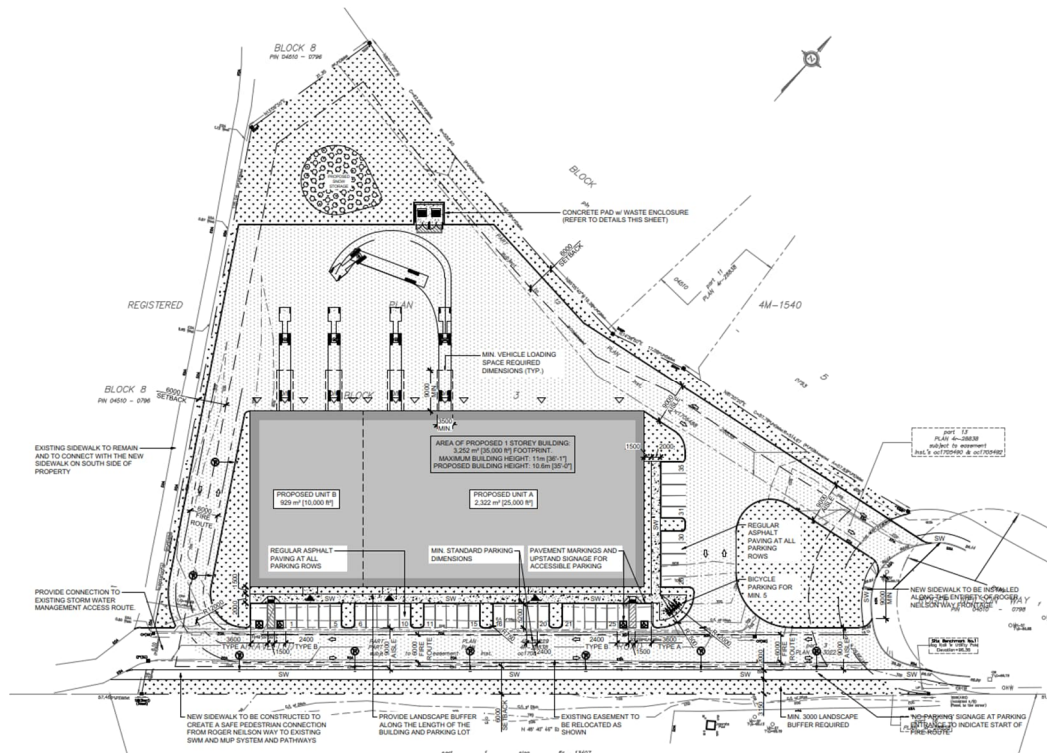


SITE SERVICING & STORMWATER MANAGEMENT REPORT 295 ROGER NEILSON WAY



Plan above by Deimling Architecture

Project No.: CCO-26-1863

Prepared for:

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3087 Apple Hill Drive
Ottawa, ON

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Revision 2: 08/04/2026

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1.0 PROJECT DESCRIPTION

1.1 Purpose

Egis Canada Ltd. (Egis) has been retained by 1850591 Ontario Ltd. to prepare this Servicing and Stormwater Management Report in support of the Site Plan Control process for the proposed warehouse located at 295 Roger Neilson Way, Ottawa, ON. The primary purpose of this report is to present a servicing design for the development in accordance with the recommendations and guidelines provided by the City of Ottawa. This report addresses water, sanitary, and storm sewer servicing, ensuring that available services will adequately support the proposed warehouse development.

This report should be read in conjunction with the following drawings:

- C101 – Lot Grading, Drainage and Erosion Sediment Control Plan; and
- C102 – Site Servicing Plan

1.2 Site Description

The subject property is located at 295 Roger Neilson Way within the City of Ottawa, in the Kanata West area. The site is zoned IP[1544] (Business Park Industrial, Urban Exception 1544), which permits warehouse uses. The site is adjacent to a stormwater management pond and multi-use pathway (MUP) system, and is subject to various overlays and policies including the Kanata West Concept Plan and Area Specific Policy 2.

See Site Location Plan in Appendix A for more details.



Figure 1: Site Location

1.3 Existing Conditions and Infrastructure

The existing property is currently undeveloped, primarily consisting of vegetated areas and hard surface areas. Municipal servicing (storm, sanitary, water) is available and stubs have been brought to the site. The City's GIS and as-built servicing reports indicate the following infrastructure:

- Roger Neilson Way:
 - o 305mm diameter watermain with a 150mm stub to service the site;
 - o 1200 & 1800mm diameter concrete storm sewer – tributary to the Kanata West SWMP 3 and;
 - o 250mm diameter concrete sanitary sewer with a stub to service the site – tributary to the existing Signature Ridge Pumping Station.

1.4 Proposed Development and Statistics

The proposed development consists of a new warehouse, asphalt parking/loading bays, and landscaped areas. The site plan will incorporate adequate buffers, screening, and landscaping to complement the neighbourhood context, as encouraged by City staff.

1.5 Approvals

The development is subject to the City of Ottawa Site Plan Control approval process. A Site Plan Control application is required, with supporting studies and plans as per the Study and Plan Identification List. An Environmental Compliance Approval (ECA) from the Ministry of Environment, Conservation and Parks (MECP) is not anticipated, provided the site continues to meet O.Reg 525/98 exemption criteria.

1.0 BACKGROUND STUDIES, STANDARDS, AND REFERENCES

1.1 Background Reports / Reference Information

Background studies have been completed for the proposed development, which include the City of Ottawa's as-built drawings, a topographical survey, and a geotechnical report. As-built drawings of existing services, provided by the City of Ottawa Information Centre, within the vicinity of the proposed site were reviewed in order to identify infrastructure available to service the proposed development. The following reports have previously been completed and are available under separate cover:

- City of Ottawa as-built drawings and GIS information
- Kanata West Master Servicing Study
- Topographical survey and geotechnical report (to be provided)
- Kanata West Master Servicing Report
- Taggart-Loblaws Subdivision Servicing Reports

The reports indicated above were used in developing the civil design within this report and will be referenced throughout.

1.2 Applicable Guidelines and Standards

City of Ottawa:

- Ottawa Sewer Design Guidelines, City of Ottawa, SDG002, October 2012. (*Ottawa Sewer Guidelines*)
 - Technical Bulletin ISTB-2014-01 City of Ottawa, February 2014. (*ISTB-2014-01*)
 - Technical Bulletin PIEDTB-2016-01 City of Ottawa, September 2016. (*PIEDTB-2016-01*)
 - Technical Bulletin ISTB-2018-01 City of Ottawa, January 2018. (*ISTB-2018-01*)
 - Technical Bulletin ISTB-2018-04 City of Ottawa, March 2018. (*ISTB-2018-04*)
 - Technical Bulletin ISTB-2019-02 City of Ottawa, February 2019. (*ISTB-2019-02*)
- Ottawa Design Guidelines – Water Distribution City of Ottawa, July 2010. (*Ottawa Water Guidelines*)
 - Technical Bulletin ISD-2010-2 City of Ottawa, December 15, 2010. (*ISD-2010-2*)
 - Technical Bulletin ISDTB-2014-02 City of Ottawa, May 2014. (*ISDTB-2014-02*)
 - Technical Bulletin ISTB-2018-02 City of Ottawa, March 2018. (*ISTB-2018-02*)
 - Technical Bulletin ISTB-2021-03 City of Ottawa, August 2021. (*ISTB-2021-03*)

Ministry of Environment, Conservation and Parks:

- Stormwater Planning and Design Manual, Ministry of the Environment, March 2003. (*MECP Stormwater Design Manual*)
- Design Guidelines for Sewage Works, Ministry of the Environment, 2008. (*MECP Sewer Design Guidelines*)

Other:

- Water Supply for Public Fire Protection, Fire Underwriters Survey, 2020. (*FUS Guidelines*)

2.0 PRE-CONSULTATION SUMMARY

A pre-consultation meeting was conducted on August 18, 2025, regarding the proposed site. Specific design parameters to be incorporated within this design include the following:

- Stormwater management criteria to follow Kanata West Master Servicing Study and Taggart-Loblaws Subdivision Reports.
- Quality control is not required, as downstream SWMP 3 provides 80% TSS removal.
- The sanitary release rate is to be in accordance with the applicable reports referenced in the comments above.
- Technical Bulletin ISTB-2018-02, is to be followed for maximum fire flow hydrant capacity. A hydrant coverage figure to be provided and demonstrate there is adequate fire protection for the proposal.

3.0 WATERMAIN

3.1 Existing Watermain

The site is located within the 3W pressure zone, as per the Water Distribution System mapping. A 203mm diameter PVC watermain is located on Roger Neilson Way. A 150mm stub from the adjacent right of way watermain on Roger Neilson Way extends to service the site.

3.2 Proposed Watermain

New 150mm diameter water service connected to the 150mm diameter watermain stub coming from the adjacent easement is proposed. The water stub already contains a water valve for the property. The water services are designed to have a minimum of 2.4 m cover.

The Fire Underwriters Survey 2020 (FUS) method was utilized to determine the required fire flow for the site. The 'C' factor (type of construction) for the FUS calculation was determined to be 0.8 (non-combustible construction). The building will also have a supervised sprinkler system. The total floor area ('A' value) for the FUS calculation was determined to be 3,252 m². The results of the calculations yielded a required fire flow of 6,000 L/min. A fire flow of 9,000 L/min was calculated using the Ontario Building Code (OBC) criteria. The detailed calculations for the FUS and OBC can be found in Appendix C. The water demands for the proposed building have been calculated to adhere to the Ottawa Design Guidelines – Water Distribution manual and can be found in Appendix C. The results have been summarized in *Table 1*, below.

Table 1: Water Demands

Design Parameter	Value
Site Area	1.38 ha
Floor Area	3,252 m ²
Commercial	28,000 L/ha/day
Industrial - Light	35,000 L/ha/day
Average Day Demand (L/s)	0.13
Maximum Day Demand (L/s)	0.19
Peak Hour Demand (L/s)	0.35

OBC Fire Flow Requirement (L/s)	150
FUS Fire Flow Requirement (L/s)	100

Boundary conditions for the site were requested and received from the city, dated March 10, 2026. The model assumed demands for the property as - Average Day = 0.13 L/s, Maximum Day = 0.19 L/s and Maximum Hourly = 0.35 L/s, and the fire flow to be 100 L/s, results are summarized in *Table 2* below.

Table 2: Boundary Conditions

Scenario	Total HGL (m)	Head Pressure	Head Pressure (psi)
Average DD	162.10	64.10	91.15
Fire Flow	149.90	51.90	73.84
Peak Hour	155.30	57.30	81.53

The boundary conditions provided by the City for the subject site were used to assess system performance. The ground elevation was set to 98.0m, the minimum and maximum hydraulic grade line (HGL) elevations are 155.3m and 162.1m, respectively, with a maximum day plus fire flow condition (100 L/s) corresponding to an HGL of 149.9m. The resulting pressure values during average day and peak hour flow fall outside the normal operating pressure range remains within 275 kPa (40 psi) to 552 kPa (80 psi), therefore pressure reducing valves are to be installed within the building.

The available fire flow based on hydrant spacing was analysed as per the City of Ottawa's technical bulletin ISTB 2018-02 Appendix I, Table 1. All existing and proposed municipal hydrants within 150m clear distance to the nearest face of the building were used to find a combined available fire flow to support the site. Existing and proposed hydrants were assumed to be class AA (painted blue) by visual inspection through the latest imagery provided on Google Street View. A total contribution of 5,700 L/min and 3,800 L/min was used for each hydrant within 75m, and between 75m and 150m of the building, respectively. The results are summarized below in *Table 3*. Please refer to Appendix C for a hydrant location map.

Table 3: Fire Hydrant Protection

Location	Assumed Class	Status	Distance	Flow Contribution (L/min)
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Roger Neilson Way	AA	Municipal	108m	3,800
On-site	AA	Proposed (Private)	5m	5,700
Total				9,500

Based on City guidelines (ISTB-2018-02), the existing hydrant and along with an additional private hydrant (proposed) can provide adequate fire protection to the proposed development. Refer to Appendix C for details.

4.0 SANITARY DESIGN

4.1 Existing Sanitary Sewer

A 250mm sanitary sewer stub is present from Roger Neilson Way to service the site.

4.2 Proposed Sanitary Sewer

A new 100 mm diameter PVC gravity sanitary lateral is proposed to be connected to the existing stub connected to Roger Neilson Way. Refer to civil drawing C102 for a detailed servicing layout.

The peak design flows for the proposed buildings were calculated using criteria from the Ottawa Sewer Design Guidelines (2012) and are summarized in Table . The proposed site development will generate a flow of 1.09 L/s under peak wet weather conditions. See Appendix D for more details.

Table 4: Sanitary Design Criteria

Design Parameter	Value
Site Area	1.38 ha
Commercial	2,800 L/1,000m ² /day
Industrial Light	35,000 L/Ha/day
Institutional/Commercial Peaking Factor	1.5
Extraneous Flow Allowance	0.33 L/s/ha
Total Infiltration Flow	0.46 L/s

Average Dry Weather Flow	0.20 L/s
Peak Sewage Flow	0.71 L/s
Total Peak Wet Weather Flow	1.09 L/s

4.3 Allowable Release Rate

Per the *Taggart-Loblaws Subdivision, Kanata West Servicing Report (Stantec, 2013)* the Total Peak Flow for the sight being developed is 1.24 L/s, therefore our peak flow is acceptable under the pre-existing parameters. Due to the complexity of the downstream network, it is still requested that the City advise of any additional downstream constraints not considered in this report that may be impacted by these flows. Please refer to Appendix D for detailed calculations.

5.0 STORM SEWER DESIGN

5.1 Existing Storm Sewers

An 1800mm storm sewer located in the adjacent easement and a 600mm culvert pipe in the southwest property corner are available. The site currently drains to Pond 3 per the Kanata West Master Servicing Study (KWSS) and the Taggart-Loblaws Subdivision Stormwater Management Facility Design Brief.

