

1746 Carling Avenue Phase 1

Site Servicing and Stormwater Management Report



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1 Introduction

Stantec Consulting Ltd. is commissioned by Kerr Broadview Properties Ltd. to prepare the following Site Servicing and Stormwater Management Report in support of a Site Plan Control (SPC) application to permit the proposed Phase 1 redevelopment at 1746 Carling Avenue in the City of Ottawa.

The overall 1746 Carling Avenue site (0.91 ha) is currently zoned AM10 and IG3 H (10.7) and consists of two existing commercial buildings, and both gravel and paved parking areas. The first phase of the development is the subject of this SPC application. Phase 1 measures approximately 0.36 ha in area and is bounded by existing commercial developments and future Phase 2-3 to the north, existing residential development to the west, Kerr Avenue to the south, and Boyd Avenue and an existing commercial building to the east, as shown in **Figure 1.1**. There are no existing buildings within the Phase 1 area.



Figure 1.1: Key Plan of Site



Phase 1 comprises of Tower C, the nine-storey retirement residence and an area dedicated as parkland (0.10 ha). RLA Architecture has provided a site plan dated June 4, 2025, which defines the proposed development (see **Appendix A.1**). The Phase 1 Tower C unit type breakdown is listed in **Table 1.1**. Phase 1 will also include two levels of underground parking. The north boundary of Phase 1 aligns with the outer edge of the Phase 1 underground parking.

Table 1.1: Phase 1 Building Unit Type Breakdown

Unit Type	Number
One-bedroom	34
One-bedroom with Den	61
Two-bedroom	21
Three-bedroom	6
Total	122

1.1 Objective

This site servicing and stormwater management (SWM) report presents a servicing scheme that is free of conflicts, provides onsite servicing concept in accordance with the City of Ottawa Design Guidelines, and uses the existing municipal infrastructure in compliance with any limitations communicated during consultation with the City of Ottawa staff. The intent of the Phase 1 development is to provide an individually serviced lot and building with the potential for future severance from the overall development site. Details of the existing infrastructure located within the Boyd Avenue, and the Kerr Avenue right of way (ROW) are obtained from available as-built drawings from the City of Ottawa and site topographic survey by Annis, O'Sullivan, Vollebakk Ltd. (AOV) completed September 17, 2025, see **Appendix A.2**.

Criteria and constraints provided by the City of Ottawa are used as a basis for the detailed servicing design of the proposed development. Specific and potential development constraints to be addressed are as follows:

- **Potable Water Servicing**
 - Estimated water demands to characterize the proposed feed(s) for the proposed development which will be serviced from the existing 150 mm diameter watermain within the Kerr Avenue ROW.
 - Watermain servicing for the development is to provide average day and maximum day (including peak hour) demands (i.e., non-emergency conditions) at pressures within the acceptable range of 345 to 552 kPa (50 to 80 psi).
 - Under fire flow (emergency) conditions, the water distribution system is to maintain a minimum pressure greater than 140 kPa (20 psi).
 - Standard park water servicing is to be provided to the parkland area to accommodate future park development.
- **Wastewater (Sanitary) Servicing**
 - Define and size the sanitary building service lateral which will be connected to the existing 225 mm diameter sanitary sewer within the Kerr Avenue ROW.



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- Standard park sanitary servicing is to be provided to the parkland area to accommodate future park development.
- **Stormwater Servicing**
 - Define major and minor conveyance systems in conjunction with the proposed grading plan.
 - Determine the stormwater management (SWM) storage requirements for water quantity control to meet the allowable release rates for the site.
 - Define and size the proposed storm services within the site and offsite storm sewers within Kerr Avenue that will collect and convey discharge from the site to the existing 450 mm and 525 mm diameter storm sewers in the Boyd Avenue ROW.
 - Standard park storm servicing is to be provided to the parkland area to accommodate future park development.
- **Site Grading Plan**
 - Prepare a grading plan in accordance with the proposed site plan and existing grades.

The accompanying drawings illustrate the proposed servicing scheme for the site.



2 Background Resources

Documents referenced in preparing this report include:

- *City of Ottawa Sewer Design Guidelines (SDG)*, City of Ottawa, October 2012, including all subsequent technical bulletins
- *City of Ottawa Design Guidelines – Water Distribution*, City of Ottawa, July 2010, including all subsequent technical bulletins
- *Design Guidelines for Drinking Water Systems*, Ministry of the Environment, Conservation, and Parks (MECP), 2008
- *Fire Protection Water Supply Guideline for Part 3 in the Ontario Building Code*, Office of the Fire Marshal (OFM), October 2020
- *Water Supply for Public Fire Protection*, Fire Underwriters Survey (FUS), 2020
- *Geotechnical Desktop Review Proposed Multi-Use Development 170, 1746 & 1754 Carling Avenue, 828 Boyd Avenue, and 1755 Kerr Avenue*, Paterson Group, December 4, 2024
- *Site Survey Plan*, Annis, O’Sullivan, Vollebekk Ltd., September 23, 2025
- *Pre-Consultation Meeting Minutes & Preliminary Comments*, City of Ottawa, July 14, 2024
- *Functional Servicing Plan to Support Zoning Bylaw Amendment, 1746 Carling Avenue Functional Servicing Report*, Stantec Consulting Ltd., October 2025



3 Water Servicing

3.1 Background

The proposed development is in Pressure Zone 1W of the City of Ottawa’s Water Distribution System. The existing watermains along the boundaries of the site consists of 150 mm diameter UCI watermains in Boyd Avenue, and Kerr Avenue. There are existing fire hydrants on each of the existing watermains. Based on the available records, the Phase 1 area does not appear to have any existing water service laterals.

3.2 Water Demands

3.2.1 Domestic Water Demand

The City of Ottawa Water Distribution Guidelines (July 2010) and ISTB 2021-03 Technical Bulletin were used to determine the water demands based on the projected population densities for residential areas and associated peaking factors. The population is estimated using an occupancy of 1.4 persons per unit for studio and one-bedroom apartments, 2.1 persons per unit for one-bedroom with study and two-bedroom units, and 3.1 persons per unit for three-bedroom apartments. Based on the unit totals in **Table 1.1**, the proposed Tower C is estimated to have a total population of 238 residents.

A daily rate of 280 L/cap/day is used to estimate average daily (AVDY) potable water demand for the residential units. The maximum day (MXDY) demand is determined by multiplying the AVDY demands by a peaking factor of 2.5 for residential areas. Peak hourly (PKHR) demand is determined by multiplying the MXDY by a peaking factor of 2.2 for residential areas. The estimated demand for the site is summarized in **Table 3.1** and detailed in **Appendix B.1**.

Table 3.1: Phase 1 Estimated Water Demands

Population	AVDY (L/s)	MXDY (L/s)	PKHR (L/s)
238	0.8	1.9	4.2

3.2.2 Fire Flow Demand

The building’s fire flow requirements are estimated using the methodology described in the document *Fire Underwriters Survey's Water Supply for Public Fire Protection* (2020). The Tower C building is intended to be constructed with non-combustible materials, have a two-hour fire resistance rating of all structural elements, be fully sprinklered with a supervised sprinkler system to the NFPA 13 standard, and to have full protection of all vertical openings (one hour fire rating).



The total effective building area is determined by adding the gross floor area of the largest floor plus 25 % of the floor area of each of the two immediately adjoining floors (Page 22 of FUS document).

Tower C was determined to have a fire flow demand of approximately 4,000 L/min (66.7 L/s). Detailed fire flow calculations per the FUS methodology are provided in **Appendix B.2**

3.2.3 Boundary Conditions

The estimated domestic water and fire flow demands are used to confirm the level of servicing available for the proposed development from the adjacent municipal watermain and hydrants. **Table 3.2** outlines the boundary conditions for the proposed connection servicing the site at Kerr Avenue in consideration of upsizing the watermain on Boyd Avenue, and a reliability scenario that accounts for the upsized Boyd Avenue watermain and closure of its connection to the 610 mm diameter backbone watermain on Carling Avenue, provided by the City of Ottawa on April 14, 2025 (see **Appendix B.3**).

Table 3.2: Phase 1 Kerr Avenue Boundary Conditions

Scenario	1	2 (Reliability)
Min. HGL (m)	108.6	107.8
Max. HGL (m)	114.4	114.1
Max. Day + FF (67 L/s) (m)	107.4	102.6

3.2.4 Allowable Domestic Pressures

The proposed finished floor elevation for the first floor of the apartment building at 79.8 m serves as the reference elevation for the calculation of residual pressures at ground level. From the boundary condition HGL elevations, the onsite pressures at ground level are expected to range from 282 kPa to 339 kPa (40.9 psi to 49.2 psi) under normal operating conditions, which are within the normal operating pressure range defined by the City of Ottawa Design Guidelines as within 276 kPa to 552 kPa (40 psi to 80 psi).

In the reliability scenario, the onsite pressures at ground level are expected to range from 274 kPa to 336 kPa (39.8 psi to 48.8 psi), which puts it just outside the normal operating pressure range. As such, it is anticipated that booster pumps will be required to service the upper floors of the building and for when the Boyd Avenue watermain connection to the Carling Avenue backbone watermain is shut off for servicing.

3.2.5 Allowable Fire Flow Pressures

The boundary conditions provided by the City of Ottawa indicate that with the watermain on Boyd Avenue upsized, the watermain on Kerr Avenue is expected to maintain a residual pressure of 27.6 m equivalent to 271 kPa (39.3 psi) under fire flow demands. Under the reliability scenario, the watermain is expected to maintain a residual pressure of 22.8 m equivalent to 224 kPa (32.4 psi) under the fire flow demands. This demonstrates that with the upsizing of the Boyd Avenue watermain, the water distribution system can provide the required fire flows for the site (67 L/s) while maintaining a residual pressure greater than 138 kPa (20 psi).



3.2.6 Fire Hydrant Coverage

The building will be sprinklered and a Siamese (fire department) connection is to be provided at the main entrance along Kerr Avenue.

According to the NFPA 1 Table 18.5.4.3 in Appendix I of the City of Ottawa Technical Bulletin ISTB-2018-02, a hydrant situated less than 76 m away from a building can supply a maximum capacity of 5,678 L/min. Given the required fire flow for the building (4,000 L/min), a new fire hydrant (HYD-1) is proposed along Kerr Avenue and fronting the proposed building to provide the required fire flows for the building. The new hydrant will be situated within 45 m of the building Siamese connection to meet Section 3.2.5.16 of the Ontario Building Code. See **Appendix B.4** for fire hydrant coverage table calculations and NFPA Table 18.5.4.3, while the proposed hydrant distance from the building's Siamese connection is shown on **Drawing SSP-1** and in **Figure 3.1**.

Figure 3.1: Fire Hydrant Coverage Sketch



3.3 Proposed Water Servicing

3.3.1 Tower C

The building will be serviced by dual 150 mm diameter water service laterals connecting to the 150 mm diameter watermain on Kerr Avenue. To provide adequate water servicing for the site, the existing 150



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mm diameter watermain in Boyd Avenue will be upsized to 200 mm between Carling Avenue and Kerr Avenue, as shown in **Drawing PP-1**. A new fire hydrant (HYD-1) will be installed on Kerr Avenue near the proposed building. The sizing of the service connections and booster pump requirements are to be confirmed by the mechanical consultant. The proposed water servicing is shown on **Drawing SSP-1**.

3.3.2 Parkland Dedication

The dedicated parkland will be serviced by a single 50 mm diameter water service lateral, complete with a standpost and water park metre per City of Ottawa Standard W31.1 to allow for future development of the parkland area by the City of Ottawa.



4 Wastewater Servicing

4.1 Background

The existing sanitary sewer adjacent to the site comprises the 225 mm diameter concrete sanitary sewer within the Kerr Avenue ROW which drains westward. There are no known existing sanitary service laterals within the Phase 1 Area.

4.2 Design Criteria

As outlined in the City of Ottawa Sewer Design Guidelines and the MECP Design Guidelines for Sewage Works, the following criteria are used to calculate the estimated wastewater flow rates and to determine the size and location of the sanitary service lateral:

- Minimum velocity = 0.6 m/s (0.8 m/s for upstream sections)
- Maximum velocity = 3.0 m/s
- Manning roughness coefficient for all smooth wall pipes = 0.013
- Minimum size of sanitary sewer service = 135 mm
- Minimum grade of sanitary sewer service = 1.0 % (2.0 % preferred)
- Average wastewater generation = 280 L/person/day (per City Design Guidelines)
- Peak Factor = based on Harmon Equation; maximum of 4.0 (residential)
- Harmon correction factor = 0.8
- Infiltration allowance = 0.33 L/s/ha (per City Design Guidelines)
- Minimum cover for sewer service connections – 2.0 m
- Population density for studio and one-bedroom apartments – 1.4 persons/apartment
- Population density for one-bedroom with den and two-bedroom apartments – 2.1 persons/apartment
- Population density for two-bedroom with den apartments – 3.1 persons/apartment

4.3 Wastewater Generation and Servicing Design

The estimated wastewater flows to be generated are based on the current site plan and unit breakdown as shown in **Table 1.1**. The anticipated wastewater peak flow generated from the proposed development is summarized in **Table 4.1**:

Table 4.1: Phase 1 Estimated Total Wastewater Peak Flow

Peak Residential Wastewater Flow				Infiltration Flow (L/s)	Total Peak Flow (L/s)
Area	Population	Peak Factor	Peak Flow (L/s)		
Building C	238	3.50	2.7	0.1	2.8
Parkland	-	-	-	0.03	0.03
Total Sanitary Peak Flow					2.83



Detailed sanitary sewage generation calculations were prepared and are included in **Appendix C.1**. A full port backwater valve will be required for the proposed building in accordance with the Sewer Design Guidelines and will be coordinated with the building's mechanical engineer.

The anticipated peak wastewater flows for the proposed development were provided to the City of Ottawa staff to evaluate the adequacy of the receiving municipal sanitary sewer system in the vicinity of the site and downstream network. The city staff confirmed that the downstream sanitary sewer can receive the proposed peak flows from the Phase 1 development with no capacity concerns on April 14th, 2025 (see correspondence in **Appendix C.2**).

4.4 Proposed Sanitary Servicing

4.4.1 Tower C

A 200 mm diameter sanitary building service, complete with full port backwater valve per City Standard S14.1, is recommended to service the proposed development. The sanitary service is to enter a sanitary monitoring manhole before connecting to the 225 mm diameter municipal sanitary sewer in Kerr Avenue. The sanitary service will connect to the upstream sanitary manhole EX. SAN 26767. The proposed sanitary servicing is shown on **Drawings SSP-1** and **SA-1**.

A full port backwater valve is required on the proposed sanitary service to prevent any surcharge from the downstream sewers from impacting the proposed site. A sump pump will be required for sewage discharge from the underground parking and mechanical room. Sizing and design of the service laterals, sump pit, sump pump, backwater valves, and the internal plumbing and mechanical systems are to be designed and confirmed by the mechanical consultant.

4.4.2 Parkland Dedication

The dedicated parkland will be serviced by a single 150 mm diameter sanitary service lateral to allow for future development of the parkland area by the City of Ottawa. A sanitary monitoring manhole is proposed within the dedicated parkland, and the park sanitary service is to connect into the existing 225 mm diameter municipal sanitary sewer in Boyd Avenue via an existing sanitary manhole. Further design of the park sanitary service is to be completed by the City of Ottawa when the park is developed.



5 Stormwater Management and Servicing

5.1 Objectives

The goal of this stormwater servicing and management (SWM) plan is to determine the measures necessary to control the quantity and quality of stormwater released from the proposed development to meet the criteria established during the consultation process with City of Ottawa staff and to provide sufficient details required for approval.

