



FUNCTIONAL SERVICING & STORMWATER MANAGEMENT REPORT

**PROPOSED CONDOMINIUM FREEHOLD
TOWNHOUSE DEVELOPMENT**

50 & 60 HARBORN ROAD

**CITY OF MISSISSAUGA
REGIONAL MUNICIPALITY OF PEEL**

FILE No. 223-M71

MAY 26, 2026



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1.0 INTRODUCTION

Skira & Associates Ltd. (Skira) was retained by Harborn Development to prepare a Functional Servicing Report (FSR) in support of the proposed industrial development at 50 & 60 Harborn Road (also referred to as ‘the site’ or ‘the property’), in the City of Mississauga, Regional Municipality of Peel.

The purpose of this report is to define the existing municipal services to the subject parcel of land and the proposed servicing scheme in support of the proposed residential development. The development includes two (2) residential townhouses and twelve (12) condominium units. Refer to ***Dwg. C102 Site Grading Plan***.

It is intended that this report will result in approval in principal of the design proposal by the City of Mississauga, Regional Municipality of Peel and any other relevant authorities.

2.0 SITE AREA INFORMATION

The subject site is legally known as part of Lot 1, Range 3, Credit Indian Reserve, City of Mississauga, Region of Peel.

The subject site is located on the southeast side of Harborn Road. It is surrounded by existing residential dwellings to the northeast, southwest and northwest. Refer to ***Figure 1 Key Plan*** for the site location.

The site has an area of 0.3134ha. Presently, the site is occupied by two residential dwellings which will be demolished prior to construction.

3.0 TRANSPORTATION SYSTEM

The subject site is in a good location to be serviced by the existing local roads such as Harborn Road. It will provide good access to arterial roads, such as Hurontario Street and to highways, such as Queen Elizabeth Way.

An access will be constructed to Harborn Road. A private road will be constructed as per City of Mississauga engineering standard **C.M. STD. 2211.157**.

Refer to ***Dwg. C102 Site Grading Plan***.

4.0 **STORM DRAINAGE SYSTEM**

4.1 **Existing Discharge**

According to available records, there is an existing 1050mm diameter storm sewer running southwest on Harborn Road. The existing storm sewer outlets to Mary Fix Creek.

An area of 0.1537ha in the front currently drains towards the existing catchbasins on Harborn Road. The remaining area of 0.1597ha drains towards the south, and eventually outlets to Mary Fix Creek.

On-site stormwater management will be implemented for the proposed residential development to restrict post-development flows up to 10-year storm intensity to 2-year storm intensity at runoff coefficient $C = 0.55$.

The allowable discharge from the site is as follows:

$$\begin{array}{ll} A & = 0.1537\text{ha} \\ C & = 0.55 \\ T_c & = 15.00\text{min} \\ I_{2\text{yr}} & = 59.89 \text{ mm/hr} \end{array} \quad \begin{array}{ll} Q & = 0.0028CIA \\ Q_{2\text{yr}} & = 0.0028 \times 0.55 \times 59.89 \times 0.1537 \\ & = \mathbf{0.01418 \text{ m}^3/\text{s}} \end{array}$$

4.2 **Proposed Drainage**

The Proposed development will have the majority of the site self contained, controlled and discharged to the 1050mm diameter storm sewer on Harborn road at the pre development rate of $0.01418 \text{ m}^3/\text{s}$. An area of 0.0814ha will drain uncontrolled from the site. The total area of the site to be controlled is **0.232ha**.

Based on the site statistics, the weighted runoff coefficient of the controlled area is calculated in the following table:

Area Description	Area (m ²)	Runoff Coefficient
Building/Roof	729	0.90
Paved	1,024	0.90
Landscaped	567	0.25
Total	2,320	0.74

Using Rational Method for the 10-year storm event calculation and established allowable discharge, the maximum detention volume is as follows:

YEAR
STORM

10 year

CITY

Mississauga

C = 0.74

A (ha) = 0.2320

Allow. Discharge Q_a (m³/s) = 0.014180

Safety Factor S_f = 0%

Max. Required

Detention (m³) = 31.03

RAINFALL DURATION	RAINFALL INTENSITY	TOTAL RUNOFF	INFLOW VOLUME	OUTFLOW VOLUME	REQUIRED DETENTION VOLUME (m ³)
T_c (min)	I (mm/hr)	$Q = CIA/360$ (m ³ /sec)	V_i (m ³)	V_o (m ³)	$D = (V_i - V_o) * S_f$
5	173.04	0.0825	24.76	4.54	20.22
10	124.77	0.0595	35.70	8.51	27.19
15	99.17	0.0473	42.56	12.50	30.06
20	83.06	0.0396	47.53	16.51	31.03
25	71.90	0.0343	51.43	20.52	30.91
30	63.66	0.0304	54.64	24.55	30.09
35	57.30	0.0273	57.38	28.58	28.80

The maximum detention volume is **31.03m³** which will be provided by oversized underground storm pipes. The storage volume provided is as follows:

Detention System	Depth (m)	Area (m ²)	Storage Provided (m ³)
MH1 (1200mm)	1.63	1.13	1.84
OGS (1500mm)	1.58	1.76	2.78
MH4 (1800mm)	1.32	2.54	3.35
MH5 (1200mm)	1.11	1.13	1.25
MH8 (1500mm)	1.13	1.76	1.99
Storm Pipe (45.0m x 600mm)			12.72
Storm Pipe (16.5m x 600mm)			4.67
Storm Pipe (10.5m x 300mm)			0.74
Storm Pipe (23.5m x 200mm)			0.74
Storm Pipe (6.0m x 250mm)			0.29
Total CB Leads (28.0m x 200mm)			0.88
Total			31.25

The storage volume of **31.25m³** satisfies the detention volume requirement.

4.3 Orifice Control

The allowable discharge of 0.01418 m³/s will be controlled by means of an orifice plate installed downstream of the oil/grit separator. The size of the orifice plate is **75mm diameter**, with a discharge rate of **0.01418 m³/s**. Refer to **Appendix A** for the orifice control calculations done through Flow Master Program developed by Haestad Methods Inc. (USA).

4.4 Quality Control

According to the Ministry of the Environment, Conservation and Parks' Stormwater Management Planning & Design Manual, the site is required to provide a long-term average removal of 80% of Total Suspended Solids (TSS) for the enhanced protection of waterways. The quality control will be provided to Level 1 TSS removal through the use of an oil/grit separator.

Oil/grit separator (O.G.S.) is suitable for institutional/commercial/industrial areas where the level of concentrated pollutants is expected to be higher. For the proposed residential townhouses, it is considered feasible to provide an O.G.S. on the proposed storm sewer.

The proposed O.G.S. is Hydrostorm HD 4 manufactured by Hydroworks. This unit will provide Level 1 (93%) protection. Refer to **Appendix B** for the output file created by Hydroworks spreadsheet.

4.5 WATER BALANCE CONSIDERATION

The latest City of Mississauga Water Balance Management Plan contains a water balance target/criterion that requires the site to retain 5mm of every rainfall and allow it to infiltrate back into the ground or use for irrigation purposes.

The required volume to be retained on-site is as follows:

$$V_{5\text{mm}} = 3,134\text{m}^2 \times 0.005\text{m} = \mathbf{15.67\text{ m}^3 \text{ per rainfall}}$$

The required retention volume will be provided by permeable pavers in the driveways. The storage volume provided is as follows:

$$\begin{aligned} V_{\text{Pavers}} &= 172.7\text{m}^2 \text{ (base area)} \times 0.30\text{m} \text{ (depth)} \times 0.40 \text{ (porosity)} \\ &= 20.73\text{m}^3 \end{aligned}$$

The storage volume of **20.73m³** satisfies the retention volume requirement.

5.0 **SANITARY DRAINAGE SYSTEM**

According to available records, there is an existing 250mm diameter sanitary sewer running northeast on Harborn Road. There are two (2) existing 125mm diameter sanitary connections. One of the connections will be abandoned and disconnected as per Region of Peel standards. The other service connection will remain and be replaced with 200mm sanitary connection. Individual sanitary connections will be provided to the condominium units in the residential townhouses.

The existing and proposed sanitary sewers have sufficient capacity and depth to accept the proposed residential development via gravity flow. The invert elevation of the proposed sanitary connections ranges from 97.51m to 97.85. The proposed finished floor elevation will range from 100.15m to 100.30m. Refer to *Dwg. C101 Site Servicing Plan*.

The sewage flow from the proposed residential development is established as follows:

Sanitary Design Flow Calculation

Population	= 3.4 persons/unit x 12 units = 41 persons
Peak Factor	= $1 + \frac{14}{4 + P^{0.5}}$ = $1 + \frac{14}{4 + 0.041^{0.5}}$ = 1 + 3.331 = 4.331 = 4.0 (max.)
Peak Flow	= 302.8 L/p/day x 41p x 4.0 = 49,659 L/day = 0.575 L/s
Infiltration Allowance	= 0.2 L/s/ha x 0.3134ha = 0.063 L/s
Design Flow	= 0.575 L/s + 0.063 L/s = 0.638 L/s

6.0 **WATER DISTRIBUTION SYSTEM**

According to available records, there is an existing 200mm diameter watermain on Harborn Road. The existing watermain will provide sufficient water supply to service the proposed residential development.