5.2 Proposed Storm Sewers

Stormwater from the proposed warehouse development at 295 Roger Neilson Way will be managed in accordance with the Kanata West Master Servicing Study (KWSS) and the Taggart-Loblaws Subdivision Stormwater Management Facility Design Brief. All site runoff will be directed to the downstream Stormwater Management Pond 3 (SWMP 3), as required by the area's master servicing strategy.

Quantity control will be achieved on-site prior to discharge. Controlled flows by an orifice plug ICD will be routed to the existing 1800mm storm sewer as permitted by the City per the easement conditions. The on-site storm system is designed to ensure that post-development peak flows do not exceed the allowable release rates stipulated in the Kanata West Master Servicing Study.

6.0 PROPOSED STORMWATER MANAGEMENT

6.1 Design Criteria and Methodology

Stormwater management for the proposed development will be maintained through positive drainage away from the proposed building and be conveyed toward a retention area. The overland flow route for the site will be

directed to the stormwater pond adjacent to the site on the west property boundary. The quantitative properties of the storm runoff for both the pre- and post-development flows are further detailed below.

In summary, the following design criteria have been employed in development the stormwater management design for the site:

Quantity Control

- The maximum allowable release rate from the site is 117 L/s. Per the *Kanata West Master Servicing Study* & the pre-consultation.
- Storage based on 200m³/Ha Per Taggart Loblaws Subdivision (2013)

Quality Control

- Enhanced level is required (80% TSS removal).

6.2 Runoff Calculations

Runoff calculations presented in this report are derived using the Rational Method, given as:

$$Q = 2.78CIA \text{ (L/s)}$$

Where: C = Runoff coefficient

I = Rainfall intensity in mm/hr (City of Ottawa IDF curves)

A = Drainage area in ha

It is recognized that the Rational Method tends to overestimate runoff rates. As a result, the conservative calculation of runoff ensures that any SWM facility sized using this method is expected to function as intended.

The following coefficients were used to develop an average C for each area, summarized in *Table 5*.

Table 5: Runoff Coefficients

Land Cover	C
Roofs/Concrete/Asphalt	0.90
Gravel	0.60
Undeveloped/Grass	0.20

As per the *City of Ottawa – Sewer Design Guidelines (2012)*, the 5-Year balanced C-value must be increased by 25% for a 100-Year storm event to a maximum of 1.0.

6.3 Pre-Development Drainage

The existing site drainage limits are demonstrated on the Pre-Development Drainage Area Plan. A summary of the Pre-Development Runoff Calculations can be found in *Table 6*.

Table 6: Pre-Development Runoff Summary

Drainage Area	Area (ha)	Runoff Coefficient (5-Year)	Runoff Coefficient (100-Year)	5-Year Peak Flow (L/s)	100-Year Peak Flow (L/s)
A1	1.38	0.26	0.31	70.04	144.62

See the Pre-Development Drainage Area Plan in Appendix F and SWM Calculations in Appendix E.

The previously accepted pre-development release rates *Kanata West Master Servicing Study* and *Taggart Loblaws Subdivision* are summarized in *Table 7*.

Table 7: Required Restricted Flow - Previously Accepted

Drainage Area	Q (L/s)	Storage to be Provided (m ³)
A1	117.70	273

6.4 Post-Development Drainage Areas

The proposed site drainage limits are demonstrated on the Post-Development Drainage Area Plan found in Appendix G of this report. A summary of the Post-Development Runoff Calculations for the site are shown in *Table 8*.

Table 8: Post-Development Runoff Summary

Drainage Area	Unrestricted Flow (L/S)			Restricted Flow (L/S)			Storage Required (m ³)			Storage Provided (m ³)		
	2-year	5-year	100-Year	2-Year	5-Year	100-Year	2-Year	5-Year	100-Year	2-Year	5-Year	100-Year
B1	197.93	269.52	516.20	47.20	58.10	86.00	102.91	148.5	323.4	114.6	151.5	341.5
B2	8.93	12.16	25.55	8.93	12.16	25.55						
Total	206.86	281.68	541.75	56.13	70.26	111.55	102.91	148.50	323.42	114.64	151.49	341.48

6.5 Quantity Control

The total post-development runoff for this site has been restricted to match the required release rates outlined in table 7. Reducing site flows will be achieved using flow restrictions and the existing onsite storage.

Area B1 conveys water via overland flow, landscape catch basins and pipes to a stormwater retention area in the grass area on the northwest side of the building, where the release rate to the existing stormwater infrastructure is controlled to 86.00 L/s in a 100-year event through the use of a 285mm diameter orifice plug inlet control device (ICD). Area B2 flows unrestricted along the property lines.

In an event that exceeds the 100-year storm event (calculated using the 20% stress test), or in the event of a sewer blockage, emergency overland flow routes have been identified to convey water overland to the subdivision stormwater infrastructure. Area B1 will spill to the existing stormwater pond with the highest spill elevation being 95.04 from the CB catchment areas, providing 1.31m of freeboard from the 96.35 finished floor elevation. Refer to Drawing C101 for locations of overland flow route.

The 100-year ponding elevation for the on-site stormwater storage area is designed to closely match the hydraulic grade line (HGL) of Pond 3, which is 94.49 m as established in the Kanata West Master Servicing Study (the Taggart-Loblaws Subdivision report has estimated HGL less than this of 94.28 and 94.26 for their two design storms). This approach sees that the site's stormwater management system functions in coordination with the downstream infrastructure and that ponding levels are compatible with the HGL of the receiving pond as our restriction occurs above the specified HGL.

The geotechnical investigation confirms that the subsurface profile at the site is dominated by silty clay and silt soils. These soil types are known for their poor hydraulic properties, which severely limit their ability to support infiltration-type low impact development (LID) practices. As per the City specification, infiltration-type LID practices are not permitted in clay or silt soils, nor in soils that have a dual classification involving silt or clay. Therefore, we will not be implementing infiltration measures across the site due to these geotechnical constraints. However, to promote drainage and manage surface water in the storage area on the north side of the site, we will be installing perforated subdrains per civil drawing C102. These subdrains will help improve site drainage even though direct infiltration into the underlying clay and silt soils is not feasible. Refer to Geotechnical Report.

See Appendix E for SWM calculations.

6.6 Quality Control

Quality control for stormwater runoff is not required for the proposed development at 295 Roger Neilson Way. This is in accordance with the Kanata West Master Servicing Study (KWMSS) and the Taggart-Loblaws Subdivision Stormwater Management Facility Design Brief, which specify that downstream Stormwater Management Pond 3 (SWMP 3, facility SWF-1261) is designed to provide enhanced water quality treatment. The pond and associated infrastructure achieve an 80% Total Suspended Solids (TSS) removal from the minor system, thereby fulfilling the

City of Ottawa's quality control requirements for this site. As a result, on-site water quality treatment measures are not necessary for this development.

7.0 EROSION AND SEDIMENT CONTROL

7.1 Temporary Measures

Before construction begins, temporary silt fence and straw bale/rock flow check dams will be installed at all natural runoff outlets from the property. It is crucial that these controls be maintained throughout construction and inspection of erosion and sediment control will be facilitated by the Contractor or Contract Administration staff throughout the construction period.

Silt fences will be installed where shown in the final engineering plans, specifically along the downstream property limits. The Contractor, at their discretion, or at the instruction of the Municipality, Conservation Authority, or Contract Administrator, shall increase the quantity of erosion and sediment controls on-site to ensure that the site is operating as intended and no additional sediment finds its way off site. The check dams and silt fences shall be inspected weekly and after rain events. Care shall be taken to properly remove sediment from the fences and check dams as required. Inlet sediment control devices (ISCD) are to be placed under the grates of all existing catch basins and manholes surrounding the site that will come in contact with flows during construction. Any new structures will have an ISCD installed immediately upon installation. The measures for the existing/proposed structures are to be removed only after all areas have been paved. Care shall be taken at the removal stage to ensure that any sediment that has accumulated is properly handled and disposed of. Removal of all silt fences and ISCDs prior to removal of the sediments shall not be permitted.

Although not anticipated, work through the winter months shall be closely monitored for erosion along sloped areas. Should erosion be noted, the Contractor shall be alerted and shall take all necessary steps to rectify the problematic area(s). Should the Contractor's efforts fail at remediating the eroded areas, the Contractor shall contact the Municipality and/or Conservation Authority to review the site conditions and determine the appropriate course of action. As the ground begins to thaw, the Contractor shall place silt fencing at all required locations as soon as the ground conditions warrant. Please see the Site Grading and Sediment & Erosion Control Plan for additional details regarding the temporary measures to be installed and their appropriate OPSD references.

7.2 Permanent Measures

Rip-rap will be placed at all locations that have the potential for concentrated flow. It is crucial that the Contractor ensure that the geotextile is keyed in properly to ensure runoff does not undermine the rip rapped area. Additional rip-rap is to be placed at erosion prone locations as identified by the Contractor / Contract Administrator / Municipality or Conservation Authority.

It is expected that the Contractor will promptly ensure that all disturbed areas receive topsoil and seed/sod and that grass be established as soon as possible. Any areas of excess fill shall be removed or levelled as soon as

possible and must be located a sufficient distance from any watercourse to ensure that no sediment is washed out into the watercourse. As the vegetation growth within the site provides a key component to the control of sediment for the site, it must be properly maintained once established. Once the construction is complete, it will be up to the landowner to maintain the vegetation and ensure that the vegetation is not overgrown or impeded by foreign objects.

8.0 SUMMARY

- Mixed use office/industrial building is proposed at 295 Roger Neilson Way in Ottawa, Ontario.
- A 150mm watermain service is proposed to service the site, connecting to a stub already provided to service the site connecting to the 200mm watermain within the adjacent easement.
- A 100mm sanitary service lateral will be connected to the existing 100mm sanitary sewer stub from Roger Neilson Way.
- Storage for the 2-, 5- and 100-year storm events will be provided in an above-ground storage areas.
- Water quality control will be provided via the pond as designed as part of the Kanata West Servicing Study and the Taggart-Loblaws Design Brief.

9.0 RECOMMENDATION

Based on the information presented in this report, we recommend that the Municipality approve this Servicing Report in support of the proposed building.

The report is respectfully being submitted for approval.

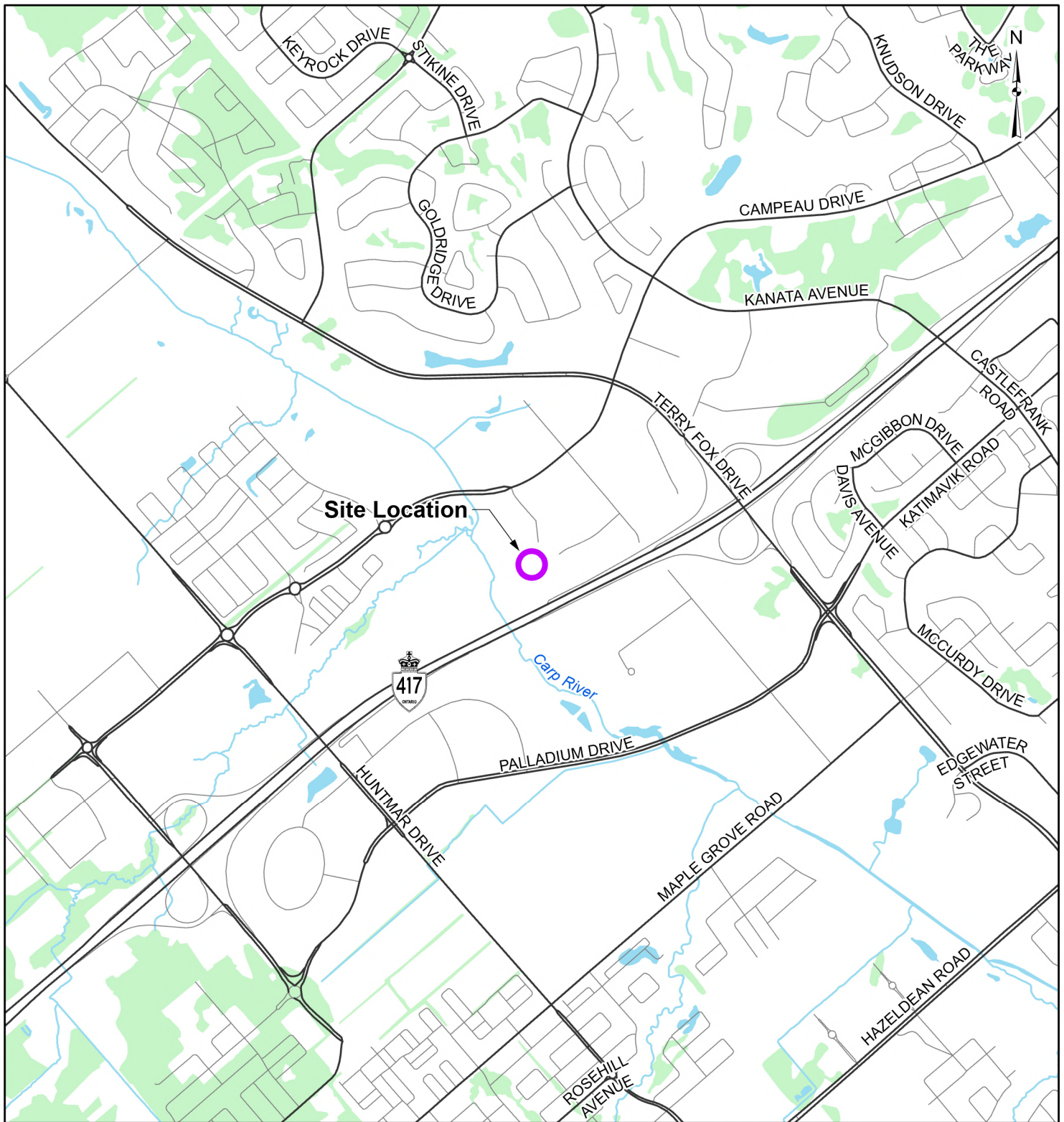
Regards,

Egis Canada Ltd.



