetrachloroethylene	7258046		<0.20	<0.20	NA	< 0.20	84%	60%	140%	72%	50%	140%	94%	50%	140%
1,1,1,2-Tetrachloroethane	7258046		<0.10	<0.10	NA	< 0.10	88%	60%	140%	89%	50%	140%	92%	50%	140%
Chlorobenzene	7258046		<0.10	<0.10	NA	< 0.10	97%	60%	140%	85%	50%	140%	68%	50%	140%
Ethylbenzene	7258046		<0.10	<0.10	NA	< 0.10	79%	60%	140%	96%	50%	140%	96%	50%	140%
m & p-Xylene	7258046		<0.20	<0.20	NA	< 0.20	92%	60%	140%	107%	50%	140%	98%	50%	140%
Bromoform	7258046		<0.10	<0.10	NA	< 0.10	85%	60%	140%	99%	50%	140%	85%	50%	140%
Styrene	7258046		<0.10	<0.10	NA	< 0.10	74%	60%	140%	83%	50%	140%	83%	50%	140%
1,1,2,2-Tetrachloroethane	7258046		<0.10	<0.10	NA	< 0.10	99%	60%	140%	94%	50%	140%	62%	50%	140%
o-Xylene	7258046		<0.10	<0.10	NA	< 0.10	74%	60%	140%	73%	50%	140%	87%	50%	140%
1,3-Dichlorobenzene	7258046		<0.10	<0.10	NA	< 0.10	83%	60%	140%	99%	50%	140%	72%	50%	140%
1,4-Dichlorobenzene	7258046		<0.10	<0.10	NA	< 0.10	80%	60%	140%	80%	50%	140%	94%	50%	140%
1,2-Dichlorobenzene	7258046		<0.10	<0.10	NA	< 0.10	75%	60%	140%	77%	50%	140%	80%	50%	140%
n-Hexane	7258046		<0.20	<0.20	NA	< 0.20	71%	60%	140%	86%	50%	140%	72%	50%	140%

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Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
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http://www.agatlabs.com

Quality Assurance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 25T373320

PROJECT: GTR-22022660-C0

ATTENTION TO: Alessandro Girardo

SAMPLING SITE:1970 and 1980 Fowler Dr.

SAMPLED BY:M.L.

Trace Organics Analysis (Continued)

RPT Date: Nov 20, 2025			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By: N Popnikolof

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Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 25T373320

PROJECT: GTR-22022660-C0

ATTENTION TO: Alessandro Girardo

SAMPLING SITE:1970 and 1980 Fowler Dr.

SAMPLED BY:M.L.

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 25T373320

PROJECT: GTR-22022660-C0

ATTENTION TO: Alessandro Girardo

SAMPLING SITE:1970 and 1980 Fowler Dr.

SAMPLED BY:M.L.

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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AGAT Laboratories

Have feedback? Scan here for a quick survey!

5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
webearth.agatlabs.com

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Report Information:

Company: EXP Services Inc
Contact: Alessandro Girardo
Address: 1595 Clark Blvd
Brampton ON L6T 4V1
Phone: 905 793 9800 Fax:
Reports to be sent to:
1. Email: Alessandro.girardo@exp.com
2. Email: Omar.jaffer@exp.com

Project Information:

Project: GTR-22022660-C0
Site Location: 1970 and 1980 Fowler Dr.
Sampled By: M.L.
AGAT Quote #: EXP competitive Rate PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☒ No ☐
Company:
Contact:
Address:
Email:

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04
Table 3 (Indicate One)
☐ Ind/Com
☒ Res/Park
☐ Agriculture
Soil Texture (Check One)
☒ Coarse
☐ Fine

☐ Regulation 406
Table (Indicate One)
☐ Ind/Com
☐ Res/Park
☐ Agriculture

☐ Regulation 558
☐ CCME

☐ Sewer Use
☐ Sanitary ☐ Storm
Region

☐ Prov. Water Quality Objectives (PWQO)

☐ Other
Indicate One

Is this submission for a **Record of Site Condition (RSC)?** ☒ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☒ Yes ☐ No

Legal Sample ☐

Sample Matrix Legend

GW	Ground Water	**SD**	Sediment
O	Oil	**SW**	Surface Water
P	Paint	**R**	Rock/Shale
S	Soil		

Laboratory Use Only

Work Order #: 25T373320
Cooler Quantity: 1S
Arrival Temperatures: 5.3 | 5.5 | 5.7
Depot Temperatures: | |
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: LL

Turnaround Time (TAT) Required:

Regular TAT ☐ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☒ Next Business Day

OR Date Required (Rush Surcharges May Apply):

November 20, 2025

Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*

For 'Same Day' analysis, please contact your AGAT CSR

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	VOC	PAHs	PCBs: Aroclors ☐	O. Reg 406: Regulation 406 Characterization Package pH, Metals, BTEX, F1-F4	O. Reg 406: EC, SAR	O. Reg 406: Regulation 406 SPLP Rainwater Leach mSPLP: ☐ Metals ☐ VOCs ☐ SVOCs ☐ OC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	Corrosivity: ☐ Moisture ☐ Sulphide	Potentially Hazardous or High Concentration (Y/N)
1. MW25-105	11/19/2025	10:00 AM PM	3	GW						X								
2. Trip Blank	↓	↓ AM PM	3	GW						X								
3.		AM PM																
4.		AM PM																
5.		AM PM																
6.		AM PM																
7.		AM PM																
8.		AM PM																
9.		AM PM																
10.		AM PM																
11.		AM PM																

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Mike Luong	11/19/2025	12:15	Dawn	11/19/25	12:20
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time

Page 1 of 1

N°: T-172643

Pink Copy - Client | Yellow Copy - AGAT | White Copy - AGAT

Document ID: DIV-78-1611.024
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Date Issued: Aug 29, 2024

AGAT Laboratories

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CLIENT NAME: EXP SERVICES INC
1595 CLARK BLVD.
BRAMPTON, ON L6T4V1
(905) 793-9809
ATTENTION TO: Alessandro Gira
PROJECT: GTR-22022660-C0
AGAT WORK ORDER: 25T375125
TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist
DATE REPORTED: Nov 25, 2025
PAGES (INCLUDING COVER): 8
VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

Notes

Disclaimer:

- *All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.*
- *All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.*
- *AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.*
- *This Certificate shall not be reproduced except in full, without the written approval of the laboratory.*
- *The test results reported herewith relate only to the samples as received by the laboratory.*
- *Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.*
- *All reportable information is available on request from AGAT Laboratories, in accordance with ISO/IEC 17025:2017, ISO/IEC 17025:2005 (Quebec), DR-12-PALA and/or NELAP Standards.*
- *This document is signed by an authorized signatory who meets the requirements of the MELCCFP, CALA, CCN and NELAP.*
- *For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.*

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Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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Certificate of Analysis

AGAT WORK ORDER: 25T375125

PROJECT: GTR-22022660-C0

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Alessandro Gira

SAMPLING SITE:1970 FOWLER DR, MISSISSAUGA

SAMPLED BY:SUKHBIR DHANDWAR

O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2025-11-24

DATE REPORTED: 2025-11-25

		SAMPLE DESCRIPTION:		MW25-105	TRIP BLANK
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2025-11-24 11:30	2025-11-24 11:30
Parameter	Unit	G / S	RDL	7277920	7277922
Dichlorodifluoromethane	µg/L		0.40	<0.40	<0.40
Vinyl Chloride	µg/L		0.17	<0.17	<0.17
Bromomethane	µg/L		0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L		0.40	<0.40	<0.40
Acetone	µg/L		1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L		0.30	<0.30	<0.30
Methylene Chloride	µg/L		0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L		0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L		0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L		0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L		1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L		0.20	<0.20	<0.20
Chloroform	µg/L		0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L		0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L		0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L		0.20	<0.20	<0.20
Benzene	µg/L		0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L		0.20	<0.20	<0.20
Trichloroethylene	µg/L		0.20	<0.20	<0.20
Bromodichloromethane	µg/L		0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L		1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L		0.20	<0.20	<0.20
Toluene	µg/L		0.20	<0.20	<0.20
Dibromochloromethane	µg/L		0.10	<0.10	<0.10
Ethylene Dibromide	µg/L		0.10	<0.10	<0.10
Tetrachloroethylene	µg/L		0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L		0.10	<0.10	<0.10
Chlorobenzene	µg/L		0.10	<0.10	<0.10
Ethylbenzene	µg/L		0.10	<0.10	<0.10

Certified By: N Popnikolof

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 25T375125

PROJECT: GTR-22022660-C0

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Alessandro Gira

SAMPLING SITE:1970 FOWLER DR, MISSISSAUGA

SAMPLED BY:SUKHBIR DHANDWAR

O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2025-11-24 **DATE REPORTED: 2025-11-25**

				SAMPLE DESCRIPTION:	MW25-105	TRIP BLANK
				SAMPLE TYPE:	Water	Water
				DATE SAMPLED:	2025-11-24 11:30	2025-11-24 11:30
Parameter	**Unit**	**G / S**	**RDL**		**7277920**	**7277922**
m & p-Xylene	µg/L		0.20		<0.20	<0.20
Bromoform	µg/L		0.10		<0.10	<0.10
Styrene	µg/L	200	0.10		<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	1400	0.10		<0.10	<0.10
o-Xylene	µg/L		0.10		<0.10	<0.10
1,3-Dichlorobenzene	µg/L		0.10		<0.10	<0.10
1,4-Dichlorobenzene	µg/L		0.10		<0.10	<0.10
1,2-Dichlorobenzene	µg/L		0.10		<0.10	<0.10
1,3-Dichloropropene	µg/L		0.30		<0.30	<0.30
Xylenes (Total)	µg/L		0.20		<0.20	<0.20
n-Hexane	µg/L		0.20		<0.20	<0.20
Surrogate	**Unit**	**Acceptable Limits**				
Toluene-d8	% Recovery	50-140			109	95
4-Bromofluorobenzene	% Recovery	50-140			88	89

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Peel Sanitary By-Law 53-2010
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

7277920-7277922 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopowkolof

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Quality Assurance

CLIENT NAME: EXP SERVICES INC
AGAT WORK ORDER: 25T375125
PROJECT: GTR-22022660-C0
ATTENTION TO: Alessandro Gira
SAMPLING SITE:1970 FOWLER DR, MISSISSAUGA
SAMPLED BY:SUKHBIR DHANDWAR

Trace Organics Analysis

RPT Date: Nov 25, 2025

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - VOCs (Water)															
Dichlorodifluoromethane	7272750		<0.40	<0.40	NA	< 0.40	99%	60%	140%	102%	50%	140%	76%	50%	140%
Vinyl Chloride	7272750		<0.17	<0.17	NA	< 0.17	99%	60%	140%	91%	50%	140%	94%	50%	140%
Bromomethane	7272750		<0.20	<0.20	NA	< 0.20	105%	60%	140%	75%	50%	140%	90%	50%	140%
Trichlorofluoromethane	7272750		<0.40	<0.40	NA	< 0.40	101%	60%	140%	97%	50%	140%	74%	50%	140%
Acetone	7272750		<1.0	<1.0	NA	< 1.0	97%	60%	140%	84%	50%	140%	88%	50%	140%
1,1-Dichloroethylene	7272750		<0.30	<0.30	NA	< 0.30	72%	60%	140%	67%	50%	140%	72%	50%	140%
Methylene Chloride	7272750		<0.30	<0.30	NA	< 0.30	83%	60%	140%	64%	50%	140%	75%	50%	140%
trans- 1,2-Dichloroethylene	7272750		<0.20	<0.20	NA	< 0.20	62%	60%	140%	61%	50%	140%	73%	50%	140%
Methyl tert-butyl ether	7272750		<0.20	<0.20	NA	< 0.20	66%	60%	140%	71%	50%	140%	87%	50%	140%
1,1-Dichloroethane	7272750		<0.30	<0.30	NA	< 0.30	64%	60%	140%	81%	50%	140%	69%	50%	140%
Methyl Ethyl Ketone	7272750		<1.0	<1.0	NA	< 1.0	85%	60%	140%	84%	50%	140%	63%	50%	140%
cis- 1,2-Dichloroethylene	7272750		<0.20	<0.20	NA	< 0.20	67%	60%	140%	62%	50%	140%	63%	50%	140%
Chloroform	7272750		<0.20	<0.20	NA	< 0.20	75%	60%	140%	66%	50%	140%	77%	50%	140%
1,2-Dichloroethane	7272750		<0.20	<0.20	NA	< 0.20	68%	60%	140%	70%	50%	140%	66%	50%	140%
1,1,1-Trichloroethane	7272750		<0.30	<0.30	NA	< 0.30	78%	60%	140%	68%	50%	140%	61%	50%	140%
Carbon Tetrachloride	7272750		<0.20	<0.20	NA	< 0.20	72%	60%	140%	64%	50%	140%	61%	50%	140%
Benzene	7272750		<0.20	<0.20	NA	< 0.20	71%	60%	140%	67%	50%	140%	66%	50%	140%
1,2-Dichloropropane	7272750		<0.20	<0.20	NA	< 0.20	94%	60%	140%	80%	50%	140%	80%	50%	140%
Trichloroethylene	7272750		<0.20	<0.20	NA	< 0.20	70%	60%	140%	62%	50%	140%	63%	50%	140%
Bromodichloromethane	7272750		<0.20	<0.20	NA	< 0.20	69%	60%	140%	65%	50%	140%	64%	50%	140%
Methyl Isobutyl Ketone	7272750		<1.0	<1.0	NA	< 1.0	76%	60%	140%	67%	50%	140%	100%	50%	140%
1,1,2-Trichloroethane	7272750		<0.20	<0.20	NA	< 0.20	66%	60%	140%	62%	50%	140%	99%	50%	140%
Toluene	7272750		<0.20	<0.20	NA	< 0.20	71%	60%	140%	63%	50%	140%	72%	50%	140%
Dibromochloromethane	7272750		<0.10	<0.10	NA	< 0.10	67%	60%	140%	60%	50%	140%	63%	50%	140%
Ethylene Dibromide	7272750		<0.10	<0.10	NA	< 0.10	85%	60%	140%	70%	50%	140%	73%	50%	140%
Tetrachloroethylene	7272750		<0.20	<0.20	NA	< 0.20	75%	60%	140%	63%	50%	140%	72%	50%	140%
1,1,1,2-Tetrachloroethane	7272750		<0.10	<0.10	NA	< 0.10	62%	60%	140%	76%	50%	140%	99%	50%	140%
Chlorobenzene	7272750		<0.10	<0.10	NA	< 0.10	64%	60%	140%	63%	50%	140%	66%	50%	140%
Ethylbenzene	7272750		<0.10	<0.10	NA	< 0.10	66%	60%	140%	70%	50%	140%	67%	50%	140%
m & p-Xylene	7272750		<0.20	<0.20	NA	< 0.20	72%	60%	140%	82%	50%	140%	72%	50%	140%
Bromoform	7272750		<0.10	<0.10	NA	< 0.10	77%	60%	140%	78%	50%	140%	69%	50%	140%
Styrene	7272750		<0.10	<0.10	NA	< 0.10	62%	60%	140%	64%	50%	140%	66%	50%	140%
1,1,2,2-Tetrachloroethane	7272750		<0.10	<0.10	NA	< 0.10	62%	60%	140%	68%	50%	140%	72%	50%	140%
o-Xylene	7272750		<0.10	<0.10	NA	< 0.10	74%	60%	140%	79%	50%	140%	75%	50%	140%
1,3-Dichlorobenzene	7272750		<0.10	<0.10	NA	< 0.10	63%	60%	140%	60%	50%	140%	62%	50%	140%
1,4-Dichlorobenzene	7272750		<0.10	<0.10	NA	< 0.10	64%	60%	140%	76%	50%	140%	63%	50%	140%
1,2-Dichlorobenzene	7272750		<0.10	<0.10	NA	< 0.10	64%	60%	140%	63%	50%	140%	64%	50%	140%
n-Hexane	7272750		<0.20	<0.20	NA	< 0.20	87%	60%	140%	92%	50%	140%	78%	50%	140%

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Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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FAX (905)712-5122
http://www.agatlabs.com

Quality Assurance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 25T375125

PROJECT: GTR-22022660-C0

ATTENTION TO: Alessandro Gira

SAMPLING SITE:1970 FOWLER DR, MISSISSAUGA

SAMPLED BY:SUKHBIR DHANDWAR

Trace Organics Analysis (Continued)

RPT Date: Nov 25, 2025			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By: N Popnikolof

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.

Results relate only to the items tested. Results apply to samples as received.

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Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 25T375125

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ATTENTION TO: Alessandro Gira

SAMPLING SITE:1970 FOWLER DR, MISSISSAUGA

SAMPLED BY:SUKHBIR DHANDWAR

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

Results relate only to the items tested. Results apply to samples as received.

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Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 25T375125

PROJECT: GTR-22022660-C0

ATTENTION TO: Alessandro Gira

SAMPLING SITE:1970 FOWLER DR, MISSISSAUGA

SAMPLED BY:SUKHBIR DHANDWAR

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

Have feedback? Scan here for a quick survey!