The proposed residential development will be serviced to the existing 200mm watermain on Harborn Road. A 100mm diameter water watermain will be constructed along the private road for domestic servicing. Individual 25mm diameter domestic water service connections will be provided to condominium units in the proposed residential townhouses.

Refer to *Dwg. C101 Site Servicing Plan*.

Water demand from the proposed residential development is established as follows:

Water Demand Calculation

Population	= 41 persons
Average Flow Rate	= 300 L/p/day x 41p = 12,300 L/day = 0.142 L/s
Max. Day Flow Rate	= 0.142 L/s x 1.4 = 0.199 L/s
Peak Hour Flow Rate	= 0.142 L/s x 3.0 = 0.426 L/s

Fire Protection Water Demand Calculation

Fire Hydrant Flow required based on Fire Underwriters Survey 2020 using formula:

$$F = 220 \times C \times \sqrt{A}$$

Where, C = coefficient related to type of construction, 1.0 for ordinary construction
A = total floor area = 458m² (Units 1-7)

$$F = 220 \times 1.0 \times \sqrt{458}$$
$$= 4,708 \text{ L/min} \approx \mathbf{5,000 \text{ L/min}}$$

A decrease can be applied for occupancy having a low contents fire hazard:

$$F = 5,000 \text{ L/min} - 25\% = 3,750 \text{ L/min}$$

The exposure separation for the east, south and west exterior walls cumulates to a charge of 60%:

$$F = 3,750 \text{ L/min} \times 14\% = 525 \text{ L/min}$$

Therefore, the fire flow demand is:

$$\begin{aligned} F &= 3,750 + 525 \\ &= 4,275 \text{ L/min} \\ &= \mathbf{71.3 \text{ L/s}} \end{aligned}$$

$$\begin{aligned} \mathbf{\text{Maximum Peak Flow}} &= 0.531 \text{ L/s} + 71.3 \text{ L/s} \\ &= \mathbf{71.83 \text{ L/s}} \end{aligned}$$

$$\mathbf{\text{Maximum Daily Flow}} = \mathbf{0.248 \text{ L/s}}$$

A fire flow test has been conducted on the existing watermain. The fire flow test result confirms that the existing watermain can provide sufficient fire protection and domestic flow. Refer to ***Appendix C*** for the fire flow test result.

7.0 SUMMARY

The findings and recommendations were prepared in accordance with accepted professional engineering principles and practices. Based on the above, the proposed residential development can be adequately serviced by the existing and proposed infrastructure. The findings of this report are global and are related to the servicing functionality of this application. These findings by no means are final and are not to replace the detail review of this application which shall take place upon submission of future application for building permit.

The conclusion is as follows:

- The proposed residential development will be serviced by the existing storm sewer on Harborn Road. Quantity control will be achieved by through oversized pipes beneath the private road. Quality control will be achieved by oil/grit separator.
- The proposed residential development will be serviced by the existing sanitary sewer on Harborn Road and proposed sanitary sewer along private road. Individual sanitary connections will be provided to the condominium units in the residential townhouses.
- The proposed residential development will be serviced by the existing watermain on Harborn Road. A watermain will be constructed along private road for fire protection. Individual water service connections will be provided to the condominium units in the residential townhouses.

We respectively submit this report with intention of obtaining approval in principal the recommendations herein, which will be implemented in detail design during engineering submission, site plan process and building permit.

Yours truly,

SKIRA & ASSOCIATES LTD.



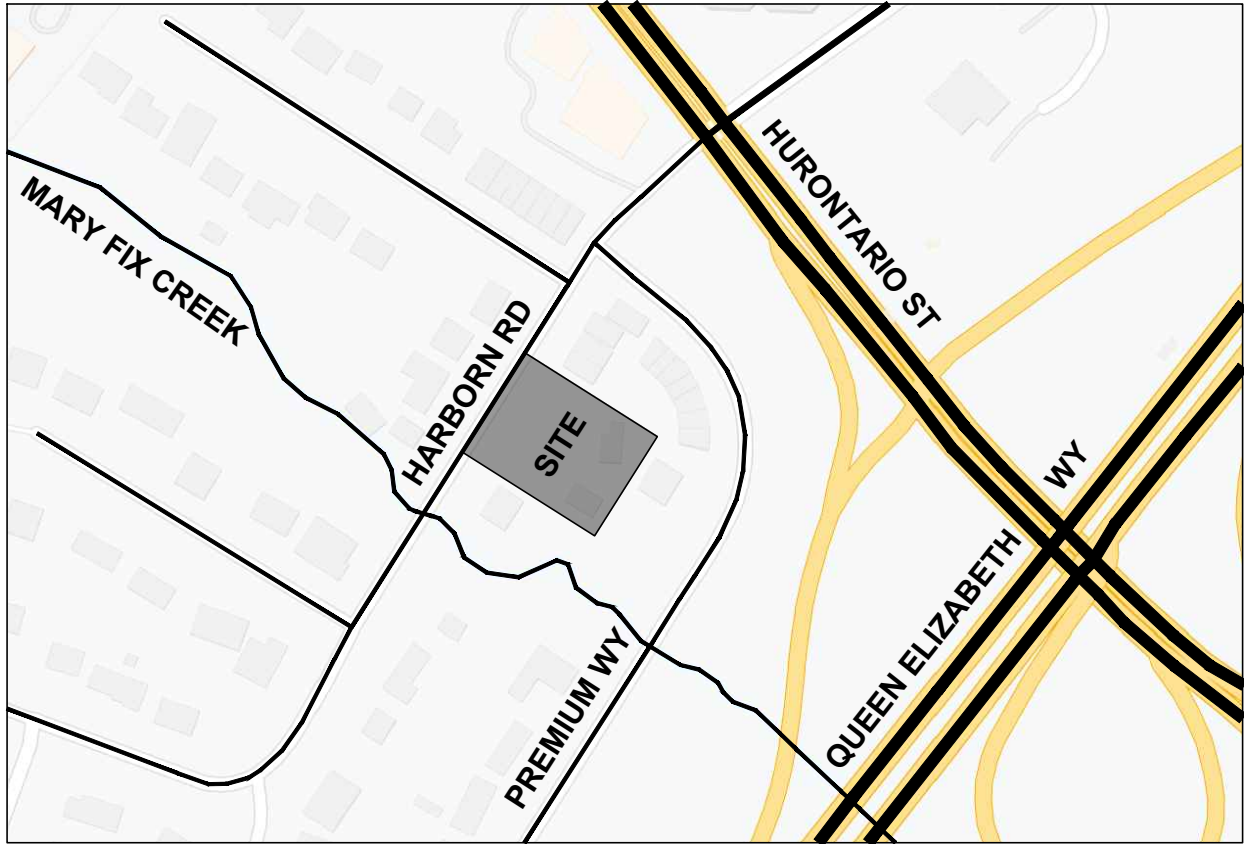
Roman T. Kerkusz, P. Eng.



NOTE: **Limitation of Report**

*This report was prepared by **Skira & Associates Ltd.** for **Harborn Development** for review and approval by government agencies only.*

*In light of the information available at the time of preparation of this report, any use by a **Third Party** of this report are solely the responsibility of such **Third Party** and **Skira & Associates Ltd.** accepts no responsibility for any damages, if any, suffered by the **Third Party**.*



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KEY PLAN

PROJECT No. 223-M71

DATE - MAY 2026

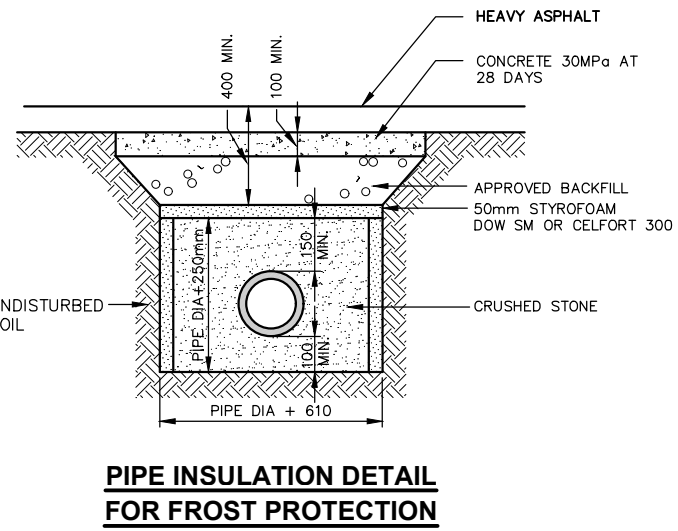
SCALE - N.T.S.

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FIGURE
No. 1

CROSSINGS

C1	WM INV	97.72
	STM OBV	96.96
C2	WM INV	97.70
	SAN OBV	97.35
C3	SAN INV	97.12
	STM OBV	96.92
C4	WM INV	97.30
	STM OBV	96.16
C5	STM INV	97.42
	SAN OBV	97.62
C6	SAN INV	97.72
	STM INV	96.29



CONTROL MANHOLE - STM MH 1

N.T.S.

