COUNTERPOINT LAND DEVELOPMENT BY | DILLON CONSULTING

IMH 1970 & 1980 Fowler Drive Ltd.

FUNCTIONAL SERVICING AND STORMWATER MANAGEMENT REPORT

1970-1980 Fowler Drive, Official Plan Amendment and Zoning Bylaw Amendment Applications, Version: 1st Submission

NOVEMBER 21, 2025

EXECUTIVE SUMMARY

This Functional Servicing and Stormwater Management Report ('FSSR') has been prepared to support Official Plan Amendment ('OPA') and Zoning Bylaw Amendment ('ZBA') applications for the site municipally known as 1970-1980 Fowler Drive, Mississauga, Ontario (referred to as 'the site' or 'subject site'). The report has been prepared on behalf of the applicant, IMH 1970 & 1980 Fowler Drive Ltd. (or 'client').

The overall proposed developable area is 0.476 ha and will include a 24-storey residential building. The site includes a 6.1m wide sanitary easement to the north. The development will provide 285 new units and four levels of underground parking. The servicing strategy for the proposed development is summarized as follows:

Water Servicing:

Fowler Drive contains an existing 300 mm diameter watermain which will be used to service the proposed development. Domestic and fire flow water demands were calculated in accordance with Region of Peel criteria and Fire Underwriter's Survey (FUS 2020) methodology. A flow test was performed on a hydrant serviced by the 300 mm watermain in Fowler Drive, and it was determined that the existing municipal water system has adequate pressure and flows to support the proposed development.

Sanitary Servicing:

The adjacent municipal easement contains a 375 mm diameter sanitary sewer that will be used to service the site. The development proposal will result in an increase in equivalent population and peak flow to the municipal sewer system. Two new sanitary connections are proposed, one new connection for the proposed development and another to relocate an existing sanitary service for 1970 Fowler Drive that currently traverses through the subject site. Post-development peak sanitary discharge flows are to be provided to Region of Peel staff to verify that available downstream capacity exists to support the proposed development.

Stormwater Servicing:

The existing storm outlet for the subject site is North Sheridan Way. North Sheridan Way is a rural road with no underground storm sewer infrastructure fronting our site. The existing storm runoff sheet flows uncontrolled into a ditch within North Sheridan Way ROW. On-site stormwater management ('SWM') infrastructure has been proposed to meet the municipal quantity, quality, water balance criteria, while maintaining existing drainage patterns. High-level feasibility calculations have been included to support the OPA/ZBA applications. The SWM design will be further developed as part of a future Site Plan Approval ('SPA') process.

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1.0 INTRODUCTION

1.1 BACKGROUND

This Functional Servicing and Stormwater Management Report ('FSSR') has been prepared to support Official Plan Amendment ('OPA') and Zoning Bylaw Amendment ('ZBA') applications for the site municipally known as 1970-1980 Fowler Drive, Mississauga, Ontario (referred to as 'the site' or 'subject site'). The report has been prepared on behalf of the applicant, IMH 1970 & 1980 Fowler Drive Ltd. (or 'client').

The overall proposed developable area is 0.476 ha and will include a 24-storey residential building. The site includes a 6.1m wide sanitary easement to the north. The development will provide 285 new units and four levels of shared underground parking.

The proposed development is bound by North Sheridan Way to the northeast, the existing 1980 Fowler Drive apartment building to the west, the existing 1970 Fowler Drive to the south and an existing apartment building, 2111 Roche Court, to the southeast. Refer to **Figure 1 – Site Location** for illustrations of the subject site within the context of its surroundings.

1.2 STUDY PARAMETERS

This servicing assessment is based on:

- Peel Region Design Criteria (watermain and sanitary sewer), Region of Peel.
- Peel Region Water and Wastewater Modelling Demand Table, Region of Peel
- Transportation and Works Department Requirements Manual, City of Mississauga.
- Plan and Profile and Sewershed Drawings, Region of Peel and City of Mississauga.
- MOE Design Guidelines for Drinking-Water Systems, 2008.
- Low Impact Development Stormwater Management Planning and Design Guide, 2010, CVC and TRCA.
- Fire Underwriters Survey (FUS) 2020 Guidelines
- Architectural Inputs, by Core Architects Inc.
- Hydrant Flow Test, by Lozzi Aqua Check, dated May 27, 2025.

SITE LOCATION PLAN

counterpoint ENGINEERING
COUNTERPOINT ENGINEERING INC.
8395 Jane St., Suite 100, Vaughan, ON L4K 5Y2 Phone 905.326.1404 Fax 905.326.1405

DEVELOPMENT PROJECT
1970-1980 FOWLER DRIVE

MISSISSAUGA, ONTARIO

DRAWING BY: BN	DATE: JUNE 2025
CHECKED BY: KL	PROJECT NO.: 23039
SCALE: N.T.S.	FIGURE NO.: 1

2.0 WATER SUPPLY

2.1 EXISTING WATER SUPPLY

There is an existing 300 mm watermain within Fowler Drive adjacent to the larger 1970-1980 Fowler Drive property. There is no municipal watermain or fire hydrants within the N. Sheridan Way ROW.

2.2 PROPOSED WATER SUPPLY

The development is to have a combined 150mm fire and 100 mm domestic line, along with a secondary 150 mm fire service, both to be serviced by the 300mm watermain in Fowler Drive. The connection shall be made as per Region of Peel standard drawing 1-8-3 and 1-6-4. Refer to drawing **SW-S** for the site servicing layout.

The available municipal servicing should satisfy the greater of either the maximum day plus fire flow or the peak hour demand. Required fire suppression was calculated using the Fire Underwriter Survey ('FUS') guidelines (2020).

Domestic water demand was calculated using Region of Peel Water and Wastewater Modelling Demand Table criteria, calculating equivalent populations by type of unit and applying the multi-unit per capita demand of 270 L/cap/day for residential use. There is no retail or commercial uses proposed for the development.

Fire flows were estimated using FUS 2020 methodology with the following considerations:

- Non-Combustible construction type.
- Limited Combustible content factor
- All system type reductions in place.

Resulting domestic and fire flow demands are as follows in **Table 1: Summary of Water Demands.**

Table 1: Summary of Water Demands

TOWER/BLDG.	MAX. DAY (L/S)	PEAK HOUR (L/S)	FIRE FLOW (L/S)	MAX. DAY + FF (L/S)
Prop. Building	3.52	5.86	83.33	86.85

As such, the governing demand is the maximum day plus fire flow demand rate, **86.85 L/s**.

A hydrant flow test was completed on May 27, 2025 by Lozzi Aqua Check on a fire hydrant opposite of 1980 Fowler Dr. on Fowler Drive with the residual hydrant on the corner of Roche Court and Fowler Drive. Results indicate an available flow rate is greater than the governing water demand at the minimum fire pressure of 20 psi. As such, the municipal watermain in Fowler Drive can accommodate the proposed development without the need for upgrades. Refer to **Appendix B** for all water demand calculations and flow test results.

3.0 GROUNDWATER MANAGEMENT

Discharge of groundwater and foundation drains to municipal sewers must be in accordance with the Region of Peel and/or City of Mississauga requirements. A Permit to Take Water (PTTW) from the Ontario Ministry of the Environment, Conservation and Parks (MECP) is required for short-term water taking over 400 m^3/day. An Environmental Activity and Sector Registry (EASR) is required from the MECP for short term water taking between 50 m^3/day and 400 m^3/day. A PTTW is required for long term water taking from a permanent drainage system greater than 50 m^3/day.

The hydrogeological report, prepared by Exp, provides high level estimates of construction (short-term) and permanent (long-term) dewatering. The rates are as follows:

Table 2: Groundwater Discharge Summary

CONSTRUCTION DEWATERING (L/DAY) INCL. SAFETY FACTOR & PRECIPITATION	LONG-TERM DEWATERING (L/DAY) INCL. SAFETY FACTOR
120,000	27,000

Construction dewatering will be designed by a qualified dewatering contractor, with MECP permitting applied for as required (EASR is expected). A rate of 120,000 L/day (**1.39 L/s**). As the above noted long-term dewatering rate is less than 50,000 L/s, a Category 3 Permit to Take Water will not be required as per the Ontario Water Resources Act.

A groundwater sample was collected during the investigation and submitted for analysis. The analysis results show that no parameters exceedances in accordance with the Peel Region Sanitary Sewer Discharge Criteria (Table 1). As such groundwater will be discharged to the existing 375 mm sanitary sewer located in the 6.1 servicing easement adjacent to the subject site, with no prior treatment required.

4.0 SANITARY SERVICING

4.1 EXISTING SANITARY SERVICING

The adjacent municipal easement contains an available 375 mm diameter sanitary sewer travelling south. The existing apartment building, 1970 Fowler Drive, is currently serviced by this sewer using a connection that travels through the subject site.

4.2 PROPOSED SANITARY SERVICING

The municipal sewer in the easement will have two new connections, one for the proposed development and one to replace the existing sanitary service for the existing 1970 Fowler Drive building that will need to be relocated as part of the proposed development. Both connections will require the installation of new control manholes in the municipal easement.

Table 3: Proposed Sanitary Connection Locations

TOWER/BLDG.	MUNICIPAL MAIN	LATERAL SIZES
Prop. Building	N. Sheridan Way Easement – 375 mm dia.	250 mm dia.
Ex. 1970 Fowler Apartment Building	N. Sheridan Way Easement – 375 mm dia.	250 mm dia.

Refer to drawing **SW-S – Site Servicing Concept** for the site servicing layout.

The proposed development will contain 285 total units, generating an equivalent residential population of 625 persons. In accordance with the Region criteria, person per unit rates of 1.7 and 3.1 were used for small apartment units (≤ 1 bedroom) and large apartment units (> 1 bedroom). Based on these equivalent populations and a generation rate of 290/cap/day for residential land uses.

Peak flows are summarized below in **Table 4**.

Table 4: Sanitary Peak Flow Summary

RESIDENTIAL			INFILTRATION		GROUNDWATER	TOTAL
TOTAL UNITS	TOTAL POPULATION	PEAK RESIDENTIAL FLOW (L/S)	SITE AREA (HA)	FLOW (L/S)	LONG-TERM DISCHARGE (L/S)	TOTAL PEAK FLOW (L/S)
285	625	**8.23**	0.476	**0.12**	0.31	**8.66**

The post-development sanitary peak flow has been calculated as **8.66** L/s, which includes an infiltration allowance of 0.12 L/s and the long-term groundwater discharge rate of 0.31 L/s. This is a net increase in peak flow to the municipal sewer system of **8.54 L/s**. The peak sanitary discharge will be provided to Region staff to verify available capacity in the receiving municipal system.

5.0 STORMWATER SERVICING

5.1 EXISTING STORMWATER DRAINAGE

The subject site has frontage to only one municipal ROW, North Sheridan Way. The existing storm outlet for the subject site is North Sheridan Way. North Sheridan Way is a rural road with no underground storm sewer infrastructure fronting the subject site. All existing site runoff sheet drains uncontrolled to the N. Sheridan Way ROW. This drainage pattern is represented by a single drainage area:

- Area 100 (0.476 ha): uncontrolled drainage directed to the N. Sheridan Way ROW.

Refer to drawing **SWM1 – Pre-Development Storm Drainage Plan** in **Appendix D** for more details. Pre-development storm flows are summarized in **Table 5**: Summary of Pre-Development Storm Flows**.**

Table 5: Summary of Pre-Development Storm Flows

STORM EVENT	AREA EX.100 (L/S)
2-Year	29.64
5-Year	39.84
10-Year	49.07
25-Year	62.00
50-Year	75.50
100-Year	87.72

Saturation factors were applied as per Section 6 of the Region's Stormwater Design Criteria.