5.2 Stormwater Management (SWM) Criteria

The Stormwater Management (SWM) criteria were established by combining current design practices outlined by the City of Ottawa Sewer Design Guidelines (SDG) (October 2012), review of project pre-consultation notes with the City of Ottawa, and through consultation with City of Ottawa staff. The following summarizes the criteria, with the source of each criterion indicated in brackets:

General

- Use of the dual drainage principle (City of Ottawa SDG)
- Wherever feasible and practical, site-level measures should be used to reduce and control the volume and rate of runoff (City of Ottawa SDG)
- Assess impact of 100-year event outlined in the City of Ottawa Sewer Design Guidelines on the major and minor drainage systems (City of Ottawa SDG)

Storm Sewer & Inlet Controls

- Discharge for each storm event to be restricted to a 2-year storm event pre-development rate with a maximum pre-development C coefficient of 0.5 (City of Ottawa pre-consultation, **Appendix A.3**)
- Peak flows generated from events greater than the 2-year and including the 100-year storm must be detained onsite (City of Ottawa pre-consultation, **Appendix A.3**)
- The foundation drainage system is to be independently connected to sewer main unless being pumped with appropriate back up power, sufficient sized pump, and backflow prevention. (City of Ottawa pre-consultation, **Appendix A.3**)
- Tc should be not less than 10 minutes since IDF curves become unrealistic at less than 10 min (City of Ottawa SDG).
- Stormwater management, servicing, and storage to attenuate peak flows from the parkland area are to be provided within the parkland dedication by the City of Ottawa when the park is developed.

Surface Storage & Overland Flow

- Building openings to be a minimum of 0.30 m above the 100-year water level (City of Ottawa SDG)



- Maximum depth of flow under either static or dynamic conditions shall be less than 0.30 m (City of Ottawa SDG)
- Provide adequate emergency overflow conveyance off-site with a minimum vertical clearance of 0.15 m between the spill elevation and the ground elevation at the building envelope in the proximity of the flow route or ponding area (City of Ottawa SDG)

5.3 Existing Conditions

The Phase 1 site (0.36 ha) is dominated by paved and gravel surface parking areas, and some grassed areas and trees. The pre-development imperviousness was calculated to be around 94 % ($C=0.86$), which exceeds the maximum permissible pre-development runoff coefficient of $C=0.5$ identified in the City of Ottawa pre-consultation for this site. Therefore, the pre-development runoff coefficient of 0.5 was used for the stormwater management analysis of Phase 1.

The 0.1 ha area dedicated as parkland is excluded from this SWM analysis and plan, because once the parkland is assumed by the City of Ottawa and developed as a local park/parkette, it is expected to have its own storm drainage system, and it is assumed that the stormwater quantity will be managed onsite within the park area. Hence, the total Phase 1 developable site area is 0.26 ha.

Under existing conditions, a small uncontrolled area (UNC-3) within Phase 1 (0.03 ha) drains north toward Carling Avenue. It is not feasible to regrade this area for capture or control within Phase 1. We are proposing to allow this area to maintain existing uncontrolled drainage patterns for the Phase 1 development. In the ultimate buildout conditions (full site development of Phases 1-3), UNC-3 will enter the Phase 2 drainage system and will be controlled. In the interim, we propose that this area will continue to drain north towards the Carling Avenue ROW. If severance of the Phase 1 area proceeds, an easement will be required for the drainage of the UNC-3 area into Phase 2.

We have proceeded with the Phase 1 SWM analysis on the basis that the UNC-3 area is excluded, and the total drainage area associated with the Phase 1 SWM analysis is limited to 0.24 ha. This 0.24 ha area is used to determine the target release rate and develop the SWM plan for Phase 1.

The pre-development release rates for the site have been determined using the rational method and the drainage characteristics identified above. A time of concentration of 10 minutes is used based on the small site size, its proximity to the existing drainage outlet, and recommendations provided during pre-consultation with the City. The peak pre-development flow rates have been calculated using the rational method as follows:

$$Q = 2.78 (C)(I)(A)$$

Where:

Q = peak flow rate, L/s

C = site runoff coefficient

I = rainfall intensity, mm/hr (per City of Ottawa IDF curves)

A = drainage area, ha



$$\text{Intensity (mm/hr)} = \frac{732.951}{(10 + 6.199)^{0.810}} = 76.81 \text{ mm/hr}$$

$$Q = 2.78(0.50)(76.81\text{mm/hr})(0.24 \text{ ha}) = 25.4 \text{ L/s}$$

Table 5.1: Phase 1 Allowable Target Release Rate

Design Storm	Pre-Development Flow Rate (L/s) for C=0.50, A=0.24 ha, Tc = 10 min
2-Year	25.4

5.4 Stormwater Management Design

The Modified Rational Method was employed to assess the rate and volume of runoff anticipated during post-development rainfall runoff events. The site was divided into sub-catchments (subareas) as defined by the proposed grades and the location, nature, or presence/absence of drains. Each sub-catchment was assigned a runoff coefficient based on the proposed finished surface. A summary of drainage areas, runoff coefficients, flow types, and outlets are provided in **Table 5.2**. Further details can be found in **Appendix D.1**, while **Drawing SD-1** illustrates the proposed sub-catchments.

Table 5.2: Summary of Post-Development Drainage Areas

Catchment Areas	C	Area (ha)	Flow Type	Outlet
R103A	0.90	0.085	Controlled	Kerr Avenue Storm Sewer via Cistern
R103B	0.90	0.015	Controlled	
R103C	0.90	0.015	Controlled	
R103D	0.90	0.001	Controlled	
R103E	0.90	0.001	Controlled	
R103F	0.90	0.001	Controlled	
TANK 1	0.20	0.007	Controlled	
TANK 2	0.43	0.011	Controlled	
TANK 3	0.35	0.017	Controlled	
TANK 4	0.75	0.019	Controlled	
EXT-1	0.35	0.014	Controlled	
EXT-2	0.75	0.006	Controlled	
Overall Cistern Tributary Catchment Areas	0.74	0.190	Controlled	Kerr Avenue Storm Sewer
UNC-1	0.64	0.043	Uncontrolled	Kerr Avenue ROW
UNC-2	0.90	0.005	Uncontrolled	Parkland Dedication
Total	0.76	0.238	-	-



Given the limitations of the existing topography and site grading, it is proposed that the post-development drainage pattern for the uncontrolled areas (UNC-1 and UNC-2) at the site perimeter be allowed to continue to drain uncontrolled to the adjacent public spaces. The release rate from controlled areas of the site will need to be over-controlled to compensate for the release rates from the two uncontrolled areas.

Subcatchments EXT-1 and EXT-2 drain from the Phase 3 area into the Phase 1 area where the runoff is captured and controlled. At the time of SPC for Phase 3 these areas will likely be regraded to be captured and controlled within the Phase 3 drainage system. Under the Phase 1 development conditions, the drainage remains within the same land ownership parcel (overall Site) and complies with the intent of the SDG and site design criteria. However, if severance of the Phase 1 area proceeds, these will become external drainage areas, and an easement may be required for the interim drainage of these areas into Phase 1 prior to the development of Phase 3.

5.4.1 Allowable Release Rate

Per the City of Ottawa pre-consultation, all storm events, up to and including the 100-year event, is to be controlled to the 2-year pre-development release rate. As such, the target release rate for the site is 25.4 L/s. Runoff coefficient values have been increased by 25 % for the post-development 100-year storm event based on the City of Ottawa SDG.

5.4.2 Quantity Control

5.4.2.1 Storage Requirements

The site requires quantity control measures to meet the restrictive stormwater release criteria. It is proposed that rooftop storage via restricted roof release is to provide some stormwater detention. Catch basins and area drains collecting drainage from the remainder of the site, and roof drain outlets will be routed by the building mechanical consultant to an internal cistern for further detention storage to reduce the site peak outflow. A spreadsheet using the Modified Rational Method (MRM) was used to size the roof and cistern storage, as detailed in **Appendix D.1**.

5.4.2.2 Rooftop Storage

It is proposed to retain stormwater on the building rooftop area R103A by installing restricted flow roof drains. The MRM calculations assume the roof will be equipped with 15 standard Watts model roof drains complete with Adjustable Accutrol Weirs. Discharge from the controlled roof drains will be routed by the mechanical consultant through the building's internal plumbing to the proposed cistern.

Watts Drainage Adjustable Accutrol roof drain weir data and the roof plan were used to calculate a practical roof release rate and detention storage volume for the rooftop areas, with 80 % of the roof area assumed to be available for storage. Approximately 34.1 m³ of available storage was calculated for area R103A. It should be noted that the Accutrol weir has been used as an example only, and that other products may be specified for use, provided that:



- The peak roof drain release rate is restricted to match the maximum rate of release indicated in **Table 5.3**,
- Sufficient roof storage is provided to meet (or exceed) the required volume of detained stormwater indicated in **Table 5.5**, and
- The maximum ponding depth of 150 mm is not exceeded during any storm event. Emergency overflow scuppers are to be provided in the rooftop to prevent exceedances.

The proposed drain release rates and storage volumes have been calculated based on all 15 roof drain weirs at the closed setting. Rooftop storage volumes and controlled release rates are summarized in **Table 5.3**.

Table 5.3: Roof Subcatchment (R103A) Stormwater Management

Design Storm	Storage Depth (mm)	Release Rate (L/s)	Volume Stored (m ³)
2-Year	89.4	4.7	7.6
100-Year	145.3	4.7	31.3

5.4.2.3 Uncontrolled Areas

There are two uncontrolled subcatchment areas included in the SWM analysis, consisting of UNC-1 and UNC-2. UNC-1 drains south to the Kerr Avenue ROW, and UNC-2 drains east to the parkland area. The peak post-development release rates from the uncontrolled areas are summarized in **Table 5.4**.

Table 5.4: Peak Post-Development Uncontrolled Surface Release Rates (L/s)

Design Storm	UNC-1	UNC-2	Total
2-Year	5.8	0.9	6.7
100-Year	17.0	2.3	19.3

5.4.2.4 Stormwater Cistern

As part of the stormwater management design, a stormwater cistern to be located in the underground parking area and equipped with a mechanical pump is proposed to attenuate peak flows from the building rooftops and surface areas. The final location of the cistern within the proposed building is to be coordinated by the architect with mechanical and structural engineers.

The stormwater cistern is to be designed to provide a minimum active storage volume of 44 m³ with a maximum controlled release rate of 6.1 L/s. The stormwater cistern is to discharge at the specified controlled release rate using a mechanical pump. **Table 5.5** summarizes the respective flow rates and volume of retained stormwater in the 2-year and 100-year storm events.



Table 5.5: Cistern Characteristics for Stormwater Management

Design Storm	Area IDs	Tributary Area (ha)	Discharge (L/s)	Required Storage (m ³)	Proposed Storage (m ³)
2-year	R103B– R103F, TANK 1 – TANK 4, EXT-1 – EXT-2	0.11	6.1	11.0	44.0
100-year	Plus, controlled outflow from R103A	(plus 0.09 ha from R103A)		43.3	

The final design of the cistern and outlet pump within the proposed building is to be completed by the mechanical and structural engineers and coordinated with the architect. In the event of a power outage or breakdown of the pump, the cistern will be designed with an emergency overflow spill outlet at or above the 100-year storage level of the cistern. The emergency overflow will spill into a gravity drain designed by the mechanical consultant to convey the 100-year flow rates. The drain inlet/invert will be set to allow flow by gravity through the building internal plumbing system to be wye-teed into the building storm service lateral downstream of the backwater flow prevention valve. The cistern's 100-year storage capacity requirements, allowable release rates, emergency overflow, and gravity drain outlet will need to be coordinated with the structural and mechanical engineering consultants at the detailed design (building permit) phase.

5.4.2.5 Results

The proposed stormwater management plan meets the requirements identified during pre-consultation that stormwater release under all storm events up to and including the 100-year storm event, are to be controlled to the 2-year pre-development target release rate. **Table 5.6** provides a summary of the peak design discharge rates calculated from the MRM analysis, detailed in **Appendix D.1**.

Table 5.6: Summary of Total 2-Year and 100-Year Release Rates

Drainage Area	2-Year Discharge (L/s)	100-Year Discharge (L/s)
Uncontrolled Areas	10.2	29.4
Cistern to Sewer	6.1	6.1
Target (L/s)	25.4	25.4
Total (L/s)	16.3	25.4

As mentioned in Section 5.4.2.3, UNC-3 has been excluded for consideration of the site's target release rate with the existing draining conditions maintained for the interim until ultimate build-out of the full site. As such, the uncontrolled discharge from UNC-3 is also excluded from the site's overall uncontrolled discharge rates.

The dedicated parkland will have its own quantity control measures separate from the rest of the site. These measures are to be provided by the City of Ottawa in later stages when the park is developed.



5.4.3 Quality Control

Through correspondence with the City of Ottawa, it was confirmed that no stormwater quality control measures apply to the Phase 1 area, as there is no surface parking proposed within the parcel. Two levels of underground parking will be provided that will drain to the sanitary sewers. No other sources of contamination or sediments are expected on this site, therefore there are no requirements for stormwater quality control design. Correspondence regarding the quality control requirements for the site is found in **Appendix D.3**.

While quality control measures are not anticipated for the dedicated parkland, the requirements shall be reassessed when the park is developed by the City in the future.

5.5 Proposed Stormwater Servicing

The internal stormwater drainage network collecting discharge from area drains throughout the site, and the roof drains will outlet to the stormwater cistern, which then pumps the discharge at a controlled rate to a proposed single 300 mm diameter stormwater building service, complete with full port backwater valve as per City Standard S14.1. A stormwater sump and pump are required for the proposed foundation drain, which will also outlet to the proposed 300 mm building service.

The proposed building service is to connect to the proposed 375 mm diameter storm sewer extension within the Kerr Avenue ROW, as shown in **Drawing PP-2**. Sizing and design of the service, backwater valves, sump, pump, and the internal drainage system (including the roof drains, cistern pump, cistern emergency overflow drain, and scuppers), are to be completed by the mechanical consultant. Design of the stormwater cistern is to be completed by the structural engineer. The proposed stormwater servicing is shown on **Drawings SSP-1** and **SD-1**.

The dedicated parkland will be serviced by a 300 mm diameter storm service, complete with a manhole within the site. The park storm service connects to the proposed 375 mm diameter storm sewer extension in Kerr Avenue via a proposed manhole within the ROW and downstream from the building service. Sizing and design of the onsite park storm servicing are to be completed by the City and/or mechanical consultant when the park is developed.

As part of the infrastructure upgrades to accommodate the stormwater servicing, Kerr Avenue will be urbanized along the north side with curb and sidewalk, complete with a proposed catch basin that will collect drainage within the right of way to the proposed 375 mm diameter storm sewer extension in Kerr Avenue. Similarly, Boyd Avenue will be urbanized along the west side with curb and sidewalk, and the existing catch basin will be relocated to accommodate the proposed sidewalk. In correspondence dated July 17, 2025 (**Appendix D.4**), the City confirmed they have no concerns with the impact the proposed urbanization of Kerr Avenue and Boyd Avenue within the vicinity of the site has on the drainage. The proposed catch basin and storm sewer extension in Kerr Avenue are shown in **Drawing PP-2**.



6 Site Grading

The Phase 1 site measures approximately 0.36 ha in area with asphalt and gravel parking, grassed areas and trees. The topography across the Phase 1 Site generally slopes southward towards the Kerr Avenue ROW at the south with a portion contributing to the Boyd Avenue ROW and a small portion north towards Carling Avenue, as shown in the topo from the site survey plan.