VERTICAL TRENCH EXCAVATION INCLUDING COMPACTED GRANULAR BACKFILL MATERIAL, INCLUDING FULL RESTORATION OF ALL DISTURBED AREAS AND INCLUDING TOPSOIL AND 500 ON BOULEVARD DUE TO CONSTRUCTION OF ALL WATERMAINS AS PER C.M. STDS. 2220.030, 2220.031 & 2220.032.

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CHART FOR CONNECTION INVERTS AT TOWNHOUSE

TOWNHOUSE No.	SAN INVERT
1-2	98.15
3-4	98.05
5-6	97.95
7	97.80
8-9	97.53
10-11	97.60
12	97.68

MIN. PAVEMENT DESIGN FOR CONDOMINIUM

40mm	HL3 TOP ASPHALT
85mm	HL8 BASE ASPHALT
200mm	20mm CRUSHER-RUN LESTONE
300mm	80mm CRUSHER-RUN LESTONE
625mm	TOTAL CONSTRUCTION DEPTH

DRIVEWAY PAVEMENT DESIGN

25mm	HL3 TOP ASPHALT
50mm	HL8 BASE ASPHALT
150mm	20mm CRUSHER-RUN LESTONE
255mm	TOTAL CONSTRUCTION DEPTH

PAVEMENT RESTORATION FOR HARBORN ROAD

150mm	HL8 BASE ASPHALT
200mm	20mm CRUSHER-RUN LESTONE
300mm	80mm CRUSHER-RUN LESTONE
625mm	TOTAL CONSTRUCTION DEPTH

STORM SEWERS

- ALL STORM SEWER MATERIALS AND CONSTRUCTION METHODS MUST CORRESPOND TO CURRENT MUNICIPAL STANDARDS AND SPECIFICATIONS.
- BEDDING TO BE TYPE 'A' AS PER C.M. STD. 2112.089 UNLESS OTHERWISE NOTED.
- SEWER BEDDING AND COVER MATERIAL SHALL CONFORM TO C.M. STDS. 2112.111 AND 2112.100 UNLESS OTHERWISE NOTED.
- IF WATER IS PRESENT IN THE TRENCH EXCAVATION, THEN 150mm CLEAR STONE OR 60mm WASHED CRUSHED GRAVEL IS TO BE USED FOR BEDDING IN ACCORDANCE WITH C.M. STDS. 2112.110 AND 2112.140 RESPECTIVELY.
- WHERE NOT ON SOFT TRENCH EXCAVATION CONDITIONS UNACCURATELY SHOWN, THE DIRECT SUPERVISOR OF THE GEOTECHNICAL ASSESSMENT MAY BE REQUIRED TO DETERMINE APPROPRIATE BEDDING IN ORDER TO STABILIZE THE SUBGRADE FOR SEWER CONSTRUCTION.
- STORM SEWERS AND CONNECTIONS 1000mm AND SMALLER TO BE CONCRETE CL 3, OR PVC SDR 26 PIPE, UNLESS OTHERWISE NOTED.
- STORM SEWERS AND CONNECTIONS 2000mm AND LARGER TO BE CONCRETE CL 60-0, PVC SDR 35, WITH TYPE 'B' BEDDING THROUGHOUT EXCEPT AT RISERS, UNLESS OTHERWISE NOTED.
- ALL CATCHBASINS TO BE 600mm x 600mm UNLESS OTHERWISE NOTED.
- ALL MANHOLES OR CATCHBASIN MANHOLES TO BE 600mm x 600mm UNLESS OTHERWISE NOTED.
- ALL CATCHBASIN FRAMES AND GRATES SHALL BE AS PER OPSD. 400.02.
- CATCHBASIN LEADS TO BE SINGLE - 2000mm, DOUBLE - 2000mm UNLESS OTHERWISE NOTED.

CONNECTIONS

- SANITARY:**
 - SANITARY SERVICE SHALL BE LOWER THAN AND TO THE RIGHT OF THE STORM SERVICE AT THE PROPERTY LINE WHEN FACING THE LOT FROM THE STREET.
 - SANITARY SERVICE SHALL BE LOWER THAN AND TO THE RIGHT OF THE STORM SERVICE AT THE PROPERTY LINE WHEN FACING THE LOT FROM THE STREET.
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- WATER:**
 - SANITARY SERVICE SHALL BE LOWER THAN AND TO THE RIGHT OF THE STORM SERVICE AT THE PROPERTY LINE WHEN FACING THE LOT FROM THE STREET.
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NOTES GENERAL NOTES

- ALL DIMENSIONS AND INVERTS MUST BE VERIFIED PRIOR TO CONSTRUCTION AND IF ANY DISCREPANCIES EXIST, CONTRACTOR IS TO NOTIFY THE ENGINEER.
- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING ALL UTILITIES DURING CONSTRUCTION. GAS, HYDRO, TELEPHONE OR ANY OTHER UTILITIES THAT MAY EXIST ON THE SITE OR WITHIN THE STREETLINES MUST BE LOCATED BY THE OWN UTILITIES AND VERIFIED PRIOR TO CONSTRUCTION.
- AT ALL ENTRANCES TO THE SITE THE MINOR SIDEWALK WILL BE CONTINUOUS THROUGH THE DRIVEWAY. THE DRIVEWAY SIDEWALK WILL BE CONTINUOUS THROUGH THE DRIVEWAY AND CURB DEPRESSION WILL BE PROVIDED FOR EACH ENTRANCE.
- SEWALIAS DEPTHS TO BE INCREASED TO MINIMUM 1800mm DEPTH FOR DRIVEWAYS.
- TOPSOIL IN FULL AREA TO BE STRIPPED AND CLEAR FILL TO BE PLACED AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.
- ALL GRADES TO BE WITHIN 25% MAXIMUM SLOPE AT PROPERTY LINE AND WITHIN THE SITE.
- SPREAD PATTERN OF EXISTING LIGHTING SHALL NOT INTERFERE ON THE ADJACENT PROPERTY.
- ALL UNDERGROUND SERVICE MATERIALS AND INSTALLATIONS TO BE IN ACCORDANCE WITH THE LATEST LOCAL MUNICIPALITY STANDARDS AND CODES, AND S.D.C.
- ALL BACKFILL FOR SEWERS, WATERMAINS AND UTILITIES ON THE ROAD ALLOWANCE AND THE INTERNAL SITE MUST BE COMPACTED TO MINIMUM 95% S.P.D. EXCEPT FOR TOP 300mm WHICH MUST BE COMPACTED TO 90% S.P.D. ON THE ROAD ALLOWANCE UNLESS OTHERWISE NOTED AND UNDER THE DIRECT SUPERVISION OF THE GEOTECHNICAL, SOILS CONSULTANT.
- THE BUILDING SITE ON THIS PLAN HAS BEEN DESIGNED UTILIZING CONTROLLED FLOW ROOF DRAINAGE IN ACCORDANCE WITH LOCAL MUNICIPAL STANDARDS.
- ALL SURFACE DRAINAGE SHALL BE SELF-CONTAINED, COLLECTED AND DISCHARGED AT A LOCATION TO BE APPROVED PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.
- CONTINUOUS CONCRETE CURB BETWEEN LANDSCAPE AREAS AND ASPHALT PAVING.

SANITARY SEWERS

- ALL SANITARY SEWER MATERIALS AND CONSTRUCTION METHODS MUST CORRESPOND TO CURRENT REGION OF PEEL STD. 8.1.
- SANITARY CONNECTIONS 1000mm AND LESS TO BE PVC SDR-26.
- SANITARY SEWERS AND CONNECTIONS 2000mm AND LARGER TO BE PVC SDR-35 ASTM D3034-01 WITH TYPE 'B' BEDDING THROUGHOUT EXCEPT AT RISERS, UNLESS OTHERWISE NOTED.
- ALL MANHOLES TO BE R.P. STD. 2-4-3 UNLESS OTHERWISE NOTED.