5835 Coopers Avenue
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Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Report Information:

Company: EXP SERVICES INC
Contact: ALESSANDRO GIRARDO
Address: 1595 CLARK BLVD
BRAMPTON, ON, L6T4V1
Phone: 905-793-9800 Fax:
Reports to be sent to:
1. Email: ALESSANDRO.GIRARDO@EXP.COM
2. Email: OMAR.JAFFER@EXP.COM

Project Information:

Project: GTR-22022660-CO
Site Location: 1970 FOWLER DR, MISSISSAUGA
Sampled By: SUKHBIR DHANDWAR
AGAT Quote #: 2938569757 9 PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☐ No ☐

Company: EXP SERVICES INC
Contact: ACCOUNTS PAYABLE
Address:
Email: AP@EXP.COM, KAREN.BURKE@EXP.COM

Regulatory Requirements:

(Please check all applicable boxes)

☑ Regulation 153/04
Table 6 (Indicate One)
☐ Ind/Com
☑ Res/Park
☐ Agriculture
Soil Texture (Check One)
☑ Coarse
☐ Fine

☐ Regulation 406
Table ____ (Indicate One)
☐ Ind/Com
☐ Res/Park
☐ Agriculture

☐ Regulation 558
☐ CCME

☐ Sewer Use ☐ Sanitary ☐ Storm
Region
☐ Prov. Water Quality Objectives (PWQO)
☐ Other
Indicate One

Is this submission for a **Record of Site Condition (RSC)**? ☑ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☑ Yes ☐ No

Legal Sample ☐

Sample Matrix Legend

GW	Ground Water	**SD**	Sediment
O	Oil	**SW**	Surface Water
P	Paint	**R**	Rock/Shale
S	Soil		

Laboratory Use Only

Work Order #: 25T575125
Cooler Quantity: 1S
Arrival Temperatures: 8.1 18.3 18.5
Depot Temperatures: | |
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: L/1

Turnaround Time (TAT) Required:

Regular TAT ☐ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☑ Next Business Day

OR Date Required (Rush Surcharges May Apply):

NOVEMBER 25, 2025

Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*

For 'Same Day' analysis, please contact your AGAT CSR

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	O. Reg 153: VOC	O. Reg 153: PAHs	O. Reg 153: PCBs: Aroclors ☐	O. Reg 406: Regulation 406 Characterization Package	O. Reg 406: pH, Metals, BTEX, F1-F4	O. Reg 406: EC, SAR	O. Reg 406: Regulation on 406 SPLP Rainwater Leach	O. Reg 406: mSPLP: ☐ Metals ☐ VOCs ☐ SVOCs ☐ OC	O. Reg 558: Landfill Disposal Characterization TCLP:	O. Reg 558: TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	Corrosivity: ☐ Moisture ☐ Sulphide	Potentially Hazardous or High Concentration (Y/N)
1. MW25-105	11/24/2025	11:30 AM/PM	3	GW						✓											
2. TRIP BLANK	↓	↓ AM/PM	↓	↓						✓											
3.		AM/PM																			
4.		AM/PM																			
5.		AM/PM																			
6.		AM/PM																			
7.		AM/PM																			
8.		AM/PM																			
9.		AM/PM																			
10.		AM/PM																			
11.		AM/PM																			

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
SUKHBIR DHANDWAR	2025/11/24	12:00PM		11/24/25	12pm
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time

Page 1 of 1

N°: T - 175062

Pink Copy - Client | Yellow Copy - AGAT | White Copy - AGAT

Document ID: DIV-78-1511.024
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Date Issued: Aug 29, 2024

Appendix E – Construction and Post-Construction Flow Rate Calculations

APPENDIX E: Dewatering Flow Rates

1970 & 1980 Fowler Drive, Mississauga
GTR-22022660-A0

Table E-1: Construction and Post Construction Dewatering Assessments

Parameters	Symbols	Unit	P4 Construction	Elevator Pit	Post Construction
Geological Formation	-	-	Glacial Deposit	Glacial Deposit	Glacial Deposit
INPUTS					
Ground Elevation	-	mASL	**123.31**	**123.31**	**123.31**
Highest Groundwater Elevation	-	mASL	**122.00**	**107.65**	**122.00**
Lowest Top Slab Elevation	-	mASL	**110.15**	**107.55**	**110.15**
Lowest Foundation Invert Elevation	-	mASL	**108.65**	**106.05**	-
Height of Static Water Table Above the Base of the Water-Bearing Zone	**H**	m	22.00	7.65	22.00
Dewatering Target Elevation	-	mASL	107.65	105.05	109.65
Height of Target Water Level Above the Base of Water-Bearing Zone	**h_w**	m	7.65	5.05	9.65
Drawdown	**s**	m	14.35	2.60	12.35
Dupuit Check (> 45%)		m	35%	66%	44%
Base of Aquifer / Water Bearing Zone	-	mASL	**100.00**	**100.00**	**100.00**
Hydraulic Conductivity	**K**	m/s	**8.3E-07**	**8.3E-07**	**8.3E-07**
Length of Excavation	-	m	**65.00**	**18.00**	**65.00**
Width of Excavation	-	m	**52.00**	**8.00**	**52.00**
Equivalent Radius (equivalent perimeter)	**r_e**	m	37.24	8.28	37.24
Method to Calculate Radius of Influence	-	-	**Cooper-Jacob**	**Cooper-Jacob**	**Cooper-Jacob**
Time (days)			**30.00**	**30.00**	**365.00**
Time (seconds)	**t**	s	2592000	2592000	31536000
Specific Yield	**Sy**		**0.05**	**0.05**	**0.05**
OUTPUTS					
Cooper-Jacob's Radius of Influence from Sides of Excavation	**Rcj**	m	46.24	27.27	161.28
Radius of Influence	**Ro**	m	83.48	35.55	198.53
Dewatering Flow Rate (unconfined radial flow component)	**Q**	m^3/day	**119**	**5**	**52.8**
Factor of Safety	**fs**	-	2.00	2.00	1.50
Dewatering Flow Rate (multiplied by factor of safety)	**Q.fs**	m^3/day	**238**	**10**	**79.2**
Precipitation Event	-	mm/day	25	-	-
Volume from Precipitation	-	m^3/day	85	-	-
Total Volume (L/day) Discharge of Groundwater (Construction dewatering) **without Safety Factor** (including precipitation)	-	m^3/day	**204**	**-**	**-**
Total Volume (L/day) Discharge of Groundwater (Construction dewatering) **with Safety Factor** (including precipitation)	-	m^3/day	**323**	**-**	**-**

Precipitation Event 2 year storm	-	mm/day	56.2
Volume from Precipitation	-	m^3/event	190
Precipitation Event 100 year storm	-	mm/day	122.3
Volume from Precipitation	-	m^3/event	413

Notes:
mASL - meters above sea level

Analytical Solution for Estimating Radial Flow from an Unconfined Aquifer to a Fully-Penetrating Excavation

$$Q_w = \frac{\pi K(H^2 - h^2)}{Ln\,[\frac{R_o}{r_e}]}$$ (Based on the Dupuit-Forcheimer Equation)

$$r_e = \frac{a+b}{\pi} \qquad R_o = R_{cj} + r_e \qquad R_{cj} = \sqrt{2.25KDt/S}$$

Where:

Q_w = Flow rate per unit length of excavation (m^3/s)

K = Hydraulic conductivity (m/s)

H = Height of static water table above base of water-bearing zone (m)

h_w = Height of target water level above the base of water-bearing zone (m)

Rcj=Cooper Jacob Radius of Influence (m)

R_o=Radius of influence (m)

re=Equivalent perimeter (m)

Appendix F – Architectural Drawings

1970-1980 FOWLER DRIVE
ISSUED FOR REZONING AND OPA
21 NOV 2025

NO.	REVISIONS	DATE
1	ISSUED FOR REZONING AND OPA	21 NOV 2025

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1970-1980 FOWLER DRIVE,
MISSISSAUGA, ON

IMH 1970 & 1980 FOWLER DRIVE LTD.

DRAWN: FKH, QL	SCALE:
CHECKED: KQ	DATE: 25 JAN 2025

TITLE: COVER

PROJECT NO.: 22-214	DRAWING NO.: **A000**

DATE/TIME PRODUCED:2025-11-18 4:41:07 PM

ZONING REQUIREMENTS
(1970-1980 FOWLER DRIVE)

SITE AREA	26,936.63 SM / 289,936.70 SQ.FT / 2.69 HA	ZONING	Mississauga Zoning By-law 0225-2007 (In Effect) Mississauga Zoning By-law 0174-2017 (EXCEPTION RA4-2/ RA5)
SITE AREA - PART 3	4,758.04 sm		
PROGRAM	OCCUPANCY IS RESIDENTIAL (GROUP C)		

STATISTICS	REQUIRED / PERMITTED	PROVIDED
BUILDING HEIGHT	56 M AND 18 STOREYS	24 STOREYS @ 77.54 M + MPH @ 6M
MAX. DENSITY	1.8	FSI : 54,036 SM/ 26,936.63 SM = 2.006
ABOVE GRADE GFA (GROSS FLOOR AREA)		19,656.8 SM GFA ABOVE GRADE
BELOW GRADE GFA (GROSS FLOOR AREA)		139.1 SM GFA BELOW GRADE
TOTAL GFA (GROSS FLOOR AREA)	ESTIMATED EXISTING RESIDENTIAL GFA= 34,240 SM TOTAL GFA = 34, 240 SM+ 19,796 SM= 54,036 SM	TOTAL GFA 19,656.8 SM (ABOVE GRADE) + 139.1 SM (BELOW GRADE)= 19,796 SM
LOADING	MINIMUM 9.0M LONG, 3.5M WIDE AND HAVE A VERTICAL CLEARANCE OF AT LEAST 7.5M.	1 X LOADING TYPE C (6.0M X 3.5M X 3M) 1 X LOADING TYPE G / C (13.0M X 4.0M X 7.5M)
NUMBER OF UNITS		285

PARKING	REQUIRED / PERMITTED	PROVIDED
RES.VEHICULAR PARKING (BASED ON SITE SPECIFIC BY-LAW) TOTAL REQUIRED FOR PROPOSED BUILDING	A MINIMUM OF 0.9 PARKING SPACE PER DWELLING UNIT FOR RESIDENTIAL AND 0.2 PARKING SPACES PER DWELLING UNIT FOR VISITORS. 1) RESIDENTIAL MIN. = 285 * 0.90 = 257 SPOTS VISITOR 285 * 0.2 = 57 SPOTS TOTAL RESIDENTIAL REQUIRED MIN. = 314 =(257 + 57)	RESIDENTIAL LEVEL — COUNT (TOTAL) — REG. — BF — EV* LEVELS P4-P3-P2-P1 — 243 — 231 — 12 — 49 TOTAL RESIDENTIAL PROVIDED = 243 VISITOR LEVEL — COUNT (TOTAL) — REG. — BF — EV* LEVEL P-1 & 1 — 29 — 27 — 2 — 3 TOTAL VISITORS PROVIDED = 29 243 RESIDENTIAL + 29 VISITORS = 272 TOTAL PARKING SPOTS (0.85 RATIO) (0.1 RATIO) (0.95 RATIO)
TOTAL BARRIER-FREE PARKING	4% OF TOTAL PARKING REQUIRED = 314* 4% = 13 REQUIRED (ROUNDED UP 12.5)	4% OF TOTAL PARKING PROVIDED(RESI.) = 243X 4% = 10 (ROUNDED UP 9.7) 4% OF TOTAL PARKING PROVIDED (VIS.) = 29X 4% = 2 (ROUNDED UP 1.16) TOTAL ACCESSIBLE PARKING SPACE PROVIDED = 14 12 RESIDENTIAL + 2 VISITOR = 14
TOTAL REQUIRED PARKING SPACES WITH EV CHARGE	20% OF TOTAL RESIDENTIAL PARKING SPACES = 257* 20% = 51 10% OF TOTAL VISITOR PARKING SPACES = 57* 10% = 6	20% OF TOTAL PARKING PROVIDED(RESI.) =243 X20% = 49(ROUNDED UP 48.6) 10% OF TOTAL PARKING PROVIDED (VIS.) =29X10% = 3 (ROUNDED UP 2.9)
TOTAL REQUIRED FOR SITE	EXISTING UNIT COUNT = 332 PROPOSED UNIT COUNT= 285 TOTAL UNIT COUNT(SITE)= 617	EXISTING PARKING SPACES = 364 SPACES PROPOSED 272 + EXISTING PARKING 364 = 636 TOTAL PARKING SPACES PARKING RATIO 636 / 617 = 1.03

BICYCLE PARKING	REQUIRED / PERMITTED	PROVIDED
RESIDENTIAL BICYCLE PARKING (CLASS A)	0.6 SPACES / UNIT REQUIRED = 0.6 X 285 UNITS = 171 RESIDENTIAL BIKE PARKING REQUIRED	RESIDENTIAL 171 LONG TERM RESIDENTIAL (CLASS A) 0.6 SPACES / UNIT
VISITOR BICYCLE PARKING (CLASS B)	0.05 SPACES / UNIT REQUIRED = 0.05 X 285 UNITS = 15 VISITORS BICYCLE SPACES RQD (ROUNDED UP 14.25)	VISITOR 15 SHORT TERM VISITOR (CLASS B) 0.05 SPACES / UNIT
TOTAL BICYCLE PARKING	171 (CLASS A) + 15 (CLASS B) = 186	171 (CLASS A) + 15 (CLASS B) = 186

AMENITY	BY-LAW REQUIREMENT	PROVIDED
PER UNITS	MIN. 5.6 SM PER UNIT MIN. 5.6SM * 285 = 1596 SM MIN. 798 SM INTERIOR AMENITY REQ. MIN. 798 SM EXTERIOR AMENITY REQ.	INTERIOR AMENITY 289.4 SM @ L01 + 237.7 SM @ L05 + 79.1 SM @ ROOF += 606.1 SM EXTERIOR AMENITY 468.7 SM @ GRADE + 317.7 SM @ L05 + 345.5 SM @ ROOF = 1131.9 SM TOTAL AMENITY PROVIDED 606.1 SM+ 1131.9 SM = 1738.0 SM (1739/ 285 = 6.10 SM / UNIT)
BARRIER-FREE UNITS	15% OF SUITES WITHIN A MULTI-UNIT RESIDENTIAL BUILDING	285 * 15% = 43 UNITS REQUIRED TO BE BARRIER FREE

UNIT MIX

LEVEL	STUDIO	1 BEDROOM	1 BEDROOM+ DEN	2 BEDROOM	2 BEDROOM+ DEN	3 BEDROOM	TOTAL UNIT PER FLOOR	NO. OF LEVELS	TOTAL UNITS
LEVEL 2	1	4	4	2	0	2	13	1	13
LEVEL 3	1	4	4	2	0	2	13	1	13
LEVEL 4	1	4	4	2	0	3	14	1	14
LEVEL 5	1	4	0	2	0	0	7	1	7
LEVEL 6 TO 15	20	70	0	30	0	0	13	10	130
LEVEL 16	1	6	0	2	2	1	12	1	12
LEVEL 17 TO 21	5	30	0	10	10	5	12	5	60
LEVEL 22 TO 24	3	18	0	9	0	6	12	3	36
TOTAL	33	140	12	59	12	29	96		285
PERCENTAGE	11.58%	49.12%	4.21%	20.70%	4.21%	10.18%			
		53.33%		24.91%					

TARGET	15 %	50 %		25 %	10 %
TARGET AREA	400-450 SF	500-550 SF	600-675 SF	775-850 SF	950-1050 SF

BARRIER FREE UNIT REQUIRED (15% OF TOTAL UNITS)						43
NO. UNITS	5	21	2	9	2	4

AVERAGE UNIT SIZE	PROVIDED	TARGET
STUDIO	444 SF	400 SF
1 BEDROOM	554 SF	555 SF
1 BEDROOM +DEN	723 SF	
2 BEDROOM	849 SF	820 SF
2 BEDROOM + DEN	953 SF	
3 BEDROOM	1039 SF	1000 SF

VEHICLE PARKING SCHEDULE

LEVEL	RESIDENTIAL PARKING	VISITOR PARKING	TOTAL NO. OF PARKING	BARRIER FREE PARKING	WITH EV CHARGER
LEVEL P4	21	0	21	1	4
LEVEL P3	86	0	86	4	17
LEVEL P2	86	0	86	4	17
LEVEL P1	50	27	77	5	14
LEVEL 1	0	2	2	0	0
TOTAL	243	29	272	14	52

PROVIDED PARKING RATIO (FOR THE BUILDING) = TOTAL PARKING 272/ TOTAL UNITS 285= 0.95

BICYCLE PARKING SCHEDULE

LEVEL	RESIDENTIAL BIKE (CLASS A)	VISITOR BIKE (CLASS B)	TOTAL NO. OF PARKING
LEVEL P1	171	0	171
LEVEL 1	0	15	15
TOTAL	171	15	186

ARCHITECTURAL DRAWINGS LIST

DRAWING NO.	TITLE
A000	COVER
A001	STATISTICS
A002	SURVEY PLAN
A003	CONCEPT PLAN
A004	OVERALL SITE PLAN
A005	ESTABLISHED GRADE
A006	SITE PLAN
A200	LEVEL P4
A201	LEVEL P3
A202	LEVEL P2
A203	LEVEL P1
A204	LEVEL 1
A205	LEVEL 2
A206	LEVEL 3
A207	LEVEL 4
A208	LEVEL 5
A209	LEVEL 6-15
A210	LEVEL 16
A211	LEVEL 17-21
A212	LEVEL 22-24
A213	LEVEL MPH - ROOFTOP AMENITY
A214	ELEVATOR MACHINE ROOM ROOF
A215	ELEVATOR MACHINE ROOM LEVEL
A400	NORTH ELEVATION
A401	EAST ELEVATION
A402	SOUTH ELEVATION
A403	WEST ELEVATION
A410	BUILDING SECTION 1
A411	BUILDING SECTION 2
A412	ANGULAR PLANE SECTION
A500	JUNE 21 INCREMENTAL SHADOW STUDY
A501	SEPTEMBER 21 INCREMENTAL SHADOW STUDY
A502	DECEMBER 21 INCREMENTAL SHADOW STUDY
A900	MASSING VIEW

ZONING REQUIREMENTS

BUILDING STATISTICS- BELOW GRADE

LEVEL	NO. OF LEVELES	GCA SM	GCA SF	GFA SM	GFA SF	GLA SM	GLA SF	CIRCULATION	MANAGEMENT OFFICE	DEDUCTIONS: GARBAGE	INTERIOR AMENITY	MECHANICAL	SHAFT	STORAGE	PARKING	LOADING	COMMON AREA
LEVEL P4	1	1,213.7 m²	13,064 ft²	32.9 m²	354 ft²	0.0 m²	0 ft²	32.9 m²	0.0 m²	0.0 m²	0.0 m²	156.8 m²	148.31 m²	22.8 m²	852.9 m²	0.0 m²	0.0 m²
LEVEL P3	1	3,348.7 m²	36,045 ft²	36.0 m²	387 ft²	0.0 m²	0 ft²	36.0 m²	0.0 m²	0.0 m²	0.0 m²	206.0 m²	92.22 m²	217.3 m²	2,797.2 m²	0.0 m²	0.0 m²
LEVEL P2	1	3,472.4 m²	37,376 ft²	35.1 m²	378 ft²	0.0 m²	0 ft²	35.1 m²	0.0 m²	0.0 m²	0.0 m²	0.0 m²	92.19 m²	428.3 m²	2,916.7 m²	0.0 m²	0.0 m²
LEVEL P1	1	3,472.4 m²	37,376 ft²	35.1 m²	378 ft²	0.0 m²	0 ft²	35.1 m²	0.0 m²	0.0 m²	0.0 m²	205.1 m²	92.30 m²	267.7 m²	2,872.2 m²	0.0 m²	0.0 m²
TOTAL		11,507.1 m²	123,862 ft²	139.1 m²	1,498 ft²	0.0 m²	0 ft²	139.1 m²	0.0 m²	0.0 m²	0.0 m²	567.9 m²	425.01 m²	936.1 m²	9,439.0 m²	0.0 m²	0.0 m²

