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: 2nd Submission

APRIL 17, 2026

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 0.510 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 275 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 the existing sanitary services for 1970 Fowler Drive that currently traverse 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. One new storm connection is proposed to bring storm runoff to the existing 1200 mm diameter storm sewer in Fowler Drive. As there is no existing drainage from the development area outletting to Fowler Drive today, the existing 1980 Fowler Drive storm servicing will be modified to control existing flows from 1980 Fowler Drive to offset redirected storm drainage from the proposed development. 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 0.510 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 275 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 150 mm fire and 100 mm domestic line, along with a secondary 150 mm fire service, both to be serviced by the 300 mm watermain in Fowler Drive. The connection shall be made as per Region of Peel standard drawings 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 are 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	3.58	5.97	66.67	70.25

As such, the governing demand is the maximum day plus fire flow demand rate**, 70.25 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	ELEVATOR PIT (L/DAY	LONG-TERM DEWATERING (L/DAY) INCL. SAFETY FACTOR
323,000	10,000	79,200

Construction dewatering will be designed by a qualified dewatering contractor, with MECP permitting applied for as required (EASR is expected). A rate of 333,000 L/day (**3.85 L/s**). As the above noted long-term dewatering rate is less than 50,000 L/day, a Category 3 Permit to Take Water will 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 with 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 redevelopment. Both connections will require the installation of new control manholes in the regional 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 275 total units, generating an equivalent residential population of 637 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)
275	637	**8.38**	0.510	**0.13**	0.92	**9.43**

The post-development sanitary peak flow has been calculated as **9.43** L/s, which includes an infiltration allowance of 0.92 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 **9.29 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 (0.510 ha): uncontrolled drainage directed to the N. Sheridan Way ROW.

Drainage for 1980 Fowler is captured by surface level catchbasins and drains, which is conveyed to the existing 1200 mm diameter storm sewer in Fowler Drive. The catchbasin located in the north parking lot (CB6) was found to have the following drainage area:

- Area CB6 (0.150 ha): captured drainage directed to 1200 mm diameter storm sewer in Fowler Drive.

Refer to drawing **SWM1 & SWM1A – Pre-Development Storm Drainage Plans** 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)	CB6 AREA (L/S)
2-Year	31.05	17.61
5-Year	41.74	23.67
10-Year	51.41	29.16
25-Year	64.96	36.83
50-Year	79.10	44.85
100-Year	91.90	52.11

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 stormwater management strategy involves redirecting stormwater flows from North Sheridan Way ROW to the 1200 mm diameter Fowler Drive storm sewer. Maintaining the existing drainage patterns to North Sheridan Way ROW is challenging due to the lack of storm sewer and the outletting ditch in the boulevard is poorly defined. As per discussions with City of Mississauga staff, we believe it to be best practices to redirect storm runoff to the existing 1200 mm diameter storm sewer in Fowler Drive.

The allowable release rate from the site into the Fowler Drive storm sewer was determined by applying quantity controls to the existing catchbasin in the north parking lot. The 10-year peak flow rate that results from the CB6 area was calculated and considered the maximum allowable release rate to the 1200 mm

diameter storm sewer in Fowler Drive for both the existing 1980 Fowler Drive catchbasin (CB6) and the proposed development. Refer to **Table 6** and Appendix D for the allowable release rate calculations.

Table 6: Allowable Release Rate

DRAINAGE AREA	RECEIVING SYSTEM	ALLOWABLE RELEASE RATE (L/S)
Area CB6	Fowler Drive 1200mm dia. Storm Sewer	29.2

The above release rate of **29.2 L/s** is the maximum release rate for the controlled drainage from the north parking lot (CB6) and the proposed development (Area 100) combined.

5.4 PROPOSED STORM SERVICING

Stormwater on the proposed development will be captured by roof and area drains, then conveyed internally through the building via mechanical plumbing then to a SWM tank (#1) external to the building underground limits.

The existing catchbasin within the 1980 Fowler Drive north parking lot (CB6), will be disconnected along with the existing catchbasin in the driveway (CB7) and redirected into a new storage tank (SWM Tank #2) to provide quantity control upstream of the existing 1980 Fowler Drive storm outlet.

The post-development drainage areas are as follows, refer to **SWM2 & SWM2A – Post-Development Storm Drainage Plan** for more details.

- Area 200: 0.475 ha, controlled drainage directed to Fowler Drive storm sewer.
- UNC1: 0.035 ha, uncontrolled drainage via overland flow to North Sheridan Way ROW due to grading restrictions.
- CB6: 0.150 ha, controlled drainage directed to Fowler Drive storm sewer.

In order to maintain the existing total stormwater runoff outletting to the existing 1200mm Fowler Drive storm sewer, both storage tanks will be fitted with orifice control devices such that the allowable release rate in Table 6 is not exceed. The following servicing elements are proposed for the proposed development and 1980 Fowler Drive:

- Connection 1: A new 250 mm diameter sewer will connect the proposed SWM Tank (#1) to an existing maintenance hole in Fowler Drive. The captured storm runoff will be pumped from the tank (due to existing grades and storm sewer inverts) at an attenuated rate less than the allowable release rate from 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.
- Connection 2: Drainage captured by existing catchbasins 6 and 7 within the 1980 Fowler Drive property and directed to a new storage tank (SWM Tank #2) are to be controlled to a rate less than the allowable release rate from Section 5.3. Both catchbasins are redirected to a proposed SWM tank

that is sized to provide sufficient storage during a 10-year storm. A 60mm diameter orifice plate will attenuate the release rate. The detailed design of the SWM tank will be done as part of a future site plan approval ("SPA") submission.

Refer to drawings **SW-S and SW-S2** for the site servicing layout.

5.5 STORMWATER QUANTITY CONTROL

The proposed storm connections will convey drainage captured from Area 200 and CB6 to the existing 1200 mm diameter storm sewer in Fowler Drive.

A pump is proposed to convey captured storm runoff through Connection 1 and be sized to control post-development flows to a maximum rate of **16.5 L/s** for the proposed development. The storage required to meet this allowable release rate has been calculated to be **204.0 m^3**. A storm tank will be located outside of the proposed limit of the below grade walls. 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**. The runoff coefficient of this area in the pre-development and post-development conditions are kept the same and no consequence is foreseen with allowing this area to continue flowing into the North Sheridan Way ROW. As the majority of the runoff generated from the proposed development will be redirected to Fowler Drive, this results in a net decrease in runoff directed to North Sheridan Way in the post-development scenario.

SWM Tank #2 will be fitted with an orifice to control post-development flows to a maximum rate of **12.7 L/s** for 1980 Fowler Drive. The storage required to meet this allowable release rate has been calculated to be **37.7 m^3**. A storm tank will be located in the landscaped area between the existing parking lot and Fowler Drive ROW. Storm tank details will be determined at SPA stage.

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
UNC1	-	4.3	31.0	Uncontrolled to N. Sheridan Way
Total to North Sheridan Way		**4.3**	**31.0**	
200	204.0	16.5	29.2	Controlled to Fowler Drive
CB6	37.7	12.7		Controlled to Fowler Drive
Total to Fowler Drive		**29.2**	**29.2**	

As can be determined from Table 7 above, the provided storage and orifice controls are able to attenuate the post-development release rate to equal or less than the existing storm discharge to the Fowler Drive storm sewer.

Refer to drawings **SWM1, SWM1A, SWM2A** and **SWM2B** 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 (%)
0.510	72.2%	0.51	80%	92.9%

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 5 mm 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 **10.6 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.

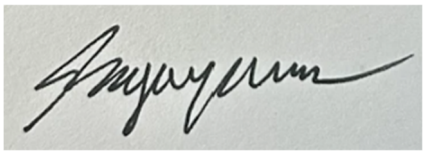
6.0 CONCLUSIONS

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

AKSAN PILLER CORPORATION LTD
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CALC.: MU DRAWN: LF CHECKED: HP
reference number: 21-24-14147-00

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
- 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

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.

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)

OVERALL LOT AREA (PART 1, PART 2, AND PART 3)	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)
PART 1 AND PART 2 LOT AREA	26,936.63 SM - 5,101.82 = 21,834.81 SM		
PART 3 LOT AREA	5101.82 sm		
OCCUPANCY TYPE	RESIDENTIAL		

STATISTICS	REQUIRED / PERMITTED	PROVIDED
BUILDING HEIGHT	56 M AND 18 STOREYS	24 STOREYS @ 77.54 m +6 m MPH +3.5 m ELEVATOR MACHINE ROOM (EMR)
MAX. DENSITY	1.8	PART 1 AND PART 2 FSI : 32,516 SM / 21,834.81 = 1.49 PART 3 FSI : 19,810 SM / 5,101.82 = 3.88 OVERALL FSI : 52,326 SM / 26,936.63 SM = 1.94
ABOVE GRADE GFA (GROSS FLOOR AREA)		19,660.0 SM GFA ABOVE GRADE
BELOW GRADE GFA (GROSS FLOOR AREA)		150.2 SM GFA BELOW GRADE
TOTAL PROPOSED GFA (PART 3) EXISTING GFA (PART 1 AND 2) OVERALL GFA AREA		19,660.0 SM (ABOVE GRADE) + 150.2 SM (BELOW GRADE)= 19,810 SM ESTIMATED EXISTING RESIDENTIAL GFA= 32,516 SM TOTAL GFA = 32, 516 SM+ 19,810 SM= 52,326 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 (13.0M X 4.0M X 7.5M)
SETBACKS FROM PROPERTY LINE	TOWER NORTH (NORTH SHERIDAN WAY) : 11.6 m SOUTH (ADJACENT TO 1970 FOWLER - PART 1) : 26.2 m EAST (ADJACENT TO 2111 ROCHE CRT.) : 15 m WEST (ADJACENT TO 1980 FOWLER - PART 2) : 14.7 m	
NUMBER OF UNITS (PROPOSED)	275	