A detailed grading plan (see **Drawing GP-1**) for the Phase 1 developable area (0.26 ha) has been provided to satisfy the stormwater management requirements, as detailed in **Section 5.0**, adhere to any grade raise restrictions for the site, and provide for minimum cover requirements for storm and sanitary sewers where possible. Site grading has been established to provide emergency overland flow routes required for stormwater management and anticipated cover requirements over sanitary and storm sewers.

Given the underground parking covers most of the developable site area, it is anticipated that the foundation excavation and shoring will remove most of the silty clay from the site, therefore a grade raise restriction will not be applicable for the proposed development.

There is a significant grade difference between the site and the adjacent properties to the west. An OPSD 3120.100 Type II retaining wall is required at the northwest corner of the Phase 1 site to accommodate the grade difference. This retaining wall is required for the development of Phase 1. In the ultimate conditions the wall is indicated as an interim structure since it will be replaced with the foundation wall of the Phase 3 underground parking in the future full site buildout.

A detailed grading plan for the parkland area will be created by the City of Ottawa at the time of development. For the purposes of the Phase 1 development, the parkland area will be graded to provide tie-in at the existing grades to the north, the proposed grades to the west, and positive sheet/overland flow drainage to the Boyd Avenue and Kerr Avenue ROWs.



7 Utilities

All existing utilities in the vicinity of the site shown in the civil plans are based on information provided in the UCC and topographic survey. At the time of construction, utility locates are the responsibility of the Contractor.

Overhead (OH) hydro-wires run parallel to the site along the north side of Kerr Avenue and to the east of the site along the east boundary of the parkland (west side of Boyd Avenue) within designated easements. All utilities within the work area will require relocation during construction. The existing utility poles within the public right of way and hydro easements are to be protected during construction.

As the site is surrounded by existing commercial and residential developments, Hydro Ottawa, Bell, Rogers, and Enbridge servicing is readily available through existing infrastructure to service this site. The exact size, location, and routing of utilities will be finalized after design circulation. Existing overhead wires and utility plants may need to be temporarily moved/reconfigured to allow sufficient clearance for the movement of heavy machinery required for construction. The relocation of existing utilities will be coordinated with the individual utility providers prior to Construction.

8 Approvals

Ontario Ministry of Environment, Conservation, and Parks (MECP) Environmental Compliance Approvals (ECAs, formerly Certificates of Approval (CofA)) under the *Ontario Water Resources Act* are not anticipated for the proposed storm and sanitary servicing of Phase 1 of the proposed site. The installation of the storm sewer extension off-site within Kerr Avenue is to be incorporated within the City of Ottawa's CLI-ECA. Both the storm sewer extension within Kerr Avenue and the watermain upsizing in Boyd Avenue will require Utilities Consent Circulation and Approval prior to undertaking of the works.

For ground or surface water volumes being pumped during the construction phase, typically between 50,000 to 400,000 L/day, it is required to register on the Environmental Activity and Sector Registry (EASR). It is possible that groundwater may be encountered during the foundation excavation on this site. A minimum of two to four weeks should be allotted for completion of the EASR registration and the preparation of the Water Taking and Discharge Plan by a Qualified Person as stipulated under O.Reg. 63/16. An MECP Permit to Take Water (PTTW), which is required for dewatering volumes exceeding 400,000L/day, is not anticipated for the site.



9 Erosion and Sediment Control During Construction

To protect downstream water quality and prevent sediment build-up in catch basins and storm sewers, erosion and sediment control measures must be implemented during construction. The following recommendations will be included in the contract documents and communicated to the Contractor.

1. Implement best management practices to provide appropriate protection of the existing and proposed drainage system and the receiving water course(s).
2. Limit the extent of the exposed soils at any given time.
3. Re-vegetate exposed areas as soon as possible.
4. Minimize the area to be cleared and grubbed.
5. Protect exposed slopes with geotextiles, geogrid, or synthetic mulches.
6. Install silt barriers/fencing around the perimeter of the site as indicated in **Drawing ECDS-1** to prevent the migration of sediment offsite.
7. Install trackout control mats (mud mats) at the entrance/egress to prevent migration of sediment into the public ROW.
8. Provide sediment traps and basins during dewatering works.
9. Install sediment traps (such as SiltSack® by Terrafix) between catch basins and frames.
10. Schedule the construction works at times which avoid flooding due to seasonal rains.

The Contractor will also be required to complete inspections and guarantee the proper performance of their erosion and sediment control measures at least after every rainfall. The inspections are to include:

- Verification that water is not flowing under silt barriers.
- Cleaning and changing the sediment traps placed on catch basins.

Refer to **Drawing ECDS-1** for the proposed location of silt fences, sediment traps, and other erosion control measures for the Phase 1 development area.



10 Geotechnical Investigation

A geotechnical desktop review report was prepared by Paterson Group on December 4, 2024. 17 boreholes were advanced to a maximum depth of 10.3 metres below the existing ground surface (BGS) in the field programs carried out on between October 2013 and October 2018. The information obtained from those previous field programs will guide the design of the site and identify development constraints.

The subsurface profile encountered at the borehole locations is characterized primarily by fill, compact to dense silty sand to sandy silt, silty clay to clayey silt or glacial till, which is generally observed to consist of loose brown silty sand with gravel, all underlain by bedrock.

Based on observations from all the boreholes, the bedrock consists of grey limestone interbedded with dolostone or shale. The long-term groundwater table is expected to be at 2.0 to 3.0 m BGS, though as groundwater levels are subject to seasonal fluctuations, they could vary at the time of construction. Given the time gap between the field programs and the proposed development, a supplemental geotechnical investigation is recommended to confirm the groundwater levels provided.

Based on Paterson's recommendations, the site is suitable for the proposed development. It is expected that the buildings will be founded on conventional shallow footings placed on the bedrock bearing surface. Bedrock removal is expected to be required to complete the excavation for the proposed underground parking. It is anticipated that the silty clay will be completely removed from the development site during the excavation and shoring operations, since the underground parking extends nearly to the Phase limits. Consequently, the geotechnical report does not include any grade raise restrictions. If a change in the proposed development is introduced where the silty clay will remain in place, additional recommendations must be provided by Paterson to accommodate the presence of the compressible silty clay layer below the proposed structure.

The geotechnical report also presents Paterson's recommended pavement structure, trench bedding, and site-specific construction considerations. For further details, refer to the full geotechnical report provided in the submission package.



11 Conclusions

The water, wastewater, and stormwater servicing conditions assessed in this report indicate that several key updates are required to the existing public services immediately adjacent to the proposed site:

1. Upsize the existing 150 mm diameter municipal watermain on Boyd Avenue from Carling Avenue to Kerr Avenue to a 200 mm diameter watermain.
2. Extend the storm sewer along Kerr Avenue from the intersection of Kerr Avenue and Boyd Avenue to the location of the proposed storm service for Building C.
3. Install barrier roadside curbs along the north side of Kerr Avenue and along the dedicated parkland fronting Boyd Avenue. New curb inlet catch basins are to be installed and tie into the new storm sewer extension within Kerr Avenue and replace an existing ditch inlet catch basin on Boyd Avenue to the new curb, replacing the frame and grate with a curb inlet type.
4. Install a new municipal fire hydrant within the municipal ROW on the north side of Kerr Avenue to feed the Building C fire department connection.

Once these improvements are completed, the municipal infrastructure adjacent to the development site will be adequate to support the site servicing and stormwater management strategy presented in this report. Existing and available utilities, geotechnical conditions and requirements, and civil approval and permit requirements for this development to proceed have been identified in this report and has effectively demonstrated that the proposed development meets all the servicing requirements for Site Plan Control approval.



Appendices



Appendix A Background

A.1 Site Plan





SITE PLAN SYMBOLS:

- SOFT LANDSCAPE PLANTING
- ENTRANCE BOULEVARD / WALKWAYS
- PRIVATE PATIOS
- PAVERS @ TERRACE LEVEL
- PROPOSED CITY BOULEVARD: CONCRETE SIDEWALK & ASPHALT CYCLE TRACK
- BIKE RACK
- MAIN ENTRANCE DOOR
- SERVICE / EXIT DOOR
- VEHICULAR DIRECTION
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- PROPOSED TREE
- SIAMESE CONNECTION
- FIRE HYDRANT

- DRAWING NOTES**
1. SEE DRAWING 1746 CARLING AVENUE FOR PHASE 1 CONSTRUCTION DETAILS.
 2. SEE DRAWING 1746 CARLING AVENUE FOR PHASE 2 CONSTRUCTION DETAILS.
 3. SEE DRAWING 1746 CARLING AVENUE FOR PHASE 3 CONSTRUCTION DETAILS.
 4. SEE DRAWING 1746 CARLING AVENUE FOR PHASE 4 CONSTRUCTION DETAILS.
 5. SEE DRAWING 1746 CARLING AVENUE FOR PHASE 5 CONSTRUCTION DETAILS.
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 36. SEE DRAWING 1746 CARLING AVENUE FOR PHASE 36 CONSTRUCTION DETAILS.
 37. SEE DRAWING 1746 CARLING AVENUE FOR PHASE 37 CONSTRUCTION DETAILS.
 38. SEE DRAWING 1746 CARLING AVENUE FOR PHASE 38 CONSTRUCTION DETAILS.
 39. SEE DRAWING 1746 CARLING AVENUE FOR PHASE 39 CONSTRUCTION DETAILS.

PROJECT INFORMATION

Zoning	REQUIRED	PROVIDED
Building Height - Building 'C'	15.0m & 30.0m	9 STOREYS / 30.0m
Allowable Projection - Amenity Level	0.0m	250m ² / 4.5m
Density - Maximum Floor Space Index (Based on 77% Construction Area)	n.a.	4.32 = 42,506 m ²
Density - Units per Hectare	n.a.	728
Interior Side Yard Setback (0 to 20m from Street)	3.0m	6.1m
Interior Side Yard Setback (Over 20m from Street)	7.5m	5.0m
Rear Yard Setback (Within 20m Abutting a Street)	3.0m	5.2m
Minimum Width of Landscape Buffer @ Parking Lot	1.5m	1.8m
TOTAL RESIDENTIAL UNIT COUNT:		
Parking - Residential (After 12 Units per Bldg.) - 0.5 PER UNIT	340	366
Parking - Visitor Only (After 12 Units per Bldg.) - 0.1 PER UNIT	68	69
Parking - Commercial Restaurant - 5.0 PER 100m ² GFA	0	0
Parking - Commercial Retail / P.S.B. - 1.25 PER 100m ² GFA	0	0
Bicycle Parking - Residential - 0.5 PER UNIT	358	370
Bicycle Parking - Commercial - 1 PER 250m ² GFA	4	12
Aisle & Driveway Minimum / Maximum Width	6.0m / 6.7m	6.0m / 6.7m
Amenity Area - Total per Unit - 6.0m ²	4,296.0m ²	4,500m ²
Amenity Area - 50% Communal per Unit - 3.0m ²	2,148.0m ²	2,250m ²
Parkland Dedication Area - 10% (Site Area Excludes Lane Lands 8.834.7m ²)	10% / 983.47m ²	10% / 983.8m ²

SITE STATISTICS - OVERALL SITE

Category	Value
GROSS BUILDING AREA	741.2 sq. m.
EST. 1754 CARLING AVE. (AUTO GARAGE)	7,978 sq. ft.
EST. 1744 CARLING AVE. (RETAIL)	6,897 sq. ft.
EST. 1744 CARLING AVE. (RETAIL)	622.2 sq. m.
PROPOSED BUILDING 'C'	7,219.4 sq. m.
PROPOSED BUILDING 'C'	77,709 sq. ft.

BUILDING STATISTICS - PHASE 1

Category	Value
GROSS BUILDING AREA	741.2 sq. m.
PARKING LEVEL	7,978 sq. ft.
GROUND FLOOR	6,897 sq. ft.
2nd - 6th FLOOR	7,219.4 sq. m.
7th - 9th FLOOR	77,709 sq. ft.

UNIT STATISTICS

Unit Type	Count	%
STUDIO UNIT	0	0%
1 BEDROOM UNIT	29	3%
1 BEDROOM + DEN UNIT	90	9%
2 BEDROOM UNIT	17	21%
2 BEDROOM + DEN UNIT	0	0%
3 BEDROOM UNIT	6	6%
TOTAL	122	

LAND BREAKDOWN

Category	Area (m ²)	%
PHASE 2: BUILDING 'A'	1,874.0m ²	17.75%
PHASE 3: BUILDING 'B'	3,467.0m ²	32.84%
PHASE 1: BUILDING 'C'	2,743.8m ²	26.00%
PARKLAND DEDICATION	981.0m ²	9.30%
CARLING AVENUE ROW	750.8m ²	7.11%
CORNER SIGHT TRIANGLE (2)	17.8m ²	0.17%
CLOSED LANES (2)	727.3m ²	6.89%
TOTAL	10,559.7m ²	100.0%

LOT COVERAGE

Category	Area (m ²)	%
EX. BUILDING 1754 CARLING AVE.	926.5m ²	9.42%
EX. BUILDING 1744 CARLING AVE.	777.7m ²	7.91%
PHASE #1 BUILDING 'C'	1,173.4m ²	11.93%
PAVED SURFACE		
LANDSCAPE OPEN SPACE		
PARKLAND DEDICATION	981.0m ²	10.00%
TOTAL	9,831.8m ²	100.0%

IT IS THE RESPONSIBILITY OF THE APPROPRIATE CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS ON SITE AND TO REPORT ALL ERRORS AND/OR OMISSIONS TO THE ARCHITECT.

ALL CONTRACTORS MUST COMPLY WITH ALL PERTINENT CODES AND BY-LAWS.

THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION UNLESS SIGNED BY THE ARCHITECT.

DO NOT SCALE DRAWINGS.

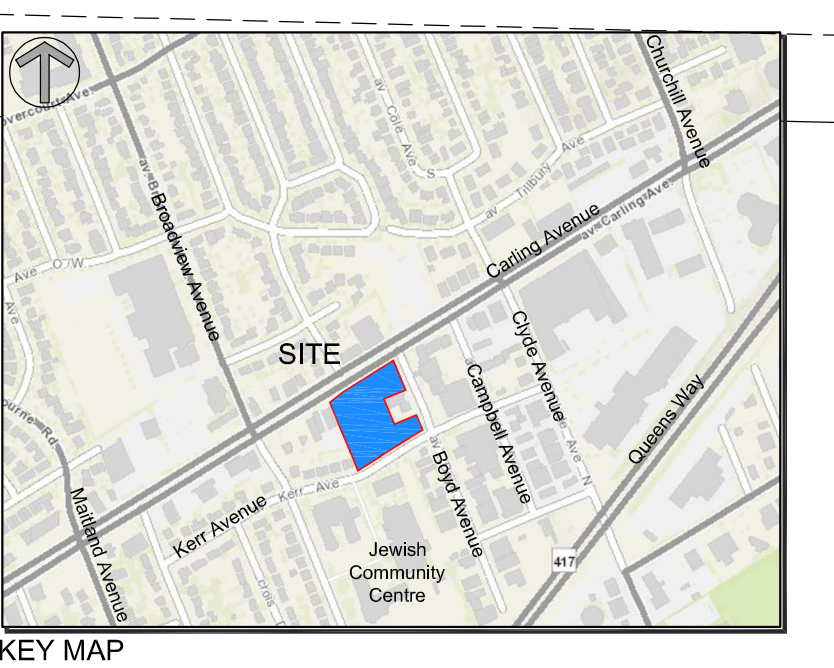
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NOTATION SYMBOLS:

- INDICATES DRAWING NOTES, LISTED ON EACH SHEET.
- INDICATES ASSEMBLY TYPE: REFER TO TYPICAL ASSEMBLIES SCHEDULED.
- INDICATES WINDOW TYPE: REFER TO WINDOW ELEVATIONS AND DETAILS ON ARCH SERIES.
- INDICATES DOOR TYPE: REFER TO DOOR SCHEDULE AND DETAILS ON ARCH SERIES.
- DETAIL NUMBER
- TITLE
- DETAIL REFERENCE PAGE
- DETAIL CROSS REFERENCE PAGE

1 SITE PLAN - Phase 1
SCALE = 1 : 250

0m 5 10 25
SCALE 1: 250



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LEGAL DESCRIPTION
SURVEYOR'S REAL PROPERTY REPORT
PART 1 Plan of
PART OF LOTS 1, 2, 3 and 4, LOT 5 and
PART OF LANE CLOSED BY JUDGE'S ORDER
(Instrument No 325341)
REGISTERED PLAN 355
CITY OF OTTAWA

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Fax: (613) 730-1136
E-Mail: bolduc@fotenn.com

A.2 Legal Survey



A.3 Pre-Consultation



July 18, 2024

Thomas Freeman

Fotenn

Via email: freeman@fotenn.com

**Subject: Pre-Consultation: Meeting Feedback
Proposed Zoning By-law Amendment Application – 1740, 1746, 1754
Carling Avenue, 1755 Kerr Avenue and 828 Boyd Avenue**

Please find below information regarding next steps as well as consolidated comments from the above-noted pre-consultation meeting held on July 2, 2024.