BUILDING STATISTICS- ABOVE GRADE

LEVEL	NO. OF LEVELES	GCA SM	GCA SF	GFA SM	GFA SF	GLA SM	GLA SF	CIRCULATION	MANAGEMENT OFFICE	DEDUCTIONS: GARBAGE	INTERIOR AMENITY	MECHANICAL	SHAFT	STORAGE	PARKING	LOADING	COMMON AREA
LEVEL 1	1	1,288.7 m²	13,871 ft²	287.4 m²	3,094 ft²	0.0 m²	0 ft²	0.0 m²	46.1 m²	154.7 m²	289.4 m²	22.2 m²	80.75 m²	43.5 m²	172.0 m²	216.6 m²	263.5 m²
LEVEL 2	1	1,101.2 m²	11,853 ft²	926.8 m²	9,976 ft²	862.7 m²	9,286 ft²	64.1 m²	0.0 m²	7.9 m²	0.0 m²	1.8 m²	164.61 m²	0.0 m²	0.0 m²	0.0 m²	0.0 m²
LEVEL 3	1	1,101.5 m²	11,857 ft²	927.5 m²	9,983 ft²	863.7 m²	9,296 ft²	63.8 m²	0.0 m²	7.9 m²	0.0 m²	1.8 m²	164.30 m²	0.0 m²	0.0 m²	0.0 m²	0.0 m²
LEVEL 4	1	1,081.2 m²	11,638 ft²	1,021.5 m²	10,995 ft²	957.1 m²	10,302 ft²	64.4 m²	0.0 m²	7.9 m²	0.0 m²	1.8 m²	49.94 m²	0.0 m²	0.0 m²	0.0 m²	0.0 m²
LEVEL 5	1	770.2 m²	8,290 ft²	465.3 m²	5,008 ft²	403.1 m²	4,339 ft²	62.1 m²	0.0 m²	7.0 m²	237.7 m²	2.2 m²	58.07 m²	0.0 m²	0.0 m²	0.0 m²	0.0 m²
LEVEL 6 TO 15	10	8,999.0 m²	96,864 ft²	8,402.0 m²	90,438 ft²	7,784.7 m²	83,794 ft²	617.3 m²	0.0 m²	79.6 m²	0.0 m²	18.5 m²	498.99 m²	0.0 m²	0.0 m²	0.0 m²	0.0 m²
LEVEL 16	1	899.9 m²	9,686 ft²	838.4 m²	9,025 ft²	779.1 m²	8,386 ft²	59.4 m²	0.0 m²	8.0 m²	0.0 m²	1.8 m²	51.65 m²	0.0 m²	0.0 m²	0.0 m²	0.0 m²
LEVEL 17 TO 21	5	4,499.5 m²	48,432 ft²	4,201.0 m²	45,219 ft²	3,895.1 m²	41,927 ft²	305.9 m²	0.0 m²	39.8 m²	0.0 m²	9.2 m²	249.50 m²	0.0 m²	0.0 m²	0.0 m²	0.0 m²
LEVEL 22 TO 24	3	2,699.7 m²	29,059 ft²	2,520.6 m²	27,131 ft²	2,335.4 m²	25,138 ft²	185.2 m²	0.0 m²	23.9 m²	0.0 m²	5.5 m²	149.70 m²	0.0 m²	0.0 m²	0.0 m²	0.0 m²
LEVEL MPH- ROOFTOP	1	535.1 m²	5,760 ft²	66.4 m²	714 ft²	0.0 m²	0 ft²	66.4 m²	0.0 m²	7.8 m²	79.1 m²	326.4 m²	55.51 m²	0.0 m²	0.0 m²	0.0 m²	0.0 m²
ELEVATOR M. ROOM	1	131.3 m²	1,413 ft²	0.0 m²	0 ft²	0.0 m²	0 ft²	0.0 m²	0.0 m²	0.0 m²	0.0 m²	107.6 m²	23.73 m²	0.0 m²	0.0 m²	0.0 m²	0.0 m²
TOTAL		23,107.3 m²	248,725 ft²	19,656.8 m²	211,584 ft²	17,880.9 m²	192,469 ft²	1,488.5 m²	46.1 m²	344.3 m²	606.1 m²	499.0 m²	1,546.74 m²	43.5 m²	172.0 m²	216.6 m²	263.5 m²
TOTAL ABOVE AND BELOW	29 + MPH	34,614.4 m²	372,587 ft²	19,795.9 m²	213,082 ft²	17,880.9 m²	192,469 ft²	1,627.6 m²	46.1 m²	344.3 m²	606.1 m²	1,066.8 m²	1,971.75 m²	979.6 m²	9,611.0 m²	216.6 m²	263.5 m²

NO.	REVISIONS	DATE
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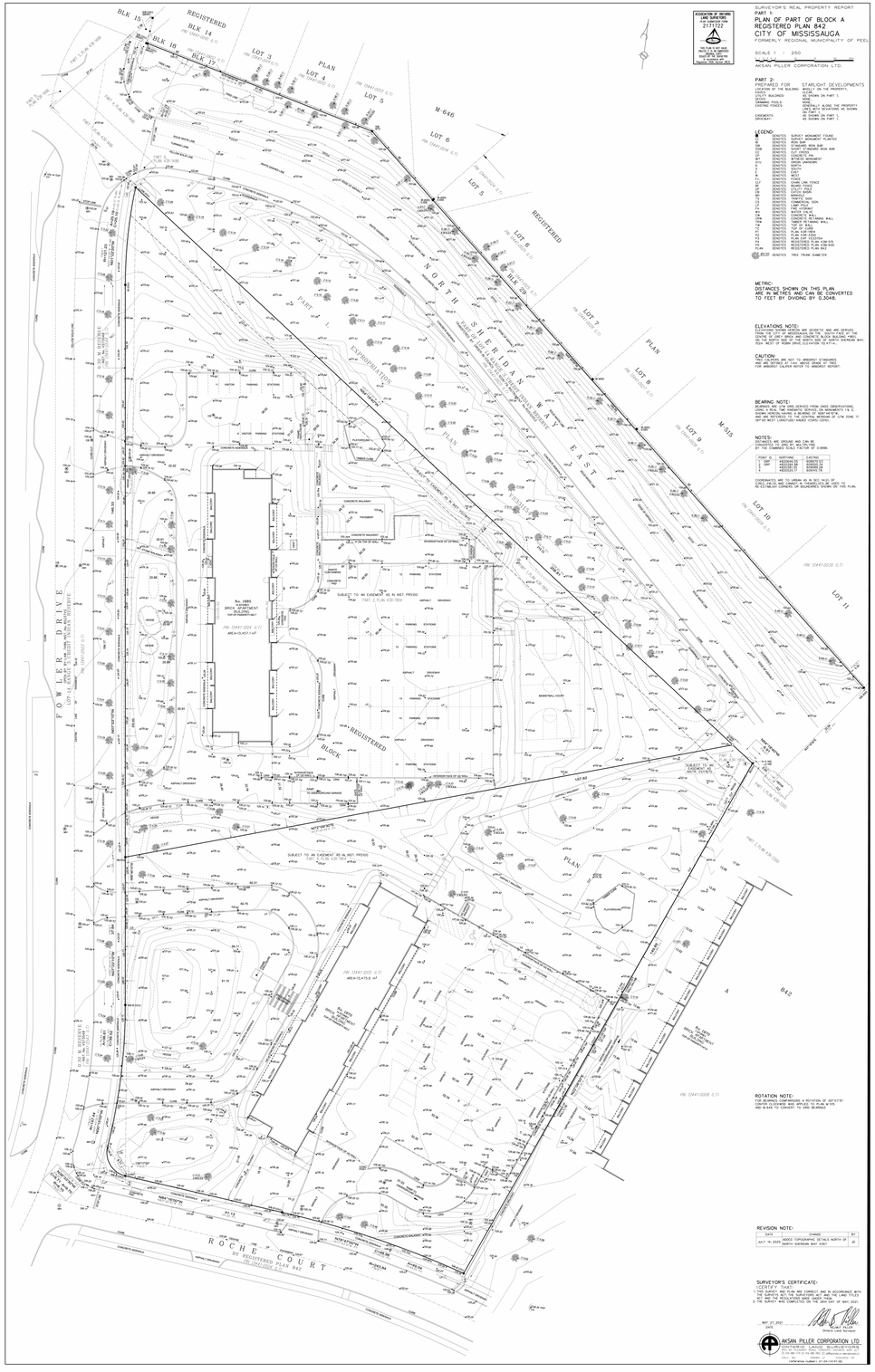
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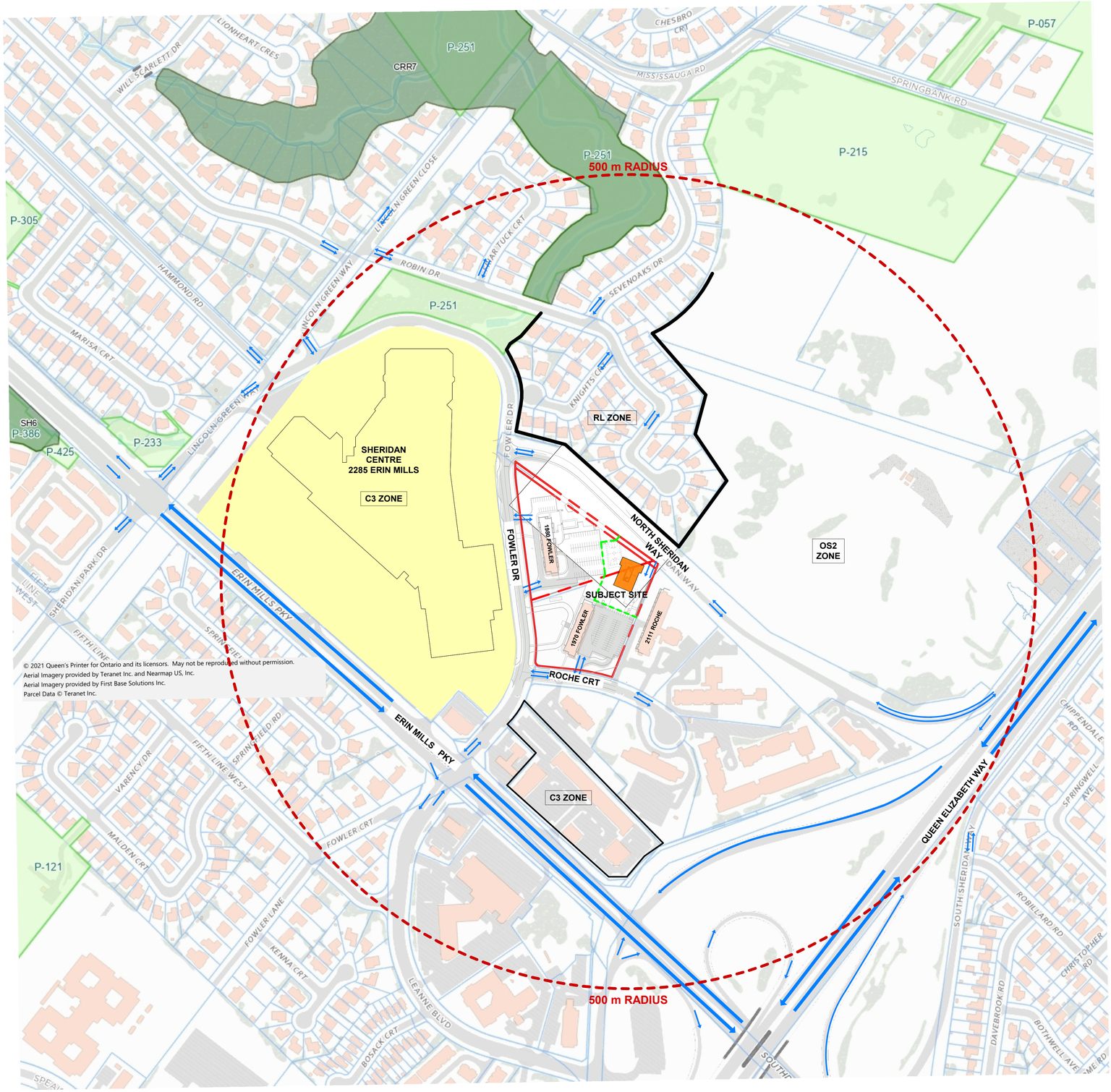
DRAWN: FKH, QL	SCALE: 1 : 1
CHECKED: KQ	DATE: 25 JAN 2025

TITLE: STATISTICS

PROJECT NO.	DRAWING NO.
22-214	A001

DATE/TIME PRODUCED 2025-11-18 4:41:13 PM


REGISTERED PLAN
BLK 10
BLK 14
BLK 18
BLK 22
LOT 3
LOT 4
LOT 5
LOT 6
LOT 7
LOT 8
LOT 9
LOT 10
LOT 11
M-646
F O W L E R D R I V E
N O R T H S H E R I D A N W A Y
E A S T S H E R I D A N W A Y
R O C H E C O U R T
EXPROPRIATION
PART 1
PART 2
PART 3
PART 4
PART 5
PART 6
PART 7
PART 8
PART 9
PART 10
PART 11
PART 12
PART 13
PART 14
PART 15
PART 16
PART 17
PART 18
PART 19
PART 20
PART



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LEGEND

- PROPOSED BUILDING
- UNDER CONSTRUCTION
- APROVED PROPOSAL
- PARK
- VEHICLE TRAFFIC

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NORTH

DRAWN: FKH, QL	SCALE: 1 : 2500
CHECKED: KQ	DATE: 25 JAN 2025

TITLE: CONCEPT PLAN

PROJECT NO.	DRAWING NO.
22-214	**A003**

DATE/TIME PRODUCED:2025-11-18 4:41:16 PM



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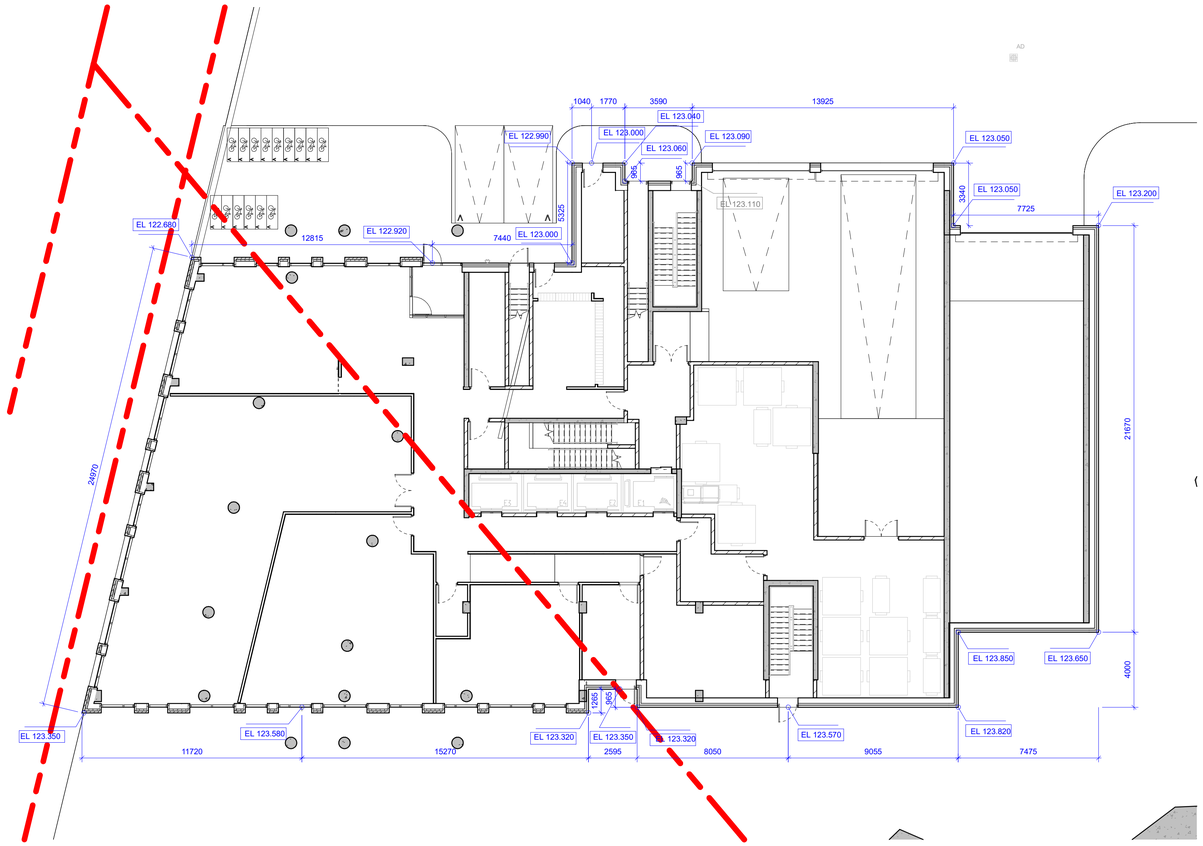
NORTH

DRAWN	SCALE
FKH, QL	1 : 500
CHECKED	DATE
KQ	25 JAN 2025

TITLE
OVERALL SITE PLAN

PROJECT NO.	DRAWING NO.
22-214	**A004**

DATE/TIME PRODUCED:2025-11-18 4:41:18 PM



CALCULATION				
LENGTH NO.	**BEGIN ELEV.**	**END ELEV.**	**LENGTH**	**((EL. 1+EL.2)/2) x L**
1	123.35	123.58	11.72	1447.01
2	123.58	123.32	15.27	1885.08
3	123.32	123.35	1.26	155.40
4	123.35	123.35	2.59	319.48
5	123.35	123.32	0.965	119.02
6	123.32	123.57	8.05	993.73
7	123.57	123.82	9.05	1119.44
8	123.82	123.85	4	495.34
9	123.85	123.65	7.47	924.41
10	123.65	123.2	21.67	2674.62
11	123.2	123.05	7.72	950.53
12	123.05	123.05	3.34	410.99
13	123.05	123.09	13.92	1713.13
14	123.09	123.11	0.965	118.79
15	123.11	123.06	3.59	441.88
16	123.06	123.04	0.965	118.74
17	123.04	123	1.77	217.75
18	123	122.99	1.04	127.91
19	122.99	123	5.32	654.33
20	123	122.99	7.44	915.08
21	122.99	122.68	12.92	1587.03
22	122.68	123.35	24.97	3071.68
		TOTAL	166.005	20461.38
		EG	20461.38/166.005	**123.26**

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DRAWN: Author	SCALE: 1 : 150
CHECKED: Checker	DATE: 25 JAN 2025

TITLE: ESTABLISHED GRADE

PROJECT NO.	DRAWING NO.
22-214	**A005**

DATE/TIME PRODUCED:2025-11-18 4:41:18 PM

MARKET RENTAL BUILDING

STATISTICS

LOT AREA : 2.69 Ha

LANDSCAPED AREA : 13, 192.82 SM (47%)

EXISTING GFA : 34,240 SM

PROPOSED GFA : 19,796 SM

TOTAL PROJECT GFA : 53,913 SM

FSI : 53,913 SM/ 26,936.63 SM = 2.00

REQUIRED PARKING SPACES : MIN. 314 SPOTS
(PARKING RATE = 0.9 RESIDENT + 0.2/VISITOR)

PROVIDED PARKING SPACES : 272 SPOTS

AMENITY SCHEDULE

INTERIOR AMENITY
289.4 SM @ L01 + 237.7 SM @ L05 + 79.1 SM @ ROOF = 606.1 SM

EXTERIOR AMENITY
468.7 SM @ GRADE+ 317.7 SM @ L05 + 345.5 SM @ ROOF = 1131.9 SM

TOTAL AMENITY PROVIDED
606.1 SM+ 1131.9 SM = 1738.0 SM 1951.9/ 285 = 6.84 SM / UNIT)

SUITE SCHEDULE

STUDIO = 33

1 BEDROOM = 140

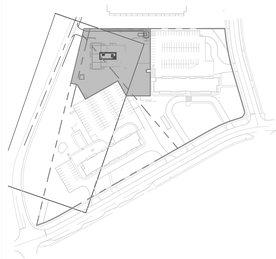
1 BEDROOM+D = 12

2 BEDROOM = 59

3 BEDROOM = 29

TOTAL UNITS = 285

KEYPLAN



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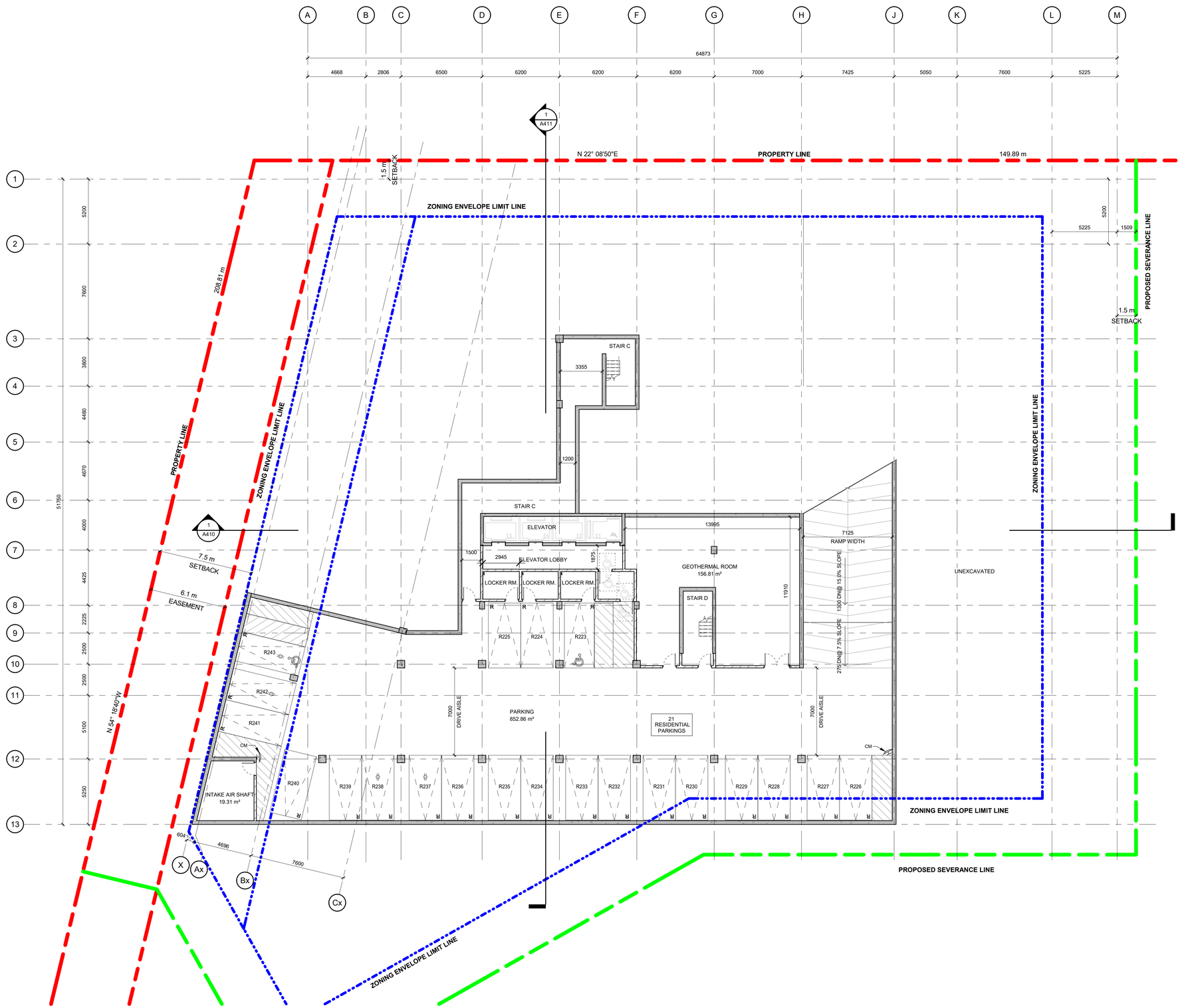
PROJECT NORTH
TRUE NORTH