WATERMAINS

- PUBLIC AND PRIVATE SERVICES, APPURTENANCES, MATERIALS AND CONSTRUCTION METHODS MUST COMPLY WITH THE MOST CURRENT REGION OF PEEL STANDARDS AND SPECIFICATIONS, THE LOCAL WATERMAINS, REQUIREMENTS FOR THE ONTARIO BUILDING CODE AND ONTARIO PROVINCIAL STANDARDS. ALL WORKS SHALL ADHERE TO ALL APPLICABLE LEGISLATION, INCLUDING REGIONAL BY-LAW.
- WATERMAIN AND/OR WATER SERVICE MATERIALS 1000mm (1") AND LARGER MUST BE P.V.C. DR-18 CONSTRUCTED AS PER ASTM D3034-01, SIZE 800 (8") AND SMALLER MUST BE TYPE 'K' BOSTON CONSTRUCTED AS PER ASTM D3034-01.
- WATERMAINS AND/OR WATER SERVICES ARE TO HAVE A MINIMUM COVER OF 1.7m (5'6") WITH A MIN. HORIZONTAL SPACING OF 1.5m FROM THEMSELVES AND OTHER UTILITIES.
- PROVISIONS FOR FLUSHING WATER LINE PRIOR TO TESTING, ETC. MUST BE PROVIDED WITH AT LEAST A 100mm OUTLET ON 1000mm AND LARGER LINES. COPPER LINES ARE TO HAVE FLUSHING POINTS AT THE END, THE SAME SIZE AS THE LINE. THEY MUST ALSO BE HOLED OR PILED TO ALLOW THE WATER TO DRAIN ONTO A PARKING LOT OR DOWN A DRAIN. ON FIRE LINES, FLUSHING OUTLET TO BE 100mm MINIMUM ON A HYDRANT.
- ALL CURB STOPS TO BE 300mm OFF THE FACE OF THE BUILDING UNLESS OTHERWISE NOTED.
- HYDRANT AND VALVE SET TO R.P. STD. 1-6-1. DIMENSION A AND B 0.75m AND 0.80m AND TO HAVE PUMP NOZZLE.
- WATERMAINS TO BE INSTALLED TO GRADE AS SHOWN ON APPROVED SITE PLAN. COPPER OR GALV. SHEET MUST BE SUPPLIED TO INSPECTOR PRIOR TO COMMENCEMENT OF WORK, WHERE REQUESTED BY INSPECTOR.
- WATERMAIN MUST HAVE A MIN. VERTICAL CLEARANCE OF 0.30m OVER OR 0.50m UNDER SEWERS AND ALL OTHER UTILITIES WHEN CROSSING.
- ALL PROPOSED WATER PIPING MUST BE ISOLATED FROM EXISTING LINES IN ORDER TO ALLOW INDEPENDENT PRESSURE TESTING AND CALIBRATING FROM EXISTING SYSTEM.
- ALL LIVE TAPINGS AND OPERATION OF REGION WATER VALVES SHALL BE ARRANGED THROUGH THE REGIONAL FIDUCIARY, ASSIGNED OR BY CONTRACTING THE OPERATIONS AND MAINTENANCE DIVISION.
- MECHANICAL RESTRAINTS MUST BE INSTALLED ON ALL BENDS, TEES AND REDUCERS.
- LOCATION OF ALL EXISTING UTILITIES IN THE FIELD TO BE ESTABLISHED BY THE CONTRACTOR.
- THE CONTRACTORS SHALL BE SOLELY RESPONSIBLE FOR LOCATES, EXPOSING, SUPPORTING AND PROTECTING OF ALL UNDERGROUND AND OVERHEAD UTILITIES AND STRUCTURES EXISTING AT THE TIME OF CONSTRUCTION IN THE AREA OF THEIR WORK, WHETHER SHOWN ON THE PLANS OR NOT AND FOR ALL REPAIRS AND CONSEQUENCES RESULTING FROM DAMAGE TO SAME.
- THE CONTRACTORS SHALL BE SOLELY RESPONSIBLE TO GIVE 72 HOURS WRITTEN NOTICE TO THE UTILITIES PRIOR TO CROSSING OR TAPPING UTILITIES FOR THE PURPOSE OF INSPECTION BY THE CONCERNED UTILITY. THIS NOTICE WILL BE FOR THE DURATION OF THE CONSTRUCTION, WITH THE CONTRACTOR RESPONSIBLE FOR ALL COSTS ARISING FROM SUCH INSPECTION.
- ALL PROPOSED WATER PIPING MUST BE ISOLATED THROUGH A TEMPORARY CONNECTION THAT SHALL INCLUDE AN APPROPRIATE CROSS-CONNECTION CONTROL DEVICE, CONSISTENT WITH THE DESIGN OF INHAIB, FOR BACKFLOW PREVENTION OF THE ACTIVE DISTRIBUTION SYSTEM, CONFORMING TO R.P. STD. 1-7-1 AND 1-7-4.
- ALL WATER METERS MUST BE INSTALLED IN HEATED AND ACCESSIBLE SPACE.
- THE OWNER ACKNOWLEDGES AND AGREES THAT THE CONNECTION IS NOT USED WITHIN ONE CALENDAR YEAR FROM THE PRIMARY ACCEPTANCE OF THE WATERMAINS. THE REGION MAY REQUIRE THAT ANY WATERMAIN BE CUT AND LIFTED AT THE COST OF THE OWNER, HE COMMISSIONING OF THE WATERMAINS, AS REQUIRED BY LEGISLATION, WILL BE AT THE COST OF THE OWNER.

ALL INTERNAL EXISTING SERVICES AND APPURTENANCES NOT UTILIZED FOR SERVING OF THIS PROJECT ARE TO BE REMOVED OFF SITE UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

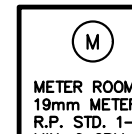
INFORMATION SHOWN HEREON REGARDING THE SIZE AND LOCATION OF EXISTING SERVICES AND/OR UTILITIES IS FURNISHED AS THE BEST AVAILABLE INFORMATION AND SHALL BE INTERPRETED AS THE CONTRACTOR SEES FIT WITH THE UNDERSTANDING THAT THE OWNER DISCLAIMS ALL RESPONSIBILITY FOR ITS SUFFICIENCY AND/OR ACCURACY.

THE CONTRACTOR/BUILDER IS RESPONSIBLE FOR CONFIRMING ALL ABOVEGROUND AND UNDERGROUND UTILITY LOCATIONS AND IS TO IMMEDIATELY ADVISE THE ENGINEER OF ANY DISCREPANCIES.

PRIOR TO ANY CONSTRUCTION, THE BUILDER IS TO CONFIRM WITH THE ARCHITECT OR THE OWNER, THAT THE PROPOSED FINISHED FLOOR AND TOP OF WALL ELEVATIONS ARE IN CONFORMITY WITH THE ARCHITECTURAL DRAWINGS.

NOTES:

- ROOF DOWNSPOUTS TO DISCHARGE ONTO THE SURFACE VIA CONCRETE SPLASH PADS AND THE RUNOFF DIRECTED TOWARDS THE SWALE AND TO THE REAR YARD CB'S AND TO ROAD.
- ROOF DOWNSPOUTS ARE TO BE LOCATED IN SUCH A MANNER AS TO DIRECT DRAINAGE AWAY FROM WALKWAYS, DRIVEWAYS OR PATIO STONES.



LEGEND

- EXISTING ELEVATION TO REMAIN
- EXISTING ELEVATION
- DIRECTION OF SURFACE FLOW
- PROPOSED ELEVATION
- PROPOSED CATCHBASIN
- SEDIMENT CONTROL
- SUMP PUMP
- HYDRO METER
- GAS METER
- SANITARY SEWAGE EJECTOR
- METER ROOM
- ROOF DOWNSPOUTS
- AREA DRAIN
- PROPOSED GAS MAIN
- PROPOSED HYDRO

C.M. BENCHMARK No. 524 ELEVATION: 96.009m

DESCRIPTION: LOCATED ON THE SOUTH FACE AT THE EAST CORNER OF SOUTH END OF A CONCRETE BOX CULVERT ACROSS PREMIUM WAY, 152m WEST OF HURONTARIO STREET.



PROPOSED CONDOMINIUM FREEHOLD TOWNHOUSES

PART OF LOT 1, RANGE 3 CREDIT INDIAN RESERVE

50 & 60 HARBORN ROAD

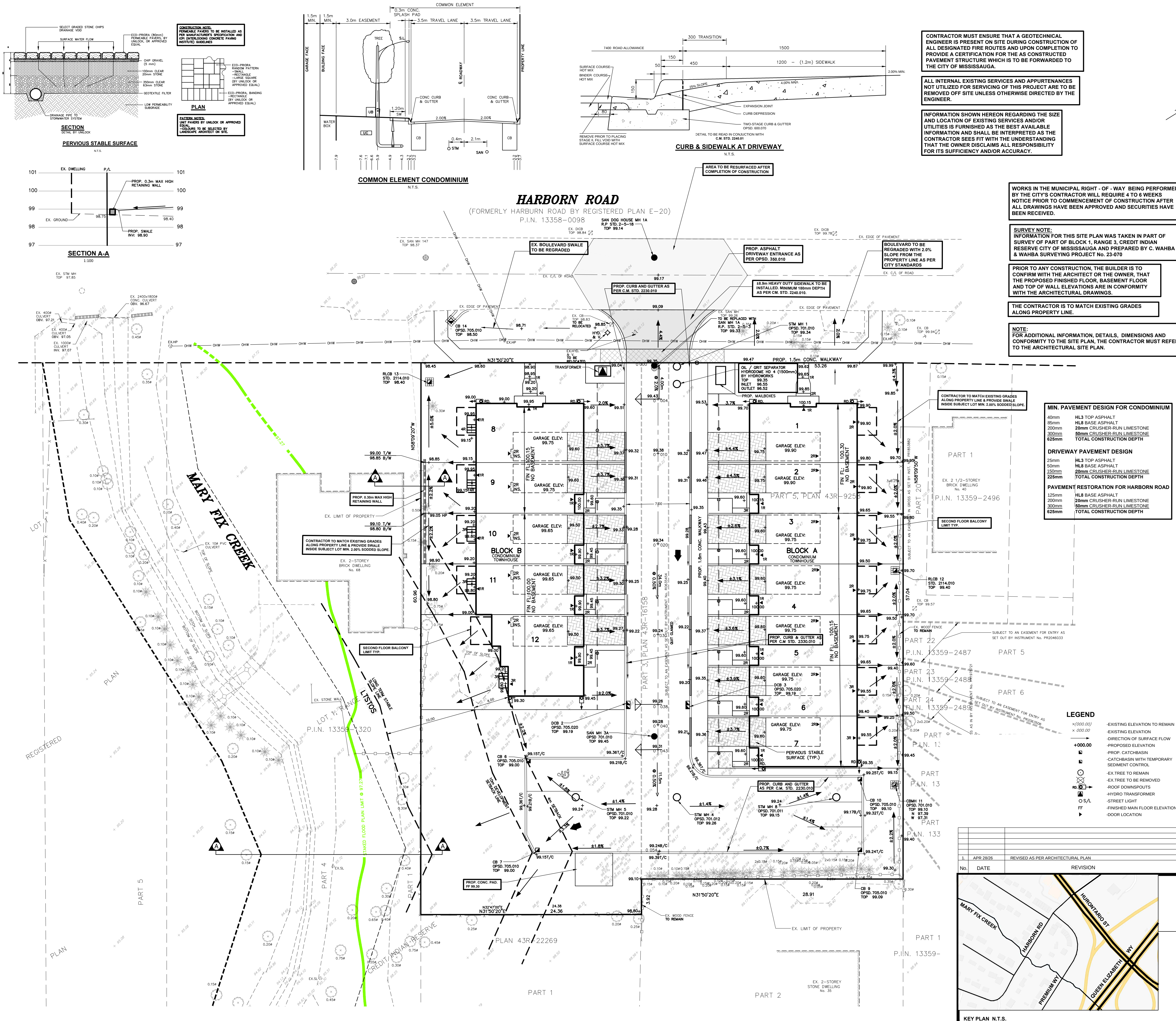
HARBORN DEVELOPMENT INC.