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. = 275 * 0.90 = 248 SPOTS VISITOR 275 * 0.2 = 55 SPOTS TOTAL RESIDENTIAL REQUIRED MIN. = 303 =(248 + 55)	RESIDENTIAL LEVEL COUNT (TOTAL) REG. BF LEVELS P4-P3-P2-P1 234 234 0 TOTAL RESIDENTIAL PROVIDED = 234 VISITOR LEVEL COUNT (TOTAL) REG. BF LEVEL P1 & GF 41 38 3 TOTAL VISITORS PROVIDED = 41 234 RESIDENTIAL + 41 VISITORS = 275 TOTAL PARKING SPOTS (0.85 RATIO) (0.15 RATIO) (1 RATIO)
TOTAL BARRIER-FREE PARKING	4% OF TOTAL VISITOR PARKING REQUIRED = 55* 4% = 3 REQUIRED	TOTAL ACCESSIBLE PARKING SPACE PROVIDED = 3
TOTAL REQUIRED PARKING SPACES WITH EV CHARGE	20% OF PROVIDED RESIDENTIAL PARKING SPACES = 234* 20% = 47 (ROUNDED UP 46.8) 10% OF PROVIDED VISITOR PARKING SPACES = 41* 10% = 5 (ROUNDED UP 4.1)	20% OF TOTAL PARKING PROVIDED(RESI.) =234 X20% =47(ROUNDED UP 46.8) 10% OF TOTAL PARKING PROVIDED (VIS.) =41 X10% = 5 (ROUNDED UP 4.1)
PARKING RATIO	EXISTING UNIT COUNT (PART 1 AND PART 2) = 332 PROPOSED UNIT COUNT (PART 3) = 275 TOTAL UNIT COUNT (PART 1 , 2 AND 3) = 607	EXISTING PARKING SPACES (PART 1 AND PART 2) = 396 EXISTING PARKING RATIO 396 / 332 = 1.19 PROPOSED PARKING SPACES (PART 3) = 275 PART 3 PARKING RATIO 275 / 275 = 1 EXISTING PARKING SPACES = 396 SPACES PROPOSED 275+ EXISTING PARKING 396 = 671 TOTAL PARKING SPACES OVERALL PARKING RATIO 671 / 607 = 1.10

BICYCLE PARKING	REQUIRED / PERMITTED	PROVIDED
RESIDENTIAL BICYCLE PARKING (CLASS A)	0.6 SPACES / UNIT REQUIRED = 0.6 X 275UNITS = 165 RESIDENTIAL BIKE PARKING REQUIRED	RESIDENTIAL 165 LONG TERM RESIDENTIAL (CLASS A) 0.6 SPACES / UNIT
VISITOR BICYCLE PARKING (CLASS B)	0.05 SPACES / UNIT REQUIRED = 0.05 X 275 UNITS = 14 VISITORS BICYCLE SPACES RQD (ROUNDED UP 13.75)	VISITOR 14 SHORT TERM VISITOR (CLASS B) 0.05 SPACES / UNIT
TOTAL BICYCLE PARKING	165 (CLASS A) + 14 (CLASS B) = 179	165 (CLASS A) + 14 (CLASS B) = 179

AMENITY	BY-LAW REQUIREMENT	PROVIDED
PER UNITS	PROPOSED BUILDING (PART3) MIN. 5.6 SM PER UNIT MIN. 5.6SM * 275 = 1,540 SM MIN. 770 SM INTERIOR AMENITY REQ. MIN. 770 SM EXTERIOR AMENITY REQ. OVERALL MIN. 5.6 SM PER UNIT MIN. 5.6SM * 607 = 3,399.2 SM MIN. 1,699.6 SM INTERIOR AMENITY REQ. MIN. 1,699.6 SM EXTERIOR AMENITY REQ.	OVERALL EXISTING AMENITY AREA INTERIOR AMENITY = 0 EXTERIOR AMENITY = EXISTING BASKETBALL COURT 610.52 SM + 2 PLAYGROUNDS 172.02 SM + COMMUNITY GARDEN 77 SM =859.54 SM TOTAL EXISTING AMENITY AREA PART 1, 2, AND 3 = 859.54 SM 859.54 SM / 332 = 2.58 SM PER UNIT PROPOSED BUILDING AMENITY AREA (PART 3) INTERIOR AMENITY 253.6 SM @ L01 + 237.7 SM @ L05 + 79.7 SM @ ROOF = 571.0 SM EXTERIOR AMENITY 306.3 SM MULTI-PURPOSE COURT+107.5 SM NEW PLAYGROUND+54.9 SM DOG RUN+ 317.7SM @ L05 +263.0 SM @ ROOF=1049.4 SM TOTAL AMENITY AREA PART 3 = 1620.4 SM 1620.4 SM / 275 = 5.89 SM PER UNIT OVERALL PROPOSED AMENITY AREA (PART 1, 2, AND 3) INTERIOR AMENITY 253.6 SM @ L01 + 237.7 SM @ L05 + 79.7 SM @ ROOF += 571.0 SM EXTERIOR AMENITY 306.3 SM MULTI-PURPOSE COURT+107.5SM NEW PLAYGROUND+ 54.9 SM DOG RUN+ 81.8 SM EXISTING PLAYGROUND+ 63.7 SM NEW GARDEN + 317.7 SM L05 ROOFTOP + 263.0 SM MPH ROOFTOP AMENITY= 1194.9 SM TOTAL AMENITY AREA OVERALL SITE = 1765.9 SM 1765.9 SM / 607 = 2.90 SM PER UNIT
BARRIER-FREE UNITS	15% OF SUITES WITHIN A MULTI-UNIT RESIDENTIAL BUILDING	275 * 15% = 42 UNITS REQUIRED TO BE BARRIER FREE

UNIT MIX

LEVEL	STUDIO	1 BEDROOM	1 BEDROOM+ DEN	2 BEDROOM	3 BEDROOM	TOTAL UNIT PER FLOOR	NO. OF LEVELS	TOTAL UNITS
LEVEL 2	1	1	4	4	2	12	1	12
LEVEL 3	1	1	4	4	2	12	1	12
LEVEL 4	1	1	4	4	3	13	1	13
LEVEL 5	1	4	0	2	0	7	1	7
LEVEL 6 TO 13	8	24	0	48	8	11	8	88
LEVEL 14 TO 24	22	77	0	33	11	13	11	143
TOTAL	34	108	12	95	26	68		275

PERCENTAGE	12.36%	39.27%	4.36%	34.55%	9.45%
		43.64%		44.00%	
				FAMILY SIZED UNITS	

BARRIER FREE UNIT REQUIRED (15% OF TOTAL UNITS)					42
NO. UNITS	5	17	2	14	4

AVERAGE UNIT SIZE	PROVIDED
STUDIO	444 SF
1 BEDROOM	553 SF
1 BEDROOM +DEN	723 SF
2 BEDROOM	859 SF
3 BEDROOM	1047 SF

VEHICLE PARKING SCHEDULE

LEVEL	RESIDENTIAL PARKING	VISITOR PARKING	TOTAL NO. OF PARKING	BARRIER FREE PARKING	WITH EV CHARGER
LEVEL P4	48	0	48	0	10
LEVEL P3	78	0	78	0	14
LEVEL P2	78	0	78	0	14
LEVEL P1	30	39	69	3	14
LEVEL 1	0	2	2	0	0
TOTAL	234	41	275	3	52

PROVIDED PARKING RATIO (FOR THE BUILDING) = TOTAL PARKING 275/ TOTAL UNITS 275= 1

BICYCLE PARKING SCHEDULE

LEVEL	RESIDENTIAL BIKE (CLASS A)	VISITOR BIKE (CLASS B)	TOTAL NO. OF PARKING
LEVEL P1	165	0	165
LEVEL 1	0	14	14
TOTAL	165	14	179

AMENITY AREA SCHEDULE

LEVEL	INTERIOR AMENITY	EXTERIOR AMENITY	TOTAL AMENITY AREA
LEVEL 1	253.6 m²	469 m²	722 m²
LEVEL 2	0.0 m²	0 m²	0 m²
LEVEL 3	0.0 m²	0 m²	0 m²
LEVEL 4	0.0 m²	0 m²	0 m²
LEVEL 5	237.7 m²	318 m²	555 m²
LEVEL 6 TO 13	0.0 m²	0 m²	0 m²
LEVEL 14 TO 24	0.0 m²	0 m²	0 m²
LEVEL MPH- ROOFTOP	79.7 m²	263 m²	343 m²
ELEVATOR M. ROOM	0.0 m²	0 m²	0 m²
TOTAL	571.0 m²	1049 m²	1620 m²

BUILDING STATISTICS- BELOW GRADE

LEVEL	NO. OF LEVELES	GCA		GFA		GLA		CIRCULATION	MANAGEMENT OFFICE	DEDUCTIONS							
		GCA SM	GCA SF	GFA SM	GFA SF	GLA SM	GLA SF			GARBAGE	INTERIOR AMENITY	MECHANICAL	SHAFT	STORAGE	PARKING	LOADING	COMMON AREA
LEVEL P4	1	2,205.6 m²	23,741 ft²	36.0 m²	387 ft²	0.0 m²	0 ft²	36.0 m²	0.0 m²	0.0 m²	0.0 m²	188.4 m²	69.89 m²	160.2 m²	1,751.1 m²	0.0 m²	0.0 m²
LEVEL P3	1	3,310.3 m²	35,632 ft²	36.0 m²	387 ft²	0.0 m²	0 ft²	36.0 m²	0.0 m²	0.0 m²	0.0 m²	184.8 m²	92.78 m²	203.6 m²	2,793.1 m²	0.0 m²	0.0 m²
LEVEL P2	1	3,310.3 m²	35,632 ft²	35.1 m²	378 ft²	0.0 m²	0 ft²	35.1 m²	0.0 m²	0.0 m²	0.0 m²	92.75 m²	393.0 m²	2,789.4 m²	0.0 m²	0.0 m²	0.0 m²
LEVEL P1	1	3,310.3 m²	35,632 ft²	43.2 m²	465 ft²	0.0 m²	0 ft²	43.2 m²	0.0 m²	0.0 m²	0.0 m²	208.4 m²	92.85 m²	276.7 m²	2,689.2 m²	0.0 m²	0.0 m²
TOTAL		12,136.5 m²	130,637 ft²	150.2 m²	1,617 ft²	0.0 m²	0 ft²	150.2 m²	0.0 m²	0.0 m²	0.0 m²	581.7 m²	348.28 m²	1,033.6 m²	10,022.8 m²	0.0 m²	0.0 m²