DRAWN	SCALE
FKH, QL	1 : 200
CHECKED	DATE
KQ	25 JAN 2025

TITLE
SITE PLAN

PROJECT NO.	DRAWING NO.
22-214	**A006**

DATE/TIME PRODUCED:2025-11-18 4:41:24 PM



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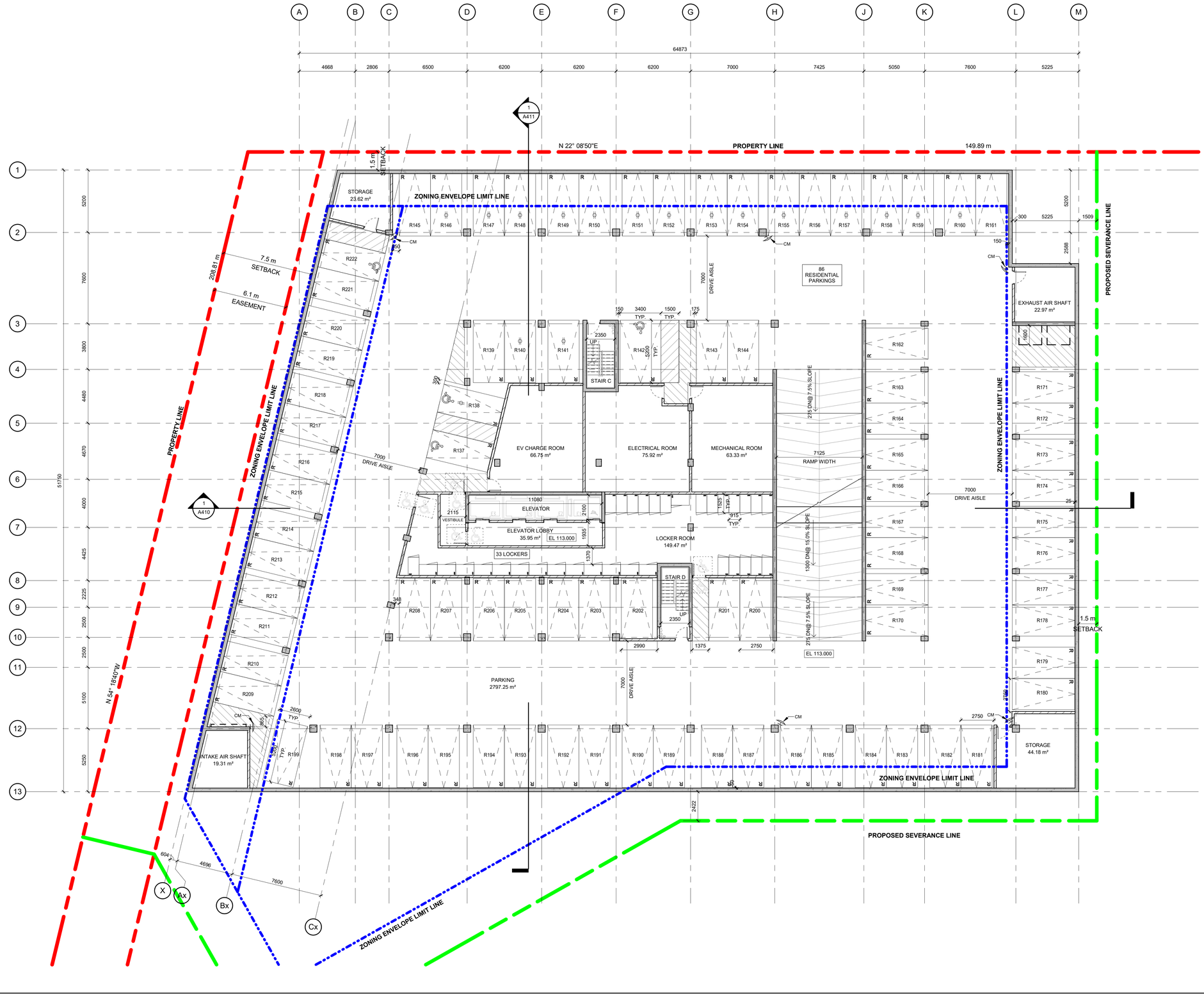
NORTH

DRAWN	SCALE
FKH	1 : 150
CHECKED	DATE
KQ	25 JAN 2025

TITLE
LEVEL P4

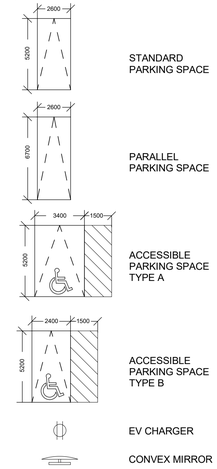
PROJECT NO.	DRAWING NO.
22-214	**A200**

DATE/TIME PRODUCED:2025-11-18 4:41:24 PM



PARKING REGULATIONS

CITY OF MISSISSAUGA



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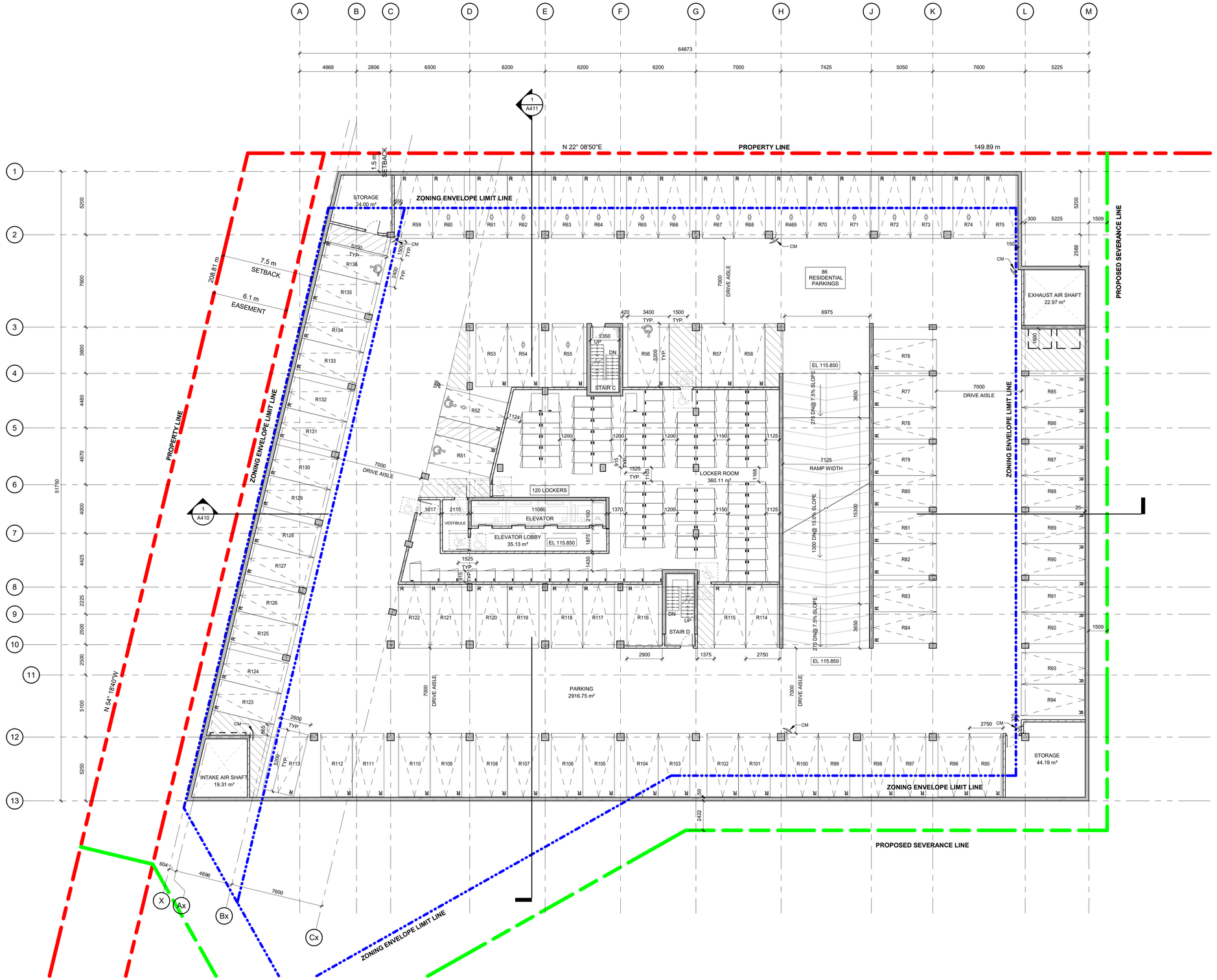
NORTH

DRAWN: FKH, QL	SCALE: 1 : 150
CHECKED: KQ	DATE: 25 JAN 2025

TITLE
LEVEL P3

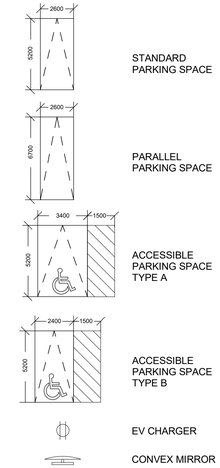
PROJECT NO.	DRAWING NO.
22-214	**A201**

DATE/TIME PRODUCED:2025-11-18 4:41:26 PM



PARKING REGULATIONS

CITY OF MISSISSAUGA



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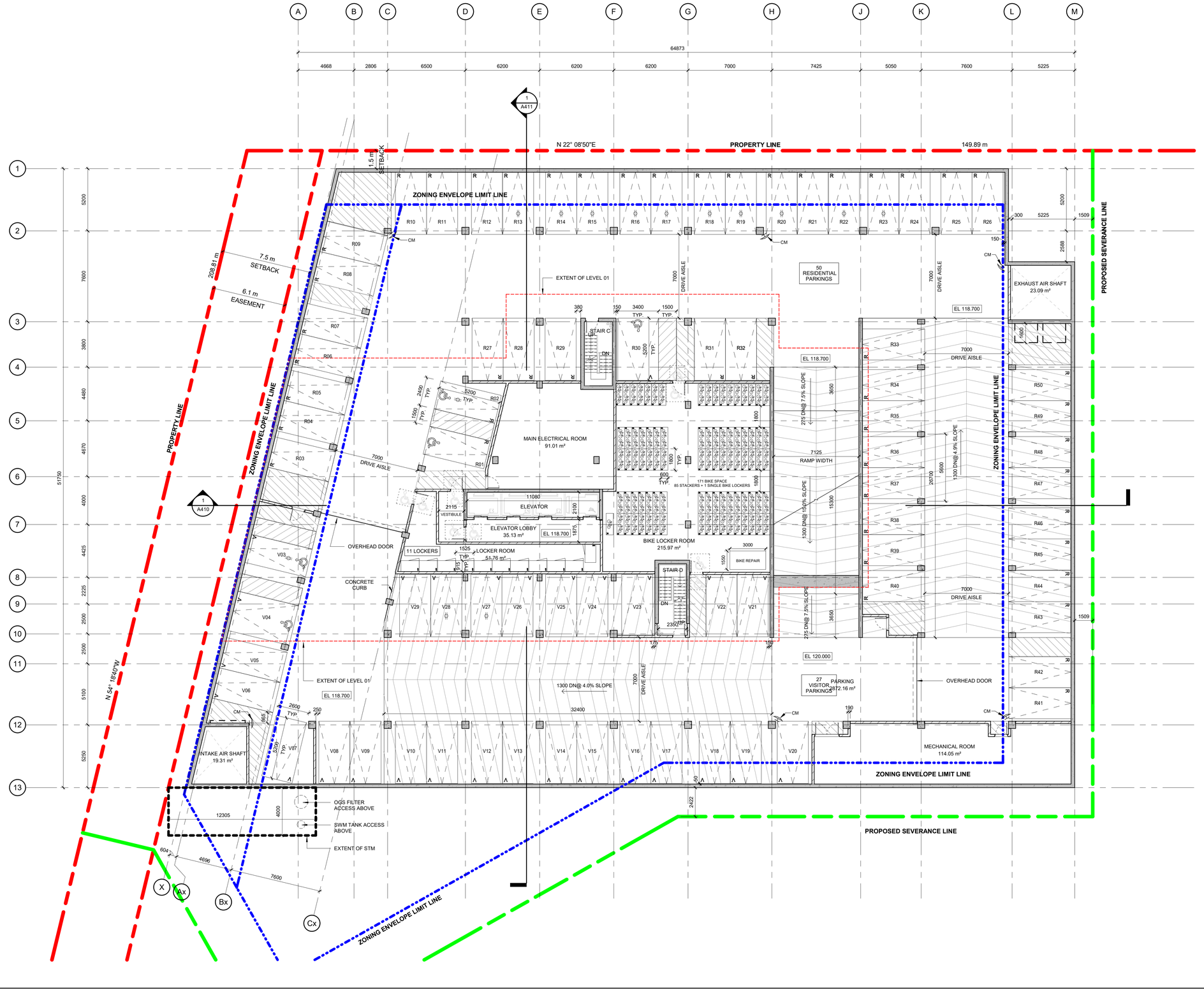
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DRAWN	SCALE
FKH, QL	1 : 150
CHECKED: KQ	DATE: 25 JAN 2025

TITLE: LEVEL P2

PROJECT NO.	DRAWING NO.
22-214	**A202**

DATE/TIME PRODUCED:2025-11-18 4:41:28 PM



PARKING REGULATIONS

CITY OF MISSISSAUGA

- STANDARD PARKING SPACE
- PARALLEL PARKING SPACE
- ACCESSIBLE PARKING SPACE TYPE A
- ACCESSIBLE PARKING SPACE TYPE B
- EV CHARGER
- CONVEX MIRROR

NO.	REVISIONS	DATE
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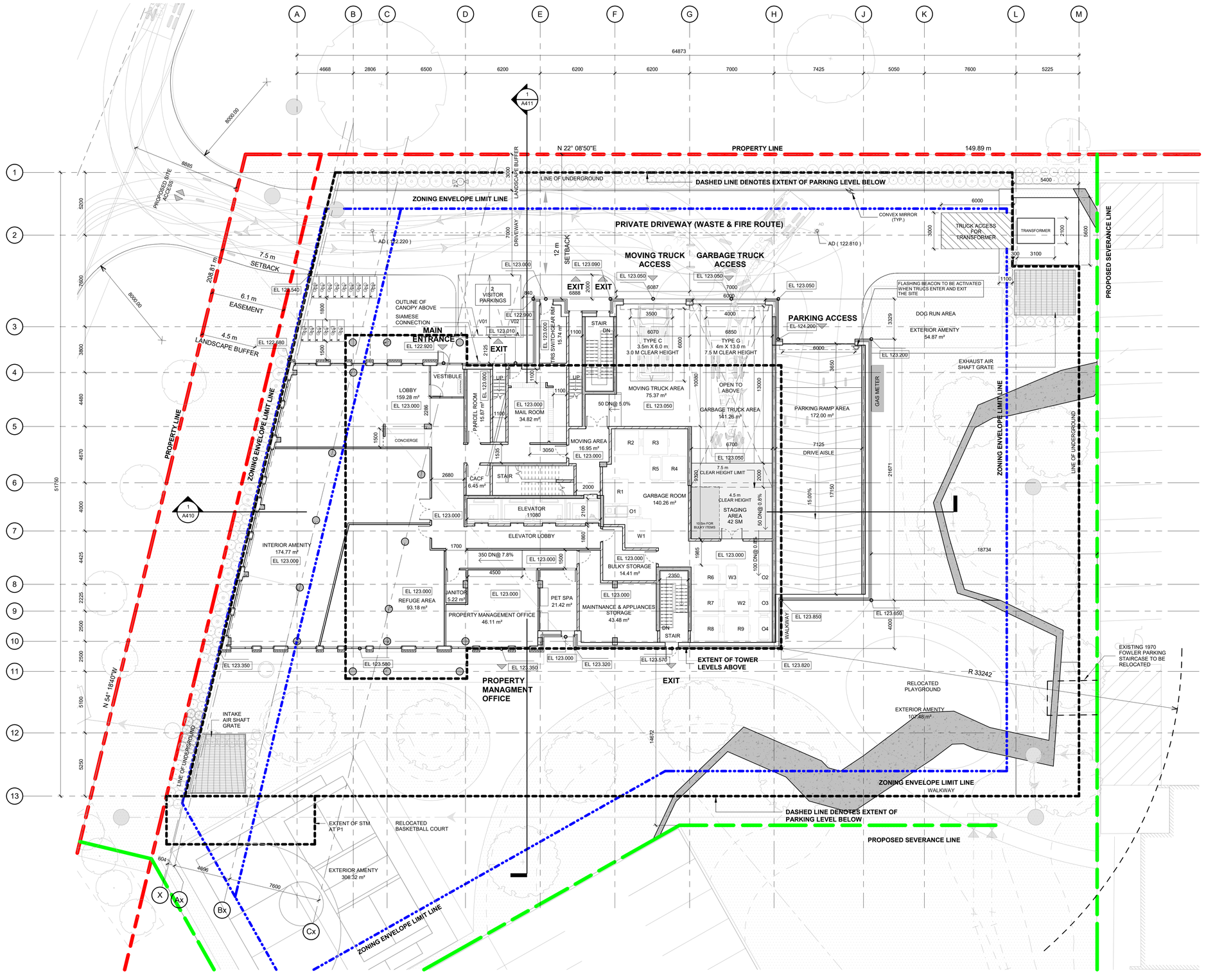
NORTH