Robbie Pickard, P. Eng
Project Engineer, Land Development
613-808-3427

APPENDIX A KEY PLAN



LEGEND

- Site Location
- Local Road
- Major Road
- ~ Watercourse
- Waterbody
- Wooded Area

REFERENCE

GIS data provided by the Ontario Ministry of Natural Resources and Forestry, 2026.

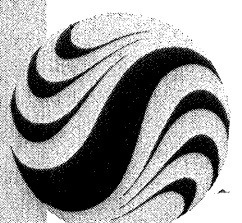
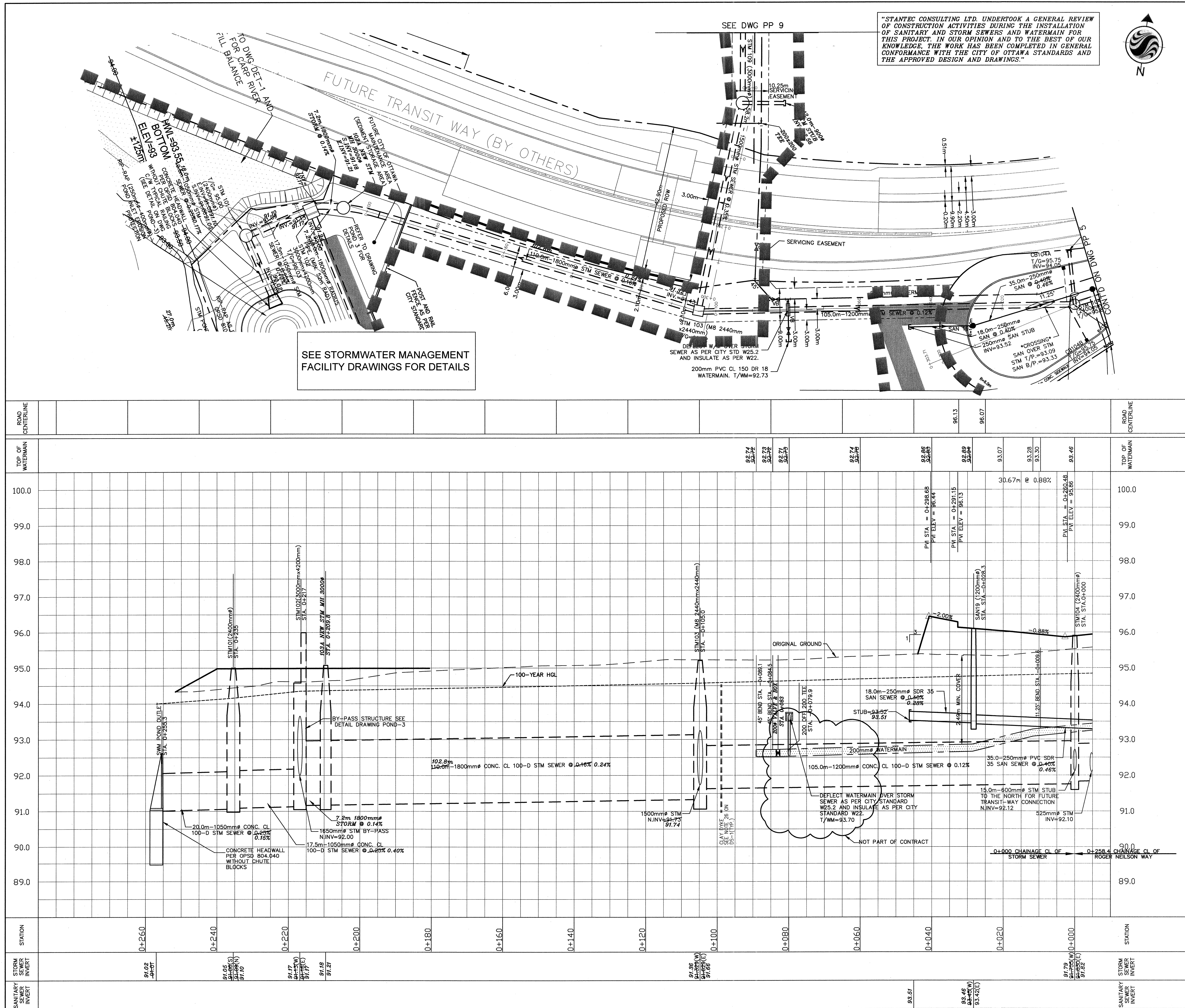


CLIENT:		PAT HUNTER	
PROJECT:		295 ROGER NEILSON WAY	
TITLE:		SITE LOCATION	
 750 Palladium Dr, Suite 310, Kanata, ON K2V 1C7 Tel: 613-836-2184 Fax: 613-836-3742		PROJECT NO: CCO-26-1863	FIGURE:
		Date	Mar., 05, 2026
		GIS	AH
		Checked By	RP
			1

APPENDIX B BACKGROUND DOCUMENTS

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5/11/2015 6:51:20 AM BY: UAK, GBOE

ORIGINAL SHEET: ARCH FULL BLEED D (36.00 X 24.00 INCHES)



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Legend

- PROPOSED WATERMAIN
- PROPOSED VALVE BOX
- PROPOSED FIRE HYDRANT
- PROPOSED SANITARY SEWER
- PROPOSED STORM SEWER
- PROPOSED CATCHBASIN MANHOLE
- PROPOSED CATCHBASIN
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING WATERMAIN
- EXISTING CATCHBASIN

Notes

REFER TO DWG DS-1 FOR DETAILED NOTES

19	AS RECORDED	GBU	CT	15.04.27	
16	REVISED FOR TENDER PHASE 1	WAI	TJW	14.08.19	
17	REVISED STORM SEWER ON DIDSBOURY ROAD	SGG	TJW	13.11.14	
16	ISSUED FOR TENDER	SGG	TJW	13.09.03	
15	REVISED TRANSITWAY SEWER AND ALIGNMENT	MJS	TJW	13.06.03	
14	REVISED FOR MOE SUBMISSION	AML/SGG	TJW	13.05.15	
13	REVISED AS PER THIRD PARTY COMMENTS	AML/DCT	TJW	13.01.17	
12	REVISED AS PER CITY COMMENTS	DCT/GBU	TJW	12.12.17	
11	REVISED BRANCH VALVE CHAMBER DETAILS	DCT	TJW	12.12.06	
10	REVISED BRANCH VALVE CHAMBER DETAILS	DCT	TJW	12.11.15	
9	REVISED PER IBI DESIGN	DCT	TJW	12.11.05	
8	REVISED PER TEMPORARY ACCESS ROAD	DCT	TJW	12.10.30	
7	REVISED PER TEMPORARY SAN CONNECTION	DCT	TJW	12.10.03	
6	REVISED AS PER CITY COMMENTS	DCT	TJW	12.06.22	
5	REVISED AS PER CITY COMMENTS	GBU	TJW	12.04.27	
4	RESUBMISSION TO CITY (2011)	NPC	TW	11.11.11	
3	ADDRESS CITY AND PEER REVIEW COMMENTS	ADF	RMW	07.12.12	
2	REVISION TO PHASING	ADF	RMW	07.06.27	
1	ISSUED FOR CITY REVIEW	ADF	RMW	06.12.20	
Revision		By	Appd.	YY.MM.DD	
File Name:	160400402C-PP06-STREET_2	ADF	RMW	ADF	06.12.11
		Dwn.	Chkd.	Dsgn.	YY.MM.DD

Seal

RECORD
DRAWING
DATE APRIL27/15

Client/Project

TAGGART - LOBLAWS SUBDIVISION

KANATA WEST

Ottawa ON Canada

Title

STORM SEWER OUTLET
PLAN AND PROFILE
STA. -0+260 TO STA. 0+000

Project No.

160400402

Drawing No.

PP-4

Scale

1:500H

1:500V

Sheet

Revision

8 of 24

19

16215

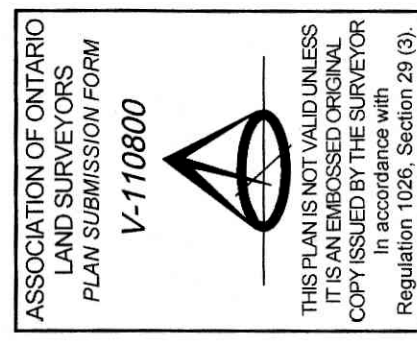
TOPOGRAPHIC PLAN OF SURVEY OF
BLOCK 3
REGISTERED PLAN 4M-1540
CITY OF OTTAWA
Surveyed by Annis, O'Sullivan, Vollebakk Ltd.

Scale 1 : 300
12 6 3 0 6 12 Metres
Metric
DISTANCES AND COORDINATES SHOWN ON THIS PLAN
ARE IN METRES AND CAN BE CONVERTED TO FEET BY
DIVIDING BY 0.3048.

Surveyor's Certificate

I CERTIFY THAT:
1. This survey and plan are correct and in accordance with the Surveyors Act, the Surveyors Act and the regulations made under them.
2. The survey was completed on the 10th day of July, 2025.

July 14, 2025
Date
Jamil Leslie
Ontario Land Surveyor
Plan revised to add trees on November 28, 2025.



Bearings are grid, derived from Can-Net 2016 Real Time Network GPS observations, MTN Zone 9 (16 30 West Longitude) NAD-83 (original).

ELEVATION NOTES

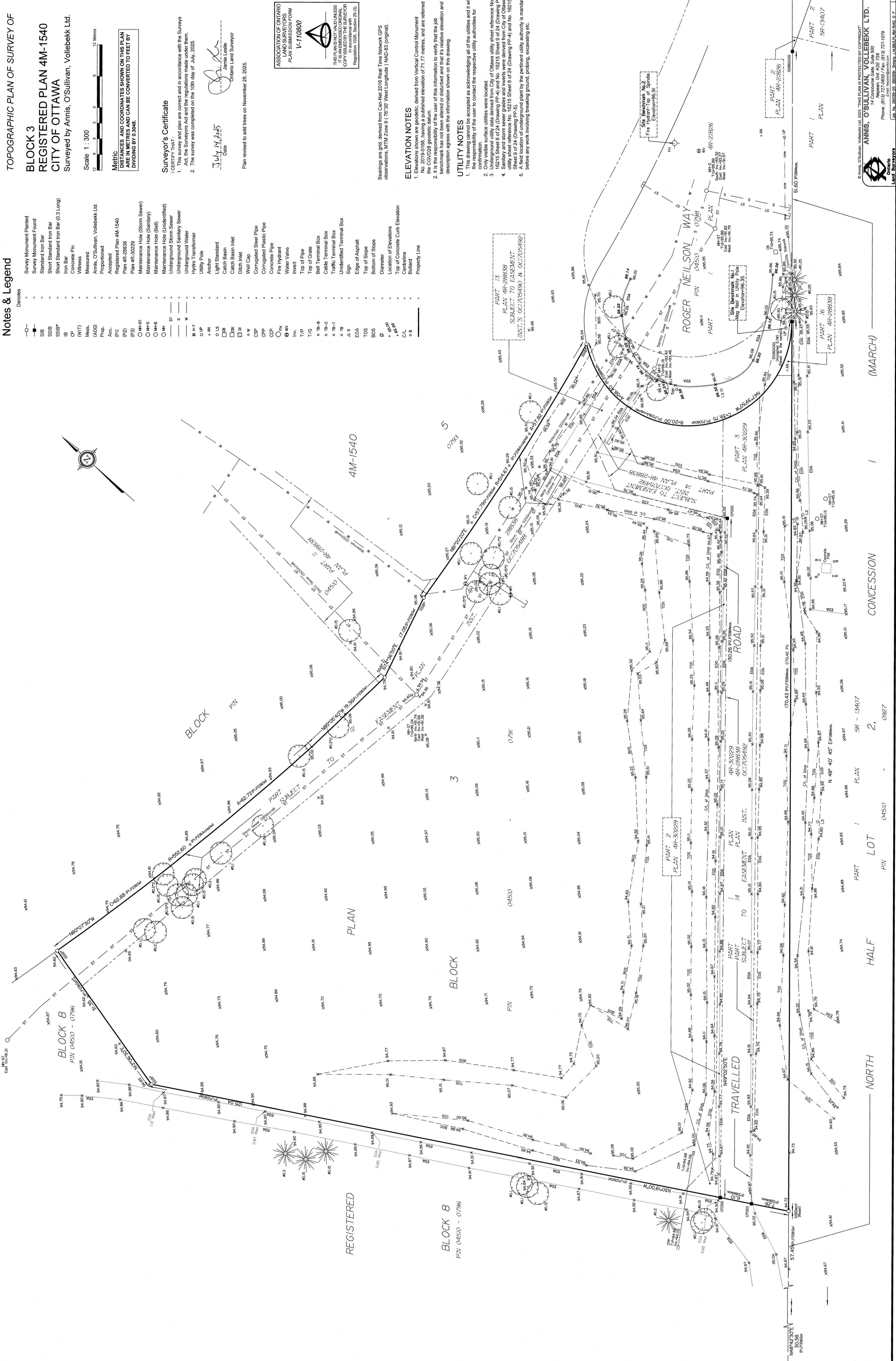
1. Elevation shown are geodetic, derived from Vertical Control Monument (VCM) data derived from City of Ottawa utility sheet reference No. 16215 (Drawing PP-5).
2. It is the responsibility of the user of this information to verify that the job description agrees with the information shown on this drawing.