BUILDING STATISTICS- ABOVE GRADE

LEVEL	NO. OF LEVELES	GCA		GFA		GLA		CIRCULATION	MANAGEMENT OFFICE	DEDUCTIONS							
		GCA SM	GCA SF	GFA SM	GFA SF	GLA SM	GLA SF			GARBAGE	INTERIOR AMENITY	MECHANICAL	SHAFT	STORAGE	PARKING	LOADING	COMMON AREA
LEVEL 1	1	1,256.0 m²	13,519 ft²	289.1 m²	3,111 ft²	0.0 m²	0 ft²	55.4 m²	51.6 m²	144.7 m²	253.6 m²	22.0 m²	92.90 m²	29.5 m²	174.9 m²	216.6 m²	214.7 m²
LEVEL 2	1	1,105.1 m²	11,895 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	168.51 m²	0.0 m²	0.0 m²	0.0 m²	0.0 m²
LEVEL 3	1	1,105.4 m²	11,899 ft²	927.5 m²	9,983 ft²	863.1 m²	9,290 ft²	64.3 m²	0.0 m²	7.9 m²	0.0 m²	1.8 m²	168.20 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 13	8	7,199.2 m²	77,492 ft²	6,721.6 m²	72,351 ft²	6,227.7 m²	67,035 ft²	493.8 m²	0.0 m²	63.6 m²	0.0 m²	14.8 m²	399.20 m²	0.0 m²	0.0 m²	0.0 m²	0.0 m²
LEVEL 14 TO 24	11	9,898.9 m²	106,551 ft²	9,242.2 m²	99,482 ft²	8,563.2 m²	92,173 ft²	679.0 m²	0.0 m²	88.3 m²	0.0 m²	20.3 m²	548.06 m²	0.0 m²	0.0 m²	0.0 m²	0.0 m²
LEVEL MPH- ROOFTOP	1	535.1 m²	5,760 ft²	66.1 m²	712 ft²	0.0 m²	0 ft²	66.1 m²	0.0 m²	8.0 m²	79.7 m²	325.8 m²	55.45 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		23,082.4 m²	248,456 ft²	19,660.0 m²	211,618 ft²	17,877.0 m²	192,426 ft²	1,549.3 m²	51.6 m²	335.4 m²	571.0 m²	498.2 m²	1,564.06 m²	29.5 m²	174.9 m²	216.6 m²	214.7 m²
TOTAL ABOVE AND BELOW	29 + MPH	35,218.9 m²	379,093 ft²	19,810.2 m²	213,235 ft²	17,877.0 m²	192,426 ft²	1,699.5 m²	51.6 m²	335.4 m²	571.0 m²	1,079.9 m²	1,912.33 m²	1,063.2 m²	10,197.7 m²	216.6 m²	214.7 m²

ARCHITECTURAL DRAWINGS LIST

DRAWING NO.	TITLE	
A000	TITLE PAGE	
A001	STATISTICS	
A002	SURVEY PLAN	
A003	CONCEPT PLAN	
A004	OVERALL SITE PLAN	
A005	SITE PLAN	
A006	ESTABLISHED GRADE	
A007	PROPERTY BOUNDARY DIAGRAM	
A200	LEVEL P4	
A201	LEVEL P3	
A202	LEVEL P2	
A203	LEVEL P1	
A204	LEVEL 1	
A205	LEVEL 2	
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A208	LEVEL 5	
A209	LEVEL 6 TO 13	
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A211	LEVEL MPH - ROOFTOP AMENITY	
A212	ELEVATOR MACHINE ROOM LEVEL	
A213	ELEVATOR MACHINE ROOM ROOF	
A400	EAST ELEVATION	
A401	SOUTH ELEVATION	
A402	WEST ELEVATION	
A403	NORTH ELEVATION	
A410	BUILDING SECTION 1	
A411	BUILDING SECTION 2	
A412	ANGULAR PLANE DIAGRAM	WEST ELEVATION
A500	JUNE 21	INCREMENTAL SHADOW STUDY
A501	JUNE 21	INCREMENTAL SHADOW STUDY
A502	JUNE 21	INCREMENTAL SHADOW STUDY
A503	SEPTEMBER 21	INCREMENTAL SHADOW STUDY
A504	SEPTEMBER 21	INCREMENTAL SHADOW STUDY
A505	DECEMBER 21	INCREMENTAL SHADOW STUDY
A506	DECEMBER 21	INCREMENTAL SHADOW STUDY
A900	MASSING VIEW	NORTH-WEST CORNER
A901	MASSING VIEW	SOUTH-EAST CORNER
A902	MASSING VIEW	NORTH-EAST CORNER
A903	MASSING VIEW	SOUTH-WEST CORNER

NO.	REVISIONS	DATE
2	ISSUED FOR REVIEW	14 APR 2026
1	ISSUED FOR REZONING AND OPA	21 NOV 2025

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1970-1980 FOWLER DRIVE, MISSISSAUGA, ON

(RESIDENTIAL)

LEGAL DESCRIPTIONS :
1970 FOWLER DRIVE : PLAN 842 PCL 1 PT BLK A
1980 FOWLER DRIVE : PLAN 842 PCL 2 PT BLK A

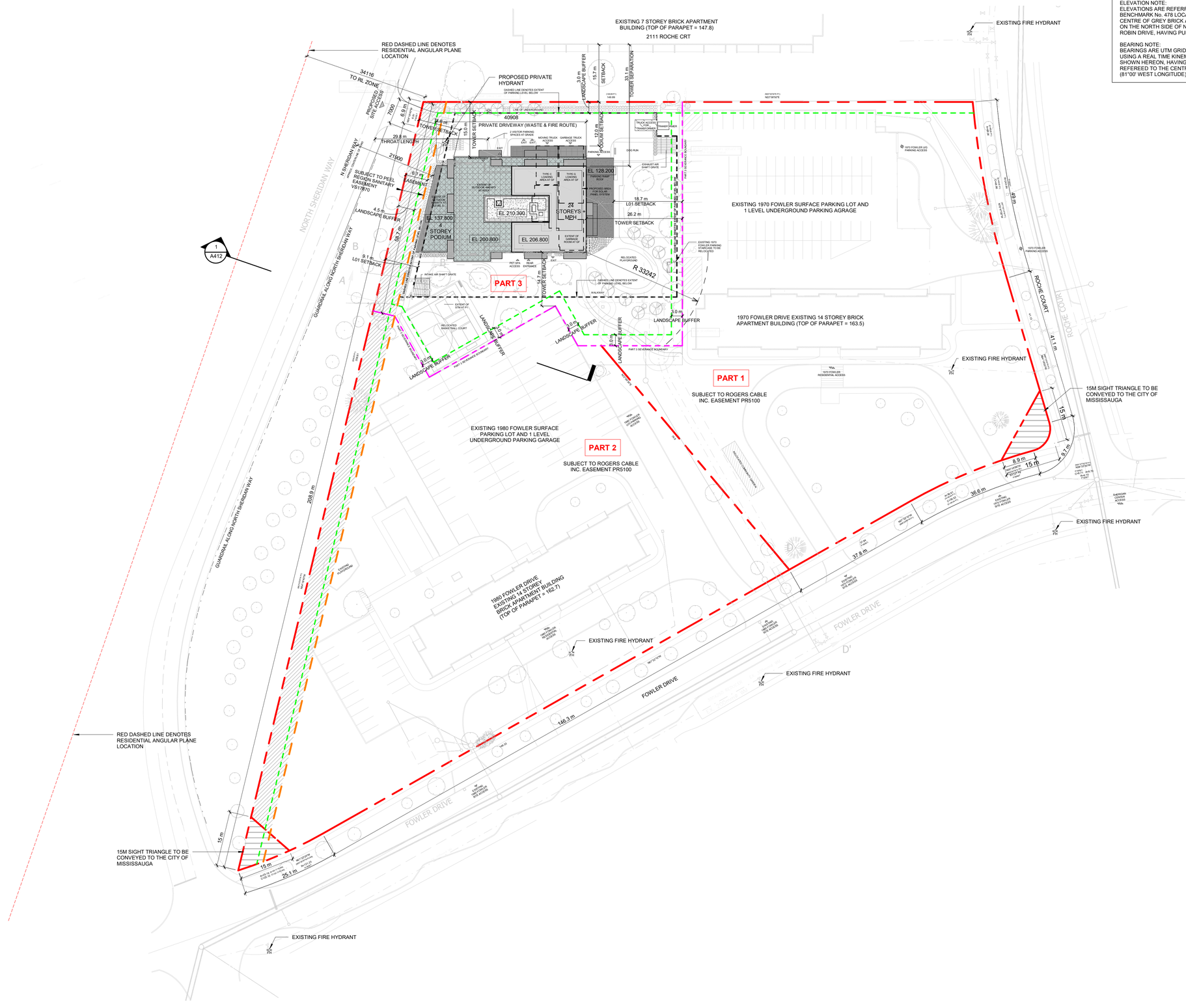
IMH 1970 & 1980 FOWLER DRIVE LTD.

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

TITLE: STATISTICS

PROJECT NO.	DRAWING NO.
22-214	A001

DATE/TIME PRODUCED:2026-04-14 4:10:34 P.M.



FROM SURVEY

ELEVATION NOTE:
ELEVATIONS ARE REFERRED TO THE CITY OF MISSISSAUGA BENCHMARK No. 478 LOCATED ON THE SOUTH FACE AT THE CENTRE OF GREY BRICK AND CONCRETE BLOCK BUILDING No.1801, ON THE NORTH SIDE OF NORTH SHERIDAN WAY, 152M WEST OF ROBIN DRIVE, HAVING PUBLISHED ELEVATION 112.471 METRES

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 REFEREED TO THE CENTRAL MERIDIAN OF UTM ZONE 17 (81°00' WEST LONGITUDE) NAD83 (CSRS) (2010).

NO.	REVISIONS	DATE
2	ISSUED FOR REVIEW	14 APR 2026
1	ISSUED FOR REZONING AND OPA	21 NOV 2025

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS ON THE JOB.