5.2 STORMWATER MANAGEMENT CRITERIA

The following stormwater management criteria was established based on City design criteria for the proposed development:

- Quantity Control: control all storm events, up to the 100-year design storm event, to the calculated allowable release rate (2-year pre-development).
- Quality Control: provide quality control on discharged stormwater such that 80% of total suspended solids ('TSS') are captured on an annual basis.
- Water Balance: retain, infiltrate or re-use runoff generated from a 5mm storm event.

There may be runoff from rainstorms that exceeds the capacity of City's storm sewer service connections. Therefore, the future site plan design shall be responsible for providing flood protection or a safe overland flow route for the proposed development without causing damage to the proposed adjacent public and private properties. Existing drainage patterns on adjacent properties shall not be altered and stormwater runoff from the subject development shall not be directed to drain onto adjacent properties.

5.3 ALLOWABLE RELEASE RATE

The allowable release rate is calculated as the pre-development 2-year peak flow rate. Refer to **Table 9** and **Appendix D** for allowable release rate calculations.

Table 6: Allowable Release Rate

DRAINAGE AREA	RECEIVING SYSTEM	ALLOWABLE RELEASE RATE (L/S)
Area 100	N. Sheridan Way ROW	29.6

5.4 PROPOSED STORM SERVICING

Stormwater on the site will be captured by roof and area drains, then conveyed internally through the building via mechanical plumbing then to a SWM tank external to the building underground limits.

The post-development drainage areas are as follows, refer to **SWM2 – Post-Development Storm Drainage Plan** for more details.

- Area 200: 0.441 ha, controlled drainage directed to North Sheriden Way ROW.
- UNC1: 0.035 ha, uncontrolled drainage via overland flow due to grading restrictions.

The subject site will drain towards N. Sheridan Way ROW as follows:

- Connection 1: 250 mm diameter PVC pipe outletting through a proposed headwall. Captured drainage on site is collected in a stormwater management tank and will be pumped up to the headwall at release rate that does not exceed the allowable release rate noted in Section 5.3. An emergency overflow hatch will be provided to direct flows toward N. Sheridan Way ROW. The design of the tank and mechanical pump sizing will be detailed during the SPA process.

Refer to drawing **SW-S** for the site servicing layout.

5.5 STORMWATER QUANTITY CONTROL

The proposed storm service and headwall will convey drainage captured from Area 200 to N. Sheridan Way ROW.

A pump is proposed to convey captured storm runoff through the new storm service and be sized to control post-development flows to a maximum rate of **17.0 L/s** at this connection point. The storage required to meet this allowable release rate has been calculated to be **180.4 m^3**. A storm tank will be located outside of the proposed limit of the building underground parking levels. Storm tank details will be determined at SPA stage.

Drainage from Area UNC1 will convey drainage uncontrolled to N. Sheridan Way ROW via overland flow due to grading limitations. The 100-year storm flow generated from this area is **4.3 L/s** and was included in the total post-development release rate.

The following is a summary of quantity controls provided for the re-development.

Table 7: Quantity Control Summary

AREA ID	STORAGE REQUIRED (M3)	RELEASE RATE (L/S)	ALLOWABLE (L/S)	DESCRIPTION
200	180.4	17.0	29.6	Controlled
UNC1		4.3		Uncontrolled
	Total Site:	**21.3**	**29.6**	

Refer to drawings **SWM1** and **SWM2** for the pre and post-development drainage plans and **Appendix D** for all stormwater management calculations.

5.6 PROPOSED QUALITY CONTROLS

The subject site will be required to provide quality control on discharged stormwater such that 80% of total suspended solids ('TSS') are captured on an annual basis. Runoff from rooftop surfaces and landscape areas are generally considered clean with 80% TSS removal prior to any treatment. Captured drainage will be routed towards a treatment device to achieve a total of 80% TSS removal of the entire site. Refer to **Table 6** and **Appendix D** for more details.

Table 8: Quality Control Summary

TOTAL AREA (HA)	INITIAL TSS REMOVAL RATE (%)	AREA TO BE TREATED BY OGS (HA)	ADDITIONAL LOAD REMOVED BY OGS	OVERALL TSS REMOVAL RATE (%)
0.476	71%	0.441	15%	85%

A quality control device, such as oil/grit separator ('OGS'), will be provided upstream of the SWM tank outlet. Details will be provided at SPA stage.

5.7 WATER BALANCE

The subject site will be required to meet the city water balance criteria. The minimum run-off retention requirement is to retain all run-off generated from a small design event, typically classified as a 5mm event. This runoff must be retained through infiltration, evapotranspiration, or rainwater reuse.

To calculate the overall volume retention requirement, these initial abstraction values were used:

- Conventional Roof-Top Areas: 1 mm.
- Asphalt Paving Areas: 1 mm.
- Landscaped Areas: 5 mm.

The water retention volume required for the site has been calculated as **9.67 m^3**. Refer to **Appendix D** for detailed calculations. The required volume will be reused on site likely through landscape reuse and irrigation, or infiltration. Details regarding water recycling usage will be provided at SPA stage.

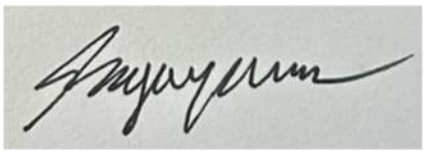
6.0 CONCLUSIONS

This FSSR presents a site servicing strategy for the proposed development that addresses the requirements of the applicable regulatory agencies and provides the basis for detailed servicing design.

We trust this report sufficiently addresses the site servicing requirements and allows for approval of the Official Plan Amendment ('OPA') and Zoning Bylaw Amendment ('ZBA') applications. Should there be any questions or comments, please feel free to contact the undersigned.

Sincerely,

Counterpoint Land Development by Dillon Consulting Limited



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APPENDIX A

Site Plan

Topographic Survey

Locates

ASSOCIATION OF ONTARIO LAND SURVEYORS
PLAN SUBMISSION FORM
2171722

THIS PLAN IS NOT VALID UNLESS IT IS AN EMBOSSED ORIGINAL COPY ISSUED BY THE SURVEYOR. In accordance with Regulation 1026, Section 29(3).

SURVEYOR'S REAL PROPERTY REPORT

PART 1:

PLAN OF PART OF BLOCK A REGISTERED PLAN 842 CITY OF MISSISSAUGA

FORMERLY REGIONAL MUNICIPALITY OF PEEL

SCALE 1 : 250

0 1 2 3 4 5 10 15 20 25m

AKSAN PILLER CORPORATION LTD.

PART 2:

PREPARED FOR STARLIGHT DEVELOPMENTS

LOCATION OF THE BUILDING:	WHOLLY ON THE PROPERTY.
EAVES:	CLEAR.
UTILITY BUILDINGS:	AS SHOWN ON PART 1.
DECKS:	NONE.
SWIMMING POOLS:	NONE.
EXISTING FENCES:	GENERALLY ALONG THE PROPERTY LINES, WITH DEVIATIONS AS SHOWN ON PART 1.
EASEMENTS:	AS SHOWN ON PART 1.
DRIVEWAY:	AS SHOWN ON PART 1.

LEGEND:

■	DENOTES	SURVEY MONUMENT FOUND
□	DENOTES	SURVEY MONUMENT PLANTED
IB	DENOTES	IRON BAR
SIB	DENOTES	STANDARD IRON BAR
SSIB	DENOTES	SHORT STANDARD IRON BAR
CC	DENOTES	CUT CROSS
CP	DENOTES	CONCRETE PIN
WIT	DENOTES	WITNESS MONUMENT
O/U	DENOTES	ORIGIN UNKNOWN
N	DENOTES	NORTH
S	DENOTES	SOUTH
E	DENOTES	EAST
W	DENOTES	WEST
Fc	DENOTES	FENCE
CLF	DENOTES	CHAIN LINK FENCE
BF	DENOTES	BOARD FENCE
UP	DENOTES	UTILITY POLE
CB	DENOTES	CATCH BASIN
MH	DENOTES	MANHOLE
TS	DENOTES	TRAFFIC SIGN
CS	DENOTES	COMMERCIAL SIGN
LP	DENOTES	LAMP POLE
FH	DENOTES	FIRE HYDRANT
WV	DENOTES	WATER VALVE
CW	DENOTES	CONCRETE WALL
CRW	DENOTES	CONCRETE RETAINING WALL
TRW	DENOTES	TIMBER RETAINING WALL
TW	DENOTES	TOP OF WALL
TC	DENOTES	TOP OF CURB
P1	DENOTES	PLAN 43R-11814
P2	DENOTES	PLAN 43R-3300
PLAN	DENOTES	REGISTERED PLAN 842

Ø0.50 DENOTES TREE TRUNK DIAMETER

METRIC:
DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

ELEVATIONS NOTE:
ELEVATIONS SHOWN HEREON ARE GEODETIC AND ARE DERIVED FROM THE CITY OF MISSISSAUGA, ON THE SOUTH FACE AT THE CENTRE OF GREY BRICK AND CONCRETE BLOCK BUILDING #1801, ON THE NORTH SIDE OF THE NORTH SIDE OF NORTH SHERIDAN WAY, 152m WEST OF ROBIN DRIVE, ELEVATION 112.471 m..

CAUTION:
TREE CALIPERS ARE NOT TO ARBORIST STANDARDS AND ARE DEFINED AT 1.4m ABOVE GRADE AT TREE FOR ARBORIST CALIPER REFER TO ARBORIST REPORT.

BEARING NOTE:
BEARINGS ARE UTM GRID, DERIVED FROM GNSS OBSERVATIONS, USING A REAL TIME KINEMATIC SERVICE, ON MONUMENTS 1 & 2, SHOWN HEREON, HAVING A BEARING OF N06°46'10"W, AND ARE REFERRED TO THE CENTRAL MERIDIAN OF UTM ZONE 17 (81° 00' WEST LONGITUDE) NAD83 (CSRS) (2010).

NOTES:
DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.9996.

POINT ID	NORTHING	EASTING
1 ORP	4820646.05	608970.53
2 ORP	4820394.98	609000.34
3	4820381.35	609089.28
4	4820520.17	609145.78

COORDINATES ARE TO URBAN AS IN SEC. 14(2). OF O.REG. 216/10, AND CANNOT, IN THEMSELVES, BE USED TO RE-ESTABLISH CORNERS OR BOUNDARIES SHOWN ON THIS PLAN.

SURVEYOR'S CERTIFICATE:
I CERTIFY THAT:
1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT, THE SURVEYORS ACT AND THE LAND TITLES ACT AND THE REGULATIONS MADE UNDER THEM;
2. THE SURVEY WAS COMPLETED ON THE 26th DAY OF MAY, 2021.