DRAWN: FKH, QL	SCALE: 1 : 150
CHECKED: KQ	DATE: 25 JAN 2025

TITLE: LEVEL P1

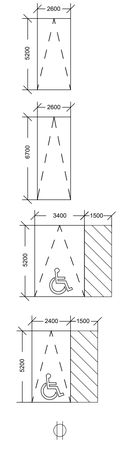
PROJECT NO.	DRAWING NO.
22-214	**A203**

DATE/TIME PRODUCED:2025-11-18 4:41:28 PM



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CITY OF MISSISSAUGA



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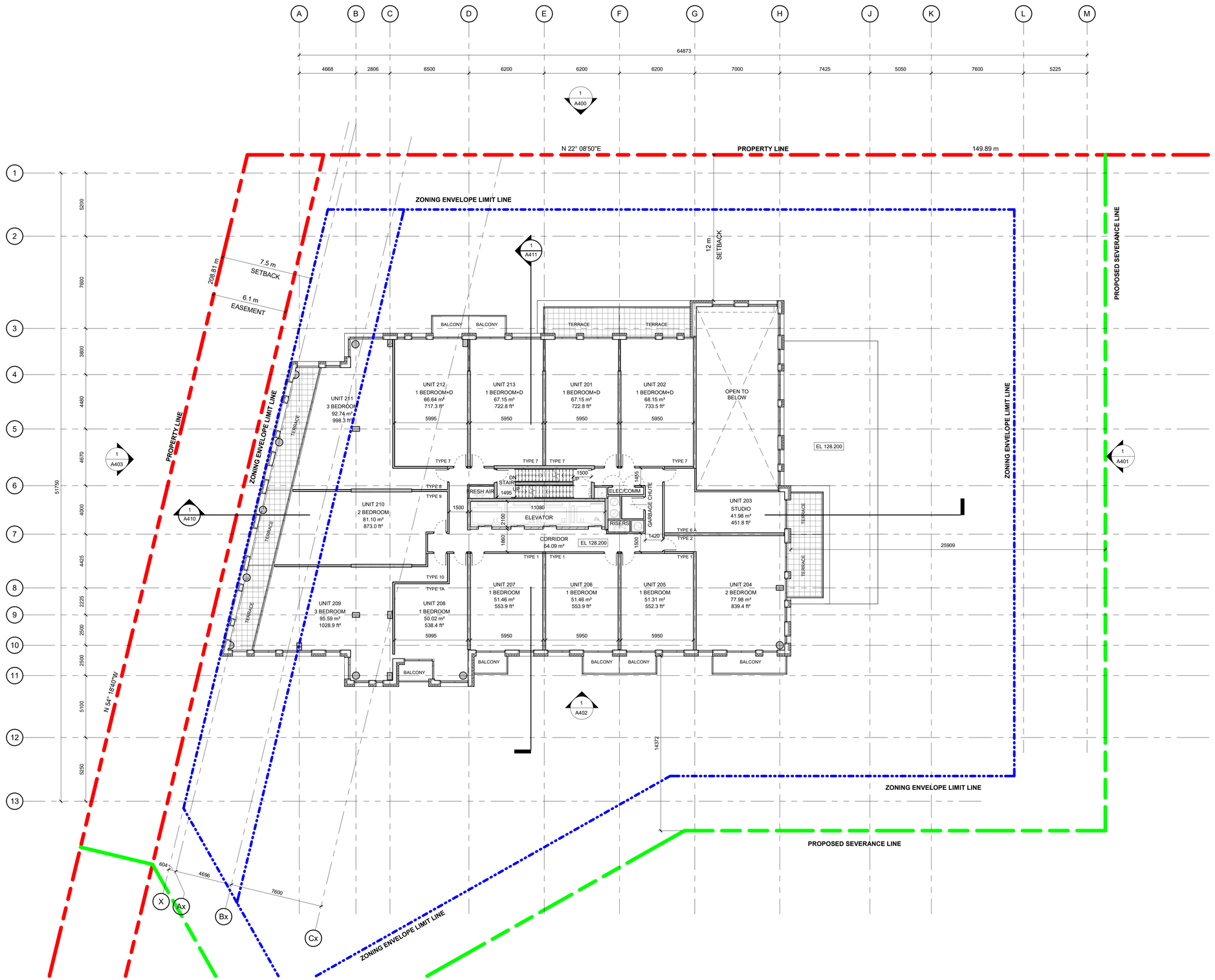
NORTH

DRAWN	SCALE
FKH, QL	1 : 150
CHECKED: KQ	DATE: 25 JAN 2025

TITLE: LEVEL 1

PROJECT NO.	DRAWING NO.
22-214	**A204**

DATE/TIME PRODUCED:2025-11-18 4:41:29 PM



NO.	REVISIONS	DATE
1	ISSUED FOR REZONING AND OPA	21 NOV 2025

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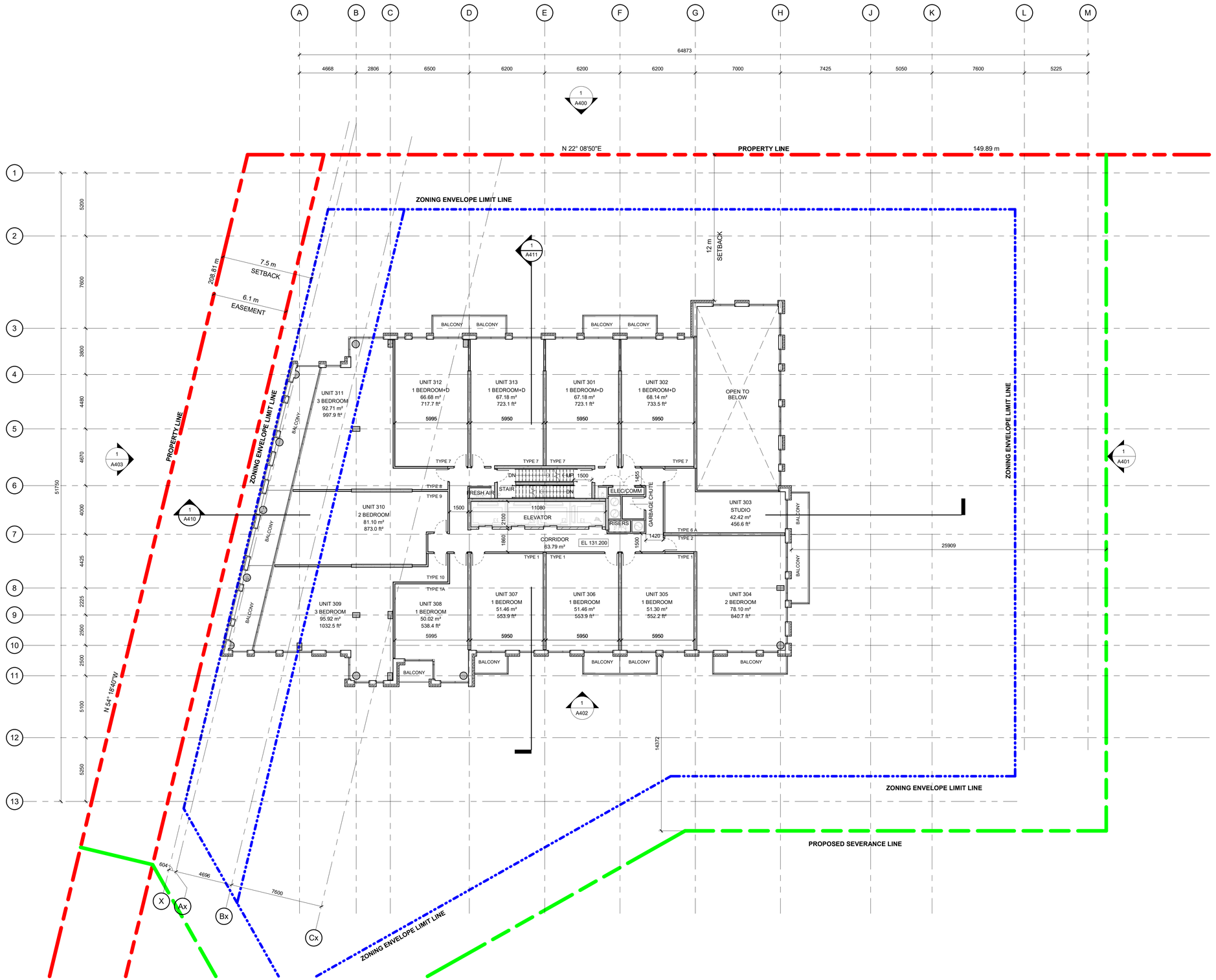
NORTH

DRAWN: FKH, QL	SCALE: 1 : 150
CHECKED: KQ	DATE: 25 JAN 2025

TITLE: LEVEL 2

PROJECT NO.	DRAWING NO.
22-214	**A205**

DATE/TIME PRODUCED:2025-11-18 4:41:30 PM



NO.	REVISIONS	DATE
1	ISSUED FOR REZONING AND OPA	21 NOV 2025

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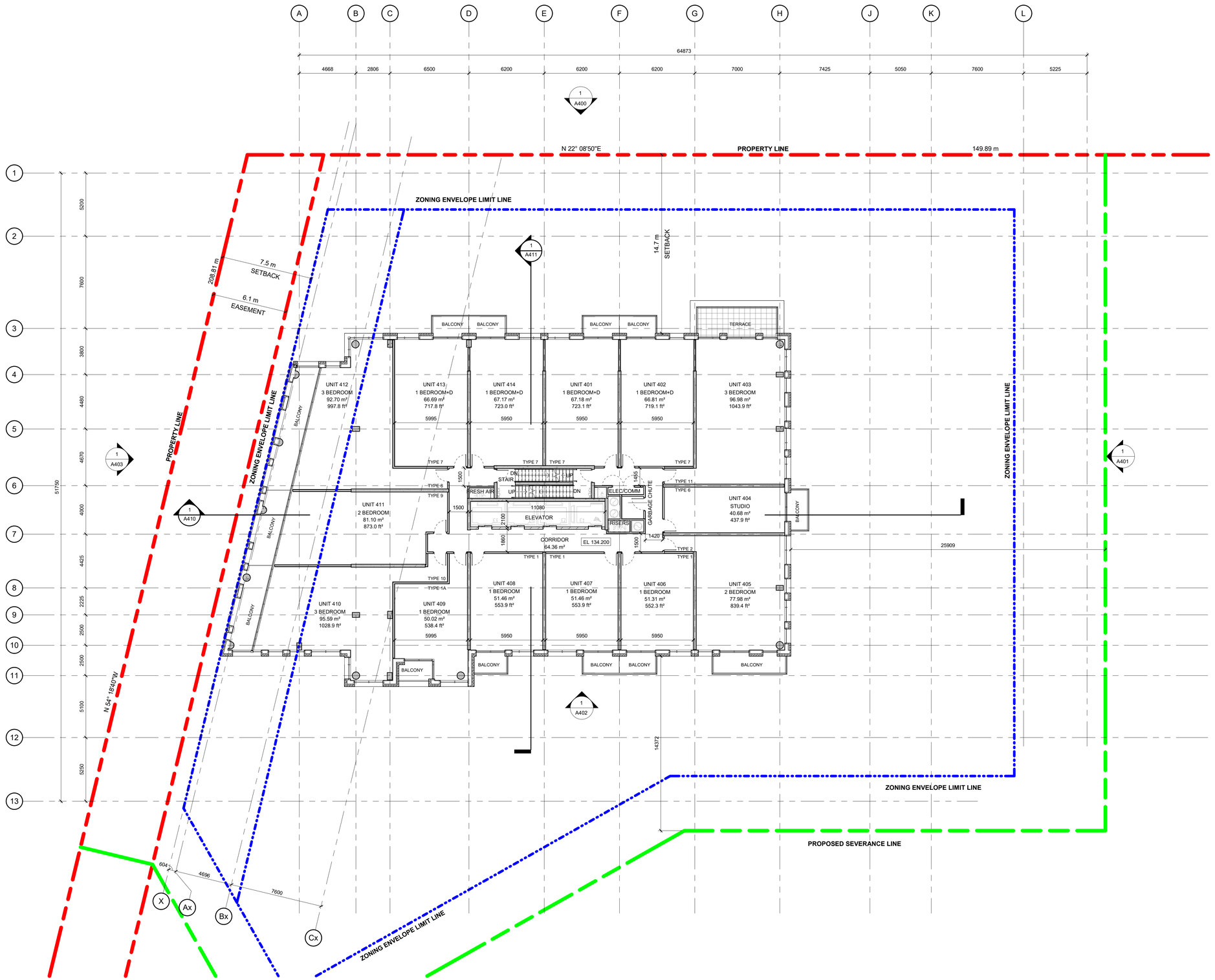
NORTH

DRAWN: FKH, QL	SCALE: 1 : 150
CHECKED: KQ	DATE: 25 JAN 2025

TITLE: LEVEL 3

PROJECT NO.	DRAWING NO.
22-214	**A206**

DATE/TIME PRODUCED:2025-11-18 4:41:31 PM



DATE/TIME PRODUCED 2025-11-18 4:41:32 PM

NO.	REVISIONS	DATE
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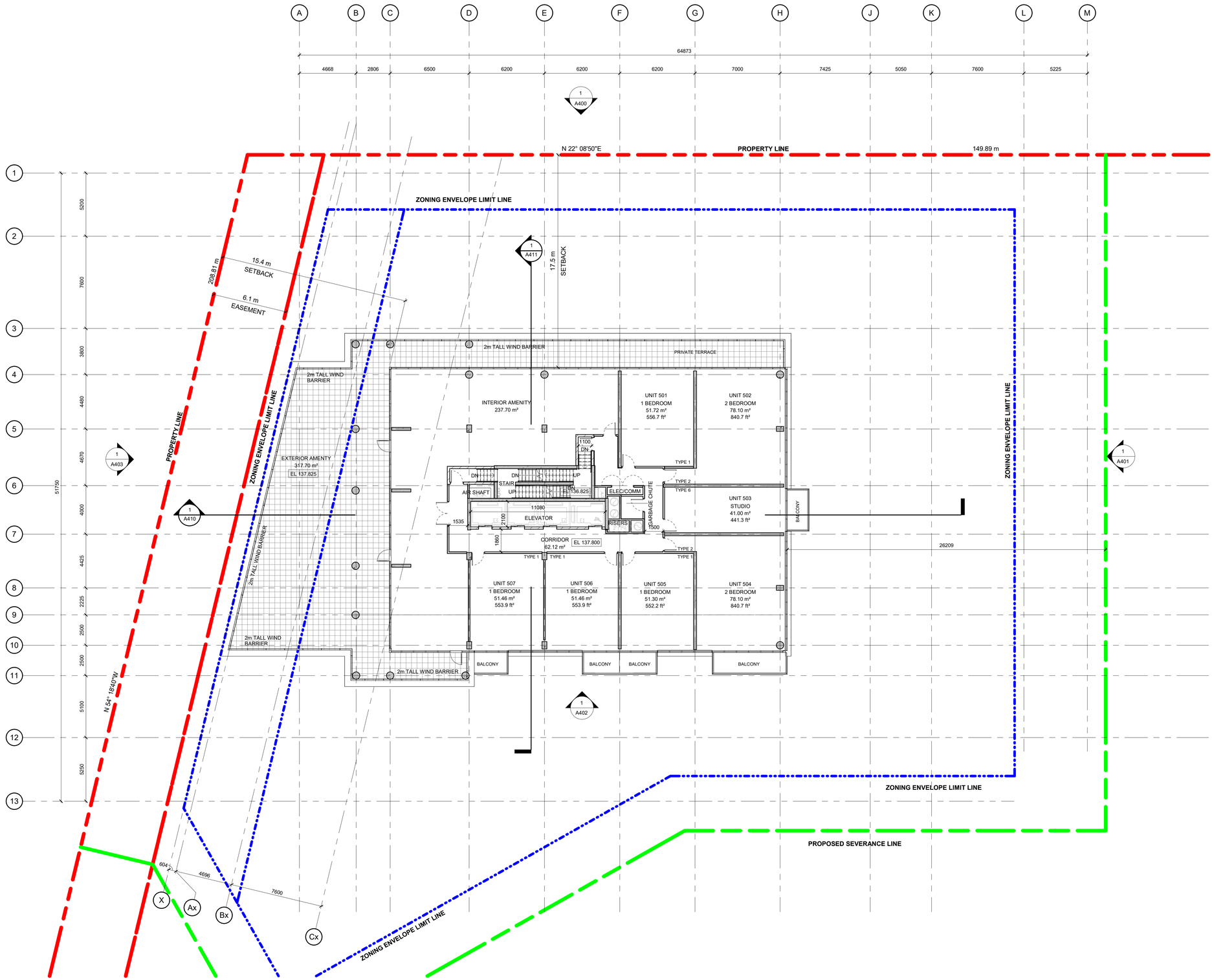
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NORTH

DRAWN	SCALE
FKH, QL	1 : 150
CHECKED	DATE
KQ	25 JAN 2025

TITLE
LEVEL 4

PROJECT NO.	DRAWING NO.
22-214	**A207**



NO.	REVISIONS	DATE
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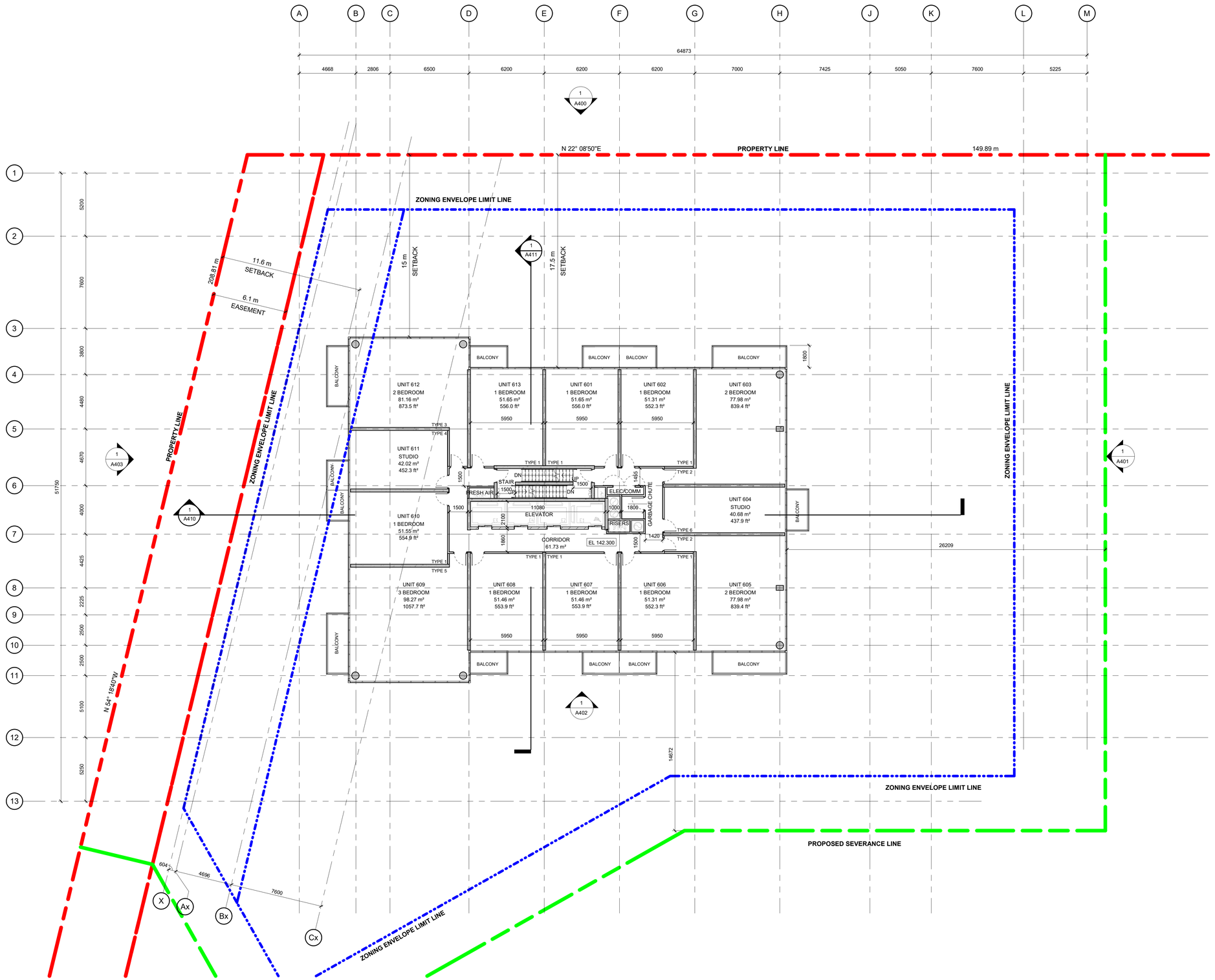
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DRAWN: FKH, QL	SCALE: 1 : 150
CHECKED: KQ	DATE: 25 JAN 2025