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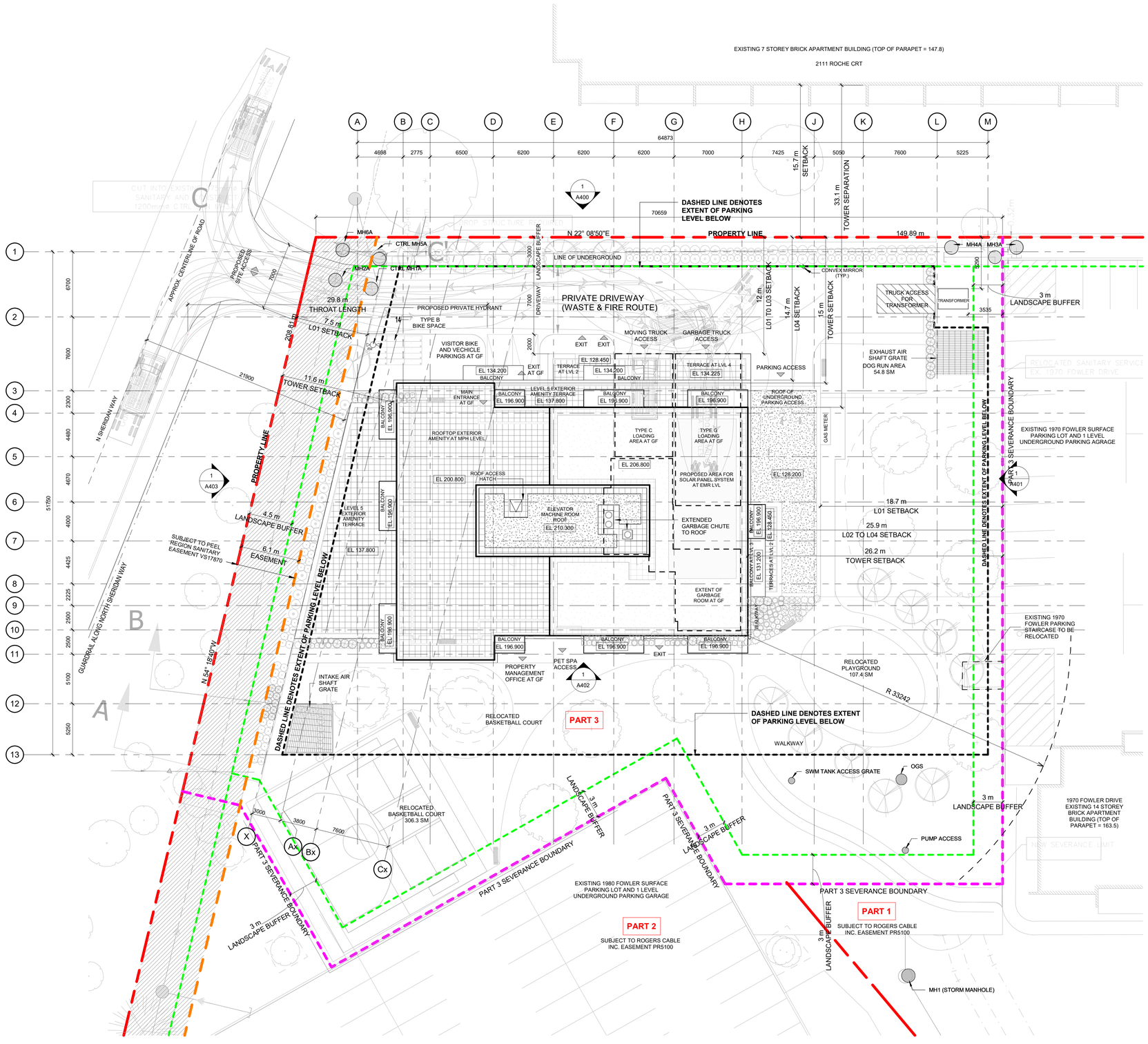
NORTH

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:2026-04-14 1:10:34 PM



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MARKET RENTAL BUILDING

EXISTING ZONING - RA4-2

STATISTICS

BUILDING HEIGHT: 24 STOREYS @ 77.54 M + MPH @ 9.5 M

LOT AREA : 2.69 Ha
PART 3 SITE AREA : 5,101.82 SM

PROPOSED GCA : 35,218.9 SM
EXISTING GFA : 32,516 SM
PROPOSED GFA : 19,810 SM
TOTAL PROJECT GFA : 52,326 SM
FSI : 52,326 SM/ 26,936.63 SM = 1.94

PARKING STATS

REQUIRED PARKING SPACES : MIN. 303 SPOTS
(PARKING RATE = 0.9 RESIDENT + 0.2 VISITOR)

PROVIDED PARKING SPACES : 275 SPOTS
(PARKING RATE = 0.85 RESIDENT + 0.15 VISITOR)

REQUIRED BARRIER FREE PARKING SPACES : 3

PROVIDED BARRIER FREE PARKING SPACES : 3

LOADING AREA:
1 LOADING SPACE TYPE C (6.0 M X 3.5 M X 3 M)
1 LOADING SPACE TYPE G (13.0 M X 4.0 M X 7.5 M)

AMENITY SCHEDULE

INTERIOR AMENITY
253.6 SM @ L01 + 237.7 SM @ L05 + 79.7 SM @ ROOF = 571.0 SM

EXTERIOR AMENITY
468.7 SM @ GRADE+ 317.7 SM @ L05 + 263.0 SM @ ROOF = 1049.4 SM

TOTAL AMENITY PROVIDED
571.0 SM+ 1049.4 SM = 1620.4 SM 1620.4/ 275 = 5.89 SM / UNIT)

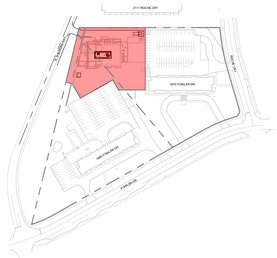
SUITE SCHEDULE

STUDIO = 34
1 BEDROOM = 108
1 BEDROOM+D = 12
2 BEDROOM = 95
3 BEDROOM = 26
TOTAL UNITS = 275

AVERAGE UNIT SIZE

STUDIO	444 SF
1 BEDROOM	553 SF
1 BEDROOM +DEN	723 SF
2 BEDROOM	859 SF
2 BEDROOM + DEN	953 SF
3 BEDROOM	1047 SF

KEYPLAN



NO.	REVISIONS	DATE
2	ISSUED FOR REVIEW	14 APR 2026
1	ISSUED FOR REZONING AND OPA	21 NOV 2025

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IMH 1970 & 1980 FOWLER DRIVE LTD.

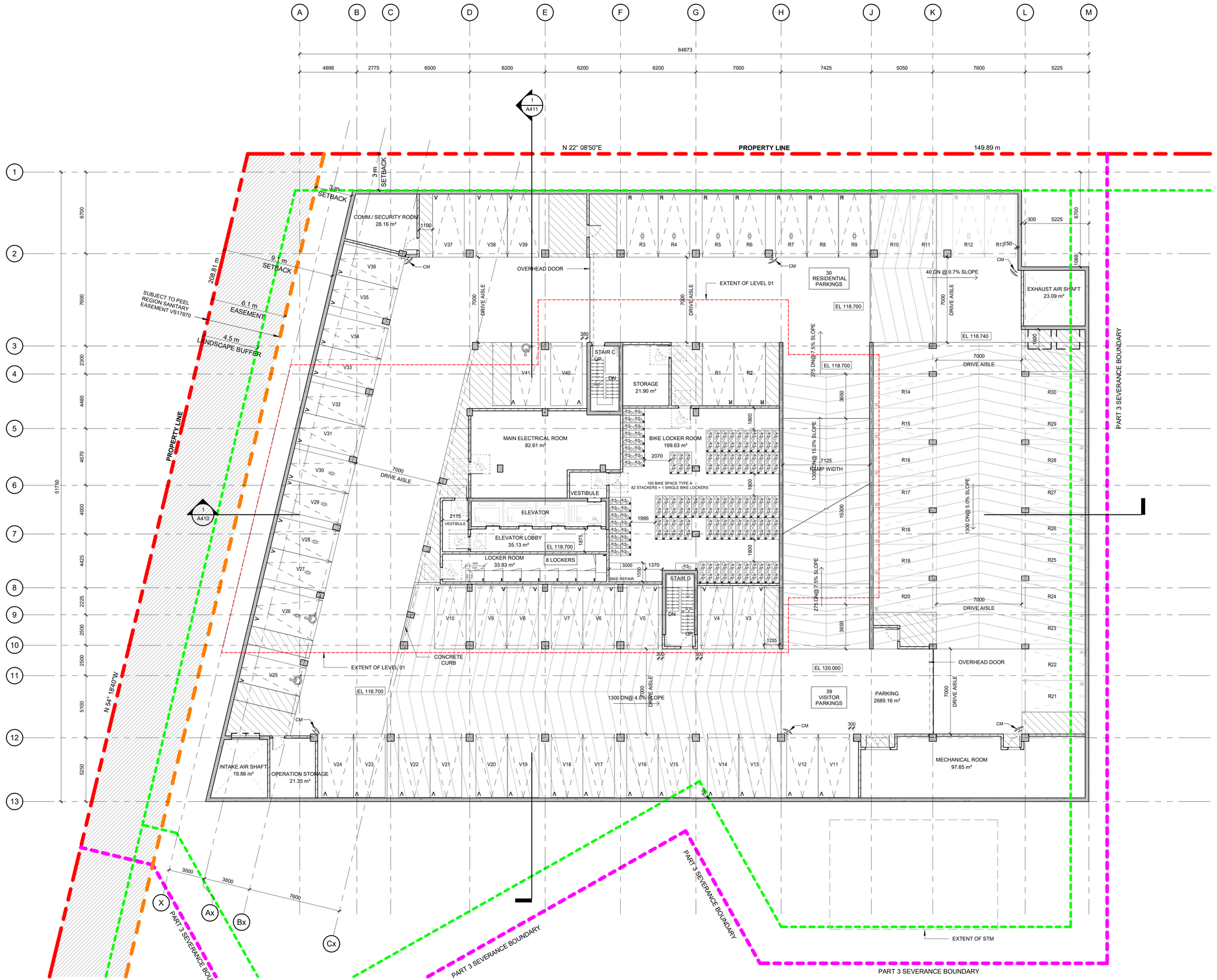
TRUE NORTH

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

TITLE: SITE PLAN

PROJECT NO.: 22-214	DRAWING NO.: **A005**

DATE/TIME PRODUCED:2026-04-14 4:10:36 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
2	ISSUED FOR REVIEW	14 APR 2026
1	ISSUED FOR REZONING AND OPA	21 NOV 2025

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1970-1980 FOWLER DRIVE, MISSISSAUGA, ON

(RESIDENTIAL)

LEGAL DESCRIPTIONS :
1970 FOWLER DRIVE : PLAN 842 PCL 1 PT BLK A
1980 FOWLER DRIVE : PLAN 842 PCL 2 PT BLK A

IMH 1970 & 1980 FOWLER DRIVE LTD.