MAY 27, 2021
DATE

HELMUT PILLER
Ontario Land Surveyor

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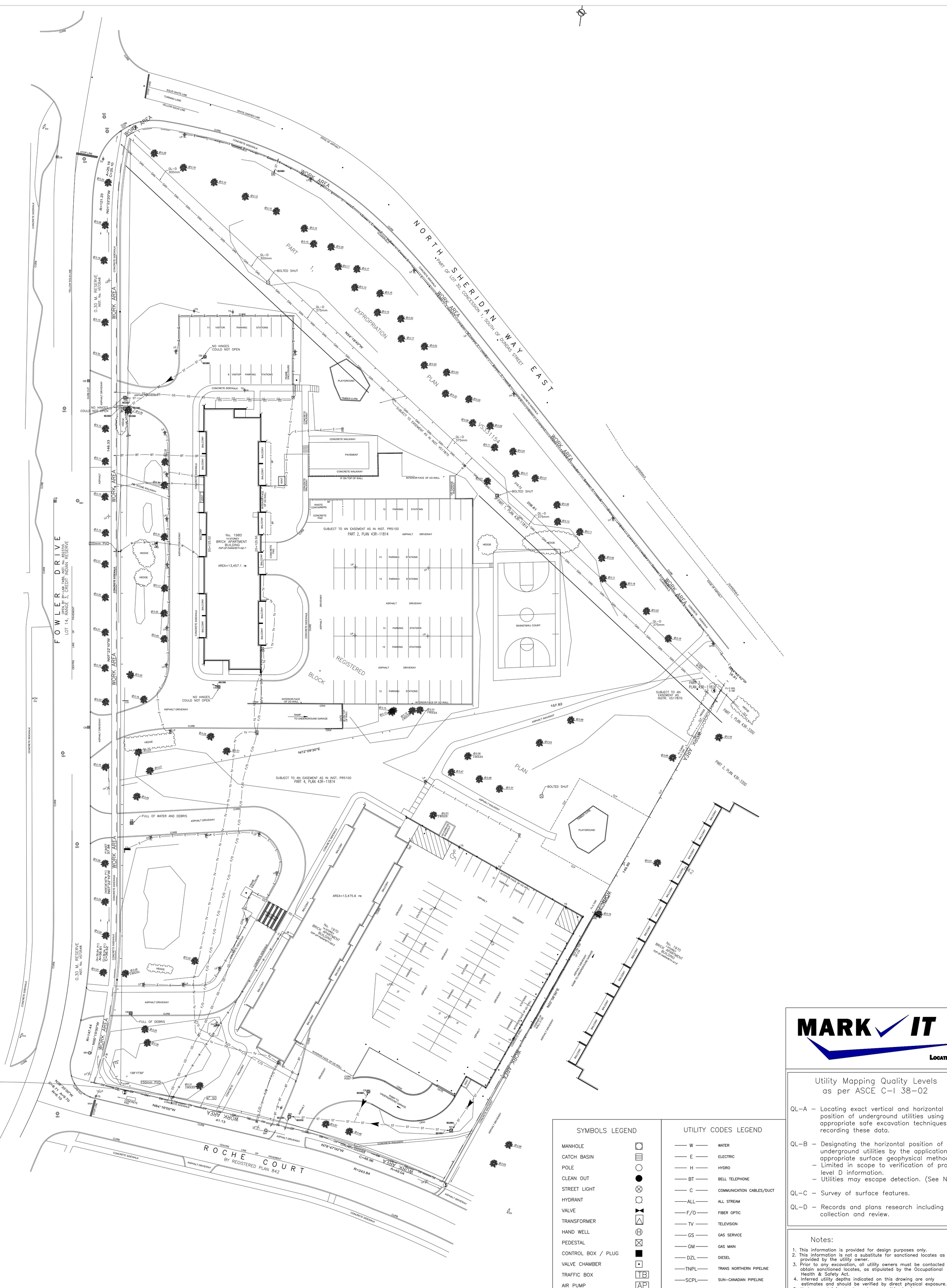
CALC.: MU DRAWN: LF CHECKED: HP
reference number: 21-24-14147-00



FOR DESIGN PURPOSES ONLY

MARK IT LOCATES INC.

Utility Mapping Quality Levels as per ASCE C-I 38-02

QL-A – Locating exact vertical and horizontal position of underground utilities using appropriate safe excavation techniques and recording these data.

QL-B – Designating the horizontal position of underground utilities by the application of appropriate surface geophysical methods.
- Limited in scope to verification of provided level D information.
- Utilities may escape detection. (See Notes)

QL-C – Survey of surface features.

QL-D – Records and plans research including record collection and review.

SYMBOLS LEGEND

- MANHOLE
- CATCH BASIN
- POLE
- CLEAN OUT
- STREET LIGHT
- HYDRANT
- VALVE
- TRANSFORMER
- HAND WELL
- PEDESTAL
- CONTROL BOX / PLUG
- VALVE CHAMBER
- TRAFFIC BOX (TB)
- AIR PUMP (AP)
- SIGN
- BUS SHELTER (BUS SHELTER)
- TRAFFIC CONTROL BOX (TRFC. CB)
- FLUSH TO GRADE VAULT (FTG)
- HEADWALL
- FLOW
- UTILITY CONTINUES
- TEST PIT

UTILITY CODES LEGEND

W	WATER
E	ELECTRIC
H	HYDRO
BT	BELL TELEPHONE
C	COMMUNICATION CABLES/DUCT
ALL	ALL STREAM
F/O	FIBER OPTIC
TV	TELEVISION
GS	GAS SERVICE
GM	GAS MAIN
DZL	DIESEL
TNPL	TRANS NORTHERN PIPELINE
SCPL	SUN-CANADIAN PIPELINE
IMPL	IMPERIAL PIPELINE
FL	FUEL LINE
SAN	SANITARY SEWER
ST	STORM SEWER
Wt	WEEPING TILE
COMB	COMBINATION SEWER
IR	IRRIGATION
?	UNKNOWN SERVICE
TC	TRAFFIC CONTROL
STM	STEAM
OXY	OXYGEN

Notes:

1. This information is provided for design purposes only.
2. This information is not a substitute for sanctioned locates as provided by the utility owner.
3. Prior to any excavation, all utility owners must be contacted to obtain sanctioned locates, as stipulated by the Occupational Health & Safety Act.
4. Inferred utility depths indicated on this drawing are only estimates and should be verified by direct physical exposure.
5. Underground infrastructure shown on this drawing was obtained on a best-effort, best-practices basis, within the technical limitations of the instrumentation.
6. The spatial accuracy of the plotted information is dependent on the accuracy of the base map information as provided by others.
7. This information is provided on a best effort basis within the limitations of the technology. Consequently some utilities may escape detection (i.e. non-conductive, inaccessible, incomplete Level D information provided by the Client and/or physical expression not reasonably identifiable at the time of the survey, etc.)
8. The information herein documents the position of suspected or known utilities existing at this site as of the drawing date.
9. Quality Level 'D' information was obtained by MARK IT Locates Inc. during the course of this investigation.

Buried Utility Map

For: Starlight Development	Site: 1970 Fowler Drive, Mississauga, ON	
Project# 2023-12310	Date: MAY 25, 2023	Checked: JA / SI

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	10	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	1,627.6 m²	46.1 m²	344.3 m²	606.1 m²	499.0 m²	1,971.75 m²	979.6 m²	9,611.0 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
1	ISSUED FOR REZONING AND OPA	21 NOV 2025

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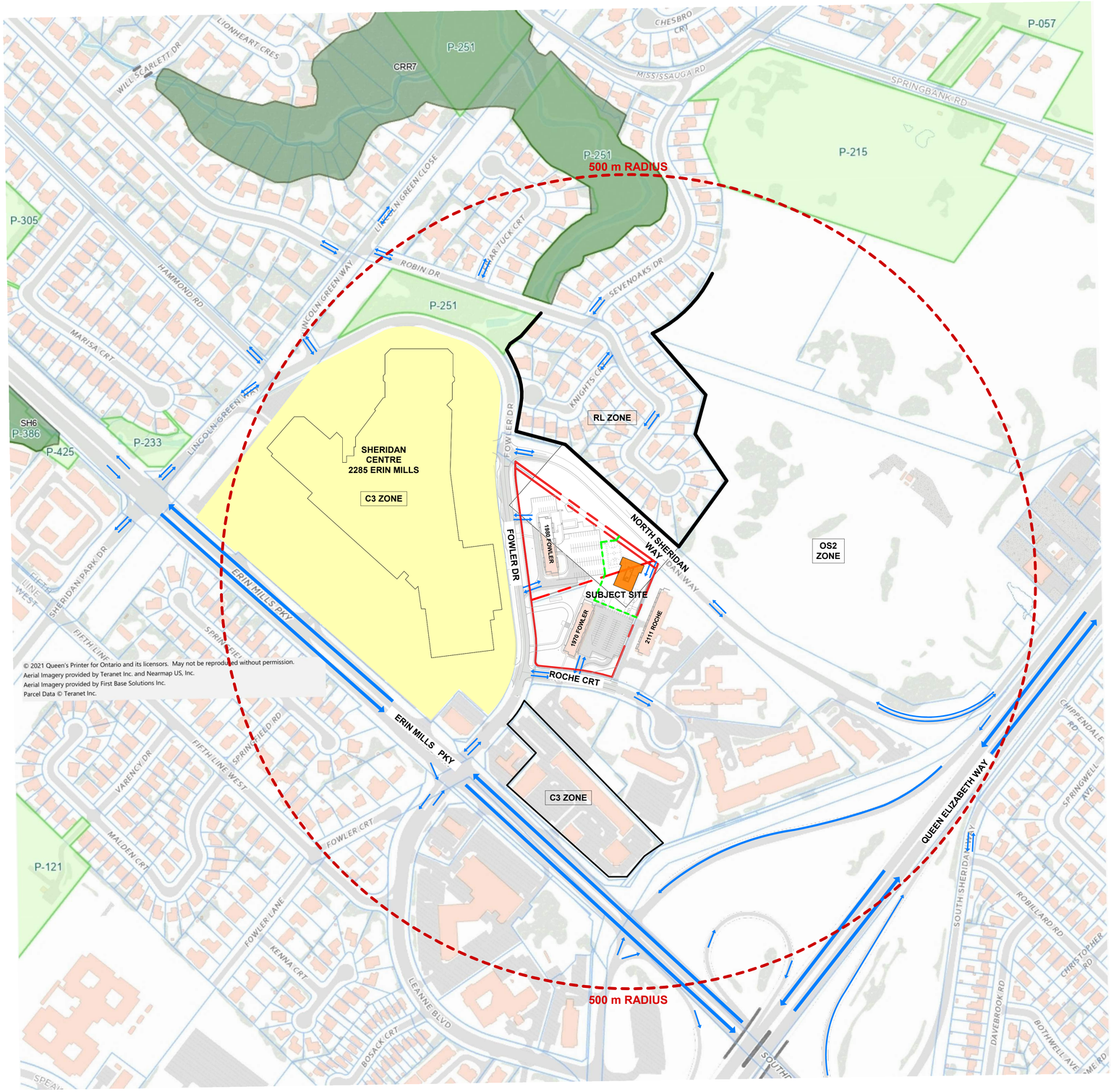
DRAWN: FKH, QL	SCALE: 1 : 1
CHECKED: KQ	DATE: 25 JAN 2025