W.E. OUGHTRED & ASSOCIATES INC., 2140 WINSTON PARK DR, OAKVILLE ON L6H 5V5 (905) 822-5644



SITE SERVING PLAN

DATE: MARCH 2024	AREA: RM6	DWG.No: C101
SCALE: 1:200	DRAWN BY: D.W.	PROJECT No: 223-M71
CITY FILE: XXXXXX	REGION FILE: XXXXXX	



- NOTES**
- GENERAL NOTES**
- ALL DIMENSIONS AND INVERTS MUST BE VERIFIED PRIOR TO CONSTRUCTION AND IF ANY DISCREPANCIES EXIST, CONTRACTOR IS TO NOTIFY THE ENGINEER.
 - THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING ALL UTILITIES DURING CONSTRUCTION. GAS, HYDRO, TELEPHONE OR ANY OTHER UTILITIES THAT MAY EXIST ON THE SITE OR WITHIN THE STREET LINES MUST BE LOCATED BY THE OWNER PRIOR TO CONSTRUCTION.
 - AT ALL ENTRANCES TO THE SITE THE MUNICIPAL SIDEWALK WILL BE CONTIGUOUS THROUGH THE DRIVEWAY. THE DRIVEWAY SHALL BE COMPATIBLE WITH THE EXISTING OR FUTURE SIDEWALK AND CURB DEPRESSION WILL BE PROVIDED FOR EACH ENTRANCE.
 - SEWALKS DEPTHS TO BE INCREASED TO MINIMUM 180mm DEPTH FOR DRIVEWAYS.
 - TOPSOIL IN FULL AREA TO BE STRIPPED AND CLEAR FILL TO BE PLACED AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.
 - ALL GRADES TO BE WITHIN 25% MAXIMUM SLOPE AT PROPERTY LINE AND WITHIN THE SITE.
 - SPREAD PATTERN OF EXISTING LIGHTING SHALL NOT IMPROVE ON THE ADJACENT PROPERTY.
 - ALL UNDERGROUND SERVICE MATERIALS AND INSTALLATIONS TO BE IN ACCORDANCE WITH THE LATEST LOCAL MATERIALS STANDARDS AND CODES, AND S.D.C.
 - ALL BACKFILL FOR SEWERS, WATERMANS AND UTILITIES ON THE ROAD ALLOWANCE AND THE INTERNAL SITE MUST BE COMPACTED TO MINIMUM 95% S.P.D. EXCEPT FOR TOP 300mm WHICH MUST BE COMPACTED TO 98% S.P.D. ON THE ROAD ALLOWANCE UNLESS OTHERWISE NOTED AND UNDER THE DIRECT SUPERVISION OF THE GEOTECHNICAL SOIL CONSULTANT.
 - THE BUILDING SITE ON THIS PLAN HAS BEEN DESIGNED USING CONTROLLED FLOW ROOF DRAINS IN ACCORDANCE WITH LOCAL MUNICIPAL STANDARDS.
 - ALL SURFACE DRAINAGE SHALL BE SELF-CONTAINED, COLLECTED AND DISCHARGED AT A LOCATION TO BE APPROVED PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.
 - CONTINUOUS CONCRETE CURB BETWEEN LANDSCAPE AREAS AND ASPHALT PAVING.
- ROADS**
- ALL FILL WITHIN ROAD ALLOWANCE AND EASEMENTS TO BE COMPACTED TO MIN 95% STANDARD PROCTOR DENSITY. THE SUBGRADE AND CONSTRUCTION OF ALL FILL MATERIALS TO BE CONFIRMED BY A REGISTERED SOIL CONSULTANT TO THE CITY ENGINEER AND THE SUBGRADE OF ALL ROADWAYS SHALL BE PROOF ROLLED UNDER THE SUPERVISION OF THE SOIL CONSULTANT PRIOR TO THE INSTALLATION OF ANY ROAD RISE MATERIALS.
 - THE DEVELOPER/CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING UTILITIES PRIOR TO CURB CONSTRUCTION. LOCATION OF EXISTING UTILITIES, WATERMANS, SEWERS AND OTHER UNDERGROUND UTILITIES AND THE INTERNAL SITE MUST BE LOCATED PRIOR TO CONSTRUCTION OF WORK. CONTRACTOR MUST EXAMINE THE ACCURACY OF SUCH EXISTING UTILITIES AND STRUCTURES (WHETHER SHOWN OR NOT) AND ASSUME ALL LIABILITY FOR DAMAGE TO THEM. ANY DISCREPANCIES TO LOCATION OF EXISTING WATERMANS AND SEWERS TO BE RECTIFIED AT DEVELOPER/ CONTRACTOR'S EXPENSE.
 - THE DEVELOPER/CONTRACTOR MUST ENSURE THAT A SURGE CERTIFICATE IS ISSUED BY THE GEOTECHNICAL SOIL CONSULTANT TO THE ENGINEER. ONLY UPON VERIFICATION AND APPROVAL OF THE SURGE CERTIFICATE BY THE LOCAL AUTHORITY INSPECTION DEPARTMENT WILL COMMENCEMENT OF ANY ROAD BASE MATERIALS BE PLACED. FAILURE TO FOLLOW THIS PROCEDURE WILL MEAN THE REMOVAL OF ROAD BASE MATERIALS AND/OR ADDITIONAL TESTING THAT PROPER COMPACT HAS BEEN ACHIEVED AT THE SURFACE BY DEVELOPER/CONTRACTOR'S EXPENSE.
 - TRENCH BACKFILLING ON PROPOSED ROADS SHALL COMPLY WITH CITY OF MISSISSAUGA SECTION 4.6.8.8 (TRENCH BACKFILLING ON ROADS AS PROVIDED IN THE CITY'S DEVELOPER REQUIREMENT MANUAL).
 - THE TOP 300mm OF THE SUBGRADE IS TO BE COMPACTED TO A MINIMUM 98% OF SPD WITHIN 2% OF THE OPTIMUM MOISTURE CONTENT.
 - ALL CONNECTIONS WITHIN PAVED PORTION OF ANY EXISTING ROAD TO BE BACKFILLED WITH UNDESIRABLE BACKFILL MATERIAL AS PER C.M. STD. 2226.040, 2226.041 AND 2226.042. UNLESS OTHERWISE SPECIFIED PRIOR APPROVAL FOR OTHER BACKFILL MATERIAL HAS BEEN OBTAINED.
 - ALL OTHER EXCAVATIONS WITHIN EXISTING ROAD ALLOWANCE SHALL BE BACKFILLED TO SUBGRADE ELEVATION WITH GRANULAR 'C' MATERIAL, AND COMPACTED TO A MINIMUM OF 98% STANDARD PROCTOR DENSITY. SURFACE RESTORATION SHALL BE EQUAL TO OR BETTER THAN EXISTING CONDITION IN ACCORDANCE WITH O.P.S.B. 807.
 - CURB TO BE AS PER O.P.S.B. 807 UNLESS OTHERWISE NOTED.
 - SUBGRADE UNDERNEATH ALL CURBS TO BE MINIMUM 100mm AS PER C.M. STD. 2226.040 AND 2226.041 AND ON EXISTING ROADS.
 - ALL EXISTING AREAS WITHIN EXISTING ROAD ALLOWANCE TO BE REINTEGRATED WITH TOPSOIL AND S/D TO THE SATISFACTION OF CITY OF MISSISSAUGA.
 - SEWALKS TO BE AS PER C.M. STD. 2246.019 AND PEDESTRIAN RAMPS TO BE PROVIDED AT ALL INTERSECTIONS AS PER C.M. STD. 2246.020 AND 2246.021.
- TRAFFIC NOTES**
- ALL DAMAGED OR DISTURBED AREAS WITHIN THE MUNICIPAL RIGHT-OF-WAY ARE TO BE REHABILITATED AT THE OWNER'S EXPENSE.
 - ALL LANDSCAPING AND GRADING WITHIN CLOSE PROXIMITY TO THE PROPOSED ACCESS POINTS IS TO BE DESIGNED TO ENSURE THAT ADEQUATE SHORT DISTANCES ARE AVAILABLE FOR ALL APPROACHING AND EXITING MOTORISTS AND PEDESTRIANS.
 - THE PORTION OF THE DRIVEWAY WITHIN THE MUNICIPAL BOUNDARY IS TO BE PAVED BY THE OWNER.
 - DRIVEWAY ACCESSORS SHALL MAINTAIN A 1.5m SETBACK FROM ABOVEGROUND FEATURES SUCH AS UTILITIES AND TREES.
 - ANY ABOVEGROUND UTILITIES LOCATED WITHIN 1.5m OF PROPOSED ACCESS ARE TO BE RELOCATED AT THE OWNER'S EXPENSE.
 - THE COST FOR ANNUAL ROAD IMPROVEMENTS REQUIRED IN SUPPORT OF THIS DEVELOPMENT APPLICATION WILL BE BORNE BY THE OWNER.
 - THE OWNER SHALL MAKE SATISFACTORY ARRANGEMENTS WITH THE TRANSPORTATION AND WORKS DEPARTMENT FOR THE DESIGN, CONSTRUCTION AND MAINTENANCE OF ALL COSTS ASSOCIATED WITH WORKS NECESSARY TO SUPPORT ACCESS TO THE SITE.
 - ANY ACCESS TO INTERNAL SERVICES SHALL BE PROVIDED INTERNALLY WITHIN THE SITE.
 - DETAILS OF THE SITE SPECIFIC ACCESS CONFIGURATIONS WILL BE FINALIZED IN CONJUNCTION WITH SITE PLAN REVIEW/REVISION PROCESS.