Pre-Consultation Preliminary Assessment

1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input checked="" type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
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One (1) indicates that considerable major revisions are required while five (5) suggests that the proposal appears to meet the City's key land use policies and guidelines. This assessment is purely advisory and does not consider technical aspects of the proposal or in any way guarantee application approval.

Next Steps

1. A review of the proposal and materials submitted for the above-noted pre-consultation has been undertaken.
2. In your subsequent submission, please ensure that all comments or issues detailed herein are addressed. A detailed cover letter stating how each issue has been addressed must be included 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 before the next submission, you may be requested to repeat the pre-consultation process before filing an Official application.

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.

Proposed Development

- Two high-rise mixed-use buildings fronting onto Carling, with tower heights of 32 and 28 storeys and a 9-storey mid-rise apartment building fronting onto Kerr Avenue. The proposal includes 736 dwelling units across the three buildings, approximately 5% 2 bedroom + den units.
- A 774 square metre park is proposed to be conveyed to the city at the corner of Kerr Avenue and Boyd Avenue

Planning

Comments:

1. Thank you for introducing commercial and active uses along Carling Avenue.
2. The additional land acquired since the previous pre-consultation has provided more space on the site for tower separation and better site layout options.
3. Official Plan Policies
 - a. The site is situated in the Inner Urban Transect and designated Mainstreet Corridor (Carling Avenue) and Neighbourhood/Evolving Neighbourhood Overlay (Kerr/Boyd Avenue)
 - i. Note that Policy 6.2.1 outlines that the Corridor designation applies to any lot abutting the Corridor to a maximum depth of 220 metres from the centreline of the mainstreet.
 - (i) 1755 Kerr Avenue is currently abutting the Corridor via the lane.
 - (ii) 828 Boyd Avenue does not currently have frontage on the Corridor. This site is therefore designated Neighbourhood with an Evolving Neighbourhood Overlay.
4. The site is adjacent to industrial uses. Review Ministry of Environment's [D-6 Compatibility between Industrial Facilities](#) for direction.

5. Zoning By-law

- a. 1740, 1746, 1754 Carling Avenue and 1755 Kerr Avenue are currently zoned AM10.
- b. 828 Boyd Avenue is currently zoned IG3 H(10.7).

6. Transition to adjacent low-rise neighbourhood designation

- a. Demonstrate appropriate transition to adjacent low-rise built forms to the west and south. See Urban Design Policies in the Official Plan and the *Design Guidelines for High-rise Buildings* for direction.

7. Transition to the park

- a. Please increase the building setback adjacent to the park. Currently, there is no space for tree plantings and pedestrian circulation adjacent to the park. See Urban Design Comments for further direction.
- b. If the building along Kerr remains as a mid-rise built form, please consider introducing a low-rise stepback adjacent to the park.

8. Please provide a safe and continuous pedestrian route through the site. Replace some surface parking with an accessible pathway. Consider adding trees between the pedestrian route and the parking area. See markup drawing.



9. Please show the extent of the underground parking on the site plan.
10. Reduce the amount of surface parking. Please consider removing the parking spaces nearest to Carling Avenue and explore using the space for a POPs, patio space or amenity spaces for residents and visitors.
11. Where possible, reduce the number of loading spaces, and accesses to the underground parking garage.
12. Westerly interior side yard setback/stepbacks
 - a. Please show the setback dimension on the plan.
 - b. Please show the tower setback dimension on the plan.
13. Design Guidelines
 - a. Review [Urban Design Guidelines for High-rise Buildings](#)
 - b. Review [Urban Design Guidelines for Development along Arterial Mainstreets](#)
14. Section 37 requirements / Community Benefits Charge
 - a. The former Section 37 regime has been replaced with a “Community Benefits Charge”, [By-law No. 2022-307](#), of 4% of the land value. This charge will be required for ALL buildings that are 5 or more storeys and 10 or more units and will be required at the time of building permit unless the development is subject to an existing registered Section 37 agreement. Questions regarding this change can be directed to Ranbir.Singh@ottawa.ca.
15. Planning submission requirements:
 - a. Planning Rationale
 - b. Building elevations
 - c. Plan of Survey
 - d. Wind Analysis
 - e. Shadow Analysis
 - f. Zoning Confirmation Report
 - g. Public Consultation Strategy

Urban Design

Comments:

16. An Urban Design Brief is required for this application. Further details can be found here [Urban Design Brief \(ottawa.ca\)](http://ottawa.ca/Urban-Design-Brief)
17. The concept plan is moving in the right direction and happy to see that additional lots have been consolidated, this gives more breathing room throughout the site.
18. Please consider moving the access on Carling to the far west side of the site. Between Tower A and B, consolidate ramps to one and locate within the building. You could then consider wrapping your commercial patio on the left side of Tower B with a possible POPs in the space between Tower A and B, while also still having some surface parking in the centre in addition to possible parallel stalls down the drive to the left. See image below.



19. Consider having Tower B in a more 'L' shape form to better address Carling and give more circulation room within the site.
20. Tower A should be sculpted more so that the building isn't coming straight down to the ground plane without additional stepbacks. Please consider shifting the angle of the building at the corner so that it is more open for movement at the ground plane for pedestrians and give the building a better presence.
21. Please examine both tower A and B articulation with Carling to build a better relationship with the street. The proposed commercial uses at grade are

supported but consider if the two buildings will have different building articulation and materiality to provide variety within the site/block.

22. The interior side yard setback on the west side is not labeled, please have a minimum of 11.5m. Please ensure all towers have 11.5m from any lot line. Guidelines for tower separation are 23m at minimum and 25m for towers over 30 storeys.
23. If there is an opportunity to, please pull the underground parking garage back so that there is capacity for tree planting within the site. There appears to be opportunities on the west side.
24. Please provide more details on the interface between the 9-storey building and the park. A 3m setback is recommended.
25. Pedestrian circulation through the site should have clearly delineated routes connecting Kerr to Carling, near the park would be one suggestion. Or a mid-block connection running along the west property line.

Phase 1 Comments:

26. The site is within a Design Priority Area and the proposal is subject to review by the City's Urban Design Review Panel prior to the application being deemed complete. Please contact udrp@ottawa.ca for details on submission requirements and scheduling. A report outlining the responses to the Panel's comments (Urban Design Review Panel Report) is required for a complete application.
27. While the Official Plan does support taller buildings along Carling, the proposal does need to conform to policies requiring transition and setbacks. Policies in Section 4.6 Urban Design mention specific design criteria to permit high-rise development.
28. A floorplate size of no larger than 750 m² is encouraged.
29. Please spend some additional time working on the articulation and massing of the podium and tower so that it's not an overwhelming scale for the site. The corner at Carling should be better addressed.
30. When preparing the landscape plan, review the sun shadow study when deciding where landscape and trees will be planted. For trees and landscaping to be successful, they shouldn't be fully shadowed. As many large tree plantings as possible are always strongly encouraged and sufficient soil volume will need to be demonstrated.

Feel free to contact Molly Smith, Urban Design, for follow-up questions.

Engineering

Comments:

31. Water Service

- a. The water boundary conditions should be requested to confirm the available pressure. The surrounding infrastructure may have a low pressure.

Water Boundary Conditions:

- i. Water boundary condition requests must include the location of the service(s) and the expected loads required by the proposed developments. Please provide all the following information:
 - ii. Location of service(s)
 - iii. Type of development and the amount of fire flow required (as per FUS, 1999)
 - iv. Average daily demand: ___ L/s
 - v. Maximum daily demand: ___ L/s
 - vi. Maximum hourly daily demand: ___ L/s Fire protection (Fire demand, Hydrant Locations)
- b. A Form 1 is required if the the municipal owned watermain will be upsized
- c. Ensure adequate hydrant coverage for the all buildings and identify fire lanes. Fire routes located above the underground structure should be coordinated with fire services and building code services.
- d. Service areas with a basic demand greater than 50 m³/day shall be connected with a minimum of two water services, separated by an isolation valve, to avoid creation of vulnerable service area.
- e. A District Metering Area Chamber (DMA) is required for services 150mm or greater in diameter.
- f. The existing water services must be blanked at the main.

32. Sanitary Service

- a. The fronting sanitary sewer systems are near maximum capacity. The applicant should confirm the sanitary sewer demands with the City to ensure adequate capacity.

- b. A monitoring maintenance hole is required at the property line.

33. Storm Service

- a. Ensure that the proposed drive ramp entrance to the underground parking garage is protected from the major overland flow route.
 - i. A minimum freeboard elevation of 350mm from highpoint of the ramp to the street spill elevation.
 - ii. A minimum freeboard elevation of 300mm from the invert of the ramp drain to the 100 year HGL of the storm sewer.
 - iii. In general conformity of City of Ottawa Standard S17.

34. Stormwater Management

- a. Quality Control:
 - i. Enhanced 80% TSS removal
- b. Quantity Control:
 - i. Time of concentration (T_c): $T_c =$ pre-development; maximum $T_c = 10$ min
 - ii. Maximum allowable run-off coefficient $C = 0.5$
 - iii. Maximum allowable flowrate: Control the 100-year storm events to the 2-year storm event.

35. Neighborhood Construction

- a. Road Resurfacing on Kerr Ave with a target start 2-3 years.

Feel free to contact Rubina Rasool, Project Manager, for follow-up questions.

Noise

Comments:

- 36. Noise study required.

Feel free to contact Mike Giampa, TPM, for follow-up questions.

Transportation

Comments:

37. Right-of-way protection (Carling Avenue).

- a. See [Schedule C16 of the Official Plan](#).
- b. Any requests for exceptions to ROW protection requirements must be discussed with Transportation Planning and concurrence provided by Transportation Planning management.

38. Corner Triangles (new):

The new required corner triangle dimensions will be embedded within Schedule C16 of the OP in 2024. Here are the current requirements at all intersection types:

Arterial/Arterial: overlapping 5m x 15m triangles

Arterial/Collector: overlapping 5m x 15m triangles

Collector/Collector: overlapping 5m x 15m triangles

Arterial/Local: 3m x 9m with the longer dimension along the arterial road

Collector/Local: 3m x 9m with the longer dimension along the collector road

Local/Local: 3m x 3m

Lane/Local: 3m x 3m

Any exceptions to the above must be approved by Transportation Planning – specifically Max Walker from Transportation Policy & Networks.

39. A TIA is warranted- proceed to scoping (step 2). Required modules can be adjusted as required. The application will not be deemed complete until the submission of the draft step 2-3. Although a full review of the TIA Strategy report (Step 3) is not required prior to application, it is strongly recommended. Synchro files are required at Step 3.

40. Ensure that the clear throat requirements meet TAC guidelines (applies to arterial and collectors only).

41. A right-turn lane into the Carling Avenue access may be required and should be reviewed in the TIA.

Feel free to contact Mike Giampa, Transportation Project Manager, for follow-up questions.

Environment

Comments:

42. No natural features present to trigger an environmental impact study.
43. Bird-safe Design - Please review and incorporate bird safe design elements. 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
44. Urban Heat Island - Please add features that reduce the urban heat island effect (see OP 10.3.3) produced by the parking lot and a building footprint. For example, this impact can be reduced by adding large canopy trees, green roofs or vegetation walls, or constructing the parking lot or building with low heat absorbing materials.

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

Forestry

Comments:

45. The arrangement of the site with the new design appears to increase the setbacks between the buildings and shared property lines except for the proposed underground parking, which is proposed up to all property lines. It is a strong priority to reduce the amount of parking and pull the underground parking away from the shared property lines to allow for tree retention and planting.
46. Please include in the TCR for the site, consideration of tree impacts if the access road from Carling is shifted to the west of 1754 Carling.

Comments from the previous phase 2 review still apply:

47. Section 4.8.2 of the New Official Plan provides strong direction to maintain the urban forest canopy and its ecosystem services during intensification noting when considering the impacts on individual trees, planning and development decisions, including Committee of Adjustment decisions, shall give priority to the retention and protection of large, healthy trees over replacement plantings and compensation. Applications must address the cumulative impacts on the urban forest, over time and space, with the goal of 40% urban forest canopy cover in mind. Further, that the City and the Committee of Adjustment may refuse a development application where it deems the loss of a tree(s) avoidable.

48. A Tree Conservation Report is required with this application in accordance with [Schedule E](#) of the Tree Protection By-law.

- a. The extent of proposed underground parking and construction shoring must be included in the TCR, with the setbacks from property lines sufficient to retain adjacent and jointly-owned trees, including City trees and to plant new trees which will survive long-term without disturbance from maintenance of underground parking. These setbacks must be set through zoning.
- b. Please note that a permit cannot be issued for removal of trees on shared or adjacent properties without permission of all owners.
- c. The proposed parkland at the corner of Kerr and Boyd is an ideal location to plant large-growing trees toward the goal of 40% canopy cover.
- d. Please confirm whether the overhead hydro along Boyd and Kerr will be buried through this development.

49. A Landscape Plan is required with this application, in accordance with the Landscape Plan Terms of Reference, to show available softscape areas for tree planting, meeting the soil volume recommendations listed in the Tree Planting Requirements list provided with the PC1 comments.

50. The Official Plan requires that "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;"

- a. Soft-scaped areas need to be created on site and within the Right of Way to provide adequate space to plant large-growing trees. See image below.
- b. Please confirm that the proposed lot layout and setbacks account for the future road widening, to ensure that any trees planted along the Carling frontage will remain long-term.
- c. Planting in the ROWs must not be impeded by the proximity of underground parking, allowing for long-term survival of new trees.
- d. The Carling ROW does not have overhead wires, and is a high priority for planting large-growing trees to improve the canopy cover and streetscape of the site. Frontages with hydro above will be limited to small-growing trees unless opportunities are explored to bury the hydro.
- e. Trees are shown throughout the site on the concept plan, but most would be above the underground parking. The Landscape Plan must include

confirmation of sufficient soil volumes in all proposed planting locations, particularly those above the parking structure.

- f. The Landscape Plan must include street trees along Kerr frontage to improve the streetscape and canopy cover in this location.
51. A permit is required prior to any tree removal on site. The tree permit will be released upon site plan approval. Please contact the planner associated with the file or the Planning Forester, Nancy Young (Nancy.young@ottawa.ca) for information on obtaining the tree permit.
52. To ensure that no harm is caused to breeding birds, tree removal and vegetation clearing should be avoided during the migratory bird season (April 15 – August 15) as specified by The City of Ottawa's Environmental Impact Study Guidelines.