TITLE: STATISTICS

PROJECT NO.	DRAWING NO.
22-214	A001

DATE/TIME PRODUCED 2025-11-18 4:41:13 PM



LEGEND

- PROPOSED BUILDING
- UNDER CONSTRUCTION
- APROVED PROPOSAL
- PARK
- VEHICLE TRAFFIC

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

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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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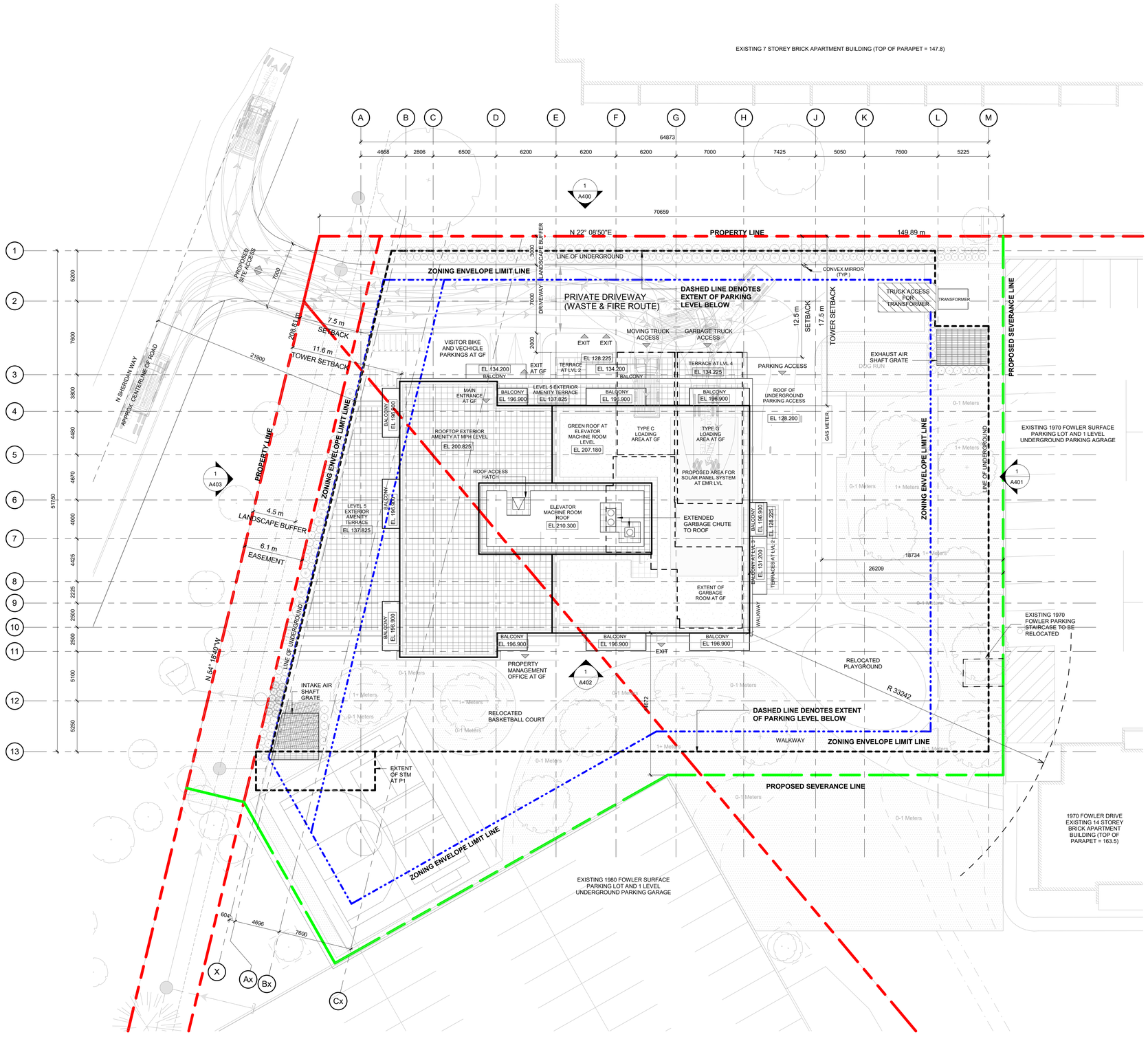
NORTH

DRAWN: FKH, QL	SCALE: 1 : 500
CHECKED: KQ	DATE: 25 JAN 2025

TITLE: OVERALL SITE PLAN

PROJECT NO.: 22-214	DRAWING NO.: **A004**

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

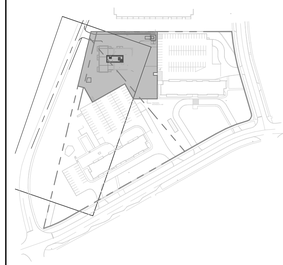
TOTAL AMENITY PROVIDED
606.1 SM+ 1131.9 SM = 1738.0 SM 1951.9/ 285 = 6.84 SM / UNIT)

SUITE SCHEDULE

STUDIO = 33
1 BEDROOM = 140
1 BEDROOM+D = 12
2 BEDROOM = 59
3 BEDROOM = 29

TOTAL UNITS = 285

KEYPLAN



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

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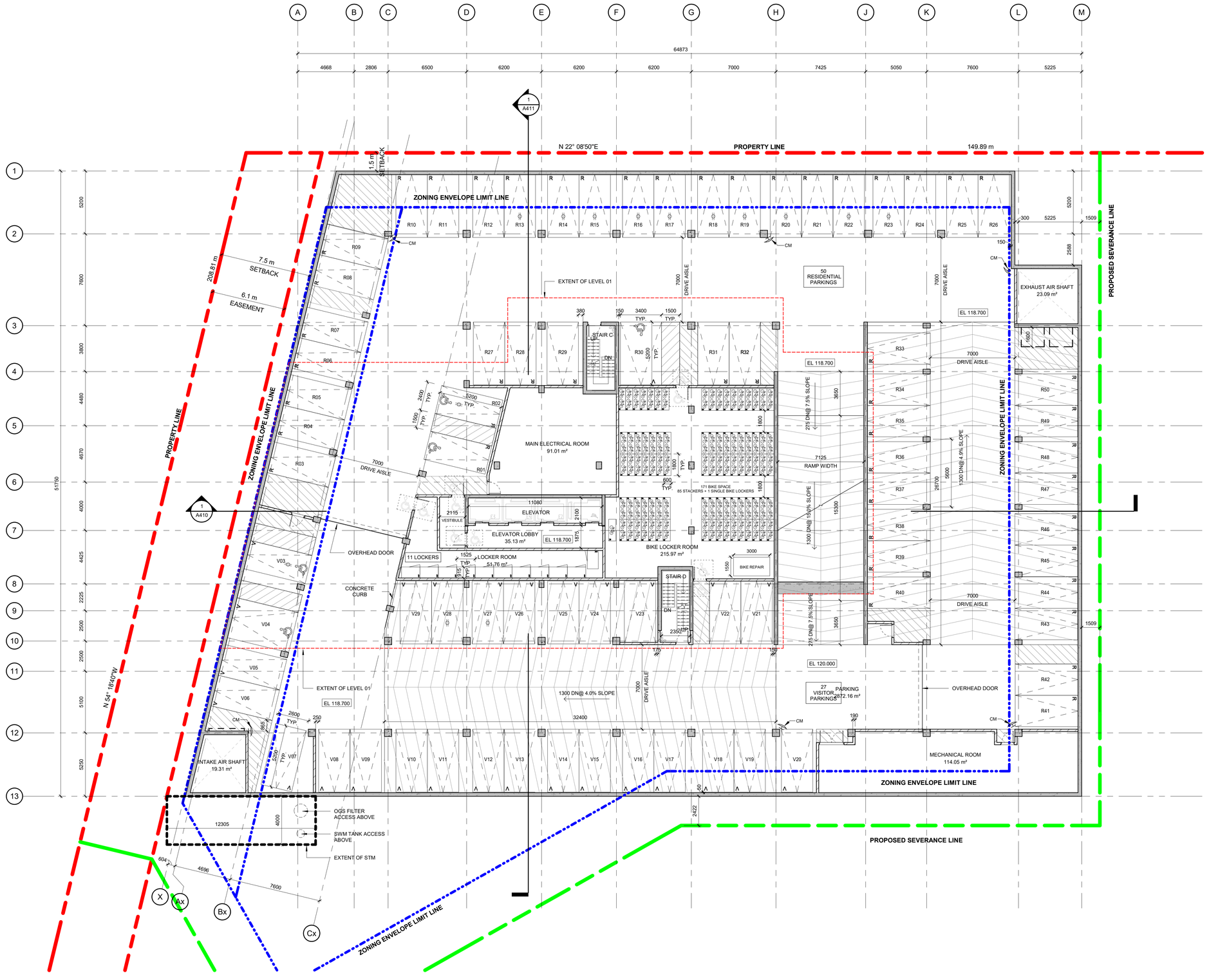
PROJECT NORTH
TRUE NORTH

DRAWN	SCALE
FKH, QL	1 : 200
CHECKED	DATE
KQ	25 JAN 2025

TITLE
SITE PLAN

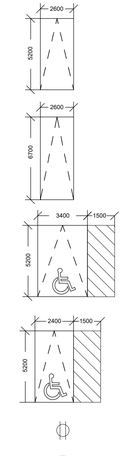
PROJECT NO.	DRAWING NO.
22-214	**A006**

DATE/TIME PRODUCED:2025-11-18 4:41:24 PM



PARKING REGULATIONS

CITY OF MISSISSAUGA



NO.	REVISIONS	DATE
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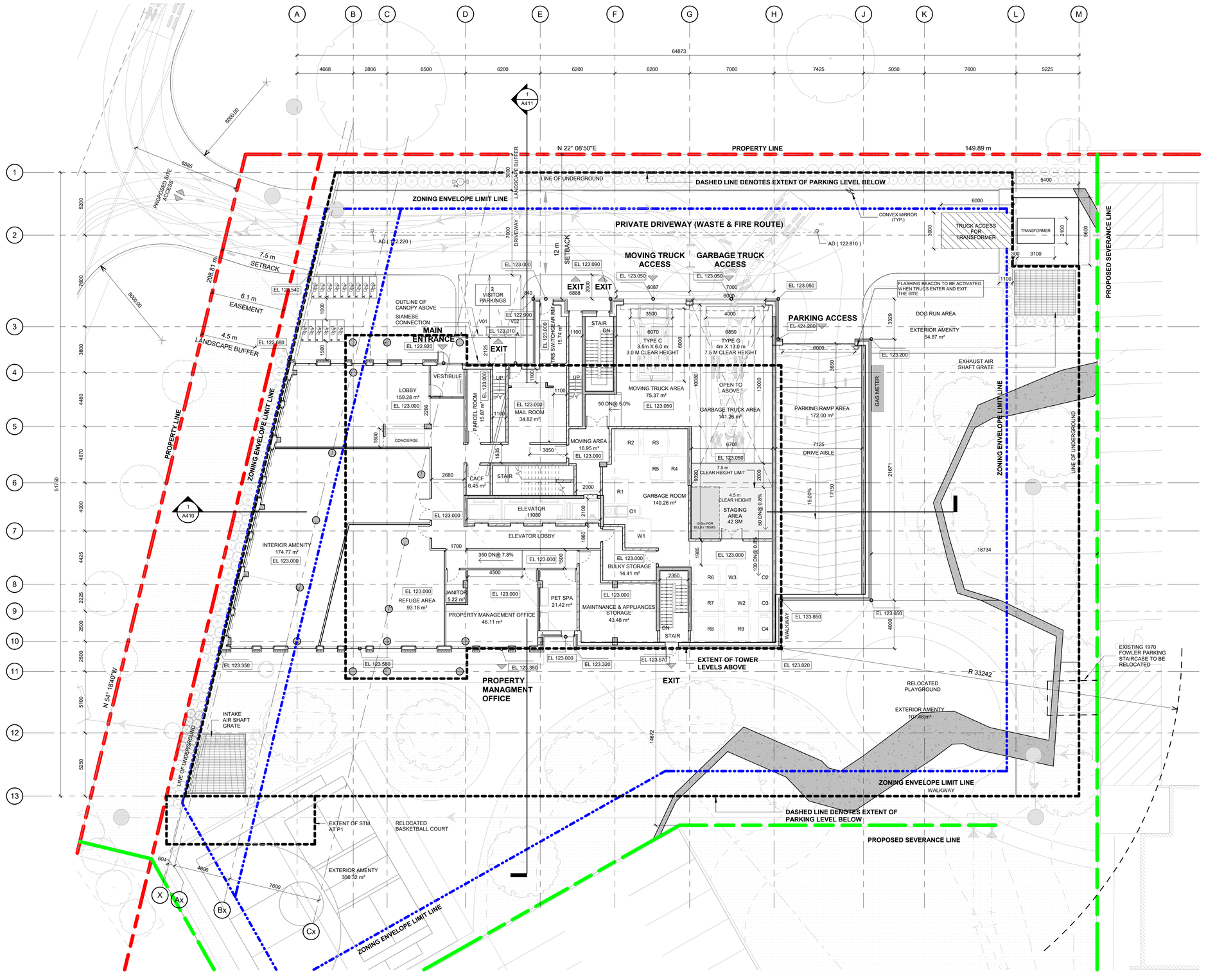
NORTH

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



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
1	ISSUED FOR REZONING AND OPA	21 NOV 2025