TITLE: LEVEL 5

PROJECT NO.	DRAWING NO.
22-214	**A208**

DATE/TIME PRODUCED:2025-11-18 4:41:32 PM



NO.	REVISIONS	DATE
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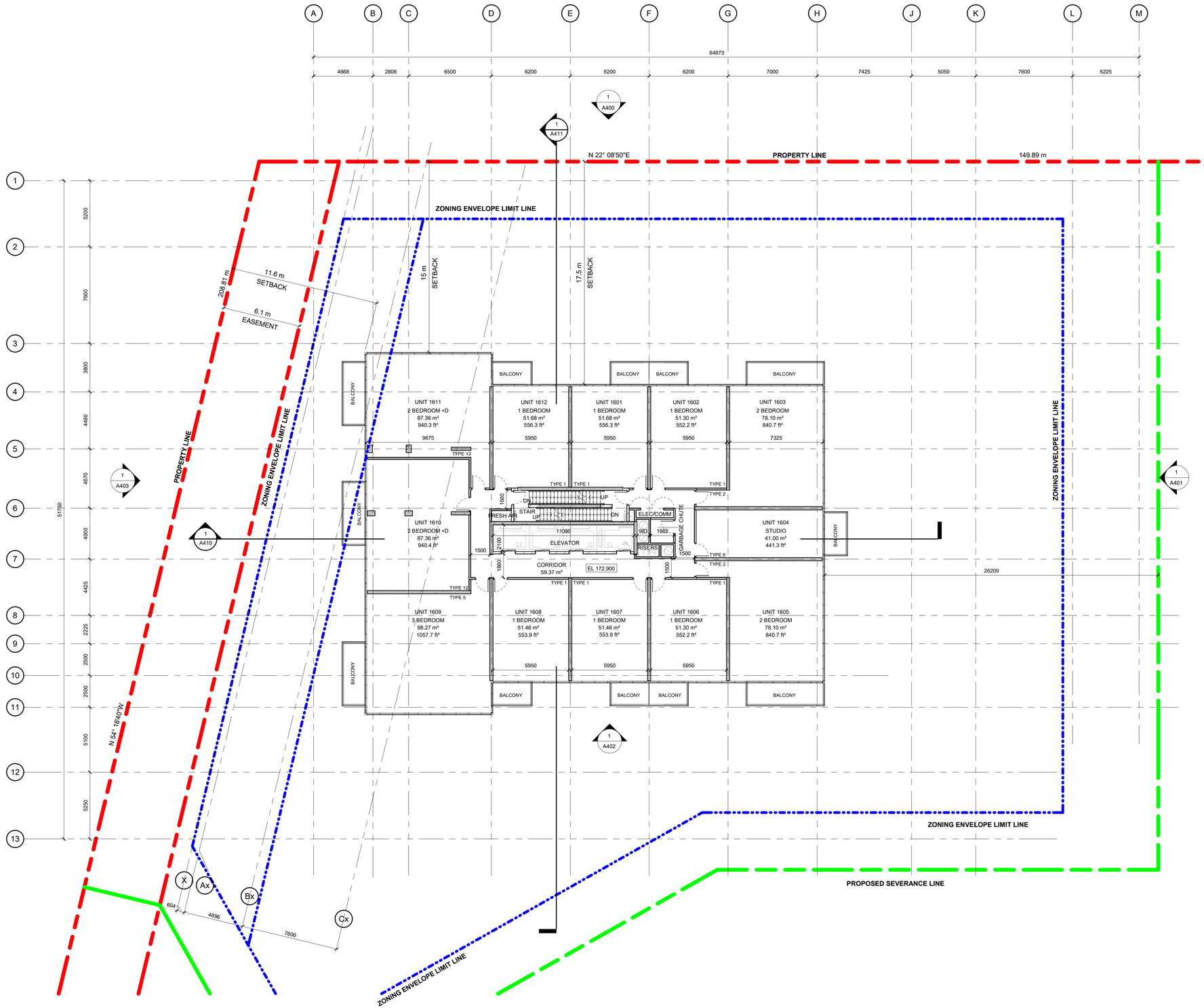
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DRAWN: FKH, QL	SCALE: 1 : 150
CHECKED: KQ	DATE: 25 JAN 2025

TITLE: LEVEL 6-15

PROJECT NO.	DRAWING NO.
22-214	**A209**

DATE/TIME PRODUCED 2025-11-18 4:41:33 PM



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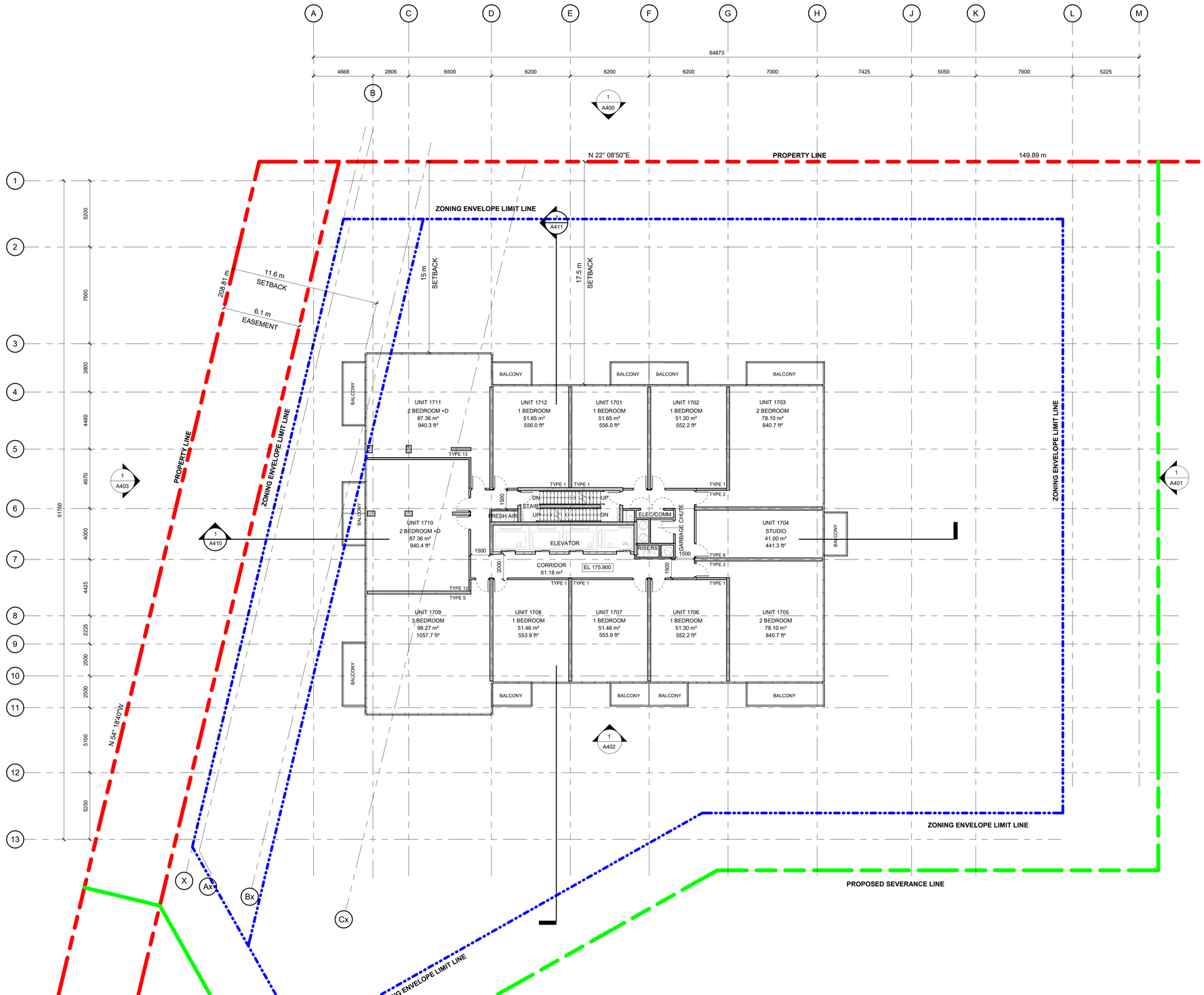
NORTH

DRAWN	SCALE
Author	1 : 150
CHECKED	DATE
Checker	25 JAN 2025

TITLE
LEVEL 16

PROJECT NO.	DRAWING NO.
22-214	**A210**

DATE/TIME PRODUCED:2025-11-18 4:41:33 PM



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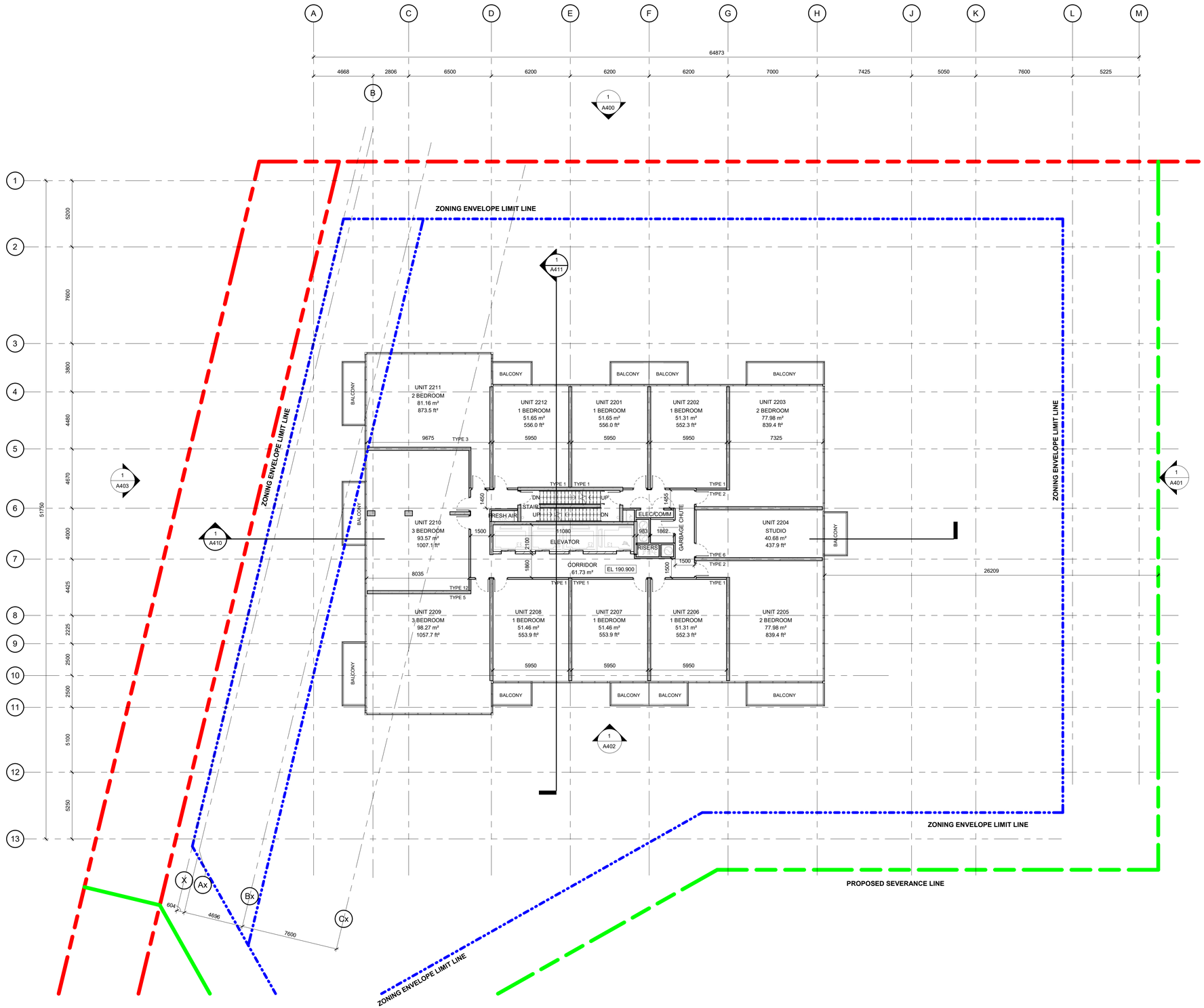
NORTH

DRAWN	SCALE
Author	1 : 150
CHECKED: Checker	DATE: 25 JAN 2025

TITLE
LEVEL 17-21

PROJECT NO.	DRAWING NO.
22-214	**A211**

DATE/TIME PRODUCED:2025-11-18 4:41:34 PM



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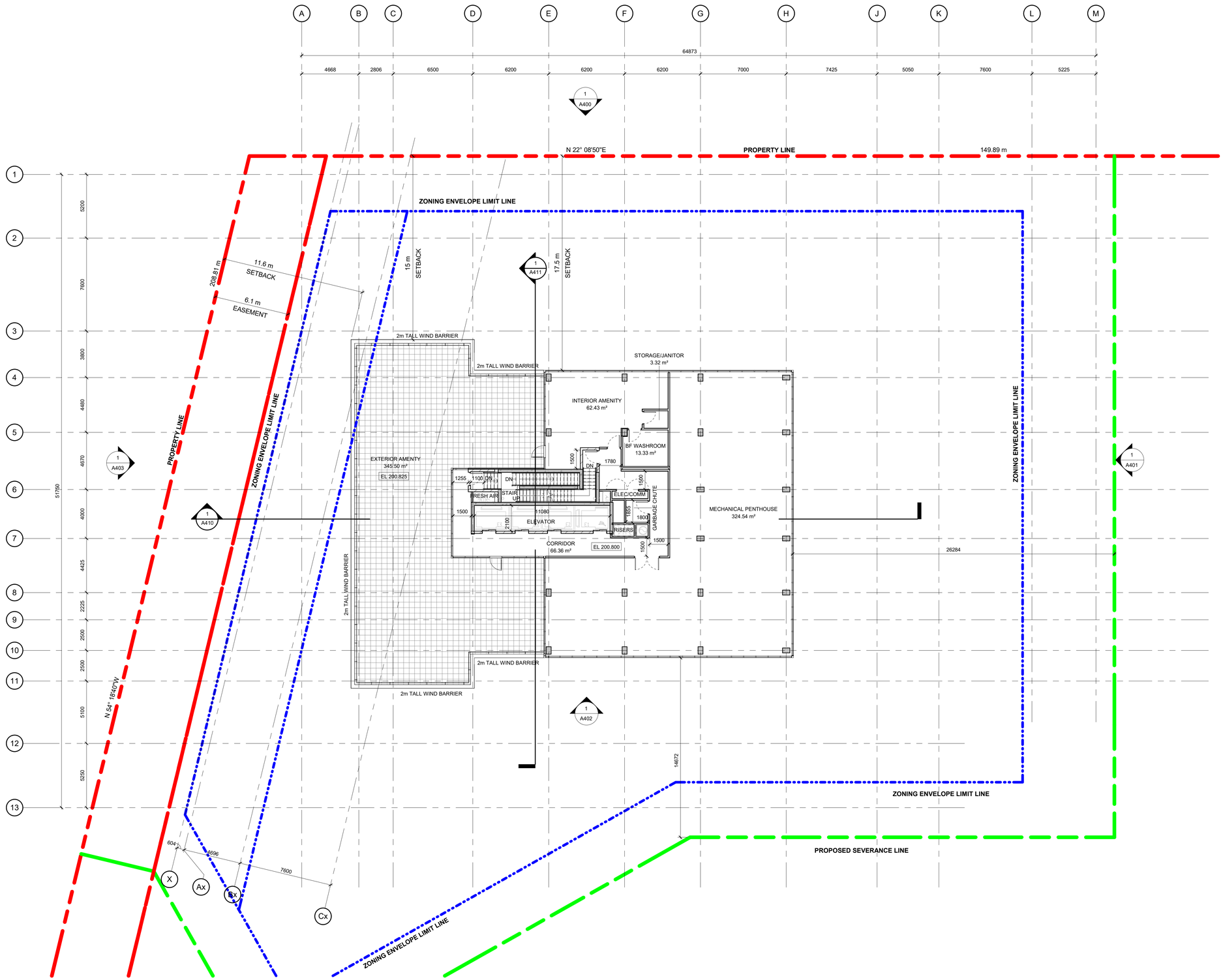
NORTH

DRAWN	SCALE
Author	1 : 150
CHECKED: Checker	DATE: 25 JAN 2025

TITLE
LEVEL 22-24

PROJECT NO.	DRAWING NO.
22-214	**A212**

DATE/TIME PRODUCED:2025-11-18 4:41:34 PM



DATE/TIME PRODUCED:2025-11-18 4:41:35 PM

NO.	REVISIONS	DATE
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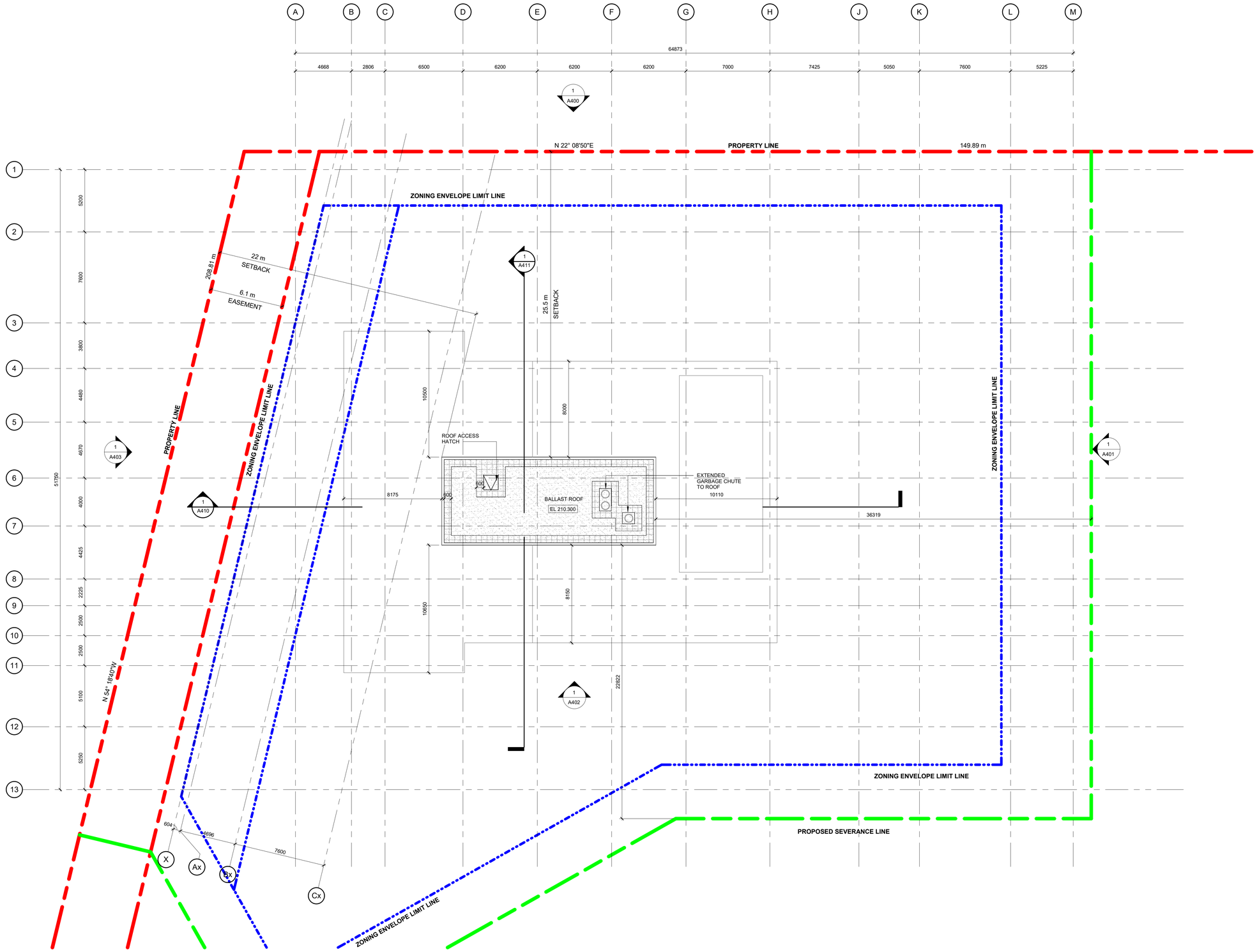
IMH 1970 & 1980 FOWLER DRIVE LTD.