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

Parkland

Comments:

53. Parkland Dedication Calculation:

- a. Parkland Dedication will apply to this application, at the rate specified in the Parkland Dedication By-law No. 2022-280 (as amended):
 - i. For residential uses > 18 units per net hectare, the requirement is an area equal to the lesser of:

one hectare per 600 net residential units; or 10% of the gross land area.
 - ii. For commercial and industrial uses, the requirement is: 2% of the gross land area.
 - iii. Where land is developed for a mix of uses within a building, the conveyance requirement shall be as calculated using the applicable rates above, prorated according to the proportion of gross floor area allocated to each use.
- b. The property is identified as being 10,560m² in area, and therefore the preliminary parkland conveyance calculation indicates a requirement of approximately **1,041 m²** (prorated for commercial/residential split).
- c. PFP requests a surveyor's note (or equivalent) specifying the gross land area of the property with your application, to confirm land area for the purpose of finalizing the parkland dedication calculation.

- d. Please note that the parkland dedication calculation provided is preliminary and is subject to change upon receipt of the development application and supporting documentation. The parkland dedication requirement will also be re-evaluated should any of the details of the proposal be modified.

54. Type of Dedication:

- a. In accordance with the City's Land First Policies under Section 4.4.1 of the Official Plan, PFP will be requesting land conveyance for the entirety (1,041m²) of the required parkland dedication for this project. The proposed park block is to provide the full required parkland conveyance.
- b. The park must be free of servicing lines, easements and other encumbrances.
- c. A sidewalk and tree planting is to be provided along all park street frontages.
- d. A 1.5m high chain link fence is to be provided where abutting private property lines.
- e. The park block conveyance will be required in a 'clean and green' state. Further details will be provided at time of SPC application, and will include for example:
 - i. Removal of all debris, contaminated soils, vegetation;
 - ii. Providing a level grade to the surrounding area, ensuring positive surface drainage throughout the park block;
 - iii. Providing services to at least 2m inside the park block property line;
 - iv. Supplying and installing 150mm of topsoil and seed or sod to City standards;

55. Shape & Location of Required Park Block:

- a. The park block, as proposed, is in a good location with about 50% street frontage, and is a useable shape, however staff note that the size of the park block will need to be increased to meet the requirement based on the calculations above.
- b. The proposed park block is too close to the adjacent parking garage. PFP requests a minimum 3m setback from the neighbouring building and parking garage.

Feel free to contact Marika Atfield, Parks Planner, for follow-up questions.

Other

56. 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. Please be advised that this is expected to occur in Q3 2024.
 - b. Please refer to the HPDS information at ottawa.ca/HPDS for more information.

Submission Requirements and Fees

1. The proposed development will require Zoning Bylaw Amendment (Major) and Site Plan Control (Complex) applications.
 - 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,

Kimberley Baldwin

Encl. Study and Plan Identification List

c.c. Kieran Watson, File Support
Rubina Rasool, Project Manager (lead)
Ryan Brault, Project Manager (support)
Mike Giampa, Transportation Project Manager



Molly Smith, Urban Design
Parks and Facilities Planning, Marika Atfield
Parks and Facilities Planning, Louise Cervený
Nancy Young, Forester

List of Technical Agencies to Consult

Proposed Zoning By-law Amendment and Site Plan Control Applications – 1740, 1746 and 1754 Carling Avenue and 828 Boyd Avenue – PC2024-0240

<input checked="" type="checkbox"/>	Zayo	Utility.Circulations@Zayo.com
<input checked="" type="checkbox"/>	Bell Canada	circulations@wsp.com
<input checked="" type="checkbox"/>	Telus Communications	Engineering.Requests@telus.com / jovica.stojanovski@telus.com
<input checked="" type="checkbox"/>	Rogers Communications	OPE.Ottawa@rci.rogers.com
<input checked="" type="checkbox"/>	Enbridge Gas Distribution	municipalplanning@enbridge.com
<input checked="" type="checkbox"/>	O.C. District School Board	planningcirculations@ocdsb.ca
<input checked="" type="checkbox"/>	O.C. Catholic School Board	planningcirculations@ocsb.ca
<input checked="" type="checkbox"/>	Conseil des écoles publiques	planification@cepeo.on.ca
<input checked="" type="checkbox"/>	Conseil des écoles catholiques du Centre-Est	planification@ecolecatholique.ca
<input type="checkbox"/>	Hydro Ottawa (Local Distribution)	Choose an item
<input type="checkbox"/>	Hydro One Networks (Transmission)	landuseplanning@hydroone.com
<input type="checkbox"/>	Ontario Power Generation	Executivevp.lawanddevelopment@opg.com
<input type="checkbox"/>	Trans Canada Pipeline c/o Lehman & Associates	dpresley@mhbcplan.com
<input type="checkbox"/>	Trans Northern Pipeline Inc.	wwatt@tnpi.com
<input type="checkbox"/>	Railways	Choose an item
<input type="checkbox"/>	National Capital Commission	Ted.Horton@ncc-ccn.ca
<input type="checkbox"/>	Parks Canada	Tom.Green@pc.gc.ca
<input type="checkbox"/>	Airport Authority	Choose an item
<input type="checkbox"/>	Transport Canada	aviation.ont@tc.gc.ca
<input type="checkbox"/>	Ministry of Transportation	Via MTO's online portal . Note that MTO approval will be required ahead of applying for a building permit.
<input type="checkbox"/>	Infrastructure Ontario	NoticeReview@infrastructureontario.ca
<input type="checkbox"/>	Propane Operator	Mailing Addresses Only
<input type="checkbox"/>	NAV Canada	landuse@navcanada.ca
<input type="checkbox"/>	Conservation Authority	Choose an item

APPLICANT'S STUDY AND PLAN IDENTIFICATION LIST

Proposed Zoning By-law Amendment Application – 1740, 1746 and 1754 Carling Avenue and 828 Boyd Avenue – PC2024-0240

Legend: **R** = Required, the study or plan is required with application submission

A = Advised, the study or plan is advised to evaluate the application or satisfy a condition of approval/draft approval

1 - OPA, **2** - ZBA, **3** - Plan of Subdivision, **4** - Plan of Condominium, **5** - SPC

Core studies required for certain applications all the time (Remaining studies are site specific)

For information and guidance on preparing required studies and plans refer [here](#):

ENGINEERING

R	A	Study/ Plan Name	Description	When Required					Applicable Study Components & Other Comments
				1	2	3	4	5	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1. Environmental Site Assessment (Phase 1 & Phase 2)	Ensures development only takes place on sites where the environmental conditions are suitable for the proposed use	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Record of Site Condition Yes <input type="checkbox"/> No <input type="checkbox"/>
				<u>Study Trigger Details:</u> All cases					
<input checked="" type="checkbox"/>	<input type="checkbox"/>	2. Geotechnical Study	Geotechnical design requirements for the subsurface conditions	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
				<u>Study Trigger Details:</u> All cases					
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3. Grading and Drainage Plan	Grading relationships between connecting (or abutting) properties and surface runoff control	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
				<u>Study Trigger Details:</u> All cases					
<input type="checkbox"/>	<input type="checkbox"/>	4. Hydrogeological and Terrain Analysis	A scientific study or evaluation that includes a description of the ground and surface hydrology, geology, terrain, affected landform and its susceptibility	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Reasonable Use Study Yes <input type="checkbox"/> No <input type="checkbox"/> Groundwater Impact Study Yes <input type="checkbox"/> No <input type="checkbox"/>
				<u>Study Trigger Details:</u> When developing on private services or when urban development is in close proximity to existing private serviced development					
<input checked="" type="checkbox"/>	<input type="checkbox"/>	5. Noise Control Study	Potential impacts of noise on a development	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Vibration Study Yes <input type="checkbox"/> No <input type="checkbox"/>
				<u>Study Trigger Details:</u> See Terms of Reference for full details.					

<input type="checkbox"/>	<input type="checkbox"/>	6. Rail Proximity Study	Development on land adjacent to all Protected Transportation Corridors and facilities shown on Schedule C2 of the Official Plan, to follow rail safety and risk mitigation best practices	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>Study Trigger Details:</u> Within the Development Zone of Influence for existing and future rapid transit stations and corridors, as shown on Annex 2 of the OP OR on land adjacent to all Protected Transportation Corridors and facilities shown on Schedule C2 of the Official Plan	Rail Safety Report Yes <input type="checkbox"/> No <input type="checkbox"/> O-Train Network Proximity Study Yes <input type="checkbox"/> No <input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	7. Site Servicing Study	Provides servicing details based on proposed scale of development with an engineering overview taking into consideration surrounding developments and connections.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>Study Trigger Details:</u> All cases	Fluvial Geomorphological Report Yes <input type="checkbox"/> No <input type="checkbox"/> Assessment of Adequacy of Public Services Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Servicing Options Report Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Erosion and Sediment Control Plan / Brief Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydraulic Water Main Analysis Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Stormwater Management Report and Detailed Design Brief Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	8. Slope Stability Study	Assessment of slope stability and measures to provide safe set-back.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>Study Trigger Details:</u> Where the potential for Hazard Lands exists on a site.	Retrogressive Landslide Analysis Yes <input type="checkbox"/> No <input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	9. Transportation Impact Assessment	Identify on and off-site measures to align a development with City transportation objectives.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>Study Trigger Details:</u> If the development generates 60 person-trips or more; or if the development is located in a Location Trigger; or if the development has a Safety Trigger.	Roadway Modification Functional Design Yes <input type="checkbox"/> No <input type="checkbox"/>

<input type="checkbox"/>	<input type="checkbox"/>	10. Water Budget Assessment	Identify impact of land use changes on the hydrologic cycle and post-development mitigation targets.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<u>Study Trigger Details:</u> May be required for site plan control applications for sites with private servicing and / or proximity to hydrogeologically-sensitive areas. Draft plans of subdivision are required to integrate water budget assessments into supporting stormwater management plans and analysis for the study area.									
<input type="checkbox"/>	<input type="checkbox"/>	11. Wellhead Protection Study	Delineate a Wellhead Protection Area (WHPA) and characterize vulnerability for new communal residential drinking water well systems, in accordance with Technical Rules under <i>Clean Water Act</i> .	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<u>Study Trigger Details:</u> Required for all new communal residential drinking water well systems; including new municipal wells, new private communal wells (small water works) that require a Municipal Responsibility Agreement (MRA), expansions or increased water takings from an existing municipal well or existing private communal well and new private communal wells.									

PLANNING

R	A	Study/Plan Name	Description	When Required					Applicable Study Components & Other Comments
				1	2	3	4	5	
<input type="checkbox"/>	<input type="checkbox"/>	12. Agrology and Soil Capability Study	Confirm or recommend alterations to mapping of agricultural lands in the City.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
				<u>Study Trigger Details:</u> For the expansion of a settlement area or identification of a new settlement area through a comprehensive review; or where it is demonstrated that the land does not meet the requirements for an Agricultural Resource Area.					
<input type="checkbox"/>	<input type="checkbox"/>	13. Archaeological Assessment	Discover any archaeological resources on site, evaluate cultural heritage value and conservation strategies	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
				<u>Study Trigger Details:</u> When the land has either: a known archaeological site; or the potential to have archaeological sites; or where the City's Archaeological Resource Potential Mapping Study indicates archaeological potential, outside of the historic core; or upon discovery of any archaeological resource during construction in the City's historic core area.					
<input checked="" type="checkbox"/>	<input type="checkbox"/>	14. Building Elevations	Visual of proposed development to understand facing of building including direction of sunlight, height, doors, and windows.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
				<u>Study Trigger Details:</u> Site Plan: for residential buildings with 25 or more residential units; or for residential buildings with less than 25 residential units, if the units are within the Urban area or the High-performance Development Standard threshold in the rural area. Official Plan or Zoning By-law: if staff deem it necessary to determine compliance with OP policies, the Zoning By-law or City of Ottawa Urban Design Guidelines.					

<input type="checkbox"/>	<input type="checkbox"/>	15. Heritage Impact Assessment	Determine impacts of proposed development on cultural heritage resources.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>Study Trigger Details:</u> Where development or an application under the Ontario Heritage Act is proposed on, adjacent to, across the street from or within 30 metres of a protected heritage property; or for any development adjacent to the Rideau Canal UNESCO World Heritage Site and its landscaped buffer.	Conservation Plan Yes <input type="checkbox"/> No <input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	16. Heritage Act Acknowledgement Report	A submission requirement to demonstrate that the <i>Ontario Heritage Act</i> requirements have been satisfied, to ensure that multiple applications are considered currently.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>Study Trigger Details:</u> Where the subject property is listed on the Heritage Register and the applicant must submit a Heritage Permit Application (designated heritage property listed on the Heritage Register) or provide notice of intent to demolish or remove a building (non-designated property listed on the Heritage Register).	Heritage Permit Application Yes <input type="checkbox"/> No <input type="checkbox"/> Notice of Intent to Demolish Yes <input type="checkbox"/> No <input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	17. Impact Assessment Study – Mineral Aggregate	Mineral aggregate extraction activities; and to protect known high quality mineral aggregate resources from development and activities that would preclude or hinder their existence (ability to be extracted) or expansion.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>Study Trigger Details:</u> New Development within 500 metres of lands within the Bedrock Overlay , or within 300 metres of lands within the Sand and Gravel Resource Area Overlay.	
<input type="checkbox"/>	<input type="checkbox"/>	18. Impact Assessment Study – Mining Hazards	To identify or confirm known mineral deposits or petroleum resources and significant areas of mineral potential. To protect mineral and petroleum resources from development and activities which would preclude or hinder the establishment of new operations or access to the resources.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>Study Trigger Details:</u> For all applications in proximity to mining operations.	

<input type="checkbox"/>	<input type="checkbox"/>	19. Impact Assessment Study – Waste Disposal Sites / Former Landfill Sites	<p>To identify or confirm known proximity of existing or former waste disposal sites.</p> <p>To ensure issues of public health, public safety and environmental impact are addressed.</p>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p><u>Study Trigger Details:</u> For the establishment of any new Solid Waste Disposal Site or for a footprint expansion of an operating Solid Waste Disposal Site; or development within three kilometers of an operating or non-operating Waste Disposal Site.</p>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	20. Landscape Plan	<p>A plan to demonstrate how the canopy cover, urban design, health, and climate change objectives of Official Plan will be met through tree planting and other site design elements.</p>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p><u>Study Trigger Details:</u> Site Plan, Plan of Subdivision, and Plan of Condominium: always required, except where it is demonstrated that the landscape component of a project is not relevant to the review of the application.</p> <p>A high-level conceptual Landscape Plan may be required to support Zoning By-law and Official Plan Amendment applications.</p>
<input type="checkbox"/>	<input type="checkbox"/>	21. Mature Neighbourhood Streetscape Character Analysis	<p>In the Mature Neighbourhoods a Streetscape Character Analysis is required to determine the applicable zoning requirements.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p><u>Study Trigger Details:</u> Zoning By-law amendment application in areas covered by the Mature Neighbourhoods zoning overlay for applications of residential development of four storeys or less located in a R1, R2, R3, or R4 zone.</p>
<input type="checkbox"/>	<input type="checkbox"/>	22. Minimum Distance Separation	<p>Provincial land use planning tool that determines setback distances between livestock barns, manure storages or anaerobic digesters and surrounding land uses, with the objective of minimizing land use conflicts and nuisance complaints related to odour.</p>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p><u>Study Trigger Details:</u> Applications in the Rural Area, outside of a village.</p>

<input type="checkbox"/>	<input type="checkbox"/>	23. Parking Plan	A tool to assess the sufficiency of on-street parking in plans of subdivision.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
				<u>Study Trigger Details:</u> For new or revised plans of subdivision with public streets.					
<input checked="" type="checkbox"/>	<input type="checkbox"/>	24. Plan of Survey	A Plan of Survey depicts legal boundaries and is a specialized map of a parcel of land and it delineates boundary locations, building locations, physical features and other items of spatial importance.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
				<u>Study Trigger Details:</u> Required for all <i>Planning Act</i> applications.					
<input type="checkbox"/>	<input type="checkbox"/>	25. Plan of Subdivision	Proposed subdivision layout to be used for application approval	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
				<u>Study Trigger Details:</u> Always required with the submission of plan of subdivision application. Only required with a Zoning By-law Amendment application, where such ZBLA is in response to enable a subdivision.					
<input type="checkbox"/>	<input type="checkbox"/>	26. Plan of Condominium	Proposed condominium layout to be used for application approval	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
				<u>Study Trigger Details:</u> With the submission of plan of condominium application.					
<input checked="" type="checkbox"/>	<input type="checkbox"/>	27. Planning Rationale	Provides the planning justification in support of the <i>Planning Act</i> application and to assist staff and the public in the review of the proposal.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Integrated Environmental Review Summary Yes <input type="checkbox"/> No <input type="checkbox"/>
				<u>Study Trigger Details:</u> For all Official Plan amendment, Zoning By-law amendment, or plan of subdivision applications.					
<input checked="" type="checkbox"/>	<input type="checkbox"/>	28. Preliminary Construction Management Plan	A checklist that shows a development proposal's anticipated impacts to all modes of transportation and all elements in the right of way during construction.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
				<u>Study Trigger Details:</u> For all Site Plan and plan of subdivision applications.					