UTILITY NOTES

1. The user is responsible for contacting all of the utilities and it will be the responsibility of the user to contact the respective utility authorities for confirmation.
2. Only visible surface utilities were located.
3. Underground utility data derived from City of Ottawa utility sheet reference No. 16215 (Drawing PP-5).
4. Sanitary and storm sewer grades and inverts were derived from City of Ottawa utility sheet reference No. 16215 (Drawing PP-5) and No. 16215 (Drawing PP-5).
5. A field location of underground plant by the pertinent utility authority is mandatory before any work involving breaking ground, probing, excavating etc.

Notes & Legend

- Denotes
- Survey Monument Planted
 - Survey Monument Found
 - Standard Iron Bar
 - Short Standard Iron Bar (0.31 long)
 - Iron Bar
 - Concrete Pin
 - Witness
 - Measured
 - Annis, O'Sullivan, Vollebakk Ltd.
 - Proportioned
 - Accepted
 - Registered Plan 4M-1540
 - Plan 4R-30229
 - Maintenance Hole (Storm Sewer)
 - Maintenance Hole (Sanitary)
 - Maintenance Hole (Bell)
 - Maintenance Hole (Underground)
 - Underground Sanitary Sewer
 - Underground Water
 - Hydro Transformer
 - Utility Pole
 - Anchor
 - Light Standard
 - Catch Basin
 - Catch Basin Inlet
 - Ditch Inlet
 - Well Cap
 - Corrugated Steel Pipe
 - Corrugated Plastic Pipe
 - Concrete Pipe
 - Fire Hydrant
 - Water Valve
 - Invert
 - Top of Pipe
 - Top of Gate
 - Bell Terminal Box
 - Cable Terminal Box
 - Traffic Terminal Box
 - Unidentified Terminal Box
 - Sign
 - Edge of Asphalt
 - Top of Slope
 - Bottom of Slope
 - Diameter
 - Location of Elevations
 - Top of Concrete Curb Elevation
 - Centreline
 - Bolland
 - Property Line



August 27, 2025

Bridgette Alchawa
Keeper Co.
Via email: bridgette@keeperco.ca

**Subject: Pre-Consultation: Meeting Feedback
Proposed Site Plan Control Application – 295 Roger Neilson Way**

Please find below information regarding next steps as well as consolidated comments from the above-noted pre-consultation meeting held on August 18, 2025.

Pre-Consultation Preliminary Assessment

Next Steps

1. A review of the proposal and materials submitted for the above-noted pre-consultation has been undertaken. For your next submission, please submit the required Application Form, together with the necessary studies and/or plans to planningcirculations@ottawa.ca, copy (cc: Amanda Davidson and John Bernier) to the file lead and planning support.
2. In your subsequent pre-consultation or application submission, please ensure that all comments or issues detailed herein are addressed. A detailed cover letter stating how each issue has been addressed is requested with the submission materials. Please coordinate the numbering of your responses within the cover letter with the comment number(s) herein.
3. Please note, if your development proposal changes significantly in scope, design, or density it is recommended that a subsequent pre-consultation application be submitted.

Supporting Information and Material Requirements

1. The attached **Study and Plan Identification List** outlines the information and material that has been identified, during this phase of pre-consultation, as either required (R) or advised (A) as part of a future complete application submission.
 - a. The required plans and studies must meet the City's Terms of Reference (ToR) and/or Guidelines, as available on Ottawa.ca. These ToR and Guidelines outline the specific requirements that must be met for each plan or study to be deemed adequate.

Consultation with Technical Agencies

1. You are encouraged to consult with technical agencies early in the development process and throughout the development of your project concept. A list of technical agencies and their contact information is enclosed.

Planning

Comments:

Policy

1. Within the City's Official Plans, the subject lands are located within the Suburban Transect pursuant to Schedule A. As per Schedule B5, the lands are designated Neighbourhood, and partially subject to the Evolving Neighbourhood Overlay on the east portion of the property.
 - a. Staff have concerns with the proposed warehouse use, as it relates to the Official Plan Direction for the area. The general intent of the Neighbourhood Designation is to accommodate a range of residential uses and non-residential built forms that are compatible with residential uses. Large-scale non-residential or industrial uses are generally directed to the Mixed Industrial or Industrial and Logistics Designations, and non-residential uses should generally be compatible with residential uses and not pose a risk of nuisance relating to noise or heavy equipment movement.
 - b. Considering the above, staff have concerns with the proposed warehouse within the Neighbourhood designation; however, staff acknowledge that a warehouse use is permitted as-of-right through the current zoning of the site, IP[1544]. It is encouraged that the site design take into consideration the intended direction of the Neighbourhood designation and provide adequate buffers, screening, and landscaping to complement a Neighbourhood context.
2. The lands are adjacent to a Development Zone of Influence pursuant to Annex 2 of the Official Plan, relating to the Future O-Train line. A Rail Proximity Study is required including an O Train Network Proximity Study, please refer to the Terms of Reference [Rail Proximity Study Terms of Reference](#)
3. The lands are subject to Area Specific Policy 2, Kanata West in Volume 2C of the Official Plan. The Area-Specific Policy and associated provisions can be found here: [Volume 2C – Area-Specific Policies](#)
 - a. As per Area Specific Policy 2, Landowners in the Kanata West policy area are required to enter into private agreements to share the costs of the major infrastructure projects and studies and plans for the development of the Kanata West Area. As a condition of site plan approval, notification is required Trustee of the Kanata West Owners Group Inc. that the owner is

party to the agreements and has paid its share of any costs pursuant to the agreements.

4. The site is subject to the Kanata West Concept Plan. Within the Concept Plan, the lands are designated as Prestige Business Park. The Kanata West Concept Plan can be found here: [Kanata West Concept Plan | City of Ottawa](#)
 - a. The intended character of the Prestige Business Park area is low profile building form and generous landscaping, and a linked open space network to allow individuals to walk or cycle to the Prestige Business Park.
 - b. Staff have concerns that the current proposal provides limited landscape area and may not meet the direction for generous landscaping as outlined in the Kanata West Concept Plan. Please review opportunities for additional landscaping to conform with the direction of the Kanata West Concept Plan.
 - c. In accordance with Section 3.5 of the Concept Plan and the direction for a linked open space network, a walkway connection from Roger Neilson to the pathway west of the site should be provided. Please review options for a pathway connection.
5. Section 4.8.2 of the Official Plan outlines the provisions pertaining to tree planting, including that development shall preserve and provide space for mature, healthy trees and accommodate space for tree planting.
 - a. Staff have concerns that the amount of hard surface proposed will impact the ability to plant trees. Please review opportunities to reduce hard surface and provide additional soft landscaping area on site to provide area for trees and other plantings, and site design options that provide more opportunity for tree planting.
 - i. Consider whether the drive aisle widths or paved area north of the proposed building may be reduced to provide additional soft landscaping.
 - b. Additional tree planting and landscaping is encouraged along the north and west limits of the site, to enhance the pedestrian experience around the multi-use pathway
 - c. Note that tree planting within the easement would require permission from the easement holder. Please review opportunities for tree planting outside of the City easements on the site.
6. Section 4.1.2 states that proponents of development shall provide an adequate number of bicycle parking facilities. Further, Policy 9 (b) of Section 4.1.2 identifies that "Short-term bicycle parking facilities shall be highly visible, well-lit, near building entrances and where appropriate, sheltered."

- a. Staff have concerns with the proposed bicycle parking location, which would require crossing a drive aisle to access the building. Please relocate the bicycle parking closer to the building entrance, and on the same side as the building access.
7. The subject lands are indicated as having Archaeological Potential. An Archaeological Assessment is required as part of the submission, in accordance with Section 4.5 of the Official Plan.

Zoning

8. The subject site is zoned IP[1544] (Business Park Industrial, Urban Exception 1544)
 - a. The intent of the IP Business Park Industrial Zone is to accommodate a range of mixed office-type uses, and low impact, light industrial uses in a business park setting.
 - b. The IP zone permits both office and warehouse uses.
9. Urban Exception 1544 includes the following site-specific provisions.
 - a. minimum lot area is 2,000 m²
 - b. minimum lot width is 15 m
 - c. minimum corner side yard, interior side yard and rear yard setback is 6 m
 - d. the following uses are prohibited
 - i. animal care establishment
 - ii. animal hospital
 - iii. convenience store
 - iv. instructional facility
 - v. restaurant, full service
 - vi. restaurant, take-out
10. Additional detail on the proposal, including dimensions of aisles, parking, gross floor area, waste management detail, landscape buffers, building height, etc., is required to provide specific comment on zoning conformity and/or any required relief from zoning provisions.

Landscaping

11. The IP zone requires the following:

- a. Minimum width of landscaping abutting a residential or institutional zone: 3 m; may be reduced to one metre if a 1.4 metre high opaque screen is provided
 - i. Please ensure a 3 meter buffer, or 1.4 meter opaque screen and minimum one metre buffer, is provided along the south property line abutting the institutional property. Additional landscaping is encouraged. Note that the installation of a wood fence or other opaque screen would require permission from the easement holder (City).

12. Please review Section 110 - Landscape Provisions for Parking Lots.

- a. A 1.5 meter landscape buffer is required around the parking lot, based on the number of provided spaces. Additionally, 15% area within the parking lot must be provided as soft landscaping. This may be provided with the landscape buffer, or with landscape islands and medians to achieve 15%.

13. Please note the Section 110 screening requirements for refuse collection if accessed via a parking lot. Refuse collection detail is required for review.

Parking Requirements

14. The subject site is located within Area C - Suburban, for the purpose of calculating parking requirements.

15. Gross floor area of the land uses will be required in order to undertake parking calculations. Please note the following requirements.

- a. Office, 2.4 per 100 m² of gross floor area
- b. Warehouse: 0.8 per 100 m² for the first 5000 m² of gross floor area, 0.4 per 100 m² above 5000 m² of gross floor area

16. Bicycle Parking is required. Please provide the gross floor area of the uses for bicycle parking calculations.

- a. Office, 1 per 250 m² of gross floor area
- b. Warehouse, 1 per 2000 m² of gross floor area
- c. Please relocate the bicycle parking to the building entrances in accordance with Policy 9 of Section 4.1.2 of the Official Plan. Consider replacing the current bicycle parking location with tree planting.

Other

17. The site is within the Ministry of Transportation (MTO) Permit Control Area.

Required Applications

18. Site Plan Control, Complex

- a. [Site Plan Control | City of Ottawa](#)

Feel free to contact Amanda Davidson, Planner, for any follow up questions.

Urban Design

Comments:

19. An Urban Design Brief is **not** required.

20. Drawings and studies are required as shown on the SPIL. Please follow the terms of references ([Planning application submission information and materials | City of Ottawa](#)) to prepare these drawings and studies. These include:

- a. Site Plan
- b. Landscape Plan
- c. Building Elevations

Preliminary Design Comments:

21. Staff are looking to see a safe pedestrian and vehicular connection from Roger Nielson Way to the existing SWM and MUP system at the edge of the site.

22. Staff are looking for a landscaped buffer along the SWM and MUP system.

23. Please reduce hardscape where possible to provide additional landscaping on-site.

24. Staff look forward to reviewing detailed Building Elevations in future.

Feel free to contact Nader Kadri, Urban Design, for any follow up questions.

Engineering

Comments:

25. The Stormwater Management Criteria is to be in accordance with the following reports:

- a. Kanata West Master Servicing Study (KWMSS), Stantec Consulting Ltd and IBI. Group, June 2006

- b. Taggart – Loblaws Subdivision, Kanata West, Servicing Report, Stantec Consulting Ltd., June 2013
- c. Taggart-Loblaws Subdivision Stormwater Management Facility Design Brief, Stantec Consulting Ltd, June 2013
- d. Quality control is not required given that SWMP 3 (SWF-1261) is designed to treat 80% TSS from the minor system.
- e. Water Balance: The subject site must provide infiltration measures in order to meet the 70mm/yr infiltration rate indicated in the KWMSS, and further the Taggart – Loblaws Subdivision Stormwater Management Facility Design Brief (June 2013). Detailed calculations will be required to demonstrate that this requirement can be achieved.

26. Sewer (Sanitary and Storm)

- a. The sanitary release rate is to be in accordance with the applicable reports referenced in the comments above.
- b. Connection to 1800mm dia. storm trunk sewer is not permissible. Storm service can either connect to the 1200mm dia. sewer (provided that the easement documents have been checked and is permissible to do so) or to manhole MHST 75161 on Roger Neilson Way.
- c. A storm sewer monitoring maintenance hole is required to be installed on private property as per City of Ottawa Sewer-Use By-Law 2003-514 (14) Monitoring Devices.
- d. Sanitary sewer monitoring maintenance hole is required to be installed on private property (on the private side of the property) as per City of Ottawa Sewer-Use By-Law 2003-514 (14) Monitoring Devices.
- e. Document how any foundation drainage system will be integrated into the servicing design and show the positive outlet on the plan. Foundation drainage is to be independently connected to sewer main unless being pumped with appropriate back up power, sufficient sized pump and back flow prevention. It is recommended that the foundation drainage system be drained by a sump pump connection to the storm sewer to minimize risk of basement flooding as it will provide the best protection from the uncontrolled sewer system compared to relying on the backwater valve.
- f. Please note that the minimum orifice dia. for a plug style ICD is 83mm and the minimum flow rate from a vortex ICD is 6 L/s in order to reduce the likelihood of plugging.