NORTH

DRAWN	SCALE
FKH, QL	1 : 150
CHECKED	DATE
KQ	25 JAN 2025

TITLE: LEVEL P1

PROJECT NO.	DRAWING NO.
22-214	**A203**

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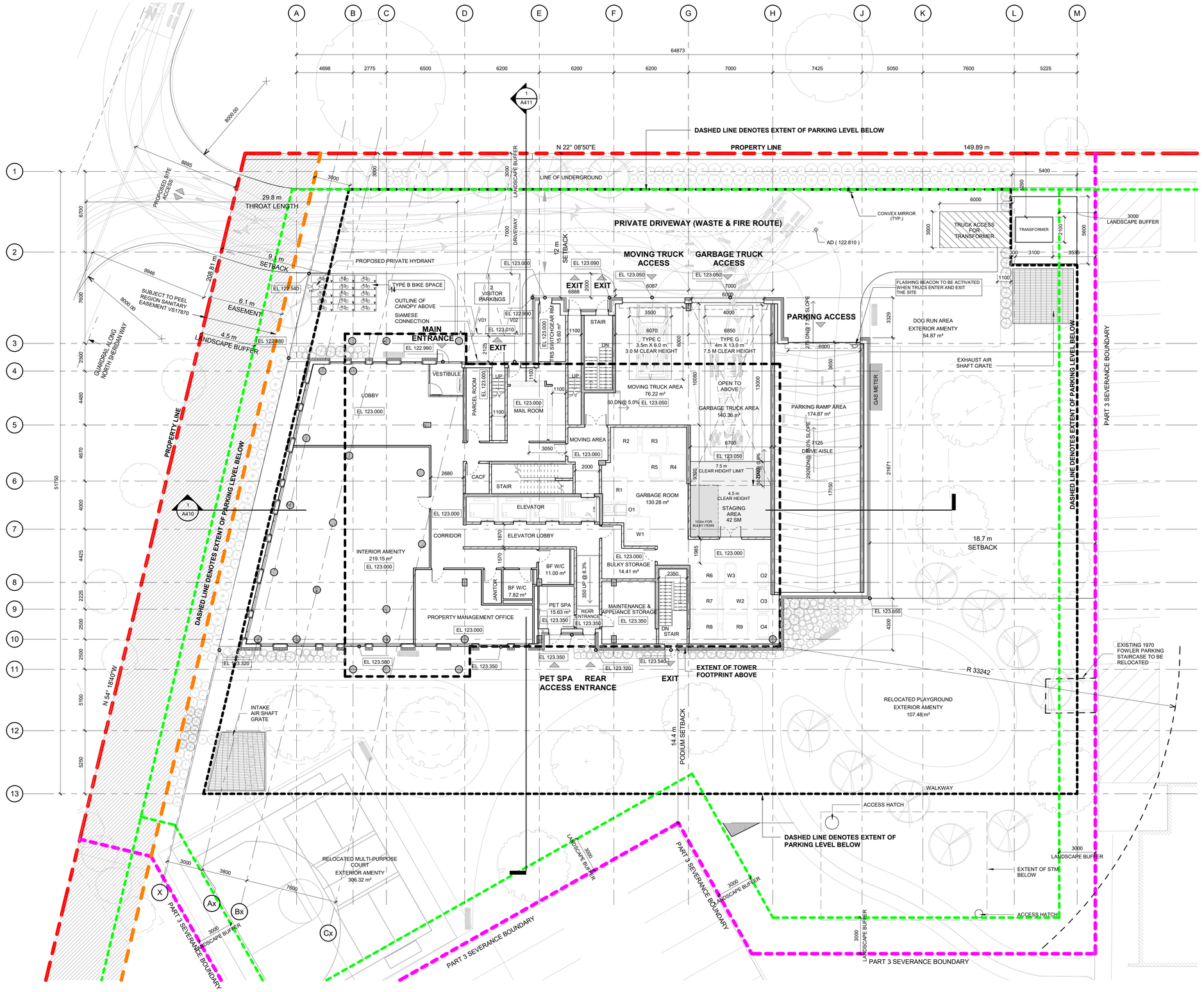
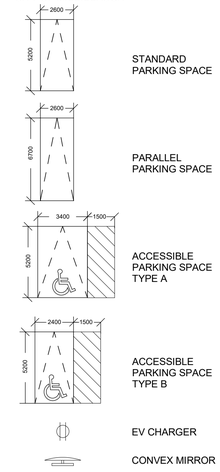


PARKING REGULATIONS

CITY OF MISSISSAUGA



NO.	REVISIONS	DATE
2	ISSUED FOR REVIEW	14 APR 2026
1	ISSUED FOR REZONING AND OPA	21 NOV 2025

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS ON THE JOB.

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DRAWN: FKH, QL	SCALE: 1 : 150
CHECKED: KQ	DATE: 25 JAN 2025

TITLE: LEVEL 1

PROJECT NO.	DRAWING NO.
22-214	**A204**

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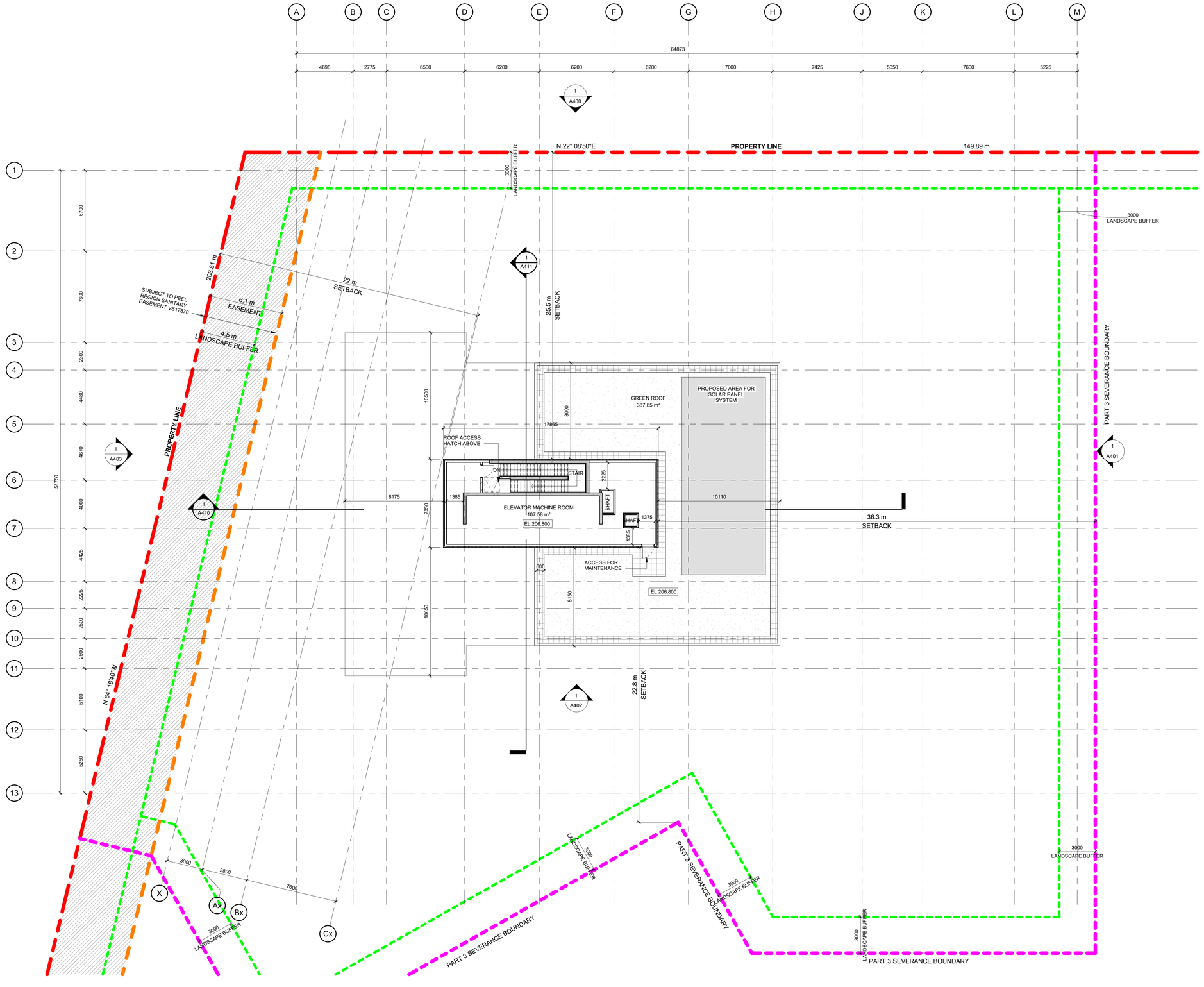

NO.	REVISIONS	DATE
2	ISSUED FOR REVIEW	14 APR 2026
1	ISSUED FOR REZONING AND OPA	21 NOV 2025

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1970-1980 FOWLER DRIVE, MISSISSAUGA, ON

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1980 FOWLER DRIVE : PLAN 842 PCL 2 PT BLK A