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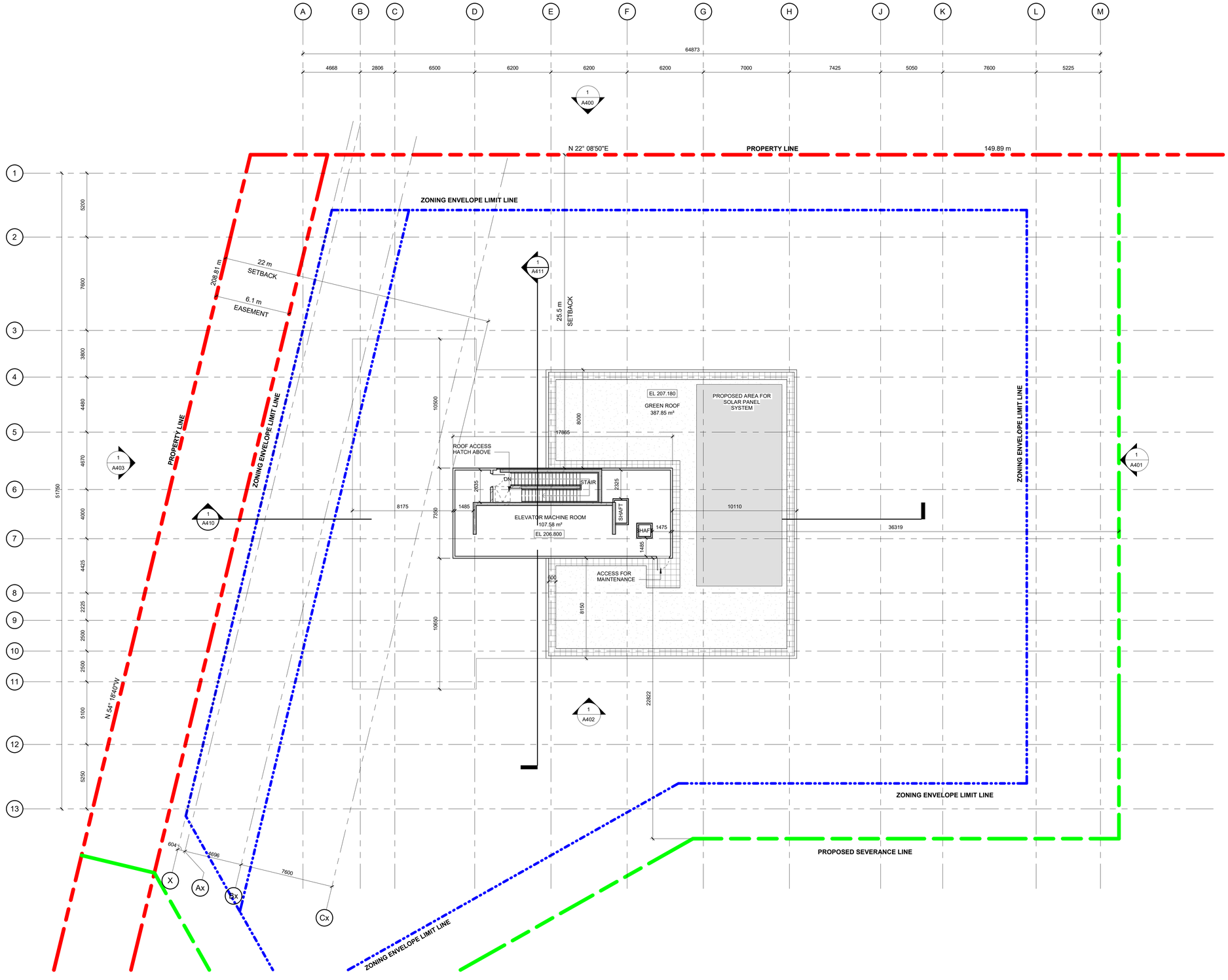
NORTH

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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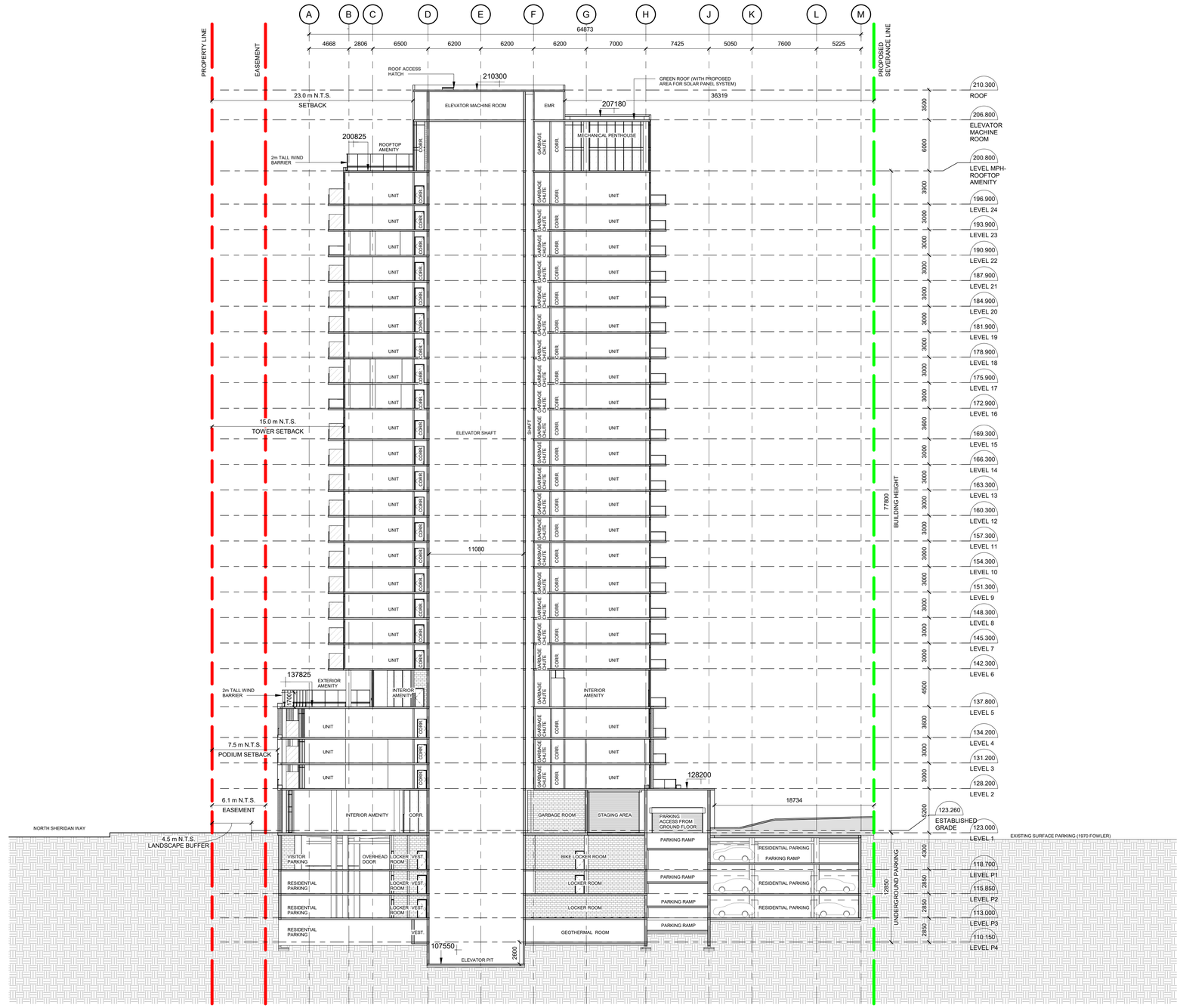
NORTH

DRAWN	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
1	ISSUED FOR REZONING AND OPA	21 NOV 2025

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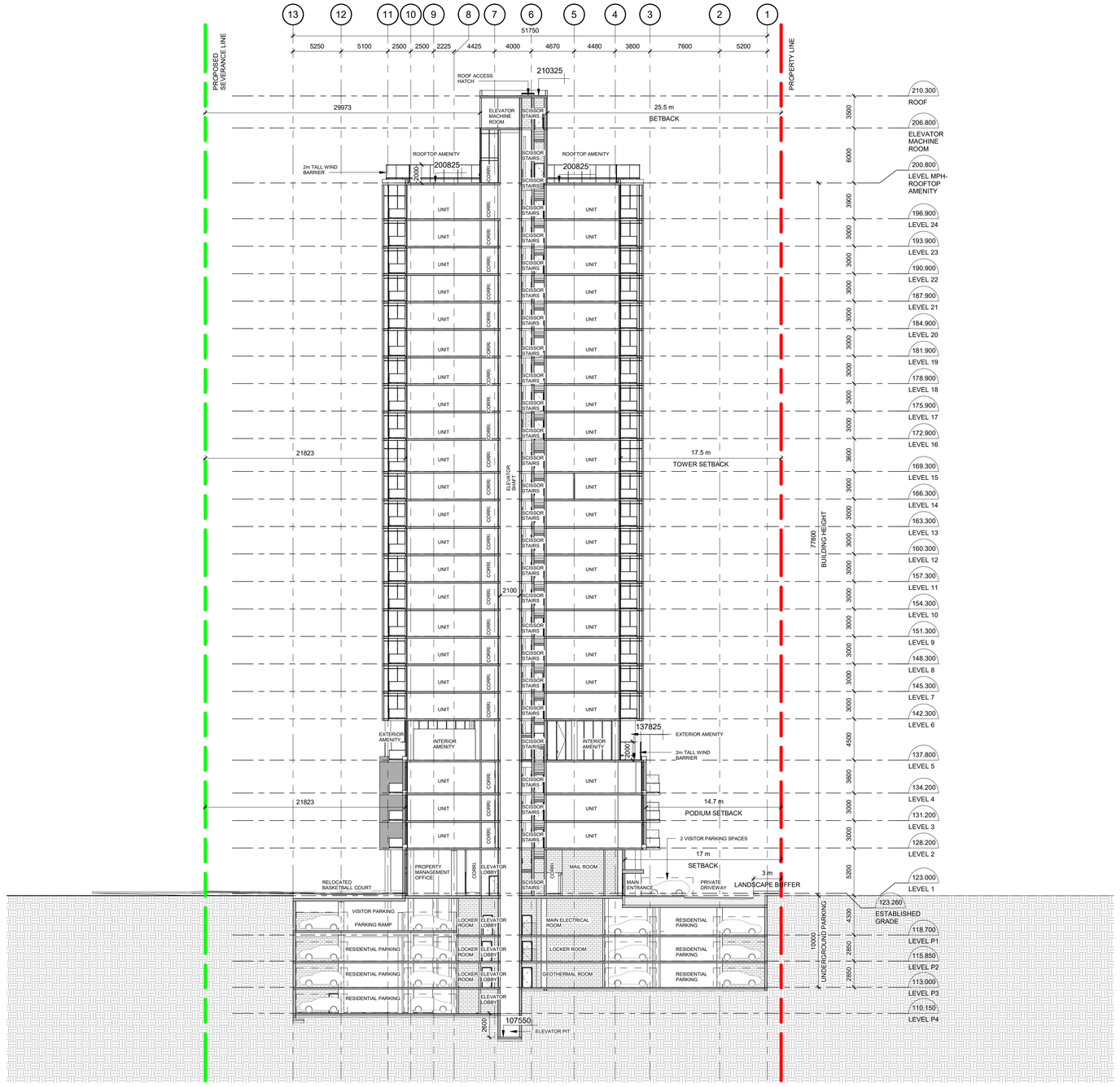
DRAWN	SCALE
FKH, QL	1 : 250
CHECKED	DATE
KQ	25 JAN 2025

TITLE
BUILDING SECTION 1

PROJECT NO.	DRAWING NO.
22-214	**A410**

DATE/TIME PRODUCED:2025-11-18 4:41:45 PM



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

COREARCHITECTS
CORE ARCHITECTS INC.
130 QUEENS QUAY EAST, SUITE 700, WEST TOWER
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1970-1980 FOWLER DRIVE,
MISSISSAUGA, ON

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

APPENDIX B

Watermain Demand

Hydrant Flow Test

FUS Calculations

Counterpoint Engineering Inc.