<input checked="" type="checkbox"/>	<input type="checkbox"/>	29. Public Consultation Strategy	Proposal to reach and collect public input as part of development application.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p><u>Study Trigger Details:</u> Official Plan Amendment, Zoning By-law Amendment and Subdivision: Always required.</p> <p>Condominium: Vacant Land only</p> <p>Site Plan: At the discretion of the City's file lead in consultation with the Business and Technical Support Services Manager.</p>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	30. Shadow Analysis	A visual model of how the proposed development will cast its shadow.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p><u>Study Trigger Details:</u> When there is an increase in height or massing proposed for a residential, commercial or office use.</p> <p>Two triggers:</p> <p>1. Inside the Greenbelt: proposed development is over 5 storeys in height (≤ 15 meters). If a development proposal is 5 storeys or less, but is proposing an increase in height and/or massing and is in close proximity to a shadow sensitive area, a shadow analysis may be requested.</p> <p>2. Outside the Greenbelt: proposed development is over 3 storeys in height (≤ 9 meters) and is in close proximity to a shadow sensitive area. Where a proposed development is not in close proximity to a shadow sensitive area (e.g. industrial development) the trigger for a shadow analysis is over 5 storeys in height (≤ 15 meters).</p>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	31. Site Plan	A Site Plan is a visual drawing that illustrates the proposed development of a site in two dimensions.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>Site Plan Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>Concept Plan Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p><u>Study Trigger Details:</u> Site Plan: All</p> <p>Other applications: where a layout of the</p>

				public realm, building massing, heights, densities or massing of the proposal provides changes to the planned context; sites proposing multiple land uses; sites with multiple landowners; sites with two or more buildings, on-site park dedication, and/or a new public or private street(s); sites with proposed changes to connectivity (such as active transportation networks, vehicular circulation or access to transit); sites where the development potential on adjacent properties may be impacted by or could be integrated into the proposed site.	Facility Fit Plan Yes <input type="checkbox"/> No <input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	32. Urban Design Brief	Illustrate how a development proposal represents high-quality and context sensitive design that implements policies of the Official Plan, relevant secondary plans, and Council approved plans and guidelines.	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <u>Study Trigger Details:</u> For all Official Plan amendment, Zoning By-law amendment, and plan of subdivision applications. For SPC applications: proposals for residential buildings with 25 or more residential units, or for proposals for residential buildings with less than 25 residential units, if the units are within the Urban area or the High-performance Development Standard threshold in the rural area where OP Policy 11.3 (3) is relevant; for non-residential and mixed-use proposals.	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	33. Urban Design Review Panel Report	Demonstrates that a development proposal has attended an Urban Design Review Panel formal review meeting, received, and responded to the associated recommendations, if applicable	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <u>Study Trigger Details:</u> Required for all planning act applications subject to UDRP review, in accordance with the UDRP Panel Terms of Reference.	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	34. Wind Analysis	A visual model and a written evaluation of how a proposed development will impact pedestrian-level wind conditions.	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <u>Study Trigger Details:</u> Applications seeking an increase in height and/or massing which is either: a tall building(s), 10 storeys or more or a proposed building that is more than twice the height of	

				adjacent existing buildings and is greater than five storeys in height and is adjacent to existing or planned low rise development, open spaces, water bodies and large public amenity areas.	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	35. Zoning Confirmation Report	The purpose of the Zoning Confirmation Report (ZCR) is to identify all zoning compliance issues, if any, at the outset of a planning application.	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	
				Study Trigger Details: Required for all SPC and ZBLA applications.	

ENVIRONMENTAL

R	A	Study / Plan Name	Description	When Required					Applicable Study Components & Other Comments
				1	2	3	4	5	
<input type="checkbox"/>	<input type="checkbox"/>	36. Community Energy Plan	Includes a community energy analysis, alongside mitigation measures, and other associated information. The community energy analysis refers to the overall assessment process to identify on and off-site measures to align the design of the development with City climate objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
				NOT IMPLEMENTED & NOT REQUIRED					
<input type="checkbox"/>	<input type="checkbox"/>	37. Energy Modelling Report	The Energy Modeling Report is a Site Plan Control application submission requirement to show how climate change mitigation, and energy objectives will be met through exterior building design elements.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
				NOT IMPLEMENTED & NOT REQUIRED					
<input type="checkbox"/>	<input type="checkbox"/>	38. Environmental Impact Study	Assessment of environmental impacts of a project and documents the existing natural features, identifies the potential environmental impacts,	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Assessment of Landform Features Yes <input type="checkbox"/> No <input type="checkbox"/> Integrated Environmental Review Yes <input type="checkbox"/> No <input type="checkbox"/>
				Study Trigger Details: Is required when development or site alteration is proposed in or within a					

			recommends ways to avoid and reduce the negative impacts, and proposes ways to enhance natural features and functions.	specified distance of environmentally designated lands, natural heritage features, the City's Natural Heritage System, or hazardous forest types for wildland fire. The EIS Decision Tool (Appendix 2 of the Environmental Impact Study Guidelines) provides a checklist of the natural heritage features and adjacent areas within which an EIS is required to support development applications under the <i>Planning Act</i> .	Protocol for Wildlife Protection during Construction Yes <input type="checkbox"/> No <input type="checkbox"/> Significant Woodlands Guidelines for Identification, Evaluation, and Impact Assessment Yes <input type="checkbox"/> No <input type="checkbox"/>				
<input type="checkbox"/>	<input type="checkbox"/>	39. Environmental Management Plan	A comprehensive environmental planning document that identifies, evaluates, and mitigates the potential impacts of proposed development on the natural environment and its ecological functions at local planning stage.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Study Trigger Details: Official Plan amendments for local plans (area-specific policy or secondary plan, where: there is significant change in the conditions upon which the original study was based; there are proposed changes to planned infrastructure needed to service a subdivision that would have a significant impact on the infrastructure needs of another subdivision within the EMP study area, or the applicable Class Environmental Assessment approval has expired.
<input type="checkbox"/>	<input type="checkbox"/>	40. High-performance Development Standard	A collection of voluntary and required standards that raise performance of new building projects to achieve sustainable and resilient design	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	41. Tree Conservation Report	Demonstrates how tree cover will be retained and protected on the site, including mature trees, stands of trees, and hedgerows.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Study Trigger Details: Where there is a tree of 10 centimeters in diameter or greater on the site and/or if there is a tree on an adjacent site that has a Critical Root Zone (CRZ) extending onto the development site.

Appendix B Water Servicing

B.1 Domestic Water Demands



1746 Carling Avenue, Ottawa, ON - Domestic Water Demand Estimates

Site Plan provided by RLA Architecture. (2025-07-07)

Stantec Project No. 160401895

City File No. PC2024-0240

Revision: 03

Revised by: MW

Date Created: 7-Jul-2025

Date Revised: 15-Oct-2025

Created by: AR

Checked by: AG

Date Checked: 5-Nov-2025



Population densities per Table 4.1 City of Ottawa Water Distribution Guidelines:		
Studio/1 Bedroom	1.4	ppu
2 Bedroom	2.1	ppu
3 Bedroom	3.1	ppu
Demand conversion factors per Table 4.2 of the City of Ottawa Water Design Guidelines and Technical Bulletin ISTB-2021-03:		
Residential	280	L/cap/day
Commercial	28000	L/gross ha/day

Unit Type	No. of Units	Population	Avg Day Demand		Max Day Demand ^{1 2}		Peak Hour Demand ^{1 2}	
			(L/min)	(L/s)	(L/min)	(L/s)	(L/min)	(L/s)
Residential								
Building C								
1 Bedroom	34	48	9.3	0.2	23.1	0.4	50.9	0.8
1 Bedroom + Den ³	61	128	24.9	0.4	62.3	1.0	137.0	2.3
2 Bedroom	21	44	8.6	0.1	21.4	0.4	47.2	0.8
3 Bedroom	6	19	3.6	0.1	9.0	0.2	19.9	0.3
Total Phase 1 (Building C)	122	238	46.4	0.8	115.9	1.9	255.0	4.2

Notes:

- The City of Ottawa water demand criteria used to estimate peak demand rates for residential areas are as follows:
 maximum day demand rate = 2.5 x average day demand rate
 peak hour demand rate = 2.2 x maximum day demand rate (as per Technical Bulletin ISD-2010-02)
- Water demand criteria used to estimate peak demand rates for gross commercial area are as follows:
 maximum daily demand rate = 1.5 x average day demand rate
 peak hour demand rate = 1.8 x maximum day demand rate (as per Technical Bulletin ISD-2010-02)
- Assumption that "1 bedroom with den" has density of 2.1 ppu.

B.2 Fire Flow Demands





FUS Fire Flow Calculation Sheet - 2020 FUS Guidelines

Stantec Project #: 160401895
 Project Name: 1746 Carling Avenue
 Date: 3/17/2025
 Fire Flow Calculation #: 3
 Description: Building C - 9-Storey Mid-Rise Building.
 Building Footprint: 944 m² for first floor, 1234 m² for 2nd to 6th floor, 1073 m² for 7th floor and 864 m² for 8th to 9th floor.

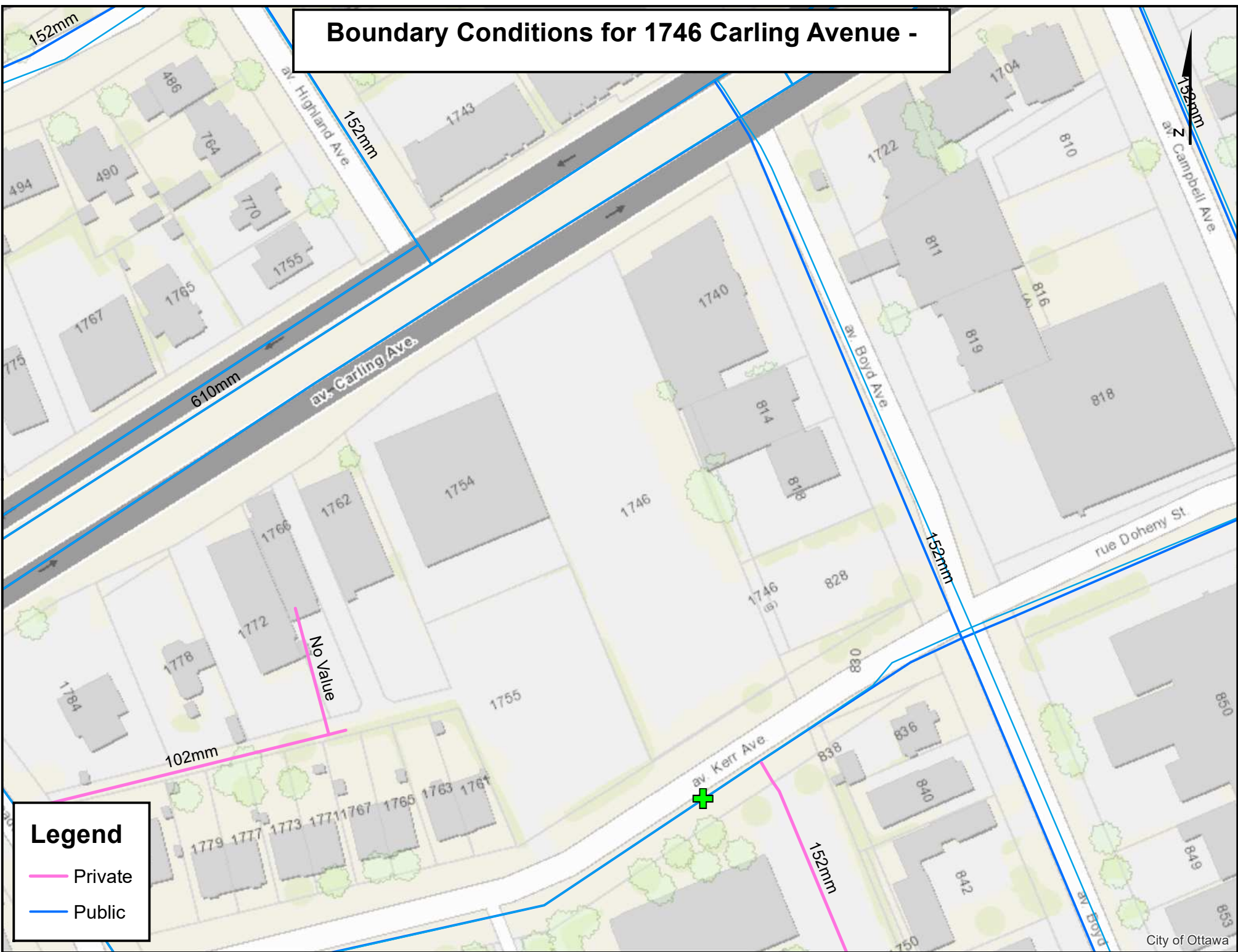
Notes: Footprint areas as per RLA Architecture Site Plan provided March 12, 2025.

Step	Task	Notes	Value Used	Req'd Fire Flow (L/min)						
1	Determine Type of Construction	Type II - Noncombustible Construction / Type IV-A - Mass Timber Construction	0.8	-						
2	Determine Effective Floor Area	Sum of Largest Floor + 25% of Two Additional Floors	Vertical Openings Protected?	YES						
		944 1234 1234 1234 1234 1234	1004 864 864	1561	-					
3	Determine Required Fire Flow	(F = 220 x C x A ^{1/2}). Round to nearest 1000 L/min	-	7000						
4	Determine Occupancy Charge	Limited Combustible	-15%	5950						
5	Determine Sprinkler Reduction	Conforms to NFPA 13	-30%	-2975						
		Standard Water Supply	-10%							
		Fully Supervised	-10%							
		% Coverage of Sprinkler System	100%							
6	Determine Increase for Exposures (Max. 75%)	Direction	Exposure Distance (m)	Exposed Length (m)	Exposed Height (Stories)	Length-Height Factor (m x stories)	Construction of Adjacent Wall	Firewall / Sprinklered ?	-	-
		North	10.1 to 20	24	9	> 100	Type I-II - Protected Openings	YES	0%	952
		East	> 30	0	0	0-20	Type V	NO	0%	
		South	> 30	40	2	61-80	Type V	NO	0%	
		West	3.1 to 10	12	2	21-49	Type V	NO	16%	
7	Determine Final Required Fire Flow	Total Required Fire Flow in L/min, Rounded to Nearest 1000L/min							4000	
		Total Required Fire Flow in L/s							66.7	
		Required Duration of Fire Flow (hrs)							1.50	
		Required Volume of Fire Flow (m ³)							360	

B.3 Boundary Conditions



Boundary Conditions for 1746 Carling Avenue -



Legend

- Private
- Public

Wu, Michael

From: Gladish, Alyssa
Sent: April 14, 2025 13:44
To: Wu, Michael
Subject: Fw: 1746 Carling Avenue (PC2024-0240) - Building C Servicing
Attachments: 1746 Carling Avenue REVISED April 2025.pdf

Alyssa Gladish E.I.T.