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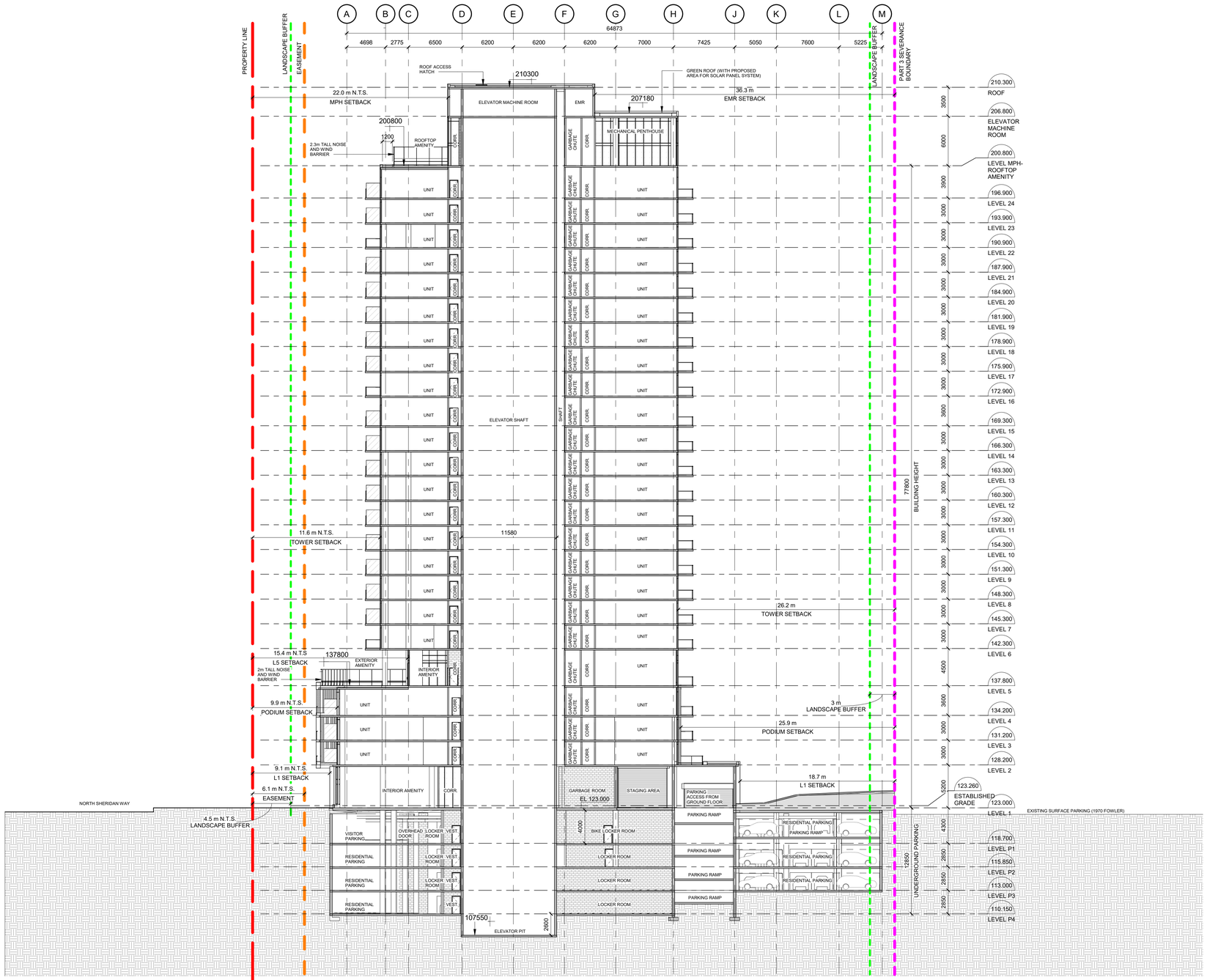
NORTH

DRAWN	SCALE
FKH, QL	1 : 150
CHECKED: KQ	DATE: 25 JAN 2025

TITLE
ELEVATOR MACHINE ROOM LEVEL

PROJECT NO.	DRAWING NO.
22-214	**A212**

DATE/TIME PRODUCED: 2026-04-14 4:10:49 PM



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

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS ON THE JOB.

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1970-1980 FOWLER DRIVE, MISSISSAUGA, ON

(RESIDENTIAL)

LLEGAL DESCRIPTIONS :
11970 FOWLER DRIVE : PLAN 842 PCL 1 PT BLK AA
11980 FOWLER DRIVE : PLAN 842 PCL 2 PT BLK AA

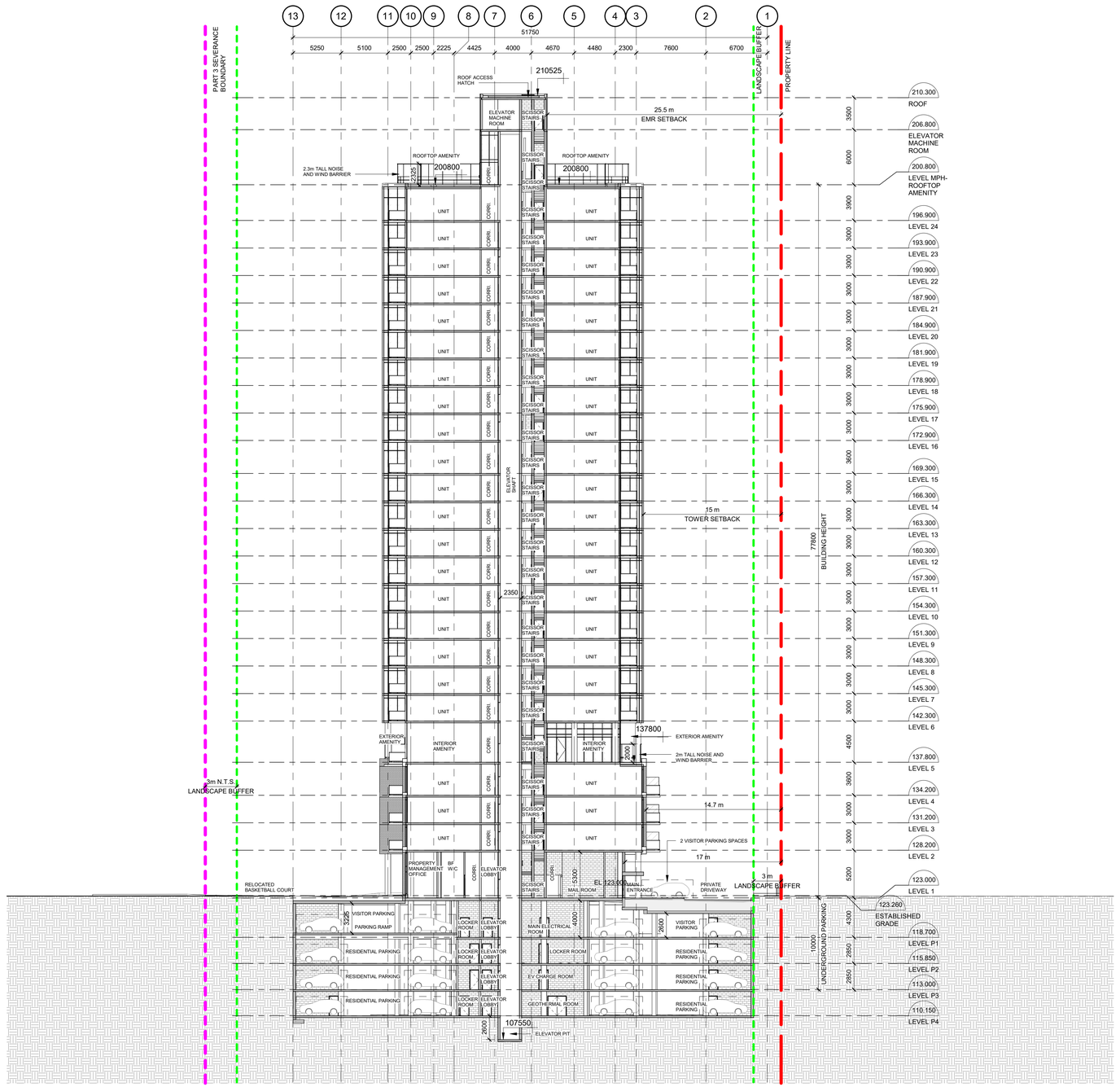
IMH 1970 & 1980 FOWLER DRIVE LTD.

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

TITLE: BUILDING SECTION 1

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

DATE/TIME PRODUCED:2026-04-14 4:10:59 PM



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

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS ON THE JOB.

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1970-1980 FOWLER DRIVE, MISSISSAUGA, ON

(RESIDENTIAL)

LLEGAL DESCRIPTIONS :
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11980 FOWLER DRIVE : PLAN 842 PCL 2 PT BLK AA

IMH 1970 & 1980 FOWLER DRIVE LTD.