C.M. BENCHMARK No. 524 ELEVATION: 66.009m
DESCRIPTION: LOCATED ON THE SOUTH FACE AT THE EAST CORNER OF SOUTH END OF A CONCRETE BOX CULVERT ACROSS PREMIUM WAY, 152m WEST OF HURONTARIO STREET.

SKIRA & ASSOCIATES LTD.
CONSULTING ENGINEERS
3454 Semenyk Court, Suite 100, Mississauga, Ontario L5C 4P8
Tel: (905) 276-5100 Fax: (905) 270-1936 Email: info@skiraconsult.ca

PROPOSED CONDOMINIUM FREEHOLD TOWNHOUSES
PART OF LOT 1, RANGE 3 CREDIT INDIAN RESERVE
50 & 60 HARBORN ROAD

HARBORN DEVELOPMENT INC.
W.E. OUGHTRED & ASSOCIATES INC., 2140 WINSTON PARK DR, OAKVILLE ON L6H 5V5 (905) 822-5644

MISSISSAUGA

SITE GRADING PLAN

DATE: MAY 2024	AREA: RM6	DWG. No: C102
SCALE: 1:200	DRAWN BY: D.W.	PROJECT No: 223-M71
CITY FILE: XXXXXX	REGION FILE: XXXXXX	

Appendix A

Orifice Control Calculations

WORKSHEET for Circular Orifice

Project Description	
Worksheet	Orifice - Plate
Type	Circular Orifice
Solve For	Diameter

Input Data	
Discharge	0.014 m ³ /s
Headwater Elevation	98.10 m
Centroid Elevation	96.67 m
Tailwater Elevation	96.55 m
Discharge Coefficient	0.60

Results	
Diameter	75 mm
Headwater Height Above	1.43 m
Tailwater Height Above	-0.12 m
Flow Area	4.46E-03 m ²
Velocity	5.30 m/s

Appendix B

Oil/Grit Interceptor Calculations



Hydroworks Sizing Summary

Harborn Rd

04-20-2026

Recommended Size: HydroStorm HS 4

Hydroworks Sizing Program Version 5.8.5

A HydroStorm HS 4 is recommended to provide 80 % annual TSS removal based on a drainage area of 0.232 (ha) with an imperviousness of 0.7 % and Toronto Bloor St., Ontario rainfall for the Hydroworks standard particle size distribution.

The recommended HydroStorm HS 4 treats 91 % of the annual runoff and provides 80 % annual TSS removal for the Toronto Bloor St. rainfall records and Hydroworks standard particle size distribution.

The HydroStorm has a headloss coefficient (K) of 1.04. The given peak flow of .01 (m³/s) is greater than the full pipe flow of .01 (m³/s) indicating the pipe will be surcharged during the peak flow. Full pipe flow was assumed For the headloss calculations. The pressure head in the pipe was Not evaluated since this would require a hydraulic gradeline analysis. The headloss was calculated to be 173 (mm) based on a flow depth of 100 (mm) (full pipe flow).

This summary report provides the main parameters that were used for sizing. These parameters are shown on the summary tables and graphs provided in this report.

If you have any questions regarding this sizing summary please do not hesitate to contact Hydroworks at 888-290-7900 or email us at support@hydroworks.com.

The sizing program is for sizing purposes only and does not address any site specific parameters such as hydraulic gradeline, tailwater submergence, groundwater, soils bearing capacity, etc. Headloss calculations are not a hydraulic gradeline calculation since this requires a starting water level and an analysis of the entire system downstream of the HydroStorm .

TSS Removal Sizing Summary

Hydroworks Hydrodynamic Separator Sizing Program - HydroStorm

File Product Units CAD Video Help

Main Dimensions Rainfall Site TSS PSD TSS Load Site Storage By-Pass Custom CAD Video Other

Site Parameters
 Area (ha) 0.232
 Imperviousness (%) 0.7

Units
☐ U.S.
☒ Metric

Rainfall Station
 Toronto Bloor St. Ontario
 1939 To 1986 Rainfall Timestep = 60 min.

Project Title (2 lines) Harbom Rd

ETV Lab Testing Results ☐ Post Treatment Recharge

Outlet Pipe
 Diam. (mm) 100 Peak Design Flow (m3/s) 0.01418
 Slope (%) 1

HydroStorm Annual Sizing Results

Model #	Qlow (m3/s)	Qtot (m3/s)	Flow Capture (%)	TSS Removal (%)
Unavailable	.005	.014	91 %	74 %
HS 4	.005	.014	91 %	80 %
HS 5	.005	.014	91 %	84 %
HS 6	.005	.014	91 %	91 %
Unavailable	.005	.014	91 %	93 %
HS 8	.005	.014	91 %	96 %
HS 10	.005	.014	91 %	99 %
HS 12	.005	.014	91 %	99 %

Particle Size Distribution

Size (um)	%	SG
20	35	2.65
35	10	2.65
63	5	2.65
88	10	2.65
125	15	2.65
200	15	2.65
325	5	2.65
750	5	2.65

Note: Results vary significantly based on particle size distribution

Simulate

TSS Particle Size Distribution

Hydroworks Hydrodynamic Separator Sizing Program - HydroStorm

File Product Units CAD Video Help

Main Dimensions Rainfall Site TSS PSD TSS Load Site Storage By-Pass Custom CAD Video Other

TSS Particle Size Distribution

Size (um)	%	SG
20	35	2.65
35	10	2.65
63	5	2.65
88	10	2.65
125	15	2.65
200	15	2.65
325	5	2.65
750	5	2.65
*		

Notes:

1. To change data just click a cell and type in the new value(s)
2. To add a row just go to the bottom of the table and start typing.
3. To delete a row, select the row by clicking on the first pointer column, then press delete
4. To sort the table click on one of the column headings