- g. Please provide a Pre-Development Drainage Area Plan to define the pre-development drainage areas/patterns. Existing drainage patterns shall be maintained and discussed as part of the proposed SWM solution.
- h. Post-development site grading shall match existing property line grades in order to minimize disruption to the adjacent residential properties. A topographical plan of survey shall be provided as part of the submission and a note provided on the plans.
- i. There must be at least 15cm of vertical clearance between the spill elevation and the ground elevation at the building envelope that is in proximity of the flow route or ponding area. The exception in this case would be at reverse sloped loading dock locations. At these locations, a minimum of 15cm of vertical clearance must be provided below loading dock openings. Ensure to provide discussion in report and ensure grading plan matches if applicable.
- j. Underground Storage: Please note that the Modified Rational Method for storage computation in the Sewer Design Guidelines was originally intended to be used for above ground storage (i.e., parking lot) where the change in head over the orifice varied from 1.5 m to 1.2 m (assuming a 1.2 m deep CB and a max ponding depth of 0.3 m). This change in head was small and hence the release rate fluctuated little, therefore there was no need to use an average release rate.

When underground storage is used, the release rate fluctuates from a maximum peak flow based on maximum head down to a release rate of zero. This difference is large and has a significant impact on storage requirements. We therefore require that an average release rate equal to 50% of the peak allowable rate shall be applied to estimate the required volume. Alternatively, the consultant may choose to use a submersible pump in the design to ensure a constant release rate.

- k. If there is a disagreement from the designer regarding the required storage, the City will require that the designer demonstrate their rationale utilizing dynamic modelling, that will then be reviewed by City modellers in the Water Resources Group.
- l. Provide information on type of underground storage system including product name and model, number of chambers, chamber configuration, confirm invert of chamber system, top of chamber system, required cover over system and details, interior bottom slope (for self-cleansing), chart of storage values, length, width and height, capacity, entry ports (maintenance) etc. UG storage to provide actual 2- and 100-year event storage requirements.

- m. In regard to all proposed UG storage, ground water levels (and in particular HGW levels) will need to be reviewed to ensure that the proposed system does not become surcharged and thereby ineffective.
- n. Modeling can be provided to ensure capacity for both storm and sanitary sewers for the proposed development by City's Water Distribution Dept. – Modeling Group, through PM and upon request.
- o. If rooftop control and storage is proposed as part of the SWM solutions sufficient details (Cl. 8.3.8.4) shall be discussed and document in the report and on the plans. Roof drains are to be connected downstream of any incorporated ICDs within the SWM system and not to the foundation drain system. Provide a Roof Drain Plan as part of the submission.
- p. Street catch basins are not to be located at any proposed entrances.
- q. Sewer connections to be made above the springline of the sewermain as per:
 - i. Std Dwg S11.1 for flexible main sewers – connections made using approved tee or wye fittings.
 - ii. Std Dwg S11 (For rigid main sewers) – lateral must be less than 50% the diameter of the sewermain,
 - iii. Std Dwg S11.2 (for rigid main sewers using bell end insert method) – for larger diameter laterals where manufactured inserts are not available; lateral must be less than 50% the diameter of the sewermain,
 - iv. Connections to manholes permitted when the connection is to rigid main sewers where the lateral exceeds 50% the diameter of the sewermain. – Connect obvert to obvert with the outlet pipe unless pipes are a similar size.
 - v. No submerged outlet connections.

27. Environmental Compliance Application

The development will be exempt from an ECA assuming it continues to meet the O.Reg 525/98 exemption criteria. O.Reg 525/98 ECA exemption criteria:

- i. is designed to service one lot or parcel of land;
- ii. discharges into a storm sewer that is not a combined sewer;
- iii. does not service industrial land or a structure located on industrial land; and
- iv. is not located on industrial land.

28. Water

Water Boundary condition requests must include the location of the service (map or plan with connection location(s) indicated) and the expected loads required by the proposed development, including calculations. Please provide the following information:

- i. Location of service
- ii. Type of development and the amount of fire flow required (as per FUS).
- iii. Average daily demand: ____ l/s.
- iv. Maximum daily demand: ____ l/s.
- v. Maximum hourly daily demand: ____ l/s.

Please review Technical Bulletin ISTB-2018-02, maximum fire flow hydrant capacity is provided in Section 3 Table 1 of Appendix I. A hydrant coverage figure shall be provided and demonstrate there is adequate fire protection for the proposal.

29. Environmental Site Assessments

- a. A Phase I ESA is required to be completed in accordance with Ontario Regulation 153/04 in support of this development proposal to determine the potential for site contamination. Depending on the Phase I recommendations a Phase II ESA may be required.
- b. The Phase I ESA shall provide all the required Environmental Source Information as required by O. Reg. 153/04. ERIS records are available to public at a reasonable cost and need to be included in the ESA report to comply with O.Reg. 153/04 and the Official Plan. The City will not be in a position to approve the Phase I ESA without the inclusion of the ERIS reports.

30. Snow Storage

Any portion of the subject property which is intended to be used for permanent or temporary snow storage shall be as shown on the approved site plan and grading plan. Snow storage shall not interfere with approved grading and drainage patterns or servicing. Snow storage areas shall be setback from the property lines, foundations, fencing or landscaping a minimum of 1.5m. Snow storage areas shall not occupy driveways, aisles, required parking spaces or any portion of a road allowance. If snow is to be removed from the site please indicate this on the plan(s).

31. Geotechnical

- a. The site is subject to water balance requirements through infiltration. All soil assumptions made in the servicing report should be supported by the geotechnical report.
- b. The geotechnical must speak to potential impacts (vibration, etc.) and mitigation measures to critical infrastructure such as the 1800mm and 1200mm dia. storm sewers.

32. Alteration of existing access road to pond

Please see comments from the City's Stormwater Operations Group:

- a. Removing the 90-degree bends would improve future access for heavy construction machinery, which is required every 10–15 years for pond clean-out operations.
- b. The easement width should remain at 6.1 m, as per the R-Plan. There should be no obstructions within the easements that could prevent access to construction machinery (e.g. curb, parking lane, etc). The legal requirements for realigning the easement will be the responsibility of the developer.
- c. The realigned access road would need to properly connect to the existing access road on the SWM block.
- d. Please be aware of the potential conflict with the existing light.
- e. The site grading will need a detailed review to confirm positive drainage and to ensure there are no impacts on the adjacent property.
- f. The proposed changes will be subject to review and approval of the City's Stormwater Operations Group.

33. General

- a. It is the sole responsibility of the consultant to investigate the location of existing underground utilities in the proposed servicing area and submit a request for locates to avoid conflict(s). The location of existing utilities and services shall be documented on an **Existing Conditions Plan**.
- b. Any easements on the subject site shall be identified and respected by any development proposal and shall adhere to the conditions identified in the easement agreement. A **legal survey plan** shall be provided, and all easements shall be shown on the engineering plans.
- c. All underground and above ground building footprints and permanent walls need to be shown on the plans to confirm that any permanent structure does

not extend either above or below into the existing property lines and sight triangles.

- d. **Construction approach** – Please contact the Right-of-Ways Permit Office TMconstruction@ottawa.ca early in the Site Plan process to determine the ability to construct site and copy File Lead on this request.

Feel free to contact Mohammed Fawzi, Senior Project Manager, for follow-up questions.

Transportation

Comments:

34. A Transportation Impact Assessment (TIA) is not required based upon the proposal submitted for this pre-application consultation. If the proposed use for the site changes, a revised Screening Form may be requested.
35. Complete and submit the [Transportation Demand Management Measures Checklist](#) and the [Transportation Demand Management Supportive Development Design and Infrastructure Checklist](#) in support of the application.
36. Ensure that the development proposal complies with the Right-of-Way protection requirements [Schedule C16 of the Official Plan](#). Any requests for exceptions to ROW protection requirements must be discussed with Transportation Planning and concurrence provided by Transportation Planning management.
37. [Transportation Master Plan](#) includes future LRT north of the property (as identified on the Priority Network). The *Kanata Light Rail Transit Planning and Environmental Assessment Study* was completed in 2019. Additional ROW may be required to accommodate the Kanata Light Rail Transit as per the EA. CAD files can be provided upon request. If ROW protection is identified as part of the EA, ROW conveyance would be required as part of this application and conveyance would be required prior to registration of the SP agreement.
38. As the proposed site is industrial and for general public use, AODA legislation applies.
- a. Ensure all crosswalks located internally on the site provide a TWSI at the depressed curb, per requirements of the Integrated Accessibility Standards Regulation under the AODA.
 - b. Clearly define accessible parking stalls and ensure they meet AODA standards (include an access aisle next to the parking stall and a pedestrian curb ramp at the end of the access aisle, as required).
 - c. Please consider using the City's [Accessibility Design Standards](#), which provide a summary of AODA requirements.

39. Construct a sidewalk along the Roger Nielson Way frontage, the sidewalk is to be continuous across access, as per City Specification 7.1.

40. On site plan:

- a. Ensure site access meets the City's [Private Approach Bylaw](#).
- b. Show all details of the roads abutting the site; include such items as pavement markings, signage, accesses, on-street parking, and/or sidewalks.
- c. Turning movement diagrams required for all accesses showing the largest vehicle to access/egress the site.
- d. Turning movement diagrams required for internal movements (loading areas, garbage).
- e. Show all curb radii measurements; ensure that all curb radii are reduced as much as possible and fall within TAC guidelines (Figure 8.5.1).
- f. Show dimensions for site elements (i.e. lane/aisle widths, access width and throat length, parking stalls, sidewalks, pedestrian pathways, etc.)

Feel free to contact Josiane Gervais, Transportation Project Manager, for follow-up questions.

Environment

Comments:

41. The site is adjacent to the Carp River corridor however since there is an existing stormwater pond between the development and the top of bank of the watercourse and the distance to the top of bank from the development parcel is greater than 30 m, an EIS will not be triggered.

42. Bird-Safe Design Guidelines - Please review and incorporate bird safe design elements, where feasible. Some of the risk factors include glass and related design traps such as corner glass and fly-through conditions, ventilation grates and open pipes, landscaping, light pollution. More guidance and solutions are available in the guidelines which can be found here:
https://documents.ottawa.ca/sites/documents/files/birdsafedesign_guidelines_en.pdf

43. Please consider if there are features that can be added reduce the urban heat island effect (see OP 10.3). For example, this impact can be reduced by adding large canopy trees, green rooves or vegetation walls, or incorporating building with low heat absorbing materials.

44. Please consider using native species in the landscaping and given the close location to the Carp River consider providing “pollinator” friendly plantings instead of typical daylilies, examples include black-eye Susan’s, purple cone flowers, bee balm.

Feel free to contact Matthew Hayley, Environmental Planner, for follow-up questions.

Forestry

Comments:

45. A Tree Conservation Report is required, in accordance with Schedule E of the Tree Protection By-law. Ownership of all trees on the subject site and with Critical Root Zones extending onto the subject site must be determined, and plans must show how they will be protected from proposed works.
46. There are several existing trees in the ROW at the Roger Neilson cul-de-sac which must be protected and/or replaced through the design of this site.
47. A Landscape Plan is required with this application and must address all requirements within the Landscape Plan Terms of Reference https://documents.ottawa.ca/sites/documents/files/landscape_for_en.pdf , including the projection of canopy cover toward the target of 40%, and confirmation of adequate soil volumes to support any proposed trees.
48. The Official Plan section 4.8.2, sub 3 provides the following direction on tree planting related to site plans:
- a. a) Preserve and provide space for mature, healthy trees on private and public property, including the provision of adequate volumes of high-quality soil as recommended by a Landscape Architect;
 - b. b) On urban properties subject to site plan control or community planning permits, development shall create tree planting areas within the site and in the adjacent boulevard, as applicable, that meet the soil volume requirements in any applicable City standards or best management practices or in accordance with the recommendation of a Landscape Architect;
49. The site abuts a City stormwater pond with a MUP on the west side as well as a City easement to the south. Adequate setbacks must be provided to allow for tree planting in these areas to improve the canopy cover of the site, provide screening from the adjacent uses, and to improve the experience of MUP users. Consider opportunities to reduce the amount of paving on site to achieve this goal.
50. Bike parking should not take the place of landscaping. Consider placing the bike parking in some of the proposed paved areas closer to the building.

51. As a best management practice, parking lots should provide 1 tree for every 5 parking spaces to reduce the urban heat island effect of the paved area.
52. The Official Plan designates Highway 417 as a Scenic Capital Entry Route (Section 4.6.2 - 4 & 5), providing direction to maintain or enhance the views from these roadways in part through provision of landscaping and trees as screening along the property line facing the ROW. Provision of a landscape buffer along the southern property line to plant trees for screening should be prioritized.

Feel free to contact Nancy Young, Forester, for follow-up questions.

Parkland

Comments:

53. It would appear that parkland dedication for the lot at the rate of 2% was provided through subdivision agreement OC-1689112 0 registered in 2013. File D07-16-09-0013 (extension), original D07-16-04-0015. No further site plans agreements have been registered at the address. There are no further parkland dedication requirements for the first commercial or industrial use of the site. Subsequent approvals or a change in use of the site may result in the requirement for additional parkland dedication.

Feel free to contact Anissa McAlpine, Parks Planner, for follow-up questions.

Other

54. The High Performance Development Standard (HPDS) is a collection of voluntary and required standards that raise the performance of new building projects to achieve sustainable and resilient design and will be applicable to Site Plan Control and Plan of Subdivision applications.
 - a. The HPDS was passed by Council on April 13, 2022, but is not in effect at this time, as Council has referred the 2023 HPDS Update Report back to staff with the direction to bring forward an updated report to Committee at a later date. The timing of an updated report to Committee is unknown at this time, and updates will be shared when they are available.
 - b. Please refer to the HPDS information at ottawa.ca/HPDS for more information.

Submission Requirements and Fees

1. Site Plan Control, Complex
 - a. Additional information regarding fees related to planning applications can be found [here](#).



2. The attached **Study and Plan Identification List** outlines the information and material that has been identified as either required (R) or advised (A) as part of a future complete application submission.
 - a. The required plans and studies must meet the City's Terms of Reference (ToR) and/or Guidelines, as available on Ottawa.ca. These ToR and Guidelines outline the specific requirements that must be met for each plan or study to be deemed adequate.
3. All of the above comments or issues should be addressed to ensure the effectiveness of the application submission review.