WATER DEMANDS BY BLOCK AND BUILDING

Project: 1970-1980 Fowler Drive
Project No: 23039
Location: Mississauga

Per Capita Demand

Residential	270	litres/person/day
ICI	250	litres/person/day

Retail/Residential Population Criteria

Small Apartment (1BR or less)	1.7	ppu
Large Apartment (2-3 BR)	3.1	ppu
Townhouse	3.4	ppu
Single detached	4.2	ppu
Semi-detached	4.2	ppu

Units per Bldg.		Unit Type Count			
Bldg.	Units	1 Bdrm.	2 Bdrm.	3 Bdrm.	Townhouse
Proposed	285	185	71	29	0
Total	**285**	**185**	**71**	**29**	**0**

Unit and Floor Area Breakdown

POPULATION AND AVERAGE DAY DEMANDS SUMMARY						
Building	Small Apartment	Large Apartment	Townhouse	Total Residential Units*	Total Residential Population	Residential Average Demand
	1.7 persons/unit	2.1 persons/unit	3.7 persons/unit	Units	Equivalent Population	L/s
Proposed	315	310	0	285	625	1.95
Totals:	**315**	**310**	**0**	**285**	**625**	**1.95**

**Note: total units rounded up due to rounding when applying unit mix ratio percentages.*

Peaking Factors

Land Use	Maximum Hour	Maximum Day
Residential	3.00	1.80
ICI	3.00	1.40

Summary of Demands

Building	Daily Water Demand (L/sec)	Max Day Water Demand (L/sec)	Peak Hour Water Demand (L/sec)	Fire Demand Required (L/sec)	Max Day plus Fire Demand (L/sec)
Proposed	1.95	3.52	5.86	83.33	86.85

counterpoint engineering

Fire Underwriter Survey (2020) Fire Flow Calculation
Reference: https://fireunderwriters.ca/assets/img/Water%20Supply%20for%20Public%20Fire%20Protection%20in%20Canada%202020.pdf

Project: 1970-1980 Fowler Drive
Building: Proposed
Project No: 23039
Location: Mississauga

To use this sheet, fill out the cells coloured in orange.

A) Determine the Construction Coefficient (C). Refer to pages 20, 21.

Construction Type, see pages 20 and 21 for definitions: Type II Noncombustible Construction
Construction Coefficient (C): **0.8**

B) Determine the Total Effective Floor Area (A). Refer to pages 22, 23.

Based on the Construction Type and associated Construction Coefficient:
Are any vertical openings unprotected? No
Take single largest floor areas plus 25% of each of the two immediately adjoining floors.
Total Effective Floor Area (A): 1,839 m^2

C) Calculate the Required Fire Flow (RFF), rounded to nearest 1,000 LPM. $RFF = 220C\sqrt{A}$ **8,000** L/min

D) Determine the decrease or increase for the Occupancy Contents Adjustment Factor. Apply to value obtained in C. Refer to pages 24 to 26.

Contents, see Page 24 for definitions and Pages 25-26 for examples: Limited Combustible
Adjustment Factor: -15%

Adjusted Required Fire Flow: **6,800** L/min

E) Determine decrease for having Automatic Sprinkler Protection, if warranted. Refer to pages 27 to 29.

Automatic Sprinkler System Design

Installed and Designed to NFPA 13 Standard?	Yes	[30% Reduction]
Water Supply standard for both system and fire department hose lines?	Yes	[10% Reduction]
Fully supervised system?	Yes	[10% Reduction]

Does the sprinkler system have complete building coverage? Yes

Reduction for Automatic Sprinkler Protection: 50%
3,400 L/min

F) Determine the total Exposure Adjustment Charge for exposures. Refer to pages 30 to 32.

Building Face	Distance to Exposure (m)	Length-Height Factor (L.H.F.)	L.H.F. Bracket	Bldg Type	Reduction Notes		Charge
North	Greater than 30m	100	all sizes	Type V	None applicable.	=	0%
East	20.1-30m	588	Over 100	Type V	None applicable.	=	10%
South	Greater than 30m	100	all sizes	Type V	None applicable.	=	0%
West	Greater than 30m	100	all sizes	Type V	None applicable.	=	0%
					Total Exposure Charge:		**10%**

Increase for Exposure Adjustment Charge: **680** L/min

G) Final Calculation of Required Fire Flow. Subtract the value obtained in E from the answer obtained in D, then add the value obtained in F

F = 5,000 L/min
F = 1,321 GPM
F = 83.3 L/s

Counterpoint Engineering Inc.

NFPA Theoretical Flow Calculations

Project: 1970-1980 Fowler Drive
Project No: 23039
Flow Hydrant: Opposite of 1980 Fowler Dr.
Residual Hydrant: Hydrant at the corner of Roch Crt and Fowler Dr.

Based on National Fire Protection Association Guidelines, the available flow at the minimum residual pressure of 20psi can be calculated based on the observed flow at the observed pressure readings, as follows:

$$\mathbf{Q_F = 29.83 \times c \times d^2 \times p^{0.5}}$$, where

Q_F = observed flow (US GPM)
c = hydrant nozzle coefficient (0.90 - 0.95)
d = nozzle diameter (in)
p = observed pitot pressure

$$\mathbf{Q_R = Q_F \times h_F^{0.54} / h_R^{0.54}}$$, where

Q_R = available flow
Q_F = observed flow (US GPM)
h_F = drop from measured static to desired baseline pressure
h_R = drop from measured static to measured residual pressure

Based on flow test results obtained by *Lozzi Aqua Check, May 27, 2025.*

c =	0.9	
d =	2.5	in
number of ports =	2	
p =	44	

Q_F = 2226 US GPM

Measured Static Pressure =	67	psi
Measured Residual Pressure =	60	psi
Desired Residual Pressure =	20	psi , minimum per City of Mississauga design criteria

Q_R = 6225 US GPM per fire conneciton
23,563 L/min
392.71 L/s

Lozzi Aqua Check Massimo Lozzi

12307 Woodbine Ave, P.O. Box 519 Cell: 416 990-2131

Gormley, ON L0H 1G0 E-mail: lozziaquacheck@gmail.com

Hydrant Flow Test Form

Job Location: 1970-1980 Fowler Dr ,Mississauga Date: May 27, 2025

Time of Test: 11:00 am

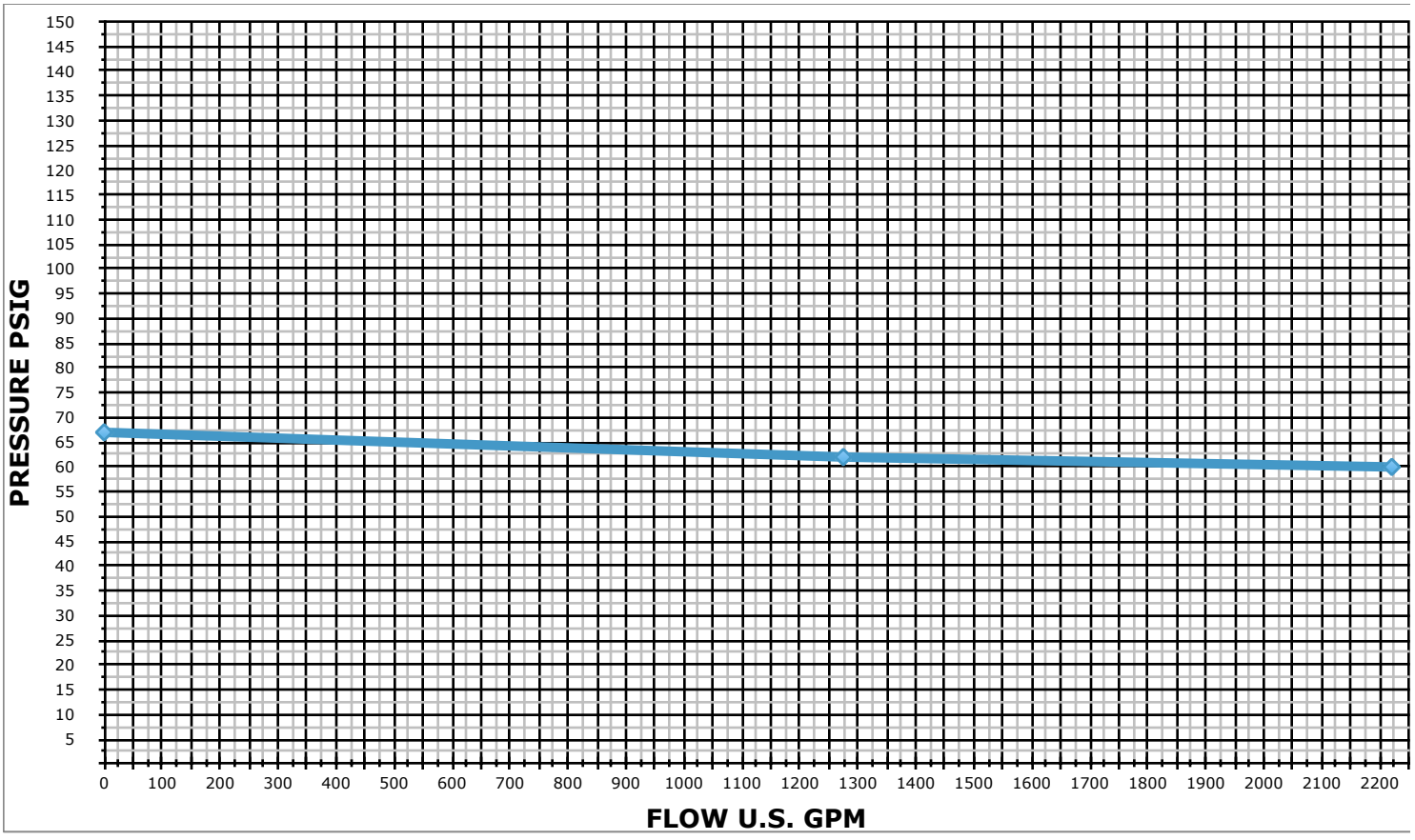
Location of Flow Hydrant: opposite 1980 Fowler Dr.

Residual: hydrant at the corner of Roch Crt and Fowler Dr.