Project Manager, Community Development

Direct: 780 917-8567

Mobile: 587 721-1241

Alyssa.Gladish@stantec.com

Stantec

300-1331 Clyde Avenue

Ottawa ON K2C 3G4

Out of Office Alert - I will be away from my virtual office on Friday March 28.

From: Rasool, Rubina <Rubina.Rasool@ottawa.ca>
Sent: Monday, April 14, 2025 11:18:38 AM
To: Gladish, Alyssa <Alyssa.Gladish@stantec.com>
Subject: RE: 1746 Carling Avenue (PC2024-0240) - Building C Servicing

Hello Alyssa,

Please see the WBC below. I anticipate the sewer analysis will be received this week as well.

The following are boundary conditions, HGL, for hydraulic analysis at 1746 Carling Avenue (zone 1W) assumed a dual connection connected to the 203mm upgraded watermain at Boyd Avenue (**Scenario 1**) **OR** to the 203mm upgraded watermain at Boyd Avenue and closed from 610mm Carling backbone due to 610 mm backbone shut down, 152mm Watermain on Carling in service (**Scenario 2**) (see attached PDF for location).

Scenario 1: upgraded 203mm Watermain on Boyd Avenue

Minimum HGL: 108.6 m

Maximum HGL: 114.4 m

Max Day+ Fire Flow (66.7 L/s): 107.4 m

Scenario 2 (RELIABILITY): upgraded 203mm Watermain on Boyd Avenue, **closed from 610mm Carling backbone due to 610 mm backbone shut down**, 152mm Watermain on Carling in service.

Minimum HGL: 107.8 m

Maximum HGL: 114.1 m

Max Day+ Fire Flow (66.7 L/s): 102.6 m

These are for current conditions and are based on computer model simulation.

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.

Rubina

Rubina Rasool
Project Manager
Planning, Infrastructure and Economic Development Department
Development Review – West Branch
City of Ottawa
110 Laurier Avenue West Ottawa, ON K1P 1J1
613-580-2424 Ext. 24221
rubina.rasool@ottawa.ca

Classified as City of Ottawa - Internal / Ville d'Ottawa - classé interne

From: Gladish, Alyssa <Alyssa.Gladish@stantec.com>
Sent: April 08, 2025 11:55 AM
To: Rasool, Rubina <Rubina.Rasool@ottawa.ca>; Baldwin, Kimberley <Kimberley.Baldwin@ottawa.ca>
Cc: Brault, Ryan <ryan.brault@ottawa.ca>
Subject: RE: 1746 Carling Avenue (PC2024-0240) - Building C Servicing

CAUTION: This email originated from an External Sender. Please do not click links or open attachments unless you recognize the source.

ATTENTION : Ce courriel provient d'un expéditeur externe. Ne cliquez sur aucun lien et n'ouvrez pas de pièce jointe, excepté si vous connaissez l'expéditeur.

Hello Rubina,

Thank you for confirming receipt of my emails and forwarding of the requests.

Looking forward to receiving the results.

Best Regards,
Alyssa

Alyssa Gladish E.I.T.
Project Manager, Community Development

Direct: 780 917-8567
Mobile: 587 721-1241
Alyssa.Gladish@stantec.com

Stantec
300-1331 Clyde Avenue
Ottawa ON K2C 3G4

B.4 Fire Hydrant Coverage Table



W:\active\160401895\design\drawing\Detailed Design Drawings\160401895 FH.dwg
2025/11/06 4:56 PM By: Gladish, Alyssa



ORIGINAL SHEET - ANSI B

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Stantec
 Stantec Consulting Ltd.
 400 - 1331 Clyde Avenue
 Ottawa ON
 Tel. 613.722.4420
 www.stantec.com

Legend

Notes

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

Client/Project
 THE PROPERTIES GROUP
 1746 CARLING AVENUE
 Ottawa, ON

Figure No.
 3.1

Title
 FIRE HYDRANT COVERAGE
 PHASE 1 - TOWER C



Project: **1746 Carling Avenue** 160401895

**TABLE 1:
FIRE HYDRANT COVERAGE TABLE**

Revision: 1 Prepared By: AR
Revision Date: 14-Oct-2025 Checked By: AG

Description	Hydrants ¹			Total Available Fire Flow (L/min)	Total Required Fire Flow ² (L/min)
	EX HYD (Carling)	NEW HYD (On-site)	NEW HYD (Kerr)		
Hydrant Class ⁴	Class AA (light blue bonnet)	Class AA (as designed)	Class AA (as designed)	-	-
C					
Unobstructed distance from main entrance (m)	-	-	13.1	-	-
Maximum fire flow capacity ³ (L/min)	-	-	5,678	5,678	4,000

NFPA 1 Table 18.5.4.3	
Distance to Building (m)	Maximum Capacity (L/min)
≤ 76	5,678
> 76 and ≤ 152	3,785
> 152 and ≤ 305	2,839

Notes:

- Existing hydrant locations as per topographic survey (15-Nov-2021).
- See FUS Calculations.
- See NFPA 1 Table 18.5.4.3 for maximum fire flow capacity of hydrants by distance to building.
- Class of existing hydrants from NFPA 291 bonnet paint colour, observed from Google Street View (imagery Jun-2023). New hydrant, class as designed.

Appendix C Wastewater Servicing

C.1 Sanitary Sewer Design Sheet





SUBDIVISION:

1746 Carling Avenue

**SANITARY SEWER
DESIGN SHEET
(City of Ottawa)**

DESIGN PARAMETERS

DATE: 2025-10-07
 REVISION: 1
 DESIGNED BY: AR
 CHECKED BY: MW

FILE NUMBER: 160401895

MAX PEAK FACTOR (RES.)=	4.0	AVG. DAILY FLOW / PERSON	280 l/p/day	MINIMUM VELOCITY	0.60 m/s
MIN PEAK FACTOR (RES.)=	2.0	COMMERCIAL	28,000 l/ha/day	MAXIMUM VELOCITY	3.00 m/s
PEAKING FACTOR (INDUSTRIAL):	2.4	INDUSTRIAL (HEAVY)	55,000 l/ha/day	MANNINGS n	0.013
PEAKING FACTOR (ICI >20%):	1.5	INDUSTRIAL (LIGHT)	35,000 l/ha/day	BEDDING CLASS	B
PERSONS / 1 BED	1.4	INSTITUTIONAL	28,000 l/ha/day	MINIMUM COVER	2.50 m
PERSONS / 2 BED	2.1	INFILTRATION	0.33 l/s/ha	HARMON CORRECTION FACTOR	0.8
PERSONS / 3 BED	3.1				

LOCATION			RESIDENTIAL AREA AND POPULATION								COMMERCIAL		INDUSTRIAL (L)		INDUSTRIAL (H)		INSTITUTIONAL		GREEN / UNUSED		C++I	INFILTRATION			TOTAL	PIPE													
AREA ID NUMBER	FROM M.H.	TO M.H.	AREA (ha)	1 BED	UNITS 2 BED	3 BED	POP.	CUMULATIVE AREA (ha)	POP.	PEAK FACT.	PEAK FLOW (l/s)	AREA (ha)	ACCU. AREA (ha)	AREA (ha)	ACCU. AREA (ha)	AREA (ha)	ACCU. AREA (ha)	AREA (ha)	ACCU. AREA (ha)	AREA (ha)	ACCU. AREA (ha)	PEAK FLOW (l/s)	TOTAL AREA (ha)	ACCU. AREA (ha)	INFILT. FLOW (l/s)	FLOW (l/s)	LENGTH (m)	DIA (mm)	MATERIAL	CLASS	SLOPE (%)	CAP. (FULL) (l/s)	CAP. V PEAK FLOW (%)	VEL. (FULL) (m/s)					
R2A, G2A	C	1	0.12	34	82	6	238	0.00	238	3.50	2.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.16	0.0	0.28	0.28	0.1	2.8	1.9	200	PVC	SDR 35	2.00	47.3	5.90%	1.49
	1	EX SAN	0.00	0	0	0	0	0.00	238	3.50	2.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.1	2.8	11.0	200	PVC	SDR 35	0.50	23.6	11.81%	0.74				
																												200											
G3A	3	16	0.00	0	0	0	0	0.00	0	3.80	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.10	0.10	0.03	0.03	12.1	150	PVC	DR 28	1.00	15.3	0.21%	0.86					
																												150											

C.2 Sanitary Sewer Capacity



Wu, Michael

From: Rasool, Rubina <Rubina.Rasool@ottawa.ca>
Sent: April 16, 2025 14:51
To: Gladish, Alyssa
Cc: Wang, Ziyi; Wu, Michael
Subject: RE: 1746 Carling Avenue (PC2024-0240) - Building C Servicing
Attachments: a.png

Good afternoon,

There are no concerns with connecting Building 3 (2.8 L/s) on Kerr Avenue. The south portion of the existing site also drains to Boyd and the City does not see any concerns with connecting to Boyd after the 2-year control.

Thank you,

Rubina

Rubina Rasool
Project Manager
Planning, Infrastructure and Economic Development Department
Development Review – West Branch
City of Ottawa
110 Laurier Avenue West Ottawa, ON K1P 1J1
613-580-2424 Ext. 24221
rubina.rasool@ottawa.ca

Classified as City of Ottawa - Internal / Ville d'Ottawa - classé interne

From: Gladish, Alyssa <Alyssa.Gladish@stantec.com>
Sent: March 25, 2025 11:11 AM
To: Rasool, Rubina <Rubina.Rasool@ottawa.ca>
Cc: Wang, Ziyi <Ziyi.Wang@stantec.com>; Wu, Michael <Michael.Wu@stantec.com>
Subject: 1746 Carling Avenue (PC2024-0240) - Building C Servicing

CAUTION: This email originated from an External Sender. Please do not click links or open attachments unless you recognize the source.

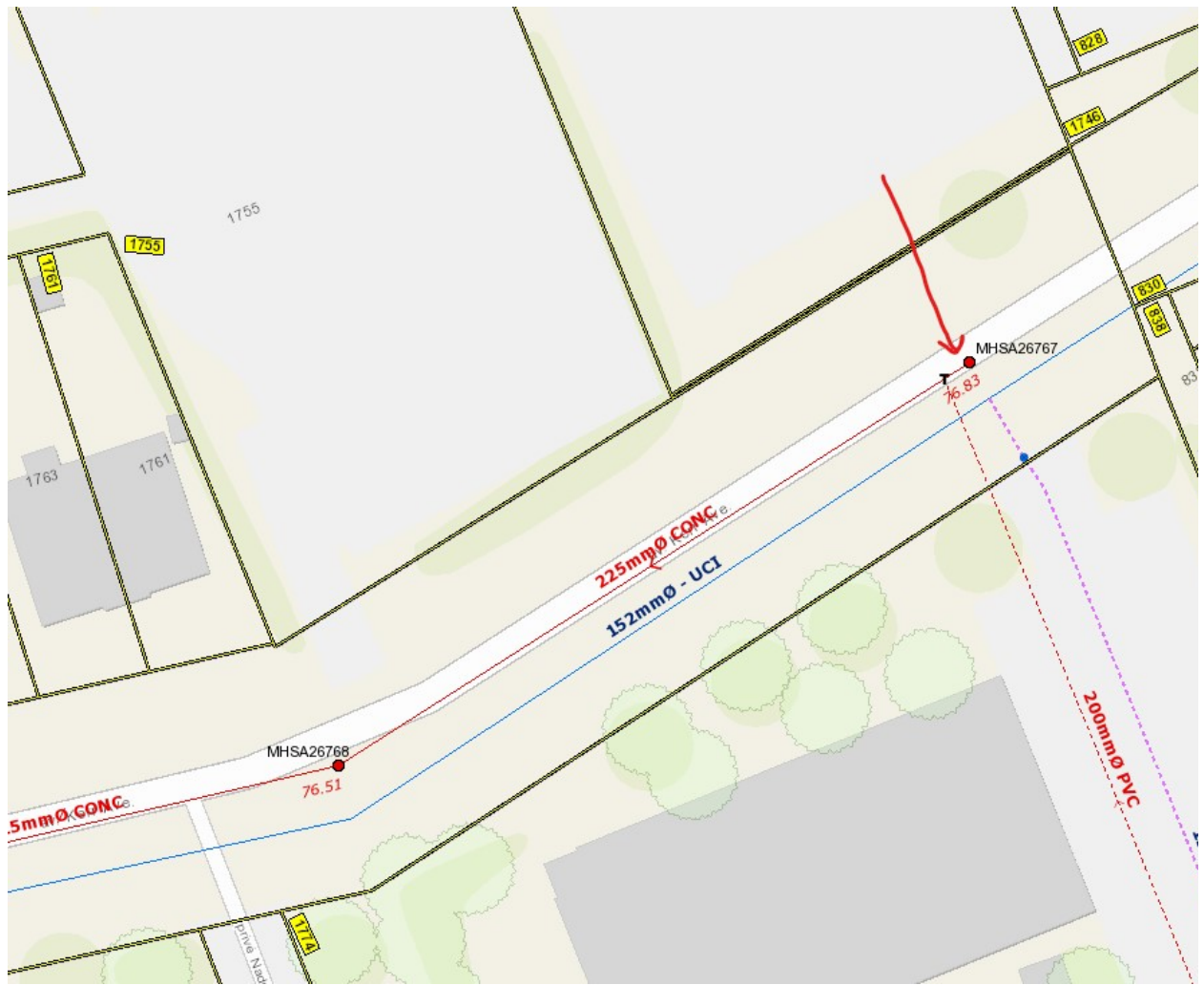
ATTENTION : Ce courriel provient d'un expéditeur externe. Ne cliquez sur aucun lien et n'ouvrez pas de pièce jointe, excepté si vous connaissez l'expéditeur.

Hello Rubina,

The owner of 1746 Carling Avenue (City Project No. PC2024-0240) is considering an Option where Building C (9-storey building fronting Boyd Avenue) is constructed separately from the other two buildings.