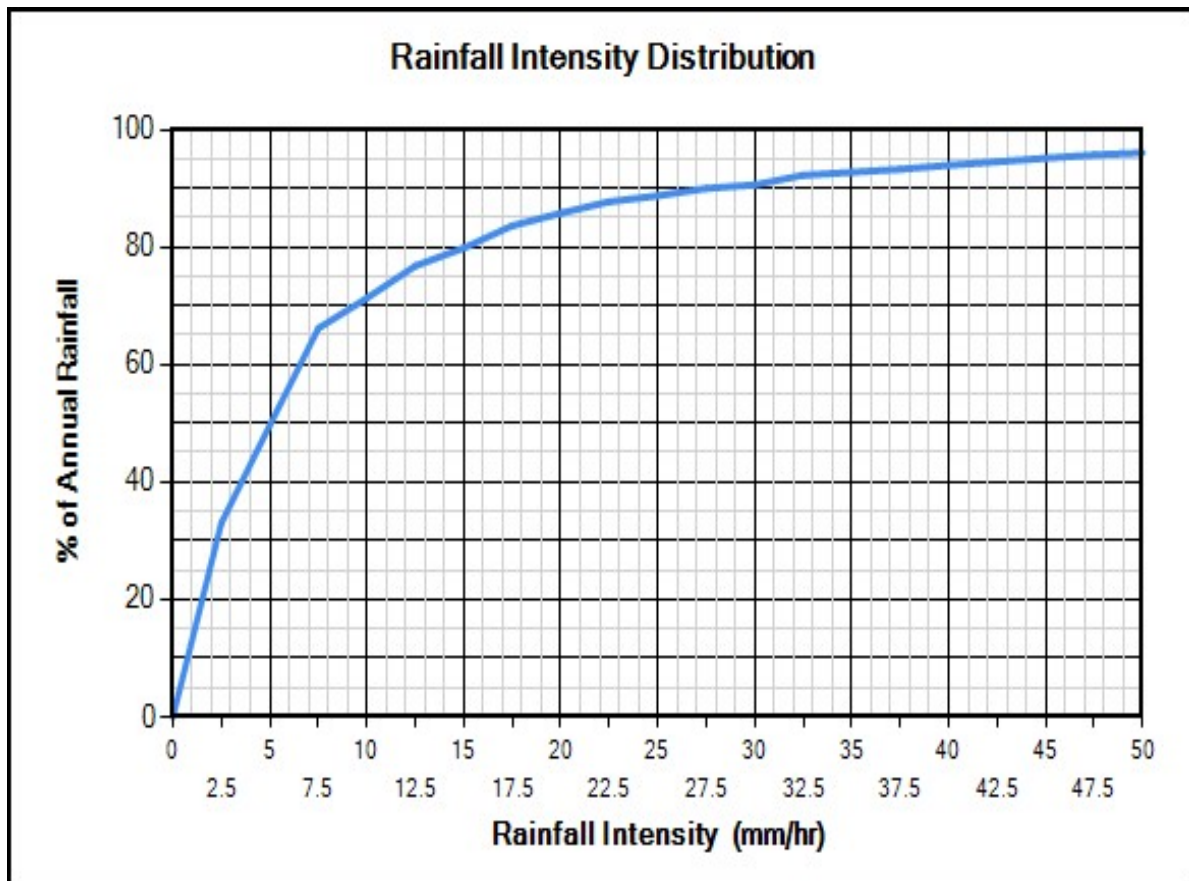
TSS Distributions

☐ ETV Canada
☒ Standard HDS Design
☐ Alden Laboratory
☐ OK110
☐ Toronto
☐ Ontario Fine
☐ ETV Canada (Calgary)
☐ Calgary Forebay
☐ Kitchener
☐ User Defined

Clear

You must select a particle size distribution for TSS to simulate TSS removal

Water Temp (C) 20



Site Physical Characteristics

Hydroworks Hydrodynamic Separator Sizing Program - HydroStorm

File Product Units CAD Video Help

Main Dimensions Rainfall Site TSS PSD TSS Load Site Storage By-Pass Custom CAD Video Other

Catchment Parameters

Width (m) Imperv. Mannings n Maintenance Frequency (months)

Perv Mannings n

Slope (%) Imp. Depress. Storage (mm)

Perv. Depress. Storage (mm)

Daily Evaporation (mm/day)

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	0	0	2.54	2.54	3.81	3.81	3.81	2.54	2.54	0	0

Infiltration

Max. Infiltration Rate (mm/hr)

Min. Infiltration Rate (mm/hr)

Infiltration Decay Rate (1/s)

Infiltration Regen. Rate (1/s)

Catch Basins

of Catch basins

Constant Baseflow

Roof Runoff (m3/s)

Resets all parameters excluding input catchment width.

Dimensions And Capacities

Hydroworks Hydrodynamic Separator Sizing Program - HydroStorm

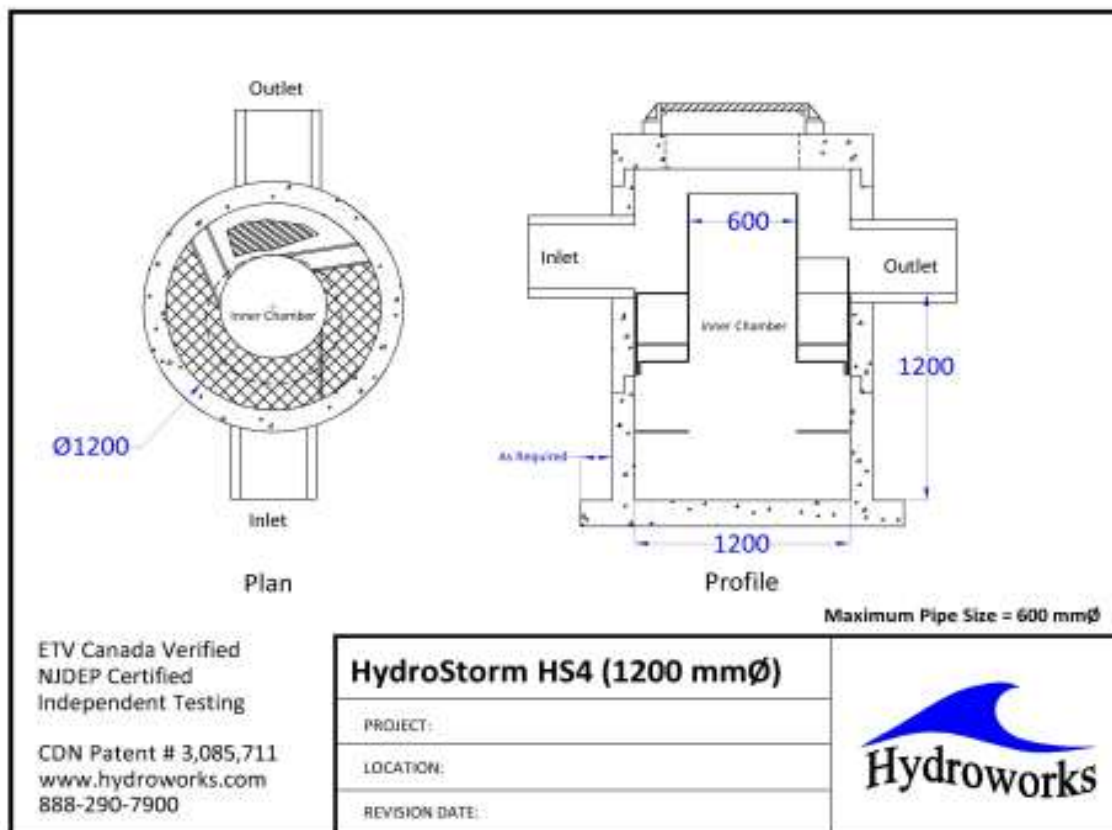
File Product Units CAD Video Help

Main Dimensions Rainfall Site TSS PSD TSS Load Site Storage By-Pass Custom CAD Video Other

Dimensions and Capacities					
Model	Diam. (m)	Depth (m)	Float. Vol. (L)	Sediment Vol. (m3)	Total Vol. (m3)
HS 3	0.91	1.07	185	0.4	0.7
HS 4	1.22	1.22	381	0.9	1.4
HS 5	1.52	1.52	642	1.8	2.8
HS 6	1.83	1.83	1041	3.2	4.8
HS 7	2.13	1.98	1575	4.6	7.1
HS 8	2.44	2.13	2354	6.3	10
HS 10	3.05	2.74	4327	13.2	20
HS 12	3.66	3.35	7164	23.8	35.2

Depth = Depth from outlet invert to inside bottom of tank

Generic HS 4 CAD Drawing



TSS Buildup And Washoff

Hydroworks Hydrodynamic Separator Sizing Program - HydroStorm

File Product Units CAD Video Help

Main Dimensions Rainfall Site TSS PSD TSS Load Site Storage By-Pass Custom CAD Video Other

TSS Buildup

☐ Power Linear
☒ Exponential
☐ Michaelis-Menton
☐ No Buildup Required

TSS Washoff

☒ Power-Exponential
☐ Rating Curve (no upper limit)
☐ Rating Curve (limited to buildup)
☐ Event Mean Concentration

Street Sweeping

Efficiency (%) 30
Start Month May
Stop Month Sep
Frequency (days) 30
Available Fraction .3

Soil Erosion

☐ Add Erosion to TSS

Reset to Default Values

TSS Buildup Parameters

Limit (kg/ha) 28.02
Coeff (kg/ha) 67.25
Exponent .5

TSS Washoff Parameters

Coefficient .0855
Exponent 1.1

TSS Buildup

☒ Based on Area
☐ Based on Curb Length

Upstream Quantity Storage

Hydroworks Hydrodynamic Separator Sizing Program - HydroStorm

File Product Units CAD Video Help

Main Dimensions Rainfall Site TSS PSD TSS Load Site Storage By-Pass Custom CAD Video Other

Quantity Control Storage

	Storage (m3)	Discharge (m3/s)
	0	0
▶	32.8	0.01418
*		

Clear

Other Parameters

The screenshot shows the 'Hydroworks Hydrodynamic Separator Sizing Program - HydroStorm' window. The 'Other' tab is selected, displaying several parameter groups:

- Scaling Law**
 - ☒ Peclet Scaling based on diameter x depth
 - ☐ Peclet Scaling based on surface area (diameter x diameter)
- TSS Removal Extrapolation**
 - ☒ Extrapolate TSS Removal for flows lower than tested
 - ☐ No TSS Removal extrapolation for flows lower than tested
 - ☐ No TSS Removal extrapolation for lower flows or inter-event periods
- Lab Testing**
 - ☐ Use NJDEP Lab Testing Results
 - ☒ Use ETV Canada Lab Testing Results
- Oil / Sediment Storage**
 - ☒ Oil Spill Storage in Pretreatment Area
 - ☐ Sediment Storage in Pretreatment Area
 - ☐ 50% Oil Spill / 50% Sediment Storage in Pretreatment Area
- TSS Removal Results**
 - ☒ Required TSS Removal
 - ☐ Choose Model #
- TSS Removal Required**
 - TSS Removal (%) Enter required TSS Removal (%)