Main Size: 300mm Static Pressure: 67 psi

	Number of Outlets & Orifice Size	Pitot Pressure (psi)	Flow (U.S. G.P.M.)	Residual Pressure (psi)
1.	Static	0	0	67
2.	1 x 2 ½	58	1275	62
3.	2 x 2 ½	44	2221	60

Note: Flow test conducted in accordance with NFPA 291



Lozzi Aqua Check

12307 Woodbine Ave, P.O. Box 519

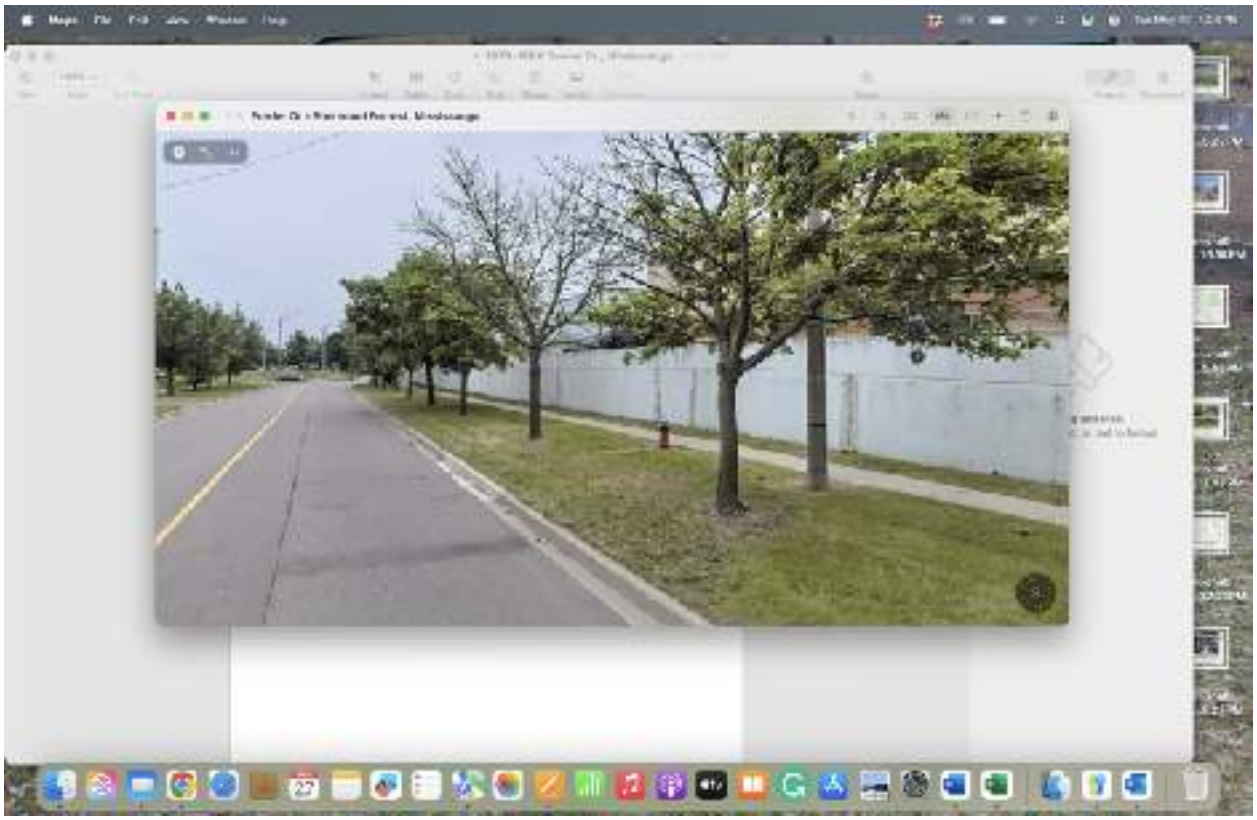
Gormley, ON L0H 1G0

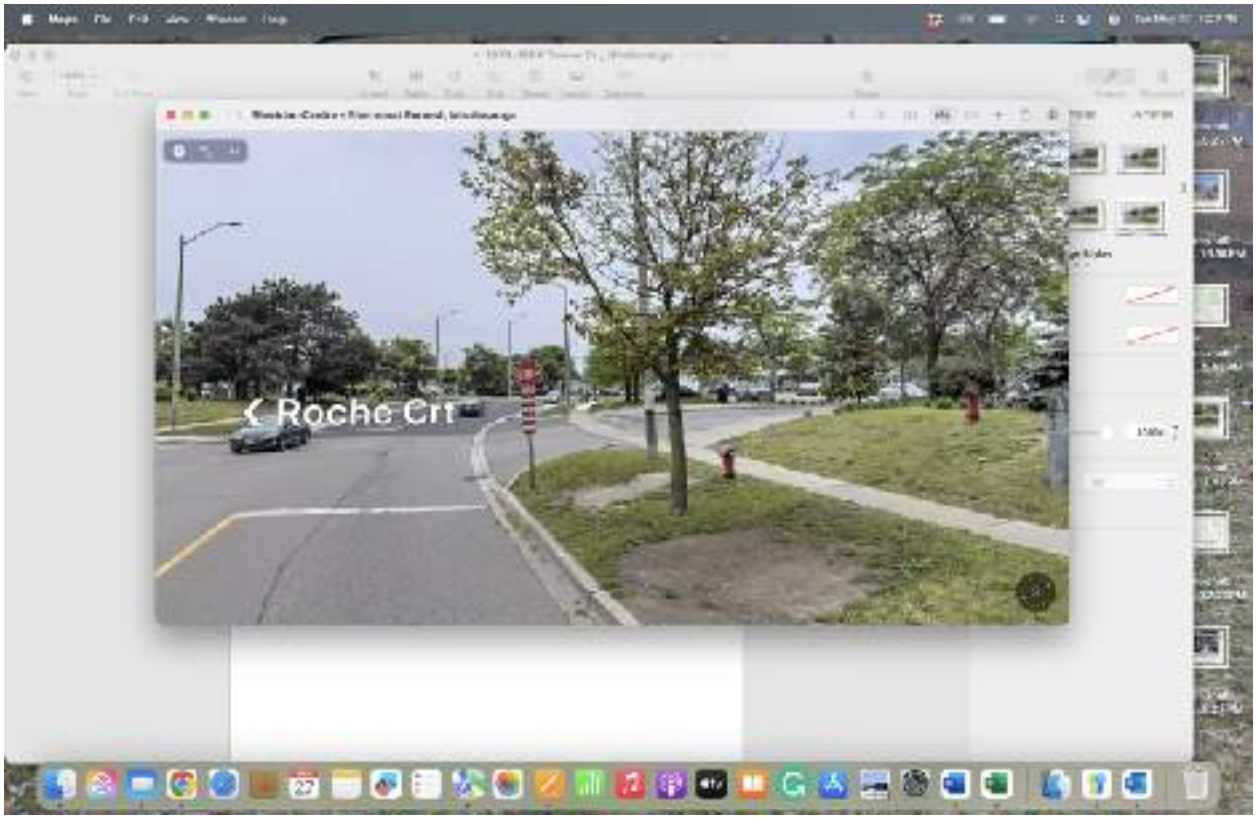
Massimo Lozzi

Cell: 416 990-2131

E-mail: lozziaquacheck@gmail.com

Flow





APPENDIX C

Sanitary Flow Calculation

Counterpoint Engineering Inc.

Existing Conditions - Sanitary

Project: 1970-1980 Fowler Dr.
Project No: 23039
Location: Mississauga
Site Area: 0.476 ha

Region of Peel Sanitary Guidelines

Average Flow		
Residential	290	litres/person/day
Infiltration	0.26	litres/second/ha

Retail/Residential Population Criteria		
Small Apartment (1BR or Less)	1.7	ppu
Large Apartment (2-3 BR)	3.1	ppu
Single Detached	4.2	ppu
Semi-Detached	4.2	ppu
Townhouse	3.4	ppu

	Residential Units
	Single Detached
Existing Residential	0
TOTAL	0

	Population Density Single Detached	TOTAL POPULATION	Average Flow (L/day)	L/s
Residential	0	0	0	0.00

Harmon Peaking Factor

Total Population	Harmon Peak Factor
0	**4.00**

Residential Peak Sanitary Flow	0.00	**L/s**
Total Sanitary Flow	0.00	**L/s**
Infiltration	0.12	**L/s**
Total Peak Flow	**0.12**	**L/s**

Counterpoint Engineering Inc.

Proposed Conditions - Sanitary

Project: 1970-1980 Fowler Dr.
Project No: 23039
Location: Mississauga
Site Area: 0.476 ha

Region of Peel Sanitary Guidelines

Average Flow		
Residential	290	litres/person/day
Infiltration	0.26	litres/second/ha

Retail/Residential Population Criteria		
Small Apartment (1BR or Less)	1.7	ppu
Large Apartment (2-3 BR)	3.1	ppu
Single Detached	4.2	ppu
Semi-Detached	4.2	ppu
Townhouse	3.4	ppu

Residential Units				
	1B	2B	3B	Total Units
Residential	185	71	29	285
TOTAL	**185**	**71**	**29**	**285**

	Population Density 1B	Population Density 2B/3B	TOTAL POPULATION	Average Flow (L/day)	L/s
Residential	315	310	625	181,250	2.10
TOTAL	**315**	**310**	**625**	**181,250**	**2.10**

Harmon Peaking Factor

Total Population	Harmon Peak Factor
625	**3.92**

Residential Peak Flow	8.23	**L/s**
Total Sanitary Flow	8.23	**L/s**
Infiltration	0.12	**L/s**

Groundwater Rate	0.31	**L/s**
Total Peak Flow	**8.66**	**L/s**

Net Increase from Existing	**8.54**	**L/s**

Region of Peel
working with you

Water and Wastewater Modelling Demand Table

Site Plan Applications

Version	Date	Description of Revision
1.0	January 10 2023	Posted to Peel Website
2.0	August 30 2024	Reflects 2023 Linear Wastewater Standards and ICI population estimates as per Peel 2020 DC background study

Introduction

Water and wastewater modelling may be required as a condition of the development approval process or prior to regional site servicing connection approval where intensification is proposed, where a possible increase in water demand or wastewater discharge is identified or where deemed necessary by Regional staff.

A completed table includes the Professional Engineer's signature and stamp as well as a site servicing concept. The table will be deemed complete once all the information below is submitted and/or included. Modelling will commence once the information is deemed complete. All required calculations must be submitted with the completed demand table. The calculations shall be based on the specific development proposal.

Application Information

Application Number:	
Address:	1970-1980 Fowler Drive , Mississauga, ON
Consulting Engineer:	Dillon Consulting
Date Prepared:	November 21st, 2025

Population

Existing

		Units	Persons
1	Residential [8)]	0	0
2	Institutional/Employment [8)]		0
3	Total	0	0

WATER AND WASTEWATER MODELLING DEMAND TABLE

Proposed

			Units	Persons
4	Residential [1)]	singles/semis (4.2 ppu)	0	0
5		Townhomes (3.4 ppu)	0	0
6		Large apartments (>1 bedroom – 3.1 ppu)	100	310
7		Small apartments (<=1 bedroom – 1.7 ppu)	185	315
8		Total proposed residential	625	625
9	Proposed Institutional[2)]			0
10	Proposed employment [3)]			0
11	Total Proposed			625

Other

12	Existing gross floor area for commercial and/or retail (sqm)	0
13	Proposed gross floor area for commercial and/or retail (sqm)	0
14	Land area (ha)	0.476

Water Connection

Hydrant flow test [4)]

15	Location 1	Flow: opposite 1980 Fowler Dr
16	Location 2	Residual: hydrant at the corner of Roche Crt and Fowler Dr

WATER AND WASTEWATER MODELLING DEMAND TABLE

		Pressure (kPa)	Flow (L/s)	Time
17	Minimum water pressure	60	392.71	11AM May 27, 2025
18	Maximum water pressure	67	0	11AM May 27, 2025

Water Demands (L/s)

		Use 1 [6]	Use 2 [6]	Use 3 [6]	Total
19	Existing fire flow [5] [8]				0
20	Proposed average day flow	1.95			1.95
21	Proposed maximum day flow	3.52			3.52
22	Proposed peak hour flow	5.86			5.86
23	Proposed fire flow [5]				83.33

Water calculations

Please use the following updated typical water demand criteria as per Peel's 2020 Development Charges background study.

Population Type	Unit	Average Consumption Rate	Max Day Factor	Peak Hour Factor
Residential	L/cap/d	270	1.8	3.0
Institutional/Commercial/ Industrial	L/emp/d	250	1.4	3.0

Wastewater Connection

Wastewater Effluent (L/s)

		Discharge location [7)]	Flow
24	Existing effluent [8)]	No existing sanitary discharge	0.12 L/s
25	Proposed effluent	North Sheridan way	8.66 l/s
26	Proposed effluent		
27	Proposed effluent		
28	Proposed additional effluent [8)]		
29	Other proposed effluent*		
30	Total proposed effluent		

*Please specify other proposed effluent (ex. occasional tank purges, off peak discharge, pool drainage)

Wastewater calculations

Please use the following updated daily per capita as per 2023 Peel Linear Wastewater Standards

Population Type	Unit	Average Day Demand	Min Peaking Factor	Max Peaking Factor	Inflow and Infiltration**
Residential	L/cap/d	290	2	4	0.26L/s/Ha
Non-residential	L/emp/d	270	2	4	0.26L/s/Ha

**For maintenance holes that are flood prone or located in low lying areas, an extra 0.28 L/s per maintenance hole may be added to the I&I calculation.