NORTH

DRAWN	SCALE
FKH, QL	1 : 150
CHECKED	DATE
KQ	25 JAN 2025

TITLE
LEVEL MPH - ROOFTOP AMENITY

PROJECT NO.	DRAWING NO.
22-214	**A213**



NO.	REVISIONS	DATE
1	ISSUED FOR REZONING AND OPA	21 NOV 2025

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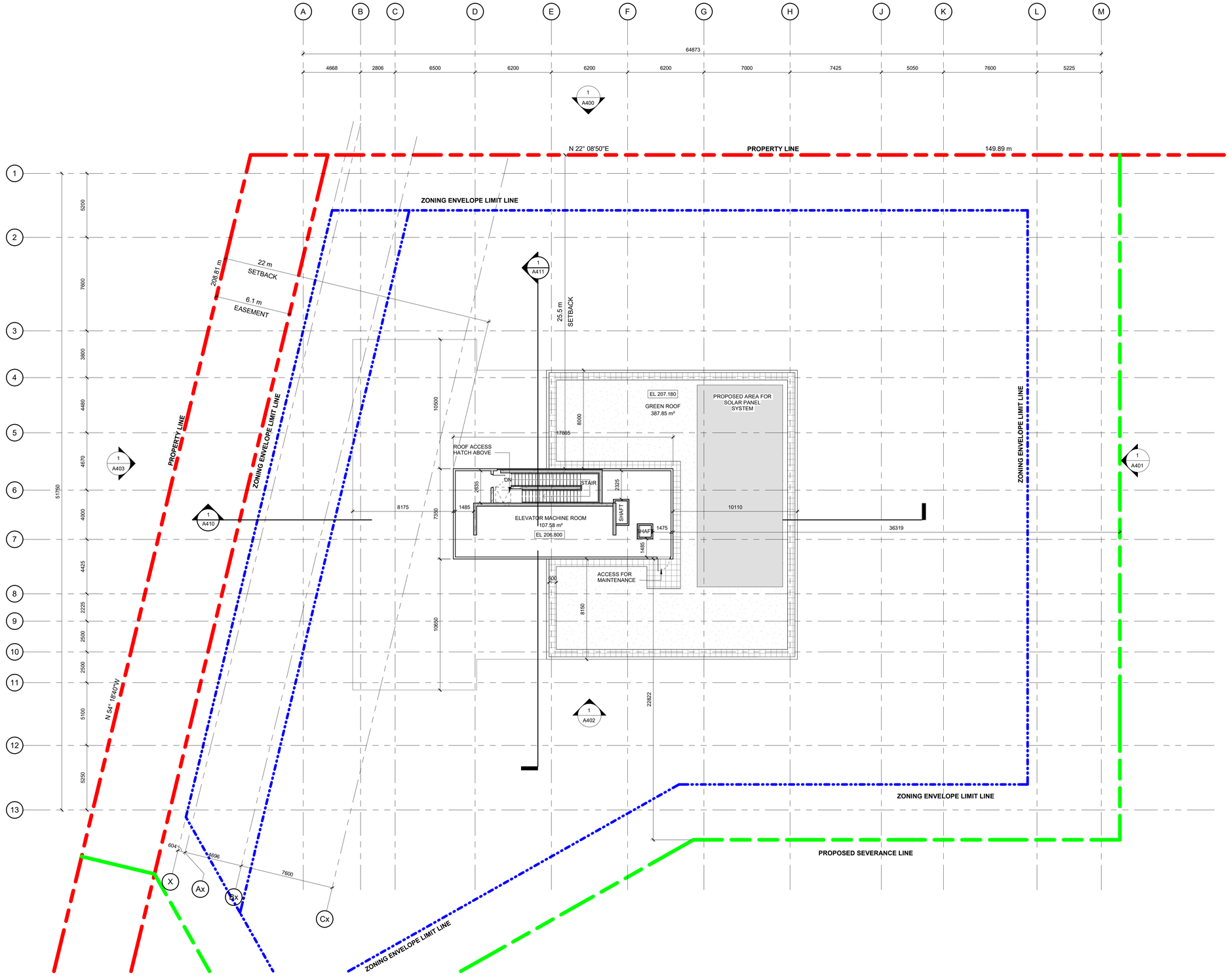
NORTH

DRAWN	SCALE
FKH, QL	1 : 150
CHECKED	DATE
KQ	25 JAN 2025

TITLE
ELEVATOR MACHINE ROOM ROOF

PROJECT NO.	DRAWING NO.
22-214	**A214**

DATE/TIME PRODUCED:2025-11-18 4:41:35 PM



NO.	REVISIONS	DATE
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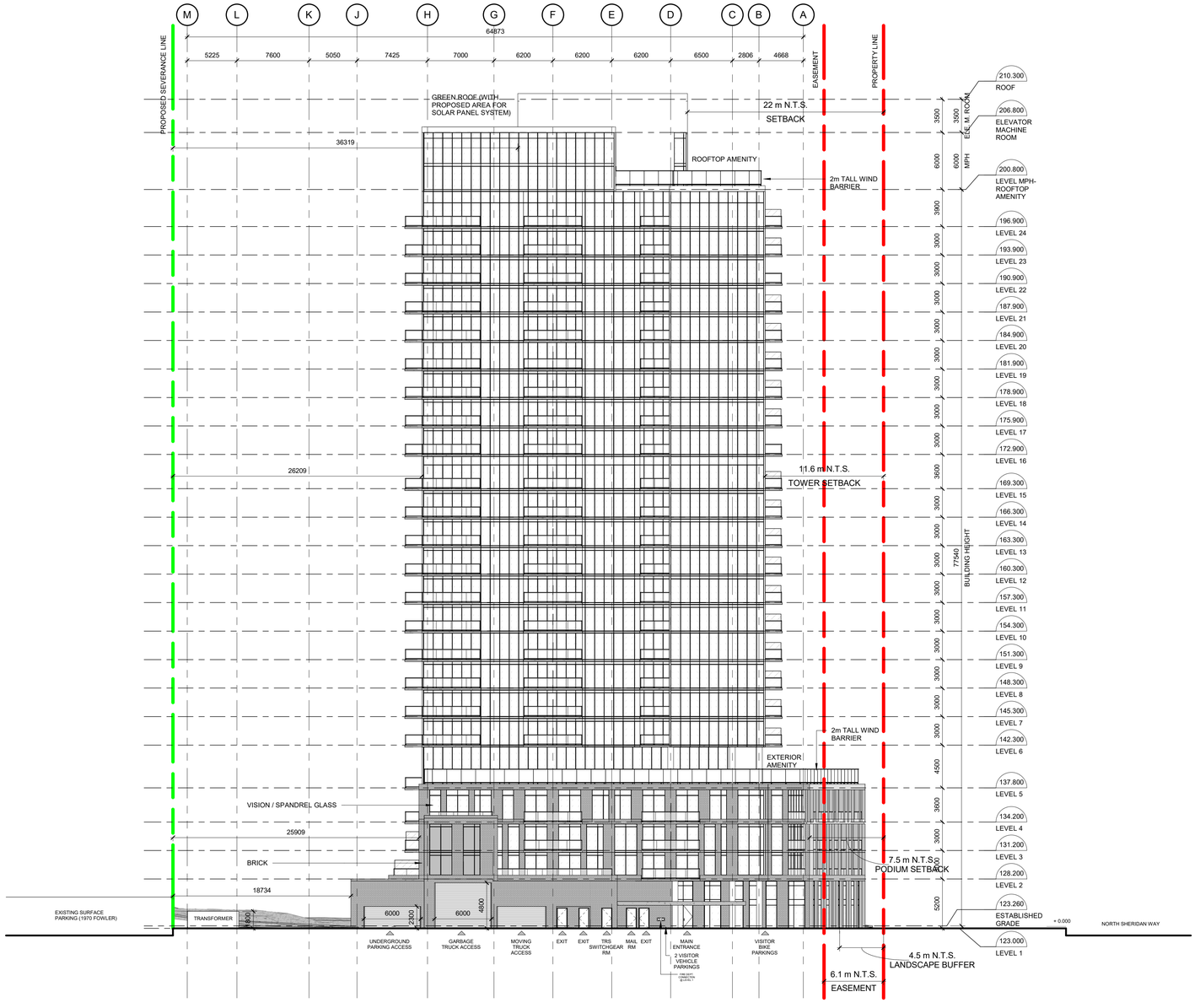
NORTH

DRAWN	SCALE
FKH, QL	1 : 150
CHECKED	DATE
KQ	25 JAN 2025

TITLE
ELEVATOR MACHINE ROOM LEVEL

PROJECT NO.	DRAWING NO.
22-214	**A215**

DATE/TIME PRODUCED:2025-11-18 4:41:36 PM



NO.	REVISIONS	DATE
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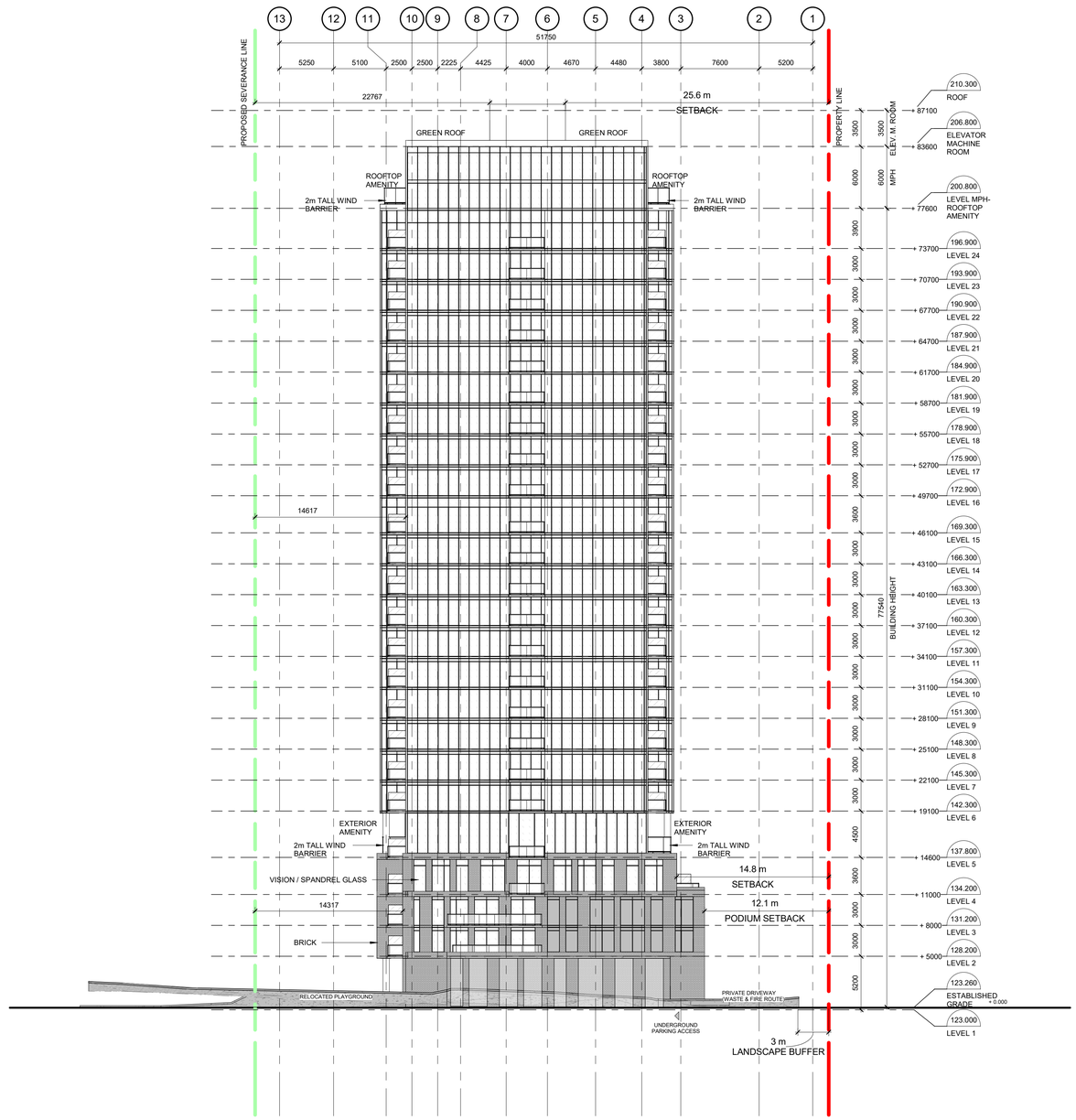
IMH 1970 & 1980 FOWLER DRIVE LTD.

DRAWN: FKH, QL	SCALE: 1 : 250
CHECKED: KQ	DATE: 25 JAN 2025

TITLE
NORTH ELEVATION

PROJECT NO.	DRAWING NO.
22-214	**A400**

DATE/TIME PRODUCED:2025-11-18 4:41:38 PM



NO.	REVISIONS	DATE
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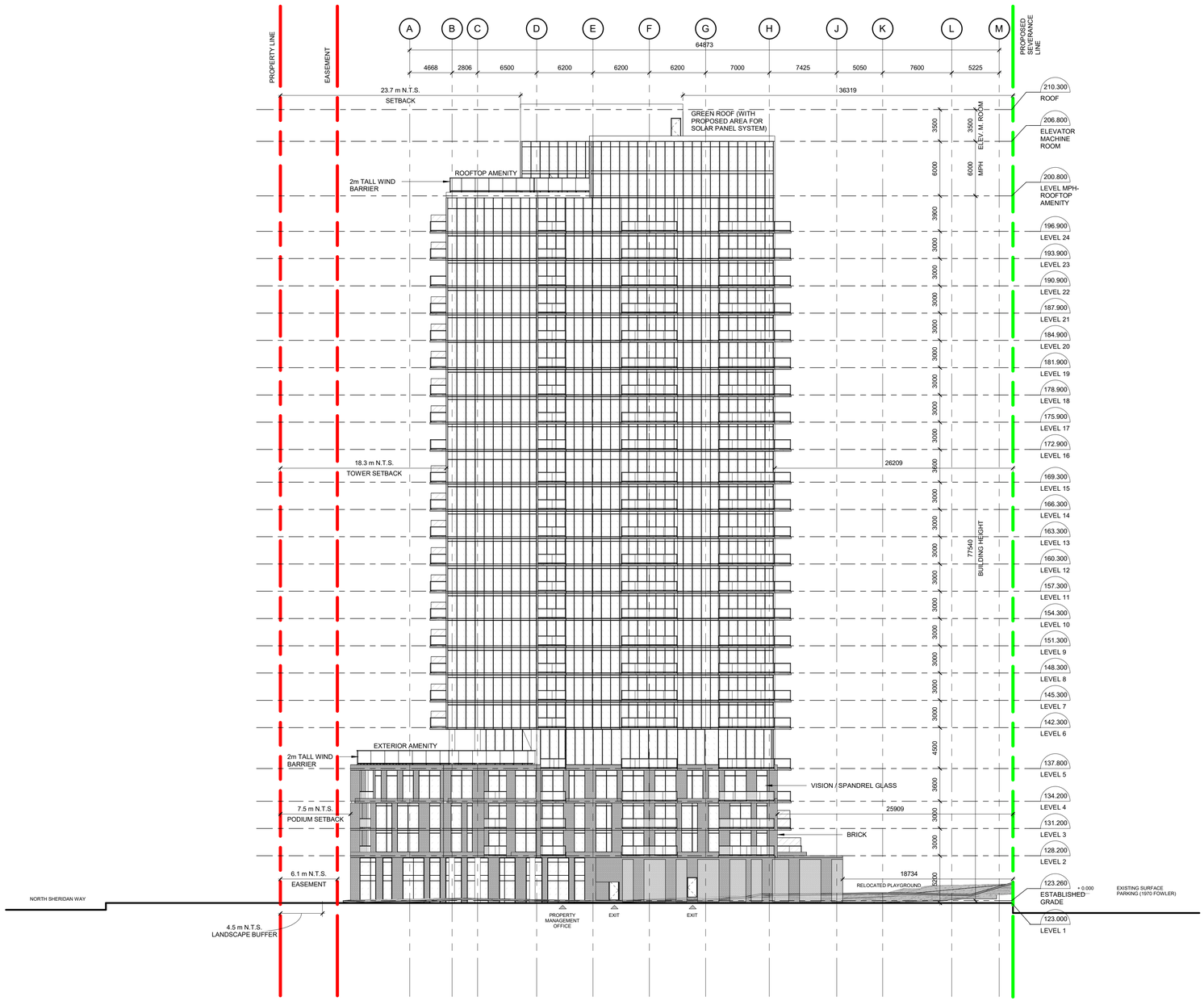
IMH 1970 & 1980 FOWLER DRIVE LTD.