Flagged Issues

None

Hydroworks Sizing Program - Version 5.8.5

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1-800-290-7900

www.hydroworks.com

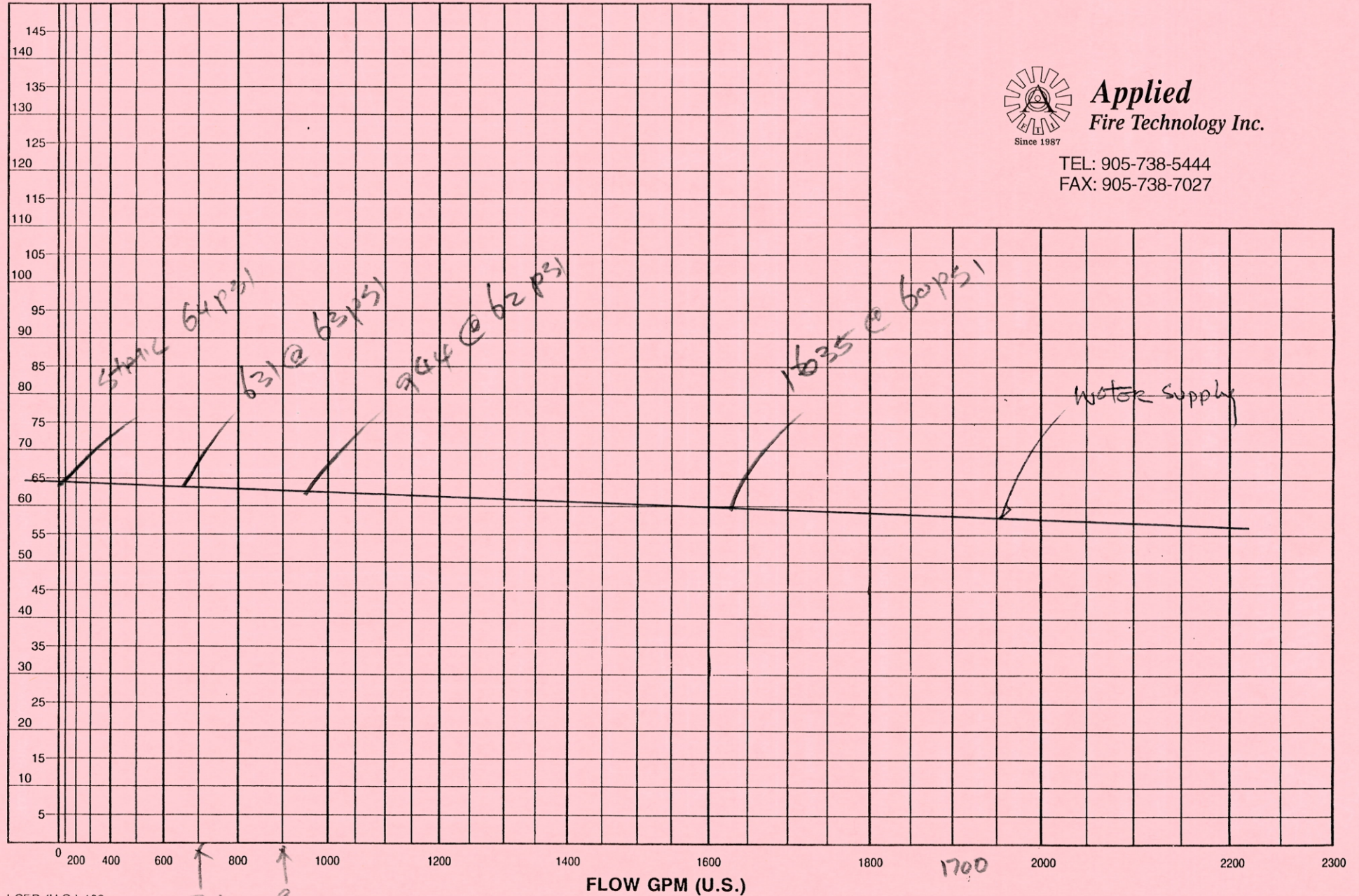
Appendix C

Fire Flow Test Result

STATIC: 64 PSI
(1) 631 USGPM@ 63 PSI
(2) 944 USGPM@ 62 PSI
(3) 1635 USGPM@ 60 PSI

NAME OF RISK: _____ FILE NO.: _____
STREET: 50, 60 HARBORN ROAD
CITY: MISSISSAUGA, ONT.

DATE: APRIL 18 2024 BY: AFTI



Applied
Fire Technology Inc.

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Applied Fire Technology Inc.

Design • Consulting • Testing • Inspection

WATER SUPPLY TEST

Name of risk: File No.:

Address: 50, 60 HARBORN ROAD Test by: AFTI

Municipality: MISSISSAUGA DNT Date: April 18, 2024

SYSTEM DATA:

Size of Main: 8" Dead End: ☒ Two Ways: Loop:

Source Reliable: YES If not explain:

Comments:

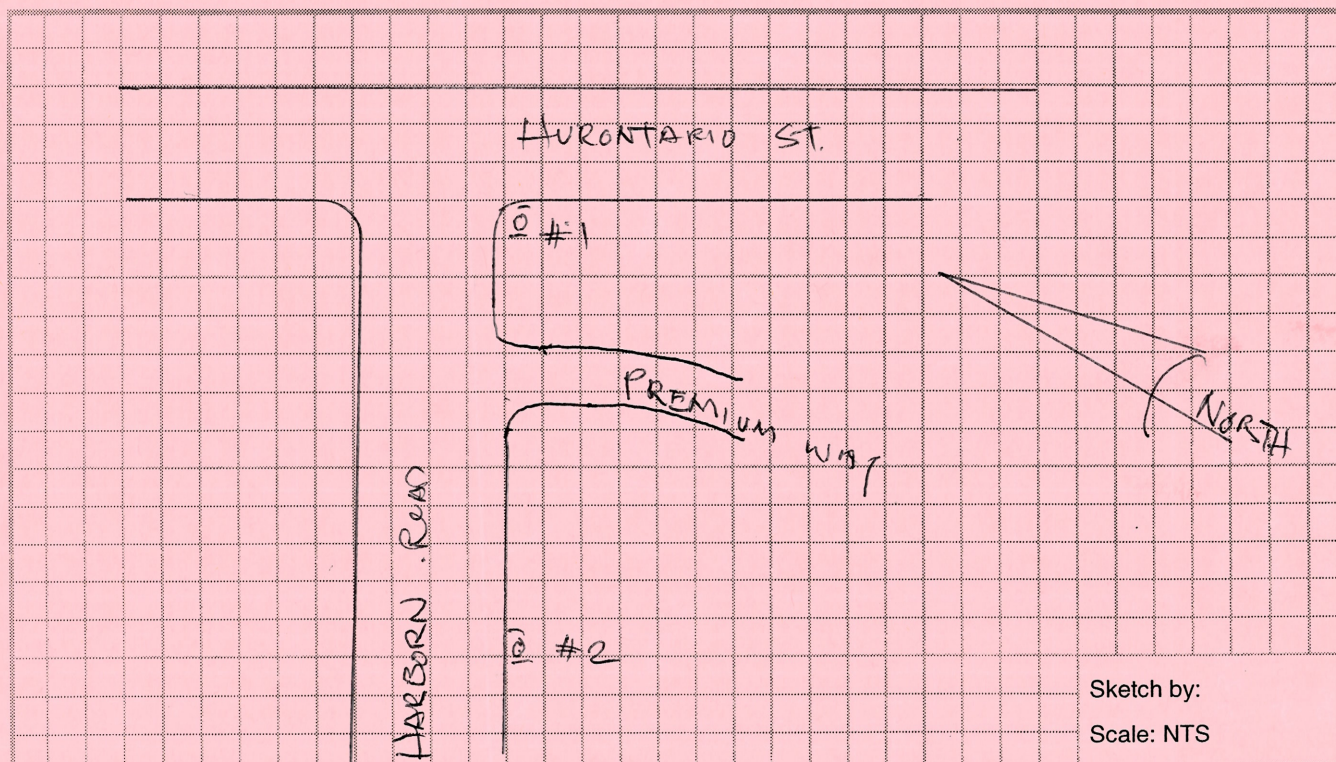
TEST DATA:

Location of test fire hydrants; Residual: #1 HARBORN ST AURONTARIO

Flow: #2 60 HARBORN ROAD

Static pressure 64 psi Time: 1130 A.M. P.M.

Test No.	No. of Outlets	Orifice Size (in.)	Pitot Reading (psi)	Equivalent Flow gpm (U.S.)	Total Flow gpm (U.S.)	Residual Pressure (psi)	Comments
1	1	1 1/4	48			62	
2	1	2 1/2	40			62	
3	2	2 1/2	30, 30			60	
4							



Name and address of municipal authority who should receive a copy.