Notes

1) In accordance with Peel Linear Wastewater Standards and Region of Peel 2020 DC background Study
2) refer to Peel Linear Wastewater Standards
3) For the commercial and industrial design flow calculations, please refer to Schedule 8b on page A-9 of the Region of Peel 2020 DC background Study to determine population.
4) Please include the graphs associated with the hydrant flow test data. Hydrant flow tests should be performed within 2 years of submission to the Region. The Region will not permit hydrant flow tests during the winter, please contact Region Water Operations for scheduling. The Region reserves the right to request an updated hydrant flow test as required at any time.
5) Please reference the Fire Underwriters Survey Document
6) Please identify the flows for each use type, **if applicable**
7) Please include drainage plan for multiple discharge locations
8) For Intensification, sites with additions to buildings or additional buildings please provide existing flow for existing buildings and the added flows for the new proposal, **if applicable**

APPENDIX D

Storm Design Calculations

Counterpoint Engineering

Project Name: 1970-1980 Fowler Drive
Project Number: 23039
City: Mississauga

Pre-Development Stormwater Flow Rates to North Sheridan Way

Total Pre-Development Flows from Area 100

Rational Method - 2 Year Predevelopment

Event:		2	years
ABC's:	A	610	*
	B	4.6	*
	C	-0.78	*
Time of Concentration:	t	15	min
Saturation Coefficient:		1	*
Runoff Coefficient:	C	0.37	
Site Area	A	0.48	ha
Intensity I=A*(T+B)^C	i	59.89	mm/hr
Flow Q=CiA/360	Q	0.03	m^3/s
		29.64	l/s

Rational Method - 5 Year Predevelopment

Event:		5	years
ABC's:	A	820	
	B	4.6	
	C	-0.78	
Time of Concentration:	t	15	min
Saturation Coefficient:		1	
Runoff Coefficient:	C	0.37	
Site Area	A	0.48	ha
Intensity I=A*(T+B)^C	i	80.51	mm/hr
Flow Q=CiA/360	Q	0.04	m^3/s
		39.84	l/s

Rational Method - 10 Year Predevelopment

Event:		10	years
ABC's:	A	1010	
	B	4.6	
	C	-0.78	
Time of Concentration:	t	15	min
Saturation Coefficient:		1	
Runoff Coefficient:	C	0.37	
Site Area	A	0.48	ha
Intensity I=A*(T+B)^C	i	99.17	mm/hr
Flow Q=CiA/360	Q	0.05	m^3/s
		49.07	l/s

Rational Method - 25 Year Predevelopment

Event:		25	years
ABC's:	A	1160	
	B	4.6	
	C	-0.78	
Time of Concentration:	t	15	min
Saturation Coefficient:		1.1	
Runoff Coefficient:	C	0.41	
Site Area	A	0.48	ha
Intensity I=A*(T+B)^C	i	113.89	mm/hr
Flow Q=CiA/360	Q	0.06	m^3/s
		62.00	l/s

Rational Method - 50 Year Predevelopment

Event:		50	years
ABC's:	A	1300	
	B	4.7	
	C	-0.78	
Time of Concentration:	t	15	min
Saturation Coefficient:		1.2	
Runoff Coefficient:	C	0.45	
Site Area	A	0.48	ha
Intensity I=A*(T+B)^C	i	127.13	mm/hr
Flow Q=CiA/360	Q	0.08	m^3/s
		75.50	l/s

Rational Method - 100 Year Predevelopment

Event:		100	years
ABC's:	A	1450	
	B	4.7	
	C	-0.78	
Time of Concentration:	t	15	min
Saturation Coefficient:		1.25	
Runoff Coefficient:	C	0.47	
Site Area	A	0.48	ha
Intensity I=A*(T+B)^C	i	141.80	mm/hr
Flow Q=CiA/360	Q	0.09	m^3/s
		87.72	l/s

Counterpoint Engineering

Project Name: 1970-1980 Fowler Drive
Project Number: 23039
City: Mississauga

Pre-Development Allowable Stormwater Flow Rates

Allowable Flows to North Sheridan Way

Rational Method - 2 Year Predevelopment

Event:		2	years
ABC's:	A	610	*
	B	4.6	*
	C	-0.78	*
Time of Concentration:	t	15	min
Saturation Coefficient:		1	*
Runoff Coefficient:	C	0.37	
Site Area	A	0.476	ha
Intensity	i	59.89	mm/hr
I=A*(T+B)^C			
Flow	Q	0.03	m^3/s
Q=CiA/360		29.64	l/s

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Project Name: 1970-1980 Fowler Drive
Project Number: 23039
City: Mississauga

Quantity Control Calculations

Rainfall Data			
Location:	City of Mississauga	a	1450
Event	100-year	b	4.7
		c	-0.78

Site Proposed Stormwater Management Summary

Area ID	Area (ha)	Runoff Coefficient	t_c (min)	Storage Available (m^3)	Storage Required (m^3)	Release Rate (l/s)	Allowable (l/s)	Description
200	0.441	0.62	15	201.4	180.4	17.0	29.6	Pumped
UNC1	0.035	0.25	15			4.3		
					Total to Storm Sewer:	**21.3**	**29.6**	

Site Storm Connection Capacity Summary

Storm Connection (mm)	Slope Pipe (%)	Total Flow to Connection (l/s)	Diameter Actual (m)	Pipe Area (sq.m)	Hydraulic Radius (m)	Pipe Capacity (l/s)
250	1.00%	21	0.250	0.05	0.063	59

200 Controlled Site

Composite RC Value	Area [ha]	RC	RC * Area
Landscaped Area	0.160	0.25	0.0401
Green Roof	0.039	0.45	0.0175
Conventional Roof, Paved & Pavers	0.242	0.90	0.2176
Total:	**0.441**		**0.2752**
		Divided by Total Area =	**0.62**

UNC1 Uncontrolled Site

Composite RC Value	Area [ha]	RC	RC * Area
Landscaped Area	0.035	0.25	0.0088
Conventional Roof, Paved & Pavers	0.000	0.90	0.0000
Total:	**0.035**		**0.0088**
		Divided by Total Area =	**0.25**

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Modified Rational **Area:** **200**

Project Name: 1970-1980 Fowler Drive
Project Number: 23039

Rainfall Data			
Location:	City of Mississaug	a	1450.000
Event	100-year	b	4.700
		c	-0.780

Site Data		
Area	0.441	ha
Runoff Coefficient	0.78	NOTE:** (RC * 1.25, having a maximum RC of 1.00)
AC	0.34	
Tc	15	
Time Increment	10	
Release Rate	17.0	l/s
Storage Required	180.42	m^3

***Storm runoff was multiplied by 1.25 (factor of safety) for the 100-year event as per City of Mississauga Development Requirements Manual (Nov 2022)*

Time	Rainfall Intensity	Storm Runoff*	Runoff Volume	Released Volume	Storage Volume	
(min)	(mm/hr)	(m^3/s)	(m^3)	(m^3)	(m^3)	
15	142	0.17	153	15	137	
25	103	0.12	185	26	159	
35	82	0.10	206	36	170	
45	69	0.08	0	46	-46	
55	60	0.07	0	56	-56	
65	53	0.06	247	66	180	********
75	48	0.06	0	77	-76	
85	43	0.05	265	87	178	
95	40	0.05	273	97	176	
105	37	0.04	280	107	173	
115	35	0.04	286	117	169	
125	33	0.04	292	128	165	
135	31	0.04	298	138	160	
145	29	0.03	303	148	155	
155	28	0.03	308	158	150	
165	26	0.03	313	168	145	
175	25	0.03	317	179	139	
185	24	0.03	322	189	133	
195	23	0.03	326	199	127	
205	22	0.03	330	209	120	
215	22	0.03	333	219	114	
225	21	0.02	337	230	107	
235	20	0.02	340	240	101	

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Rational Method	**Area UNC1 - Bypassed Flow**		
Project No:	23039		
Project Name:	1970 & 1980 Fowler Drive		
Event:	100	years	
ABC's:	a	1450	
	b	4.7	
	c	-0.78	
Time of Concentration:	t	15	min
Saturation Coefficient:		1.25	
Runoff Coefficient:	C	0.31	
Site Area	A	0.035	ha
Intensity I=A*(T+B)^C	i	141.80	mm/hr
Flow	Q	0.0043	m^3/s
Q=CiA/360		4.3	l/s

Counterpoint Engineering Inc.

Quality Control

Project: 1970-1980 Fowler Drive
Project No: 23039
Location: Mississauga
Total Site Area **0.476 ha**

Un-Mitigated Condition

Surface Type	Area (Ha)	Effective TSS Removal	% Area of Site Rate (%)	Overall TSS Removal Rate (%)
Conventional Roof Area	0.134	80%	28%	22.5%
Landscape Area (softscape)	0.196	80%	41%	32.9%
Landscaping Area (Hardscape)	0.091	80%	19%	15.4%
Vehicular Area	0.055	0%	12%	0.0%
Total	**0.476**		**100%**	**71%**

Mitigated Condition #1 (Area Contributing to OGS)

Surface Type	Area (Ha)	Effective TSS Removal	% of Contributing Area Rate (%)	Overall TSS Removal Rate (%)
Conventional Roof Area	0.134	80%	30%	24.3%
Landscape Area (softscape)	0.161	80%	36%	29.1%
Landscaping Area (Hardscape)	0.091	80%	21%	16.6%
Vehicular Area	0.055	0%	13%	0.0%
Sub-Total	**0.441**		**100%**	**70%**
Mitigation Method		Effective TSS Removal	Available Remaining TSS Removal (%)	Overall TSS Removal Rate (%)
Oil/Grit Seperator *(Provides additonal TSS removal capability to the possible remaining TSS* = 100% - Unmitigated overal TSS Removal Percentage)		50%	30%	15%
Total	**0.441**			**85%**

Mitigated Condition #2 (Area By-Passing OGS)

Surface Type	Area (Ha)	Effective TSS Removal	% of Contributing Area Rate (%)	Overall TSS Removal Rate (%)
Landscape Area (softscape)	0.035	80%	100%	80%
Sub-Total	**0.035**		**100%**	**80%**

Combined Mitigated Condition

Surface Type	Area (Ha)	Effective TSS Removal	% of Contributing Area Rate (%)	Overall TSS Removal Rate (%)
Mitigated Condition #1	0.441	85%	93%	78.7%
Mitigated Condition #2	0.035	80%	7%	5.9%
Site Total	**0.476**		**100%**	**85%**

Counterpoint Engineering

Project Name: 1970-1980 Fowler Drive
Project Number: 23039

Site Area: 0.476 ha

WATER BALANCE CALCULATION SHEET

Total Required Volume to be Retained (5mm across area)	**23.81**	**m^3**

Conventional Roof and Paved Walkways		
Initial Abstraction	1.0	mm
Total Area	0.242	ha
Volume for evapotranspiration	**2.42**	**m^3**

Grassed and Landscaped Areas		
Initial Abstraction	5.0	mm
Total Area	0.196	ha
Volume for evapotranspiration and infiltration	**9.78**	**m^3**

Green Roof		
Initial Abstraction	5.0	mm
Total Area	0.039	ha
Volume for evapotranspiration	**1.94**	**m^3**

Cistern		
Total used within 72 hours	**9.67**	**m^3**