Should there be any questions, please do not hesitate to contact myself or the contact identified for the above areas / disciplines.

Yours Truly,
Amanda Davidson, Planner I

Encl. Study and Plan Identification List, List of Technical Agencies, Supplementary Development Information

c.c. John Bernier, Planner II
Mohammed Fawzi, Senior Project Manager, Infrastructure Approvals
Julie Candow, Project Manager, Infrastructure Approvals
Josiane Gervais, Project Manager, Transportation
Nader Kadri, Urban Design
Nancy Young, Planning Forester
Matthew Hayley, Environmental Planner
Anissa McAlpine, Parks Planner



Re: Roger Neilson - Water Calc information

From Chris Deimling <chris@deimlingarchitecture.com>

Date Thu 7/30/2026 2:55 PM

To PICKARD Robert <Robert.PICKARD@egis-group.com>

Cc jay@deimlingarchitecture.com <jay@deimlingarchitecture.com>; MELANSON Curtis <Curtis.MELANSON@egis-group.com>; Jordan Fairhead <jordan@deimlingarchitecture.com>

/!\ External email - Please be careful with links and attachments /!\ Courriel externe - Merci d'être prudent avec les liens et les pièces jointes /!\

Hi Robert,

With respect to item No. 25 of the Site Plan Control Delegated Authority Report, this email is to confirm that the plans for a proposed single storey pre-engineered Warehouse Building, to be located at 295 Roger Neilson Way, which will be submitted for building permit issuance shortly, will incorporate any and all requirements of the Fire Underwriters Survey (FUS) 2020, or as amended, to achieve the low construction coefficient of 0.8.

The proposed building will be equipped with a fully automatic supervised sprinkler system and the construction will of noncombustible fire-resistive materials.

We trust this is acceptable.

Best Regards,

Chris Deimling
President



Office: 613-697-6113 Ext. 1
Cell: 613-979-6113

On Tue, Jul 28, 2026 at 12:04 PM PICKARD Robert <Robert.PICKARD@egis-group.com> wrote:
Hi Chris,

An email confirming will work per the comment.

Please provide a memo or email confirmation from the building architect confirming that the building will have a C factor of 0.8 and will have a supervised sprinkler system. Please have the memo or email appended to the report.

Thanks,



APPENDIX C WATERMAIN CALCULATIONS

CO-26-1863 - 295 Roger Neilson - Water Demands

Project:	295 Roger Neilson
Project No.:	CO-26-1863
Designed By:	RP
Checked By:	CM
Date:	March 5, 2026
Site Area:	1.38 gross ha

Commercial/Office	488 m2
Industrial - Light	2764 m2

AVERAGE DAILY DEMAND

DEMAND TYPE		AMOUNT	UNITS
	Residential	280	L/c/d
	Industrial - Light	35,000	L/gross ha/d
	Industrial - Heavy	55,000	L/gross ha/d
	Shopping Centres	2,500	L/(1000m ² /d)
	Hospital	900	L/(bed/day)
	Schools	70	L/(Student/d)
	Trailer Park with no Hook-Ups	340	L/(space/d)
	Trailer Park with Hook-Ups	800	L/(space/d)
	Campgrounds	225	L/(campsite/d)
	Mobile Home Parks	1,000	L/(Space/d)
	Motels	150	L/(bed-space/d)
	Hotels	225	L/(bed-space/d)
	Tourist Commercial	28,000	L/gross ha/d
	Other Commercial	28,000	L/gross ha/d
AVERAGE DAILY DEMAND	Residential	0.00	L/s
	Commercial/Industrial/Institutional	0.13	L/s

MAXIMUM DAILY DEMAND

DEMAND TYPE		AMOUNT		UNITS
	Residential	9.5	x avg. day	L/c/d
	Industrial	1.5	x avg. day	L/gross ha/d
	Commercial	1.5	x avg. day	L/gross ha/d
	Institutional	1.5	x avg. day	L/gross ha/d
MAXIMUM DAILY DEMAND	Residential	0.00	L/s	
	Commercial/Industrial/Institutional	0.19	L/s	

MAXIMUM HOUR DEMAND

DEMAND TYPE		AMOUNT		UNITS
	Residential	14.3	x avg. day	L/c/d
	Industrial	1.8	x max. day	L/gross ha/d
	Commercial	1.8	x max. day	L/gross ha/d
	Institutional	1.8	x max. day	L/gross ha/d
MAXIMUM HOUR DEMAND	Residential	0.00	L/s	
	Commercial/Industrial/Institutional	0.35	L/s	

WATER DEMAND DESIGN FLOWS PER UNIT COUNT
CITY OF OTTAWA - WATER DISTRIBUTION GUIDELINES, JULY 2010

AVERAGE DAILY DEMAND	0.13	L/s
MAXIMUM DAILY DEMAND	0.19	L/s
MAXIMUM HOUR DEMAND	0.35	L/s

CO-26-1863 - 295 Roger Neilson - OBC Fire Calculations

Project:	295 Roger Neilson
Project No.:	CO-26-1863
Designed By:	RP
Checked By:	CM
Date:	March 5, 2026

Ontario 2006 Building Code Compendium (Div. B - Part 3)

Water Supply for Fire-Fighting - Medium Hazard Industrial

Building is classified as Group : F2 (from table 3.2.2.55)
 Building is of noncombustible construction with fire separations and fire-resistance ratings provided in accordance with subsections 3.2.2., including loadbearing walls, columns and arches

From Div. B A-3.2.5.7. of the Ontario Building Code - 3. Building On-Site Water Supply:

$$(a) Q = K \times V \times Stot$$

where:

Q = minimum supply of water in litres

K = water supply coefficient from Table 1

V = total building volume in cubic metres

Stot = total of spatial coefficient values from the property line exposures on all sides as obtained from the formula:

$$Stot = 1.0 + [S_{side1} + S_{side2} + S_{side3} + \dots \text{etc.}]$$

K	17	(from Table 1 pg A-31)
V	20,488	(Total building volume in m³.)
Stot	1.0	(From figure 1 pg A-32)
Q =	348,296.00 L	

From Table 2: Required Minimum Water Supply Flow Rate (L/s)

9,000 L/min if Q > 270,000 L
 2378 gpm

Therefore, FUS to be used

			From Figure 1 (A-32)
Snorth	100 m	0.0	
Seast	100 m	0.0	
Ssouth	100 m	0.0	
Swest	100 m	0.0	

*approximate distances

CO-26-1863 - 295 Roger Neilson - Fire Underwriters Survey

Project:	295 Roger Neilson
Project No.:	CO-26-1863
Designed By:	RP
Checked By:	CM
Date:	March 5, 2026

From the Fire Underwriters Survey (2020)

From Part II – Guide for Determination of Required Fire Flow Copyright I.S.O.:
City of Ottawa Technical Bulletin ISTB-2018-02 Applied Where Applicable

A. BASE REQUIREMENT (Rounded to the nearest 1000 L/min)

F = 220 x C x v^A Where:

F = Required fire flow in liters per minute

C = Coefficient related to the type of construction.

A = The total floor area in square meters (including all storey's, but excluding basements at least 50 percent below grade) in the building being considered.

Construction Type Non-Combustible Construction

C

0.8

A 3,252.0 m²

Total Floor Area (per the 2020 FUS Page 20 - Total Effective Area) 3,252.0 m²

*Unprotected Vertical Openings

Calculated Fire Flow

10,036.6 L/min

10,000.0 L/min

B. REDUCTION FOR OCCUPANCY TYPE (No Rounding)

From Page 24 of the Fire Underwriters Survey:

Combustible

0%

Fire Flow

10,000.0 L/min

C. REDUCTION FOR SPRINKLER TYPE (No Rounding)

Standard Water Supply Sprinklered

40%

Reduction

6,000.0 L/min

D. INCREASE FOR EXPOSURE (No Rounding)

	Separation Distance (m)	Cons. of Exposed Wall	Length Exposed Adjacent Wall (m)	Height (Stories)	Length-Height Factor	
Exposure 1	Over 30 m	Ordinary - Mass Timber (Unprotected)	N/A	1	N/A	0%
Exposure 2	Over 30 m	Ordinary - Mass Timber (Unprotected)	N/A	1	N/A	0%
Exposure 3	Over 30 m	Ordinary - Mass Timber (Unprotected)	N/A	1	N/A	0%
Exposure 4	Over 30 m	Ordinary - Mass Timber (Unprotected)	N/A	1	N/A	0%
% Increase*						0%

Increase*

0.0 L/min

E. Total Fire Flow (Rounded to the Nearest 1000 L/min)

Fire Flow

6,000.0 L/min

Fire Flow Required**

6,000.0 L/min

*In accordance with Part II, Section 4, the Increase for separation distance is not to exceed 75%

**In accordance with Section 4 the Fire flow is not to exceed 45,000 L/min or be less than 2,000 L/min

CO-26-1863 - 295 Roger Neilson - Hydrant Availability

Project:	295 Roger Neilson
Project No.:	CO-26-1863
Designed By:	RP
Checked By:	CM
Date:	March 5, 2026

Boundary Conditions Unit Conversion

AVAILABLE FIRE FLOWS BASED ON HYDRANT SPACING

BASED ON CITY OF OTTAWA TECHNICAL BULLITEN ISTB-2018-02

Location	Municipal or Private	Colour or Class (If Known)	295 Roger Neilson Way	
			¹ Distance (m)	² Fire Flow Contribution (L/min)
Roger Neilson Way	Municipal	Blue (assume class AA)	108	3,800
Proposed On-site	Private	Blue (assume class AA)	5	5,700
Total (L/min)				9,500
FUS RFF in L/min or (L/sec)				6,000 (100)
Notes:				
¹ Distance is measured along a road or fire route to nearest face of building.				
² Fire Flow Contribution based on Table 1 of Appendix I, ISTB-2018-02				

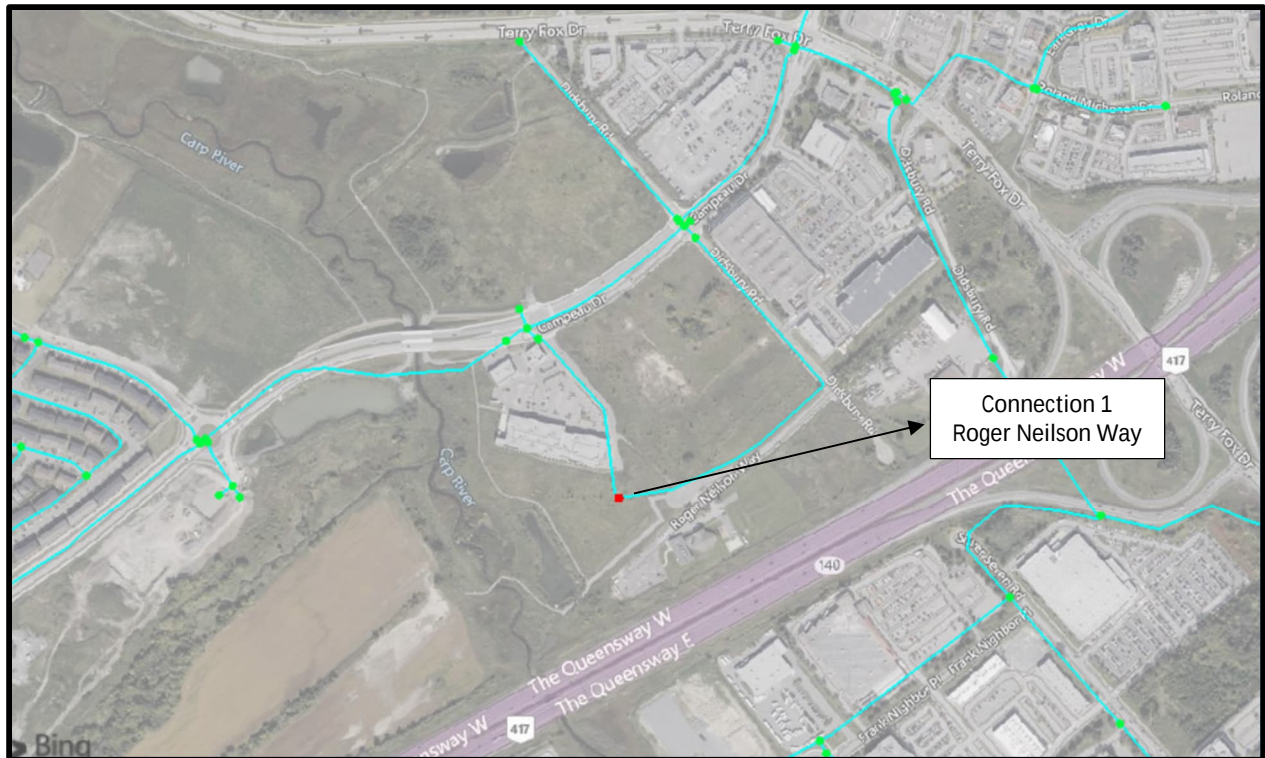


Boundary Conditions 295 Roger Neilson Way – 2026

Provided Information

Scenario	Demand	
	L/min	Total L/s
Average Daily Demand	7.8	0.13
Maximum Daily Demand	11.4	0.19
Peak Hour	21.0	0.35
Fire Flow Demand #2	6,000.0	100.00

Location



Results

Connection 1 - 295 Roger Neilson Way

Demand Scenario	Head (m)	Pressure¹ (psi)
Maximum HGL	162.1	91.1
Peak Hour	155.3	81.5
Max Day plus Fire Flow #1	149.9	73.8

¹ Ground Elevation = 98.0 m

Notes

1. As per the Ontario Building Code in areas that may be occupied, the static pressure at any fixture shall not exceed 552 kPa (80 psi.) Pressure control measures to be considered are as follows, in order of preference:
 - If possible, systems to be designed to residual pressures of 345 to 552 kPa (50 to 80 psi) in all occupied areas outside of the public right-of-way without special pressure control equipment.
 - Pressure reducing valves to be installed immediately downstream of the isolation valve in the home/ building, located downstream of the meter so it is owner maintained.