DRAWN: FKH, QL	SCALE: 1 : 250
CHECKED: KQ	DATE: 25 JAN 2025

TITLE
EAST ELEVATION

PROJECT NO.	DRAWING NO.
22-214	**A401**

DATE/TIME PRODUCED:2025-11-18 4:41:40 PM



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1	ISSUED FOR REZONING AND OPA	21 NOV 2025

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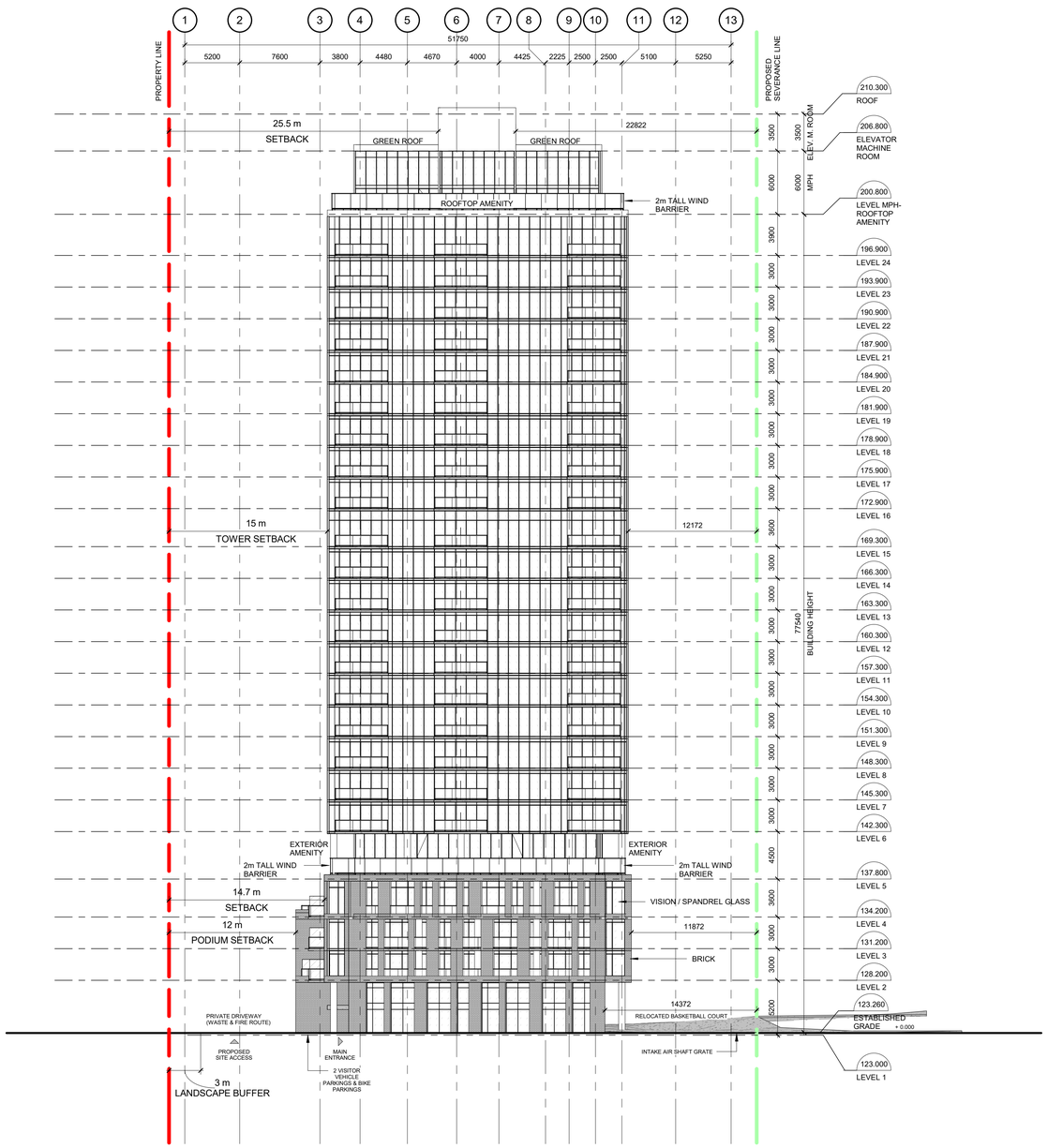
IMH 1970 & 1980 FOWLER DRIVE LTD.

DRAWN: FKH, QL	SCALE: 1 : 250
CHECKED: KQ	DATE: 25 JAN 2025

TITLE
SOUTH ELEVATION

PROJECT NO.	DRAWING NO.
22-214	**A402**

DATE/TIME PRODUCED:2025-11-18 4:41:42 PM



NO.	REVISIONS	DATE
1	ISSUED FOR REZONING AND OPA	21 NOV 2025

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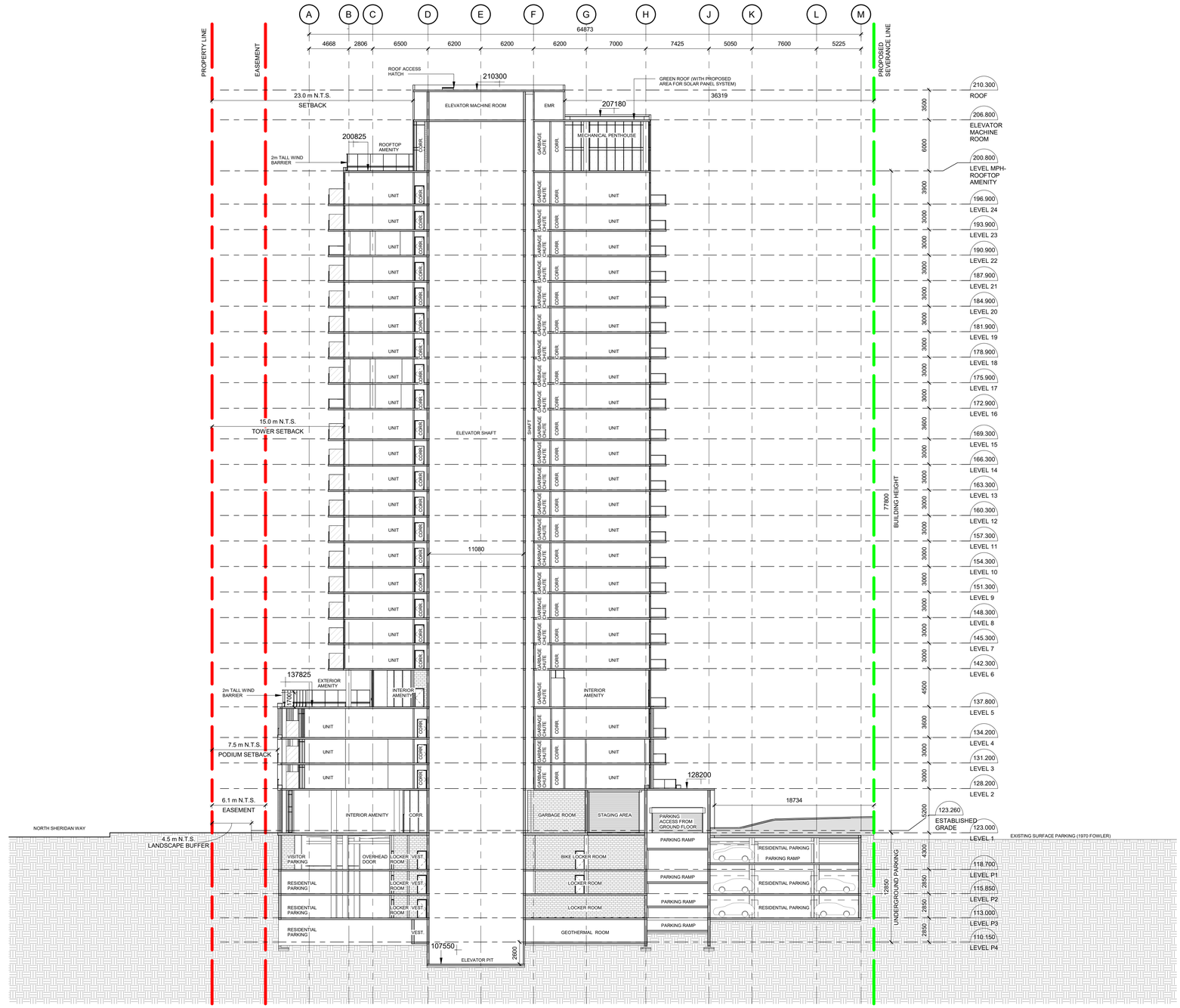
IMH 1970 & 1980 FOWLER DRIVE LTD.

DRAWN	SCALE
FKH, QL	1 : 250
CHECKED	DATE
KQ	25 JAN 2025

TITLE
WEST ELEVATION

PROJECT NO.	DRAWING NO.
22-214	**A403**

DATE/TIME PRODUCED:2025-11-18 4:41:45 PM



NO.	REVISIONS	DATE
1	ISSUED FOR REZONING AND OPA	21 NOV 2025

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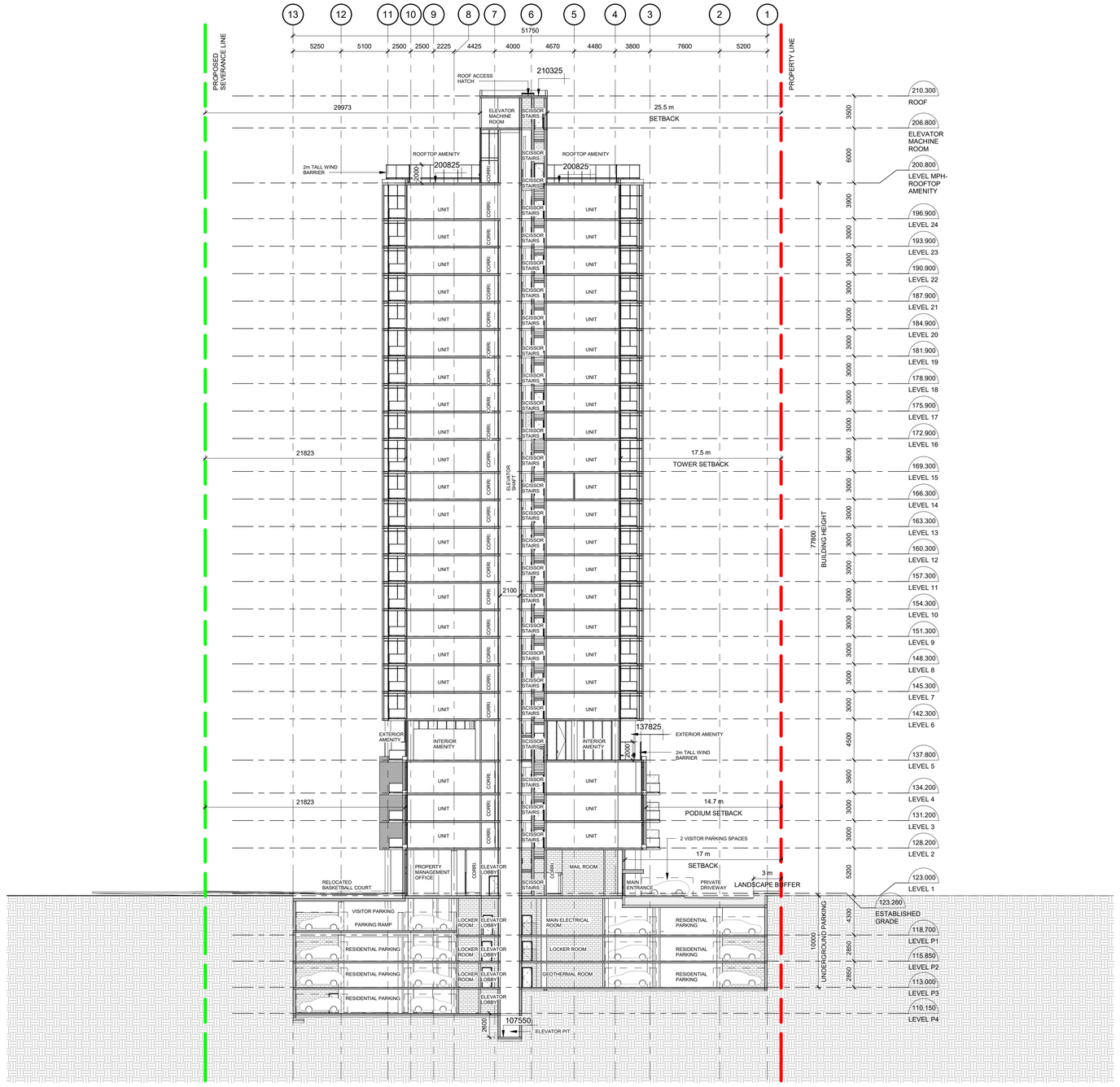
IMH 1970 & 1980 FOWLER DRIVE LTD.

DRAWN: FKH, QL	SCALE: 1 : 250
CHECKED: KQ	DATE: 25 JAN 2025

TITLE
BUILDING SECTION 1

PROJECT NO.	DRAWING NO.
22-214	**A410**

DATE/TIME PRODUCED:2025-11-18 4:41:45 PM



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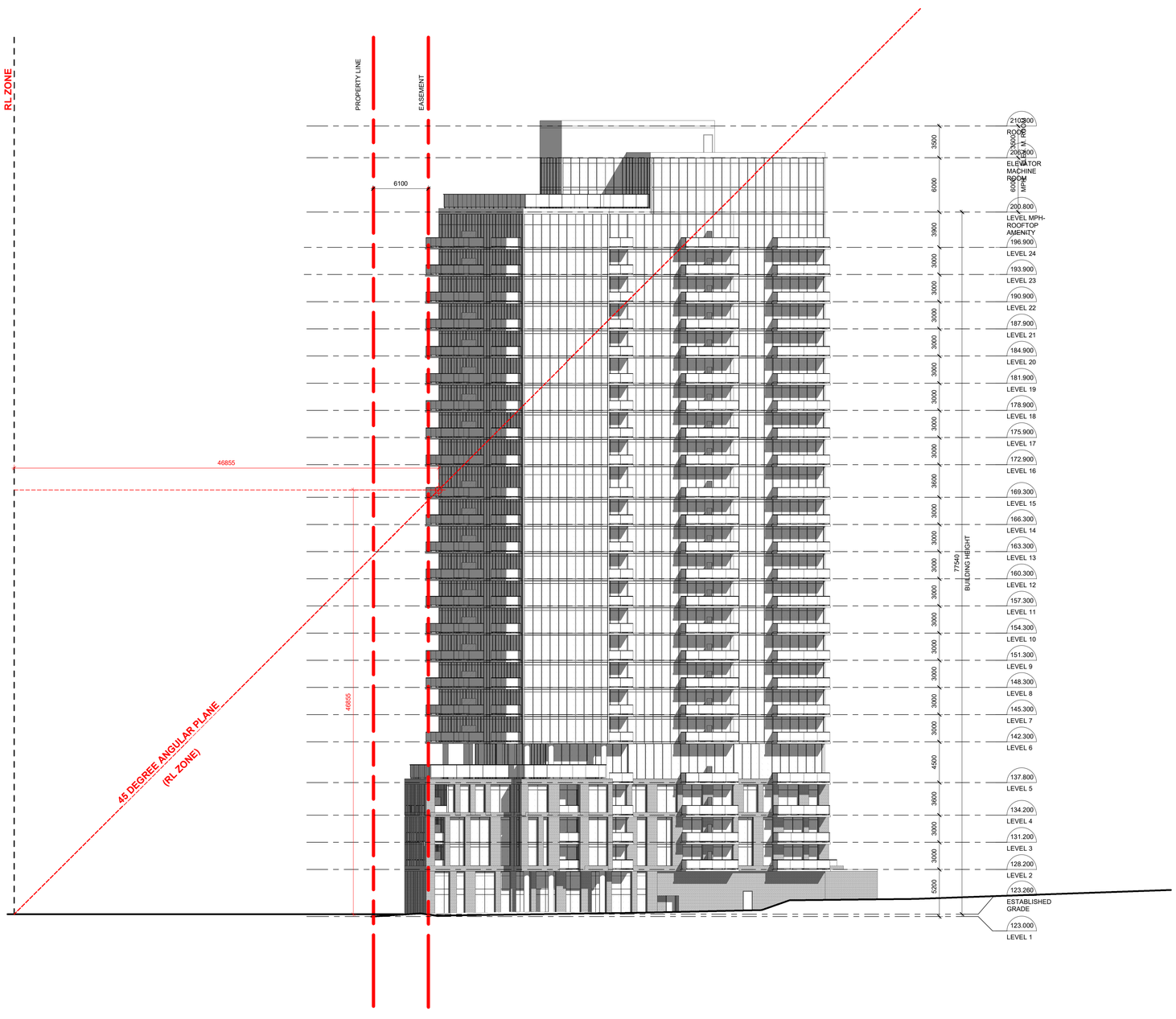
IMH 1970 & 1980 FOWLER DRIVE LTD.

DRAWN	SCALE
FKH, QL	1 : 250
CHECKED	DATE
KQ	25 JAN 2025

TITLE
BUILDING SECTION 2

PROJECT NO.	DRAWING NO.
22-214	**A411**

DATE/TIME PRODUCED:2025-11-18,4:41:47 PM



NO.	REVISIONS	DATE
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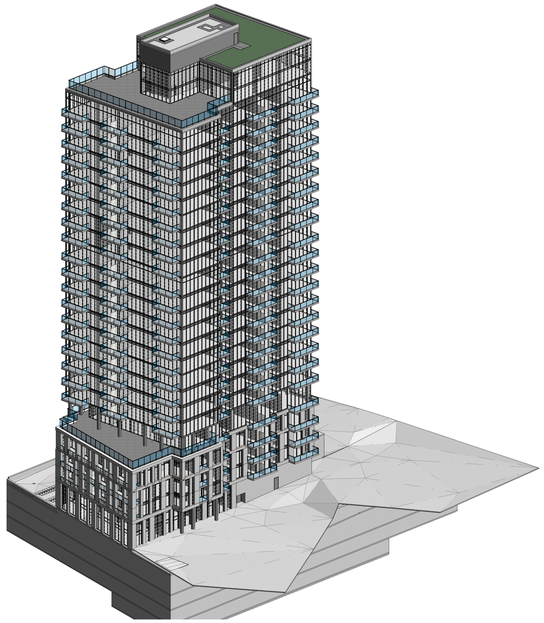
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DRAWN: Author	SCALE: 1 : 250
CHECKED: Checker	DATE: 25 JAN 2025

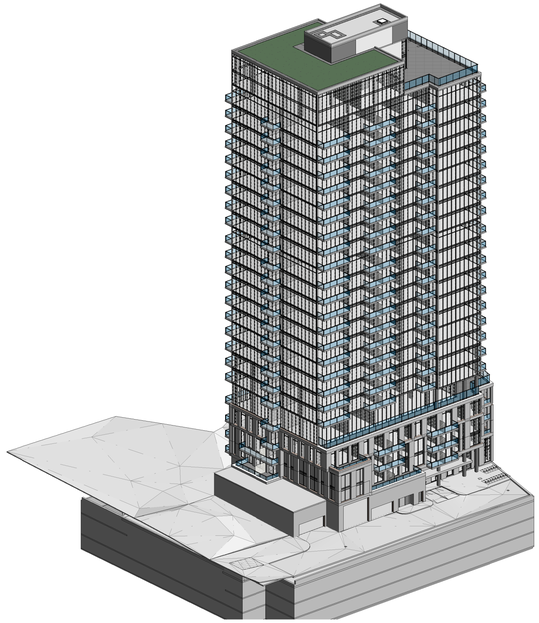
TITLE
ANGULAR PLANE SECTION

PROJECT NO.	DRAWING NO.
22-214	**A412**

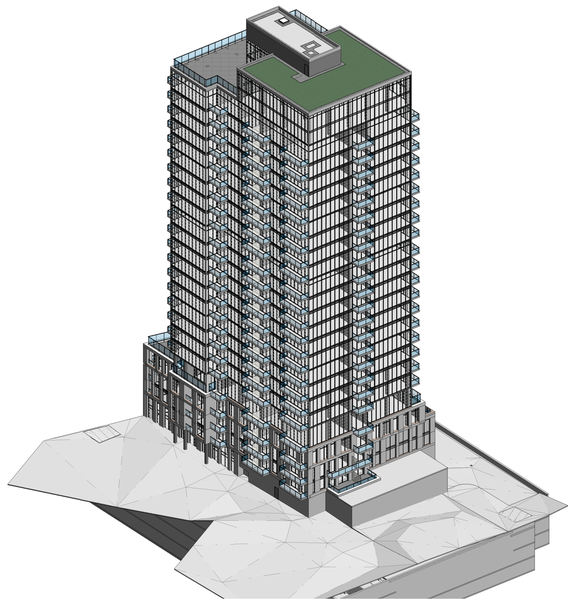
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North East View



North West View



South West View



South East View

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TITLE: MASSING VIEW

PROJECT NO.: 22-214	DRAWING NO.: **A900**

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