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

TITLE: BUILDING SECTION 2

PROJECT NO.: 22-214	DRAWING NO.: **A411**

DATE/TIME PRODUCED 2026-04-14 4:11:00 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	275	154	95	26	0
Total	**275**	**154**	**95**	**26**	**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	262	375	0	275	637	1.99
Totals:	**262**	**375**	**0**	**275**	**637**	**1.99**

**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	1.99	3.58	5.97	66.67	70.25

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): 1,809 m^2

C) Calculate the Required Fire Flow (RFF), rounded to nearest 1,000 LPM. $RFF = 220C\sqrt{A}$ **7,000** 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: **5,950** 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%
2,975 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: **595** 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 = 4,000 L/min
F = 1,057 GPM
F = 66.7 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

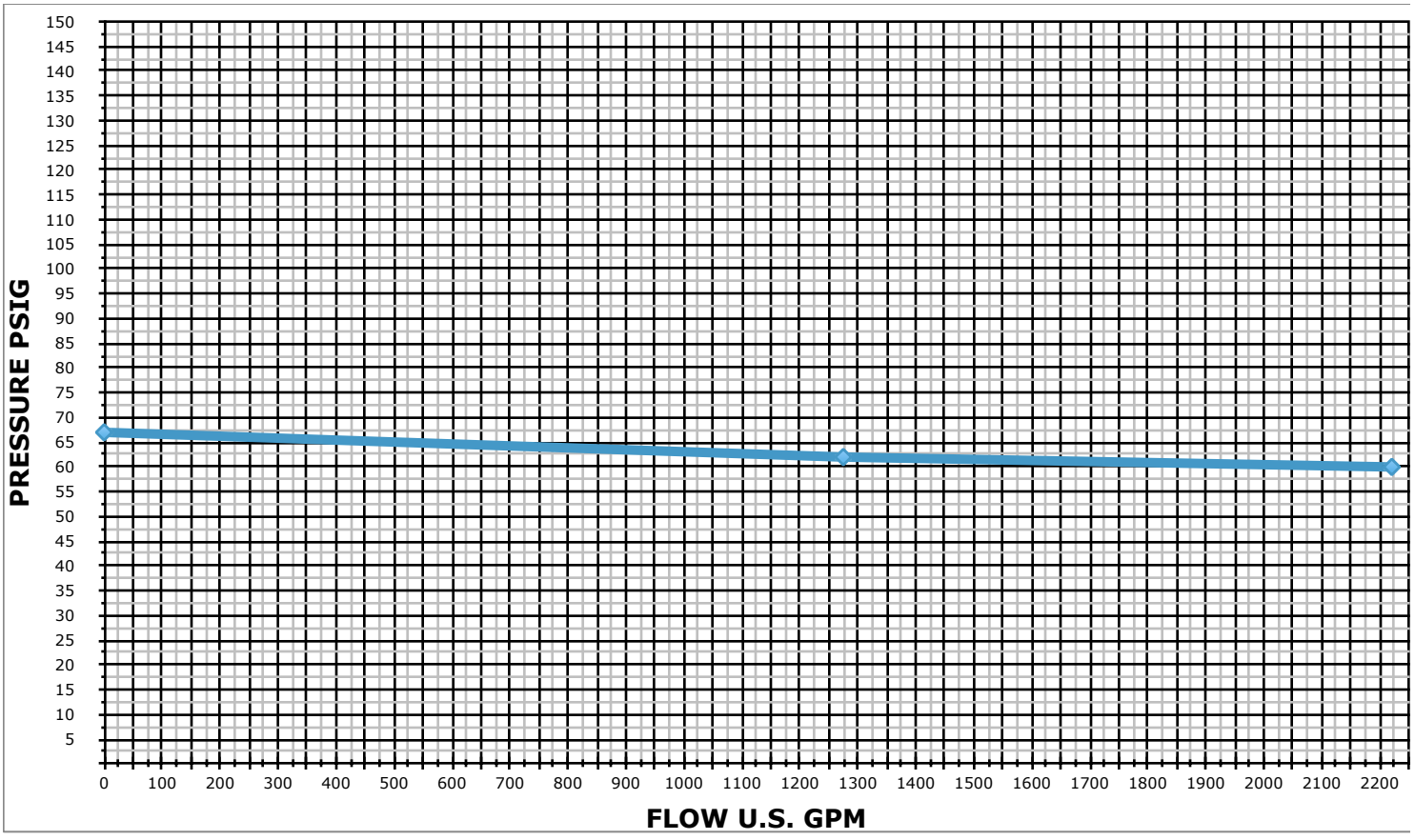
Location of Flow Hydrant: opposite 1980 Fowler Dr.

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

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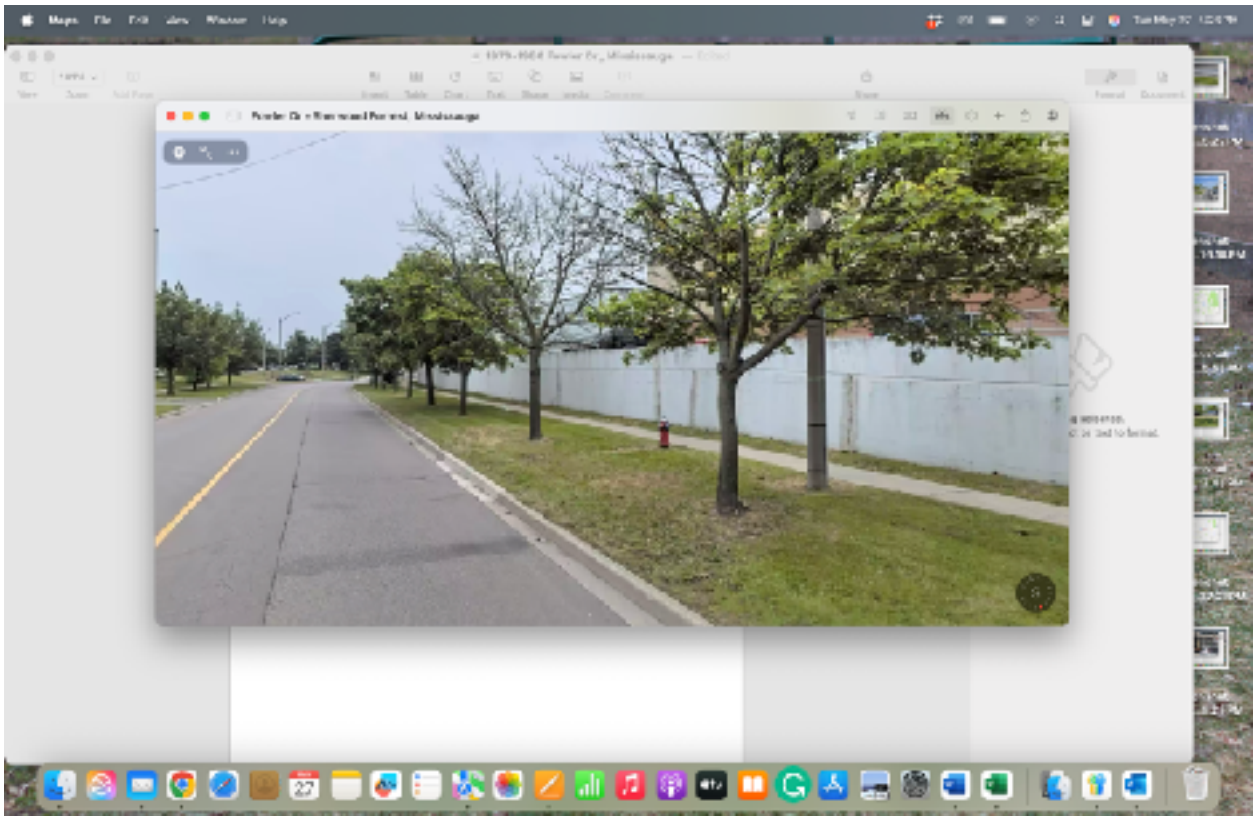
Gormley, ON L0H 1G0

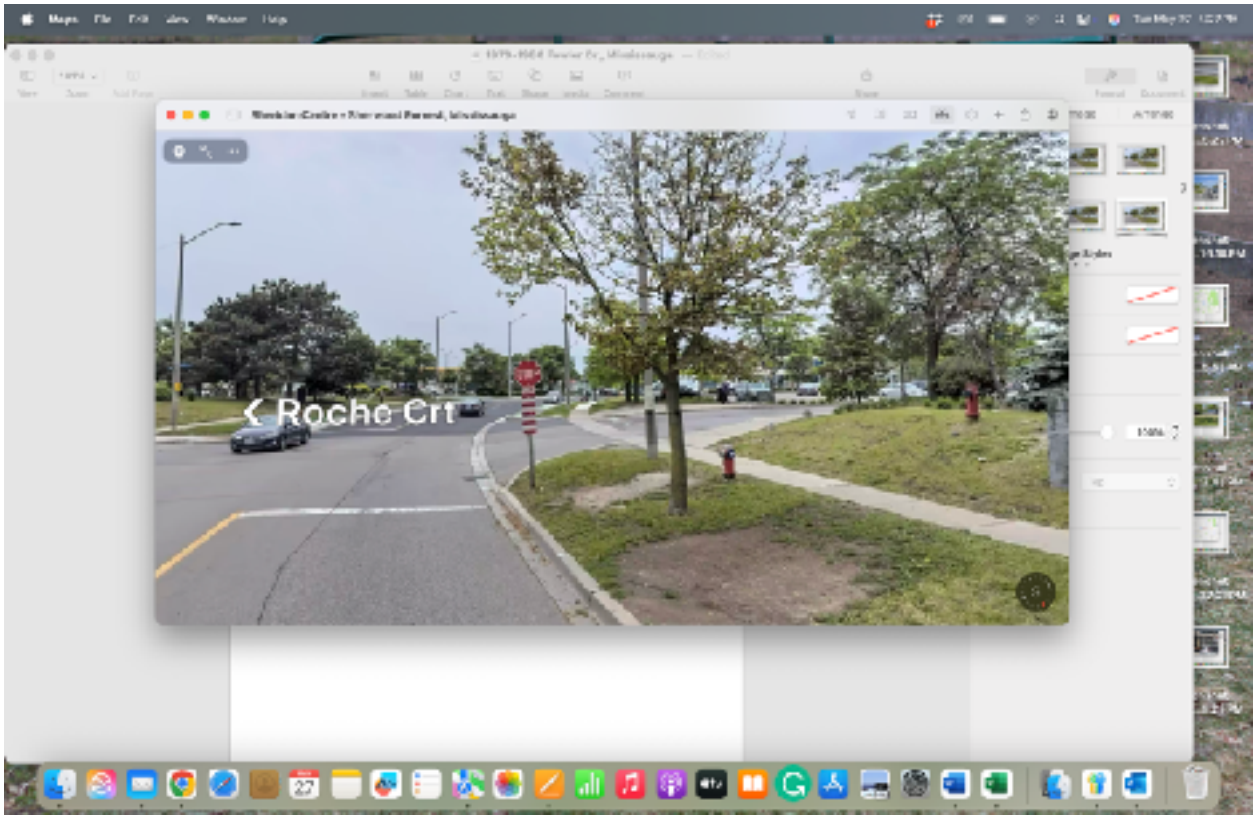
Massimo Lozzi

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: 0.510 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	0.13	**L/s**
Total Peak Flow	**0.13**	**L/s**

Counterpoint Engineering Inc.