Disclaimer

The boundary condition information is based on current operation of the city water distribution system. The computer model simulation is based on the best information available at the time. The operation of the water distribution system can change on a regular basis, resulting in a variation in boundary conditions. The physical properties of watermains deteriorate over time, as such must be assumed in the absence of actual field test data. The variation in physical watermain properties can therefore alter the results of the computer model simulation. Fire Flow analysis is a reflection of available flow in the watermain; there may be additional restrictions that occur between the watermain and the hydrant that the model cannot take into account.

APPENDIX D SANITARY CALCULATIONS



CO-26-1863 - 295 Roger Neilson - Sanitary Demands

Project:	295 Roger Neilson		
Project No.:	CO-26-1863		
Designed By:	RP		
Checked By:	CM		
Date:	March 5, 2026		
Site Area	1.38	Gross ha	
Industrial Area	2764	m ²	
Commercial/Office	488	m ²	

DESIGN PARAMETERS		
Industrial Peaking Factor	5.5	*Check Ottawa Sewer Design Guidelines Appendix 4B
Institutional/Commercial Peaking Factor	1.5	*Check technical bulletin ISTB 2018-01 (Either use 1.0 or 1.5)
Residential Peaking Factor	3.80	* Using Harmon Formula = 1+(14/(4+P^0.5))*0.8
Mannings coefficient (n)	0.013	
Demand (per capita)	350	L/day
Infiltration allowance	0.33	L/s/Ha

EXTRANEOUS FLOW ALLOWANCES

Infiltration / Inflow	Flow (L/s)
Dry	0.07
Wet	0.39
Total	0.46

AVERAGE DAILY DEMAND

DEMAND TYPE	AMOUNT	UNITS	POPULATION / AREA	Flow (L/s)
Residential	350	L/c/d		0
Industrial -Heavy**	55,000	L/gross ha/d		0
Industrial - Light**	35,000	L/gross ha/d	0.28	0.11
Commercial /Office	28,000	L/gross ha/d	0.05	0.02
Hospital	900	L/(bed/day)		0
Schools	70	L/(Student/d)		0
Trailer Parks no Hook-Ups	340	L/(space/d)		0
Trailer Park with Hook-Ups	800	L/(space/d)		0
Campgrounds	225	L/(campsite/d)		0
Mobile Home Parks	1,000	L/(Space/d)		0
Motels	150	L/(bed-space/d)		0
Hotels	225	L/(bed-space/d)		0
Office	75	L/7.0m ² /d		0
Tourist Commercial	28,000	L/gross ha/d		0
Other Commercial	28,000	L/gross ha/d		0

AVERAGE RESIDENTIAL FLOW	0.00	L/s
PEAK RESIDENTIAL FLOW	0.00	L/s
AVERAGE ICI FLOW	0.13	L/s
PEAK INSTITUTIONAL/COMMERCIAL FLOW	0.024	L/s
PEAK INDUSTRIAL FLOW	0.62	L/s
TOTAL PEAK ICI FLOW	0.64	L/s

TOTAL SANITARY DEMAND

TOTAL ESTIMATED AVERAGE DRY WEATHER FLOW	0.20	L/s
TOTAL ESTIMATED PEAK DRY WEATHER FLOW	0.71	L/s
TOTAL ESTIMATED PEAK WET WEATHER FLOW	1.09	L/s

** PEAK INDUSTRIAL FLOW PER CITY OF OTTAWA SEWER DESIGN GUIDELINES APPENDIX 4B

APPENDIX E STORMWATER CALCULATIONS

CO-26-1863 - 295 Roger Neilson Way - SWM Calculations

1 of 4

Tc (min)	Intensity (mm/hr)				C-Values	
	2-Year	5-Year	100-Year			
20	51.6	70.3	120.0	PRE-DEVELOPMENT	Impervious	0.90
10	76.5	104.2	178.6	POST-DEVELOPMENT	Gravel	0.60
					Pervious	0.20

Pre-Development Runoff Coefficient

Drainage Area	Impervious Area (m ²)	Gravel (m ²)	Pervious Area (m ²)	Average C (2-year)	Average C (5-year)	Average C (100-year)
A1	1,167	0	12,680	0.26	0.26	0.31

Pre-Development Runoff Calculations

Drainage Area	Area (ha)	C 2-Year	C 5-Year	C 100-Year	Tc (min)	Q (L/s)		
						2-Year	5-Year	100-Year
A1	1.38	0.26	0.26	0.31	20	51.43	70.04	144.62
Total	1.38					51.43	70.04	144.62

Post-Development Runoff Coefficient

Drainage	Impervious	Gravel	Pervious Area	Average C	Average C	Average C
B1	9,856	0	2,172	0.77	0.77	0.86
B2	80	0	1,739	0.23	0.23	0.28

Post-Development Runoff Calculations

Drainage Area	Area (ha)	C 2-Year	C 5-Year	C 100-Year	Tc (min)	Q (L/s)		
						2-Year	5-Year	100-Year
B1	1.20	0.77	0.77	0.86	10	197.93	269.52	516.20
B2	0.18	0.23	0.23	0.28	10	8.93	12.16	25.55
Total	1.38					206.86	281.68	541.75

Front yard
Uncontrolled

Required Post-Development Flow

Drainage Area	Q (L/s)	Storage Provided (m ³)
A1	117.70	69.2

*Flow based on 85 L/s/Ha per Kanata West Servicing Study (2006)
*Storage based on 50m³/Ha Per Taggart Loblaw's Subdivision (2013)

10

Post-Development Restricted Runoff Calculations

Drainage Area	Unrestricted Flow			Restricted Flow			Storage Required (m ³)			Storage Provided (m ³)		
	2-year	5-year	100-Year	2-Year	5-Year	100-Year	2-Year	5-Year	100-Year	2-Year	5-Year	100-Year
B1	197.93	269.52	516.20	47.20	58.10	86.00	102.91	148.5	323.4	114.6	151.5	341.5
B2	8.93	12.16	25.55	8.93	12.16	25.55						
Total	206.86	281.68	541.75	56.13	70.26	111.55	102.91	148.50	323.42	114.64	151.49	341.48

CO-26-1863 - 295 Roger Neilson Way - SWM Calculations

Storage Requirements for Area B1

2 of 4

Area (s)

2-Year Storm Event

Tc (min)	I (mm/hr)	Runoff (L/s) B1	Allowable Outflow (L/s)	Runoff to be Stored (L/s)	Storage Required (m³)
10	76.0	196.59	47.20	149.39	89.64
20	51.4	132.96	47.20	85.76	102.91
30	39.5	102.18	47.20	54.98	98.96
40	32.4	83.81	47.20	36.61	87.86
50	27.6	71.39	47.20	24.19	72.58

Maximum Storage Required 2-year = 103 m³

5-Year Storm Event

Tc (min)	I (mm/hr)	Runoff (L/s) B1	Allowable Outflow (L/s)	Runoff to be Stored (L/s)	Storage Required (m³)
10	104.2	269.54	58.10	211.44	126.86
20	70.3	181.85	58.10	123.75	148.50
30	53.9	139.42	58.10	81.32	146.38
40	44.2	114.33	58.10	56.23	134.96
50	37.7	97.52	58.10	39.42	118.26

Maximum Storage Required 5-year = 148 m³

100-Year Storm Event

Tc (min)	I (mm/hr)	Runoff (L/s) B1	Allowable Outflow (L/s)	Runoff to be Stored (L/s)	Storage Required (m³)
10	178.6	516.32	86.00	430.32	258.19
20	120.0	346.91	86.00	260.91	313.09
30	91.9	265.68	86.00	179.68	323.42
40	75.1	217.11	86.00	131.11	314.66
50	64.0	185.02	86.00	99.02	297.06
60	55.9	161.60	86.00	75.60	272.17
70	49.8	143.97	86.00	57.97	243.47
80	45.0	130.09	86.00	44.09	211.64
90	41.1	118.82	86.00	32.82	177.21
100	37.9	109.57	86.00	23.57	141.40

Maximum Storage Required 100-year = 323 m³

2-Year Storm Event Storage Summary

		Water Elev. (m) =		94.72		
Location	INV. (culv.)	INV. (orif.)	Area (m²)	Depth (m)	Head (m)	Volume (m³)
MH1	94.50	94.64	94.7	0.22	0.08	114.6

Storage Available (m³) = 114.6 *

Storage Required (m³) = 102.9

5-Year Storm Event Storage Summary

		Water Elev. (m) =		94.76		
Location	INV. (culv.)	INV. (orif.)	Area (m²)	Depth (m)	Head (m)	Volume (m³)
MH1	94.50	94.64	94.8	0.26	0.12	151.5

Storage Available (m³) = 151.5 *

Storage Required (m³) = 148.5

100-Year Storm Event Storage Summary

		Water Elev. (m) =		94.90		
Location	INV. (culv.)	INV. (orif.)	Area (m²)	Depth (m)	Head (m)	Volume (m³)
MH1	94.50	94.64	95.2	0.40	0.26	341.5

Storage Available (m³) = 341.5 *

Storage Required (m³) = 323.4

* Available Storage calculated from AutoCAD

CO-26-1863 - 295 Roger Neilson Way - SWM Calculations

3 of 4

For Orifice Flow, C= 0.6
For Weir Flow, C= 3.33

		Orifice 1	Orifice 2	Weir 1	Weir 2
B1	Invert Elevation	94.50	NA		
	Center of Crest Elevation	94.64	NA		
	Orifice Width / Weir Length	285.00	NA		
	Orifice Height	NA	NA		
	Orifice Area (m ²)	0.064	NA		

Table E9 Elevation Discharge Table - Storm Routing

Elevation (m)	Orifice 1		Orifice 2		Weir 1		Weir 2		Total Q (L/s)
	H (m)	Q (m ³ /s)	H (m)	Q (m ³ /s)	H (m)	Q (m ³ /s)	H (m)	Q (m ³ /s)	
94.50	x	x	x	x	x	x	x	x	0.0
94.50	x	x	x	x	x	x	x	x	0.0
94.51	x	x	x	x	x	x	x	x	0.0
94.52	x	x	x	x	x	x	x	x	0.0
94.53	x	x	x	x	x	x	x	x	0.0
94.54	x	x	x	x	x	x	x	x	0.0
94.55	x	x	x	x	x	x	x	x	0.0
94.56	x	x	x	x	x	x	x	x	0.0
94.57	x	x	x	x	x	x	x	x	0.0
94.58	x	x	x	x	x	x	x	x	0.0
94.59	x	x	x	x	x	x	x	x	0.0
94.60	x	x	x	x	x	x	x	x	0.0
94.61	x	x	x	x	x	x	x	x	0.0
94.62	x	x	x	x	x	x	x	x	0.0
94.63	x	x	x	x	x	x	x	x	0.0
94.64	x	x	x	x	x	x	x	x	0.0
94.65	0.01	0.015	x	x	x	x	x	x	14.7
94.66	0.02	0.022	x	x	x	x	x	x	22.4
94.67	0.03	0.028	x	x	x	x	x	x	28.1
94.68	0.04	0.033	x	x	x	x	x	x	32.8
94.69	0.05	0.037	x	x	x	x	x	x	37.0
94.70	0.06	0.041	x	x	x	x	x	x	40.7
94.71	0.07	0.044	x	x	x	x	x	x	44.0
94.72	0.08	0.047	x	x	x	x	x	x	47.2
94.73	0.09	0.050	x	x	x	x	x	x	50.2
94.74	0.10	0.053	x	x	x	x	x	x	52.9
94.75	0.11	0.056	x	x	x	x	x	x	55.6
94.76	0.12	0.058	x	x	x	x	x	x	58.1
94.77	0.13	0.061	x	x	x	x	x	x	60.5
94.78	0.14	0.063	x	x	x	x	x	x	62.9
94.79	0.15	0.065	x	x	x	x	x	x	65.1
94.80	0.16	0.067	x	x	x	x	x	x	67.3
94.81	0.17	0.069	x	x	x	x	x	x	69.4
94.82	0.18	0.071	x	x	x	x	x	x	71.4
94.83	0.19	0.073	x	x	x	x	x	x	73.4
94.84	0.20	0.075	x	x	x	x	x	x	75.3
94.85	0.21	0.077	x	x	x	x	x	x	77.2
94.86	0.22	0.079	x	x	x	x	x	x	79.1
94.87	0.23	0.081	x	x	x	x	x	x	80.9
94.88	0.24	0.083	x	x	x	x	x	x	82.6
94.89	0.25	0.084	x	x	x	x	x	x	84.3
94.90	0.26	0.086	x	x	x	x	x	x	86.0
94.91	0.27	0.088	x	x	x	x	x	x	87.7
94.92	0.28	0.089	x	x	x	x	x	x	89.3
94.93	0.29	0.091	x	x	x	x	x	x	90.9
94.94	0.30	0.092	x	x	x	x	x	x	92.5
94.95	0.31	0.094	x	x	x	x	x	x	94.0
94.96	0.32	0.096	x	x	x	x	x	x	95.5
94.97	0.33	0.097	x	x	x	x	x	x	97.0
94.98	0.34	0.098	x	x	x	x	x	x	98.5
94.99	0.35	0.100	x	x	x	x	x	x	99.9
95.00	0.36	0.101	x	x	x	x	x	x	101.4
95.01	0.37	0.103	x	x	x	x	x	x	102.8
95.02	0.38	0.104	x	x	x	x	x	x	104.2
95.03	0.39	0.106	x	x	x	x	x	x	105.5
95.04	0.40	0.107	x	x	x	x	x	x	106.9
95.05	0.41	0.108	x	x	x	x	x	x	108.2
95.06	0.42	0.110	x	x	x	x	x	x	109.5
95.07	0.43	0.111	x	x	x	x	x	x	110.9
95.08	0.44	0.112	x	x	x	x	x	x	112.1
95.09	0.45	0.113	x	x	x	x	x	x	113.4
95.10	0.46	0.115	x	x	x	x	x	x	114.7

1. For Orifice Flow, User is to Input an Elevation Higher than Crown of Orifice.
2. Orifice Equation: $Q = cA(2gh)^{1/2}$
3. Weir Equation: $Q = cLH^{3/2}$
4. These Computations Do Not Account for Submergence Effects Within the Pond Riser.
5. H for orifice equations is depth of water above the centroid of the orifice.
6. H for weir equations is depth of water above the weir crest.