Proposed Conditions - Sanitary

Project: 1970-1980 Fowler Dr.
Project No: 23039
Location: Mississauga
Site Area: 0.510 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	154	95	26	275
TOTAL	**154**	**95**	**26**	**275**

	Population Density 1B	Population Density 2B/3B	TOTAL POPULATION	Average Flow (L/day)	L/s
Residential	262	375	637	184,730	2.14
TOTAL	**262**	**375**	**637**	**184,730**	**2.14**

Harmon Peaking Factor

Total Population	Harmon Peak Factor
637	**3.92**

Residential Peak Flow	8.38	**L/s**
Total Sanitary Flow	8.38	**L/s**
Infiltration	0.13	**L/s**
Groundwater Rate	0.92	**L/s**
Total Peak Flow	**9.43**	**L/s**
Net Increase from Existing	**9.29**	**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

WATER AND WASTEWATER MODELLING DEMAND TABLE

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
Consulting Engineer:	Counterpoint Engineering
Date Prepared:	April 17, 2026

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)	121	375
7		Small apartments (<=1 bedroom – 1.7 ppu)	154	262
8		Total proposed residential	637	637
9	Proposed Institutional[2)]			0
10	Proposed employment [3)]			0
11	Total Proposed			637

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)	0.510

Water Connection

Hydrant flow test [4)]

15	Location 1	Flow: Opposite of 1980 Fowler Drive
16	Location 2	Residual: Corner of Roche Crt. & Fowler Dr.

WATER AND WASTEWATER MODELLING DEMAND TABLE

		Pressure (kPa)	Flow (L/s)	Time
17	Minimum water pressure	60	392.71	11 AM - May 27, 2025
18	Maximum water pressure	67	0	11 AM - May 27, 2026

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	1.99			1.99
21	Proposed maximum day flow	3.58			3.58
22	Proposed peak hour flow	5.97			5.97
23	Proposed fire flow [5]				66.67

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	0.13 L/s
25	Proposed effluent	North Sheridan Way	9.43 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	0.51	ha
Intensity I=A*(T+B)^C	i	59.89	mm/hr
Flow Q=CiA/360	Q	0.03	m^3/s
		31.05	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	0.51	ha
Intensity I=A*(T+B)^C	i	80.51	mm/hr
Flow Q=CiA/360	Q	0.04	m^3/s
		41.74	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	0.51	ha
Intensity I=A*(T+B)^C	i	99.17	mm/hr
Flow Q=CiA/360	Q	0.05	m^3/s
		51.41	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	0.40	
Site Area	A	0.51	ha
Intensity I=A*(T+B)^C	i	113.89	mm/hr
Flow Q=CiA/360	Q	0.06	m^3/s
		64.96	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	0.44	
Site Area	A	0.51	ha
Intensity I=A*(T+B)^C	i	127.13	mm/hr
Flow Q=CiA/360	Q	0.08	m^3/s
		79.10	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	0.46	
Site Area	A	0.51	ha
Intensity I=A*(T+B)^C	i	141.80	mm/hr
Flow Q=CiA/360	Q	0.09	m^3/s
		91.90	l/s

Counterpoint Engineering

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

Pre-Development Stormwater Flow Rates to Fowler Drive

Total Pre-Development Flows from Area CB6

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	0.70	
Site Area	A	0.15	ha
Intensity I=A*(T+B)^C	i	59.89	mm/hr
Flow Q=CiA/360	Q	0.02	m^3/s
		17.61	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	0.70	
Site Area	A	0.15	ha
Intensity I=A*(T+B)^C	i	80.51	mm/hr
Flow Q=CiA/360	Q	0.02	m^3/s
		23.67	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	0.70	
Site Area	A	0.15	ha
Intensity I=A*(T+B)^C	i	99.17	mm/hr
Flow Q=CiA/360	Q	0.03	m^3/s
		29.16	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	0.77	
Site Area	A	0.15	ha
Intensity I=A*(T+B)^C	i	113.89	mm/hr
Flow Q=CiA/360	Q	0.04	m^3/s
		36.83	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	0.84	
Site Area	A	0.15	ha
Intensity I=A*(T+B)^C	i	127.13	mm/hr
Flow Q=CiA/360	Q	0.04	m^3/s
		44.85	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	0.88	
Site Area	A	0.15	ha
Intensity I=A*(T+B)^C	i	141.80	mm/hr
Flow Q=CiA/360	Q	0.05	m^3/s
		52.11	l/s

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Allowable Release Rate Calculation

Project No: 23039
Project Name: 1970 & 1980 Fowler Drive

Rational Method - 10 Year Pre-Development

Area: CB6
Receiving Street: Fowler Drive

Event:		10	years
ABC's:	a	1010	
	b	4.6	
	c	-0.78	
Time of Concentration:	t	15	min
Runoff Coefficient:	C	0.70	
Site Area	A	0.150	ha
Intensity I=A*(T+B)^C	i	99.17	mm/hr
Flow	Q	0.03	m^3/s
Q=CiA/360		29.2	l/s
Controlled Flow		12.7	l/s
Allowable Release Rate For Prop. Development		**16.5**	**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	0.476	0.63	15	208.7	204.0	16.5	16.5	Pumped to Fowler Drive
UNC1	0.035	0.25	15			4.3		Uncontrolled to N. Sheridan Way

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%	17	0.250	0.05	0.063	59

200 Controlled Site

Composite RC Value	Area [ha]	RC	RC * Area
Landscaped Area	0.171	0.25	0.0428
Green Roof	0.039	0.45	0.0175
Conventional Roof, Paved & Pavers	0.266	0.90	0.2390
Total:	**0.476**		**0.2992**
		Divided by Total Area =	**0.63**

UNC1 Uncontrolled Site

Composite RC Value	Area [ha]	RC	RC * Area
Landscaped Area	0.035	0.25	0.0086
Conventional Roof, Paved & Pavers	0.000	0.90	0.0000
Total:	**0.035**		**0.0086**
		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	0.476	ha
Runoff Coefficient	0.79	NOTE:** (RC * 1.25, having a maximum RC of 1.00)
AC	0.37	
Tc	15	
Time Increment	10	
Release Rate	16.5	l/s
Storage Required	203.99	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	0.18	166	15	151	
25	103	0.13	201	25	176	
35	82	0.11	224	35	189	
45	69	0.09	0	45	-44	
55	60	0.08	0	54	-54	
65	53	0.07	268	64	204	
75	48	0.06	0	74	-74	
85	43	0.06	288	84	204	********
95	40	0.05	297	94	203	
105	37	0.05	304	104	200	
115	35	0.05	311	114	197	
125	33	0.04	318	124	194	
135	31	0.04	324	134	190	
145	29	0.04	330	144	186	
155	28	0.04	335	153	182	
165	26	0.03	340	163	177	
175	25	0.03	345	173	172	
185	24	0.03	350	183	167	
195	23	0.03	354	193	161	
205	22	0.03	358	203	155	
215	22	0.03	362	213	150	
225	21	0.03	366	223	144	
235	20	0.03	370	233	137	

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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

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Modified Rational **Area:** **CB6**

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

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

Site Data		
Area	0.150	ha
Runoff Coefficient	0.70	
AC	0.11	
Tc	15	
Time Increment	10	
Release Rate	12.7	l/s
Storage Required	37.74	m^3

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	0.05	47	11	36	
25	103	0.04	57	19	38	********
35	82	0.03	63	27	37	
45	69	0.03	0	34	-34	
55	60	0.02	0	42	-42	
65	53	0.02	76	50	26	
75	48	0.02	0	57	-57	
85	43	0.02	82	65	17	
95	40	0.01	84	72	12	
105	37	0.01	86	80	6	
115	35	0.01	88	88	0	
125	33	0.01	90	95	-5	
135	31	0.01	92	103	-11	
145	29	0.01	93	111	-17	
155	28	0.01	95	118	-23	
165	26	0.01	96	126	-29	
175	25	0.01	98	133	-36	
185	24	0.01	99	141	-42	
195	23	0.01	100	149	-48	
205	22	0.01	101	156	-55	
215	22	0.01	103	164	-61	
225	21	0.01	104	171	-68	
235	20	0.01	105	179	-74	

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Quality Control Calculation Sheet

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

Total Site Area	**0.510**	**ha**	**Total Site Area**
Total Contributing Area	**0.476**	**ha**	**(Vehicular Area only)**

TSS Removal Rates

Surface Type	Fraction of Area			TSS Removal Rate (%)	Overall TSS Removal Rate (%)
Conventional/Green Roof Area (Clean)	25.3%	0.13	ha	80%	20.2%
Landscape Area (Softscape) (Clean)	33.6%	0.17	ha	80%	26.9%
Landscaping Area (Hardscape) (Clean)	31.4%	0.16	ha	80%	25.1%
Vehicular Area (directed to OGS)	9.8%	0.05	ha	0%	0.0%
			Overall TSS Removal Achieved		**72.2%**

Reference: **New Jersey Stormwater Best Management Practices Manual**
Champter 4 - TSS Removal Rates for BMP's in Series

Initial TSS Load*	(1-	0.72)		**0.28**
TSS Load Removed by Stormtech Isolator Row				
Contributing Area		0.48	ha	
Total Area		0.51	ha	
Contribution		93%		
Removal Rate of Isolator Row		80	% TSS	(Sized for 80% + TSS removal)
Removal based on Contribution		75	% TSS	
Remaining TSS Load x Removal =		0.208		
Final TSS Load Downstream of Oil-Grit Separator				
0.28	-	0.21	=	**0.07**

Total TSS Removal Rate						
1.0	-	0.07	=	**0.93**	or	**92.9%**

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

Site Area: 0.510 ha

WATER BALANCE CALCULATION SHEET

Total Required Volume to be Retained (5mm across area)	**25.50**	**m^3**

Conventional Roof and Paved Walkways		
Initial Abstraction	1.0	mm
Total Area	0.266	ha
Volume for evapotranspiration	**2.66**	**m^3**

Grassed and Landscaped Areas		
Initial Abstraction	5.0	mm
Total Area	0.206	ha
Volume for evapotranspiration and infiltration	**10.29**	**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	**10.62**	**m^3**