Time of Concentration Pre-Development

Drainage Area ID	Sheet Flow Distance (m)	Slope of Land (%)	Tc (min) (5-Year)	Tc (min) (100-Year)
A1	55	1.00	20	19

Therefore, a Tc of 20 can be used

$$T_c = (3.26(1.1 - c)L^{0.5}/S^{0.33})$$

c = Balanced Runoff Coefficient

L = Length of drainage area

S = Average slope of watershed

APPENDIX F PRE DEVELOPMENT



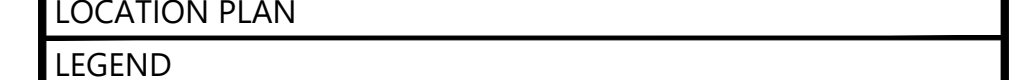
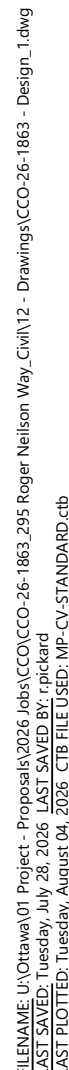
Check and verify all dimensions before proceeding with the work	Do not scale drawings
---	-----------------------



FIRE DEVELOPMENT DRAINAGE PLAN

PR

APPENDIX G POST DEVELOPMENT



Check and verify all dimensions before proceeding with the work	Do not scale drawings
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Drawing Title:

POST

APPENDIX H CITY OF OTTAWA DESIGN CHECKLIST

4. Development Servicing Study Checklist

The following section describes the checklist of the required content of servicing studies. It is expected that the proponent will address each one of the following items for the study to be deemed complete and ready for review by City of Ottawa Infrastructure Approvals staff.

The level of required detail in the Servicing Study will increase depending on the type of application. For example, for Official Plan amendments and re-zoning applications, the main issues will be to determine the capacity requirements for the proposed change in land use and confirm this against the existing capacity constraint, and to define the solutions, phasing of works and the financing of works to address the capacity constraint. For subdivisions and site plans, the above will be required with additional detailed information supporting the servicing within the development boundary.

4.1 General Content

Criteria	Location (if applicable)
☐ Executive Summary (for larger reports only).	N/A
☐ Date and revision number of the report.	On Cover
☐ Location map and plan showing municipal address, boundary, and layout of proposed development.	Appendix A
☐ Plan showing the site and location of all existing services.	N/A
☐ Development statistics, land use, density, adherence to zoning and official plan, and reference to applicable subwatershed and watershed plans that provide context to which individual developments must adhere.	1.1 Purpose 1.2 Site Description 6.0 Storm Sewer Design
☐ Summary of pre-consultation meetings with City and other approval agencies.	Appendix B
☐ Reference and confirm conformance to higher level studies and reports (Master Servicing Studies, Environmental Assessments, Community Design Plans), or in the case where it is not in conformance, the proponent must provide justification and develop a defensible design criteria.	1.1 Purpose 1.2 Site Description 6.0 Storm Sewer Design
☐ Statement of objectives and servicing criteria.	3.0 Pre-Consultation Summary

☐ Identification of existing and proposed infrastructure available in the immediate area.	N/A
☐ Identification of Environmentally Significant Areas, watercourses and Municipal Drains potentially impacted by the proposed development (Reference can be made to the Natural Heritage Studies, if available).	N/A
☐ Concept level master grading plan to confirm existing and proposed grades in the development. This is required to confirm the feasibility of proposed stormwater management and drainage, soil removal and fill constraints, and potential impacts to neighbouring properties. This is also required to confirm that the proposed grading will not impede existing major system flow paths.	N/A
☐ Identification of potential impacts of proposed piped services on private services (such as wells and septic fields on adjacent lands) and mitigation required to address potential impacts.	N/A
☐ Proposed phasing of the development, if applicable.	N/A
☐ Reference to geotechnical studies and recommendations concerning servicing.	N/A
☐ All preliminary and formal site plan submissions should have the following information: - o Metric scale - o North arrow (including construction North) - o Key plan - o Name and contact information of applicant and property owner - o Property limits including bearings and dimensions - o Existing and proposed structures and parking areas - o Easements, road widening and rights-of-way - o Adjacent street names	N/A

4.2 Development Servicing Report: Water

Criteria	Location (if applicable)
☐ Confirm consistency with Master Servicing Study, if available	N/A
☐ Availability of public infrastructure to service proposed development	N/A
☐ Identification of system constraints	N/A
☐ Identify boundary conditions	Appendix C
☐ Confirmation of adequate domestic supply and pressure	N/A
☐ Confirmation of adequate fire flow protection and confirmation that fire flow is calculated as per the Fire Underwriter's Survey. Output should show available fire flow at locations throughout the development.	Appendix C
☐ Provide a check of high pressures. If pressure is found to be high, an assessment is required to confirm the application of pressure reducing valves.	N/A
☐ Definition of phasing constraints. Hydraulic modeling is required to confirm servicing for all defined phases of the project including the ultimate design	N/A
☐ Address reliability requirements such as appropriate location of shut-off valves	N/A
☐ Check on the necessity of a pressure zone boundary modification.	N/A
☐ Reference to water supply analysis to show that major infrastructure is capable of delivering sufficient water for the proposed land use. This includes data that shows that the expected demands under average day, peak hour and fire flow conditions provide water within the required pressure range	Appendix C, Section 4.2 Proposed Water Servicing

☐ Description of the proposed water distribution network, including locations of proposed connections to the existing system, provisions for necessary looping, and appurtenances (valves, pressure reducing valves, valve chambers, and fire hydrants) including special metering provisions.	Site Servicing Plan (C101)
☐ Description of off-site required feeder mains, booster pumping stations, and other water infrastructure that will be ultimately required to service proposed development, including financing, interim facilities, and timing of implementation.	N/A
☐ Confirmation that water demands are calculated based on the City of Ottawa Design Guidelines.	Appendix C
☐ Provision of a model schematic showing the boundary conditions locations, streets, parcels, and building locations for reference.	N/A

4.3 Development Servicing Report: Wastewater

Criteria	Location (if applicable)
☐ Summary of proposed design criteria (Note: Wet-weather flow criteria should not deviate from the City of Ottawa Sewer Design Guidelines. Monitored flow data from relatively new infrastructure cannot be used to justify capacity requirements for proposed infrastructure).	N/A
☐ Confirm consistency with Master Servicing Study and/or justifications for deviations.	N/A
☐ Consideration of local conditions that may contribute to extraneous flows that are higher than the recommended flows in the guidelines. This includes groundwater and soil conditions, and age and condition of sewers.	N/A
☐ Description of existing sanitary sewer available for discharge of wastewater from proposed development.	Section 5.2 Proposed Sanitary Servicing

☐ Verify available capacity in downstream sanitary sewer and/or identification of upgrades necessary to service the proposed development. (Reference can be made to previously completed Master Servicing Study if applicable)	Section 5.2 Proposed Sanitary Servicing
☐ Calculations related to dry-weather and wet-weather flow rates from the development in standard MOE sanitary sewer design table (Appendix 'C') format.	N/A
☐ Description of proposed sewer network including sewers, pumping stations, and forcemains.	Section 5.2 Proposed Sanitary Servicing
☐ Discussion of previously identified environmental constraints and impact on servicing (environmental constraints are related to limitations imposed on the development in order to preserve the physical condition of watercourses, vegetation, soil cover, as well as protecting against water quantity and quality).	N/A
☐ Pumping stations: impacts of proposed development on existing pumping stations or requirements for new pumping station to service development.	N/A
☐ Forcemain capacity in terms of operational redundancy, surge pressure and maximum flow velocity.	N/A
☐ Identification and implementation of the emergency overflow from sanitary pumping stations in relation to the hydraulic grade line to protect against basement flooding.	N/A
☐ Special considerations such as contamination, corrosive environment etc.	N/A

4.4 Development Servicing Report: Stormwater Checklist

Criteria	Location (if applicable)
☐ Description of drainage outlets and downstream constraints including legality of outlets (i.e. municipal drain, right-of-way, watercourse, or private property)	Section 6.0 Storm Sewer Servicing & Section 7.0 Proposed Stormwater Management
☐ Analysis of available capacity in existing public infrastructure.	N/A
☐ A drawing showing the subject lands, its surroundings, the receiving watercourse, existing drainage patterns, and proposed drainage pattern.	Pre & Post-Development Plans
☐ Water quantity control objective (e.g. controlling post-development peak flows to pre-development level for storm events ranging from the 2 or 5-year event (dependent on the receiving sewer design) to 100-year return period); if other objectives are being applied, a rationale must be included with reference to hydrologic analyses of the potentially affected subwatersheds, taking into account long-term cumulative effects.	Section 6.0 Storm Sewer Servicing & Section 7.0 Proposed Stormwater Management
☐ Water Quality control objective (basic, normal or enhanced level of protection based on the sensitivities of the receiving watercourse) and storage requirements.	Section 6.0 Storm Sewer Servicing & Section 7.0 Proposed Stormwater Management
☐ Description of the stormwater management concept with facility locations and descriptions with references and supporting information.	Section 6.0 Storm Sewer Servicing & Section 7.0 Proposed Stormwater Management
☐ Set-back from private sewage disposal systems.	N/A
☐ Watercourse and hazard lands setbacks.	N/A
☐ Record of pre-consultation with the Ontario Ministry of Environment and the Conservation Authority that has jurisdiction on the affected watershed.	N/A
☐ Confirm consistency with sub-watershed and Master Servicing Study, if applicable study exists.	N/A
☐ Storage requirements (complete with calculations) and conveyance capacity for minor events (1:5-year return period) and major events (1:100-year return period).	Appendix G

☐ Identification of watercourses within the proposed development and how watercourses will be protected, or, if necessary, altered by the proposed development with applicable approvals.	Site Grading Plan (C101)
☐ Calculate pre-and post development peak flow rates including a description of existing site conditions and proposed impervious areas and drainage catchments in comparison to existing conditions.	Appendix G, Section 7.0 Proposed Stormwater Management
☐ Any proposed diversion of drainage catchment areas from one outlet to another.	Section 6.0 Storm Sewer Servicing & Section 7.0 Proposed Stormwater Management
☐ Proposed minor and major systems including locations and sizes of stormwater trunk sewers, and stormwater management facilities.	Section 6.0 Storm Sewer Servicing & Section 7.0 Proposed Stormwater Management
☐ If quantity control is not proposed, demonstration that downstream system has adequate capacity for the post-development flows up to and including the 100-year return period storm event.	N/A
☐ Identification of potential impacts to receiving watercourses	N/A
☐ Identification of municipal drains and related approval requirements.	N/A
☐ Descriptions of how the conveyance and storage capacity will be achieved for the development.	Section 6.0 Storm Sewer Servicing & Section 7.0 Proposed Stormwater Management
☐ 100-year flood levels and major flow routing to protect proposed development from flooding for establishing minimum building elevations (MBE) and overall grading.	Site Grading Plan (C101)
☐ Inclusion of hydraulic analysis including hydraulic grade line elevations.	N/A

☐ Description of approach to erosion and sediment control during construction for the protection of receiving watercourse or drainage corridors.	Section 8.0 Sediment & Erosion Control
☐ Identification of floodplains – proponent to obtain relevant floodplain information from the appropriate Conservation Authority. The proponent may be required to delineate floodplain elevations to the satisfaction of the Conservation Authority if such information is not available or if information does not match current conditions.	N/A
☐ Identification of fill constraints related to floodplain and geotechnical investigation.	N/A

4.5 Approval and Permit Requirements: Checklist

The Servicing Study shall provide a list of applicable permits and regulatory approvals necessary for the proposed development as well as the relevant issues affecting each approval. The approval and permitting shall include but not be limited to the following:

Criteria	Location (if applicable)
☐ Conservation Authority as the designated approval agency for modification of floodplain, potential impact on fish habitat, proposed works in or adjacent to a watercourse, cut/fill permits and Approval under Lakes and Rivers Improvement Act. The Conservation Authority is not the approval authority for the Lakes and Rivers Improvement Act. Where there are Conservation Authority regulations in place, approval under the Lakes and Rivers Improvement Act is not required, except in cases of dams as defined in the Act.	N/A
☐ Application for Certificate of Approval (CofA) under the Ontario Water Resources Act.	N/A
☐ Changes to Municipal Drains.	N/A
☐ Other permits (National Capital Commission, Parks Canada, Public Works and Government Services Canada, Ministry of Transportation etc.)	N/A

4.6 Conclusion Checklist

Criteria	Location (if applicable)
☐ Clearly stated conclusions and recommendations	Section 9.0 Summary Section 10.0 Recommendations
☐ Comments received from review agencies including the City of Ottawa and information on how the comments were addressed. Final sign-off from the responsible reviewing agency.	All are stamped
☐ All draft and final reports shall be signed and stamped by a professional Engineer registered in Ontario	All are stamped