In this scenario, Building C would have 128 Dwelling Units and unique service connections for Water, Sanitary, and Storm. Please confirm the following:

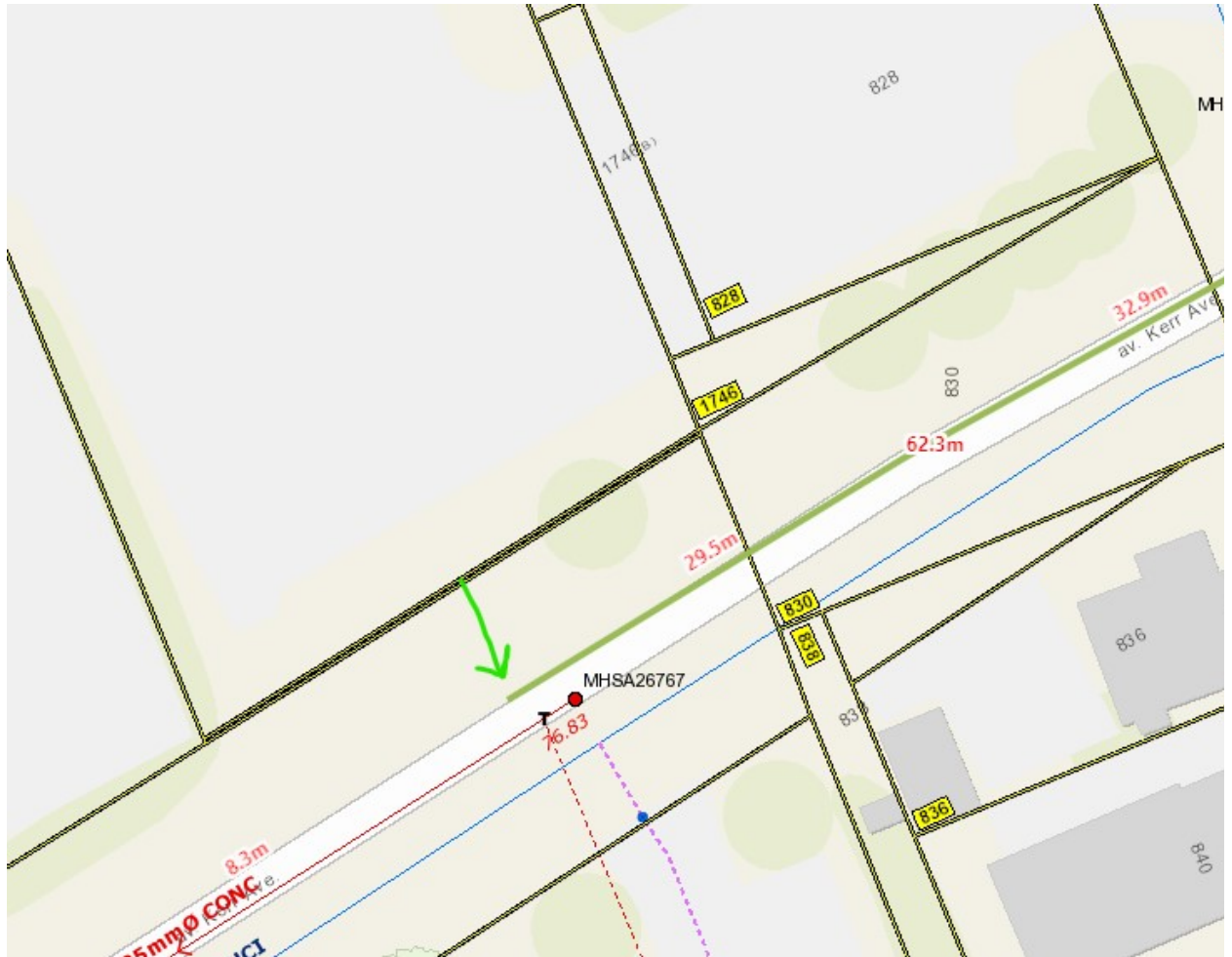
1. The peak **sanitary flow rate** is calculated to be **2.8 L/s**.
 - a. Would this service be permitted to connect to the upstream sanitary manhole MHSA26767 on Kerr Avenue?



b. Does the downstream sanitary sewer system have the capacity to receive the proposed peak wastewater flow rate of 2.8 L/s?

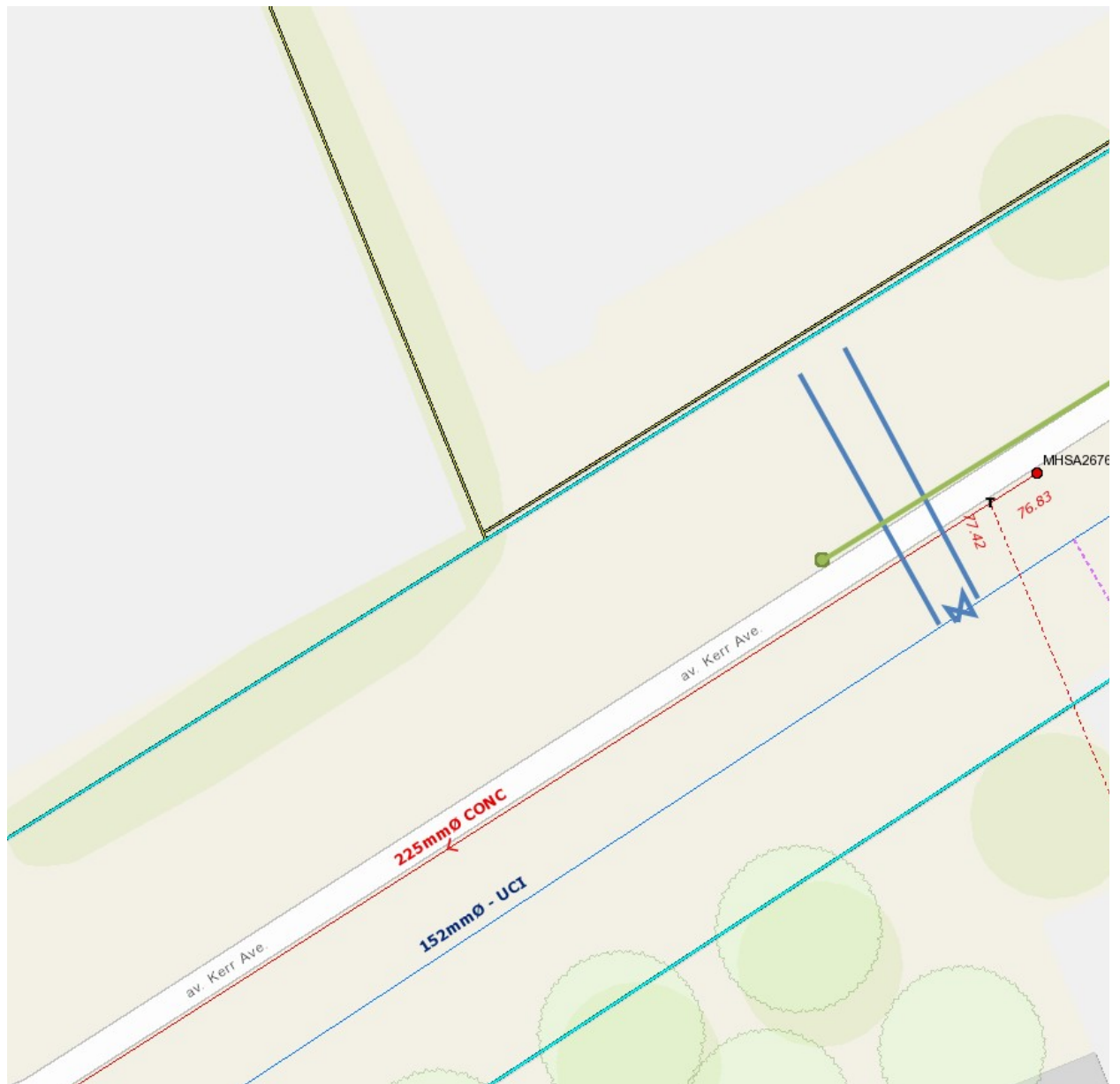
2. The stormwater for Building C (Phase 3 area – 0.26 ha) will be controlled onsite to the pre-development 2-year storm event release rate. Assuming a pre-development $C=0.5$, City of Ottawa IDF Curves, and a Time of Concentration of 10 minutes, the post-development release rate for the phase three area will be restricted to **27.5 L/s**.

a. A 300 mm diameter storm sewer extension will be required on Kerr Avenue from the storm sewer manhole on Boyd Avenue (MHST27733) to the Building C services (approximately 62 m west of the existing manhole). We understand that this extension would require Utilities Circulation for approvals. Would the City be open to this servicing approach?



- b. Does the downstream storm sewer system on Boyd Avenue have the capacity to receive the proposed 2-year peak stormwater release rate of 27.5 L/s?

3. The potable water and fire servicing for Building 3 is proposed to have a connection to the municipal watermain on Kerr Avenue.
 - a. Building C will include more than 50 dwelling units – consequently two water service connections (separated by an isolation valve) will be required.



- b. A new municipal fire hydrant is to be installed on Kerr Avenue within 45m of the building's Siamese connection.
- c. To provide sufficient fire flows and pressures to the 1746 Carling Avenue Site, the watermain is to be upsized to a 200mm diameter watermain on Boyd Avenue from Carling to Kerr, as per previous discussions with the City of Ottawa.
- d. Please provide new Boundary Conditions for the Building C water service. A separate email with this request will follow.
- e. Based on the new boundary conditions, will watermain upsizing also be required on Boyd Avenue? To what extent?

Thank you,
Alyssa

Alyssa Gladish E.I.T.
Project Manager, Community Development

Direct: 780 917-8567
Mobile: 587 721-1241
Alyssa.Gladish@stantec.com

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Ottawa ON K2C 3G4



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Appendix D Stormwater Servicing

D.1 Modified Rational Method



Stormwater Management Calculations

File No: 160401895
 Project: 1746 Carling Avenue
 Date: 04-Sep-25

SWM Approach:
 Post-development to Pre-development flows

Post-Development Site Conditions:

Overall Runoff Coefficient for Site and Sub-Catchment Areas

Runoff Coefficient Table							
Catchment Type	Sub-catchment Area ID / Description	Area (ha) "A"	Runoff Coefficient "C"	"A x C"	Overall Runoff Coefficient		
Phase 1 Cistern	EXT-1, EXT-2, R103B-R103F, TANK 1-TANK 4	Hard	0.062	0.9	0.056	0.105	0.064
		Soft	0.043	0.2	0.009		
Subtotal							0.61
External from Phase 3	EXT-1	Hard	0.003	0.9	0.003	0.014	0.005
		Soft	0.011	0.2	0.002		
Subtotal							0.35
External from Phase 3	EXT-2	Hard	0.005	0.9	0.004	0.006	0.004
		Soft	0.001	0.2	0.000		
Subtotal							0.75
Roof	R103A	Hard	0.085	0.9	0.077	0.085	0.077
		Soft	0.000	0.2	0.000		
Subtotal							0.90
Tributary to Phase 1 Cistern	R103B - R103F	Hard	0.032	0.9	0.029	0.032	0.029
		Soft	0.000	0.2	0.000		
Subtotal							0.90
Tributary to Phase 1 Cistern	TANK 1	Hard	0.000	0.9	0.000	0.007	0.001
		Soft	0.007	0.2	0.001		
Subtotal							0.20
Tributary to Phase 1 Cistern	TANK 2	Hard	0.004	0.9	0.003	0.011	0.005
		Soft	0.008	0.2	0.002		
Subtotal							0.43
Tributary to Phase 1 Cistern	TANK 3	Hard	0.004	0.9	0.003	0.017	0.006
		Soft	0.013	0.2	0.003		
Subtotal							0.35
Tributary to Phase 1 Cistern	TANK 4	Hard	0.015	0.9	0.013	0.019	0.014
		Soft	0.004	0.2	0.001		
Subtotal							0.75
Uncontrolled - Non-Tributary	UNC-1	Hard	0.027	0.9	0.024	0.043	0.027
		Soft	0.016	0.2	0.003		
Subtotal							0.64
Tributary to Parkland	UNC-2	Hard	0.005	0.9	0.004	0.005	0.004
		Soft	0.000	0.2	0.000		
Subtotal							0.90
Tributary to Phase 2	UNC-3	Hard	0.016	0.9	0.014	0.027	0.016
		Soft	0.011	0.2	0.002		
Subtotal							0.61
Total Analysis Area:						0.238	0.180
Overall Runoff Coefficient= C:							0.76

Total Area with Rooftop Controls	0.085 ha
Total Area with only Cistern Controls	0.105 ha
Total Area to Sewer Outlet	0.190 ha
Total Uncontrolled Areas (Non-Tributary)	0.047 ha
Total SWM Analysis Area	0.238 ha
Uncontrolled Area with Future Control (Phase 2)	0.027
Total Phase 1 Developable Area	0.264 ha
Parkland Area	0.099
Total Phase 1 Site Area	0.363 ha

Roof Drain Design Calculation Sheet

**Project #160401895, 1746 Carling Avenue
Roof Drain Design Sheet, Area R103A
Standard Watts Accutrol Weir - Single Notch Roof Drain**

Rating Curve				Volume Estimation				Water Depth (m)
Elevation (m)	Discharge Rate (cu.m/s)	Outlet Discharge (cu.m/s)	Storage (cu. m)	Elevation (m)	Area (sq. m)	Volume (cu. m)		
						Increment	Accumulated	
0.000	0.0000	0.0000	0	0.000	0	0	0	0.000
0.025	0.0003	0.0047	0	0.025	19	0	0	0.025
0.050	0.0003	0.0047	1	0.050	76	1	1	0.050
0.075	0.0003	0.0047	4	0.075	170	3	4	0.075
0.100	0.0003	0.0047	10	0.100	303	6	10	0.100
0.125	0.0003	0.0047	20	0.125	473	10	20	0.125
0.150	0.0003	0.0047	34	0.150	681	14	34	0.150

Drawdown Estimate			
Total Volume (cu.m)	Total Time (sec)	Vol (cu.m)	Detention Time (hr)
0.0	0.0	0.0	0
1.1	233.3	1.1	0.06481
4.1	633.3	3.0	0.24071
9.9	1233.2	5.8	0.58326
19.6	2033.1	9.6	1.14801
33.9	3033.0	14.3	1.9905

Roof Storage Summary

Total Building Area (sq.m)		851.52
Assume Available Roof Area (sq. m)	80%	681.216
Roof Imperviousness		0.99
Roof Drain Requirement (sq.m/Notch)		232
Number of Roof Notches*		15
Max. Allowable Depth of Roof Ponding (m)	0.15	* As per Ontario Building Code section OBC 7.4.10.4.(2)(c).
Max. Allowable Storage (cu.m)		34
Estimated 100 Year Drawdown Time (h)		1.8

* Note: Number of drains can be reduced if multiple-notch drain used.

Adjustable Accutrol Weir Flow Rate Settings From Watts Drain Catalogue					
Head (m)	L/s				
	Open	75%	50%	25%	Closed
0.025	0.3154	0.3154	0.3154	0.3154	0.3154
0.05	0.6308	0.6308	0.6308	0.6308	0.3154
0.075	0.9462	0.8674	0.7885	0.7097	0.3154
0.1	1.2617	1.104	0.9462	0.7885	0.3154
0.125	1.5771	1.3405	1.104	0.8674	0.3154
0.15	1.8925	1.5771	1.2617	0.9462	0.3154

Calculation Results

	5yr	100yr	Available
Qresult (cu.m/s)	0.005	0.005	-
Depth (m)	0.089	0.145	0.150
Volume (cu.m)	7.6	31.3	34.1
Drain time (hrs)	0.4	1.8	

Stormwater Management Calculations

Project #160401895, 1746 Carling Avenue Modified Rational Method Calculations for Storage

2 yr Intensity City of Ottawa	$I = a/(t + b)^c$	a =	732.951	t (min)	I (mm/hr)
		b =	6.199	10	76.8
		c =	0.81	20	52.0
				30	40.0
			40	32.9	
			50	28.0	
			60	24.6	
			70	21.9	
			80	19.8	
			90	18.1	
			100	16.7	
			110	15.6	
			120	14.6	

2 YEAR Predevelopment Target Release from Portion of Site

Subdrainage Area: Predevelopment Tributary Area to Outlet
 Area (ha): 0.238
 C: 0.50

Typical Time of Concentration

tc (min)	I (2 yr) (mm/hr)	Qtarget (L/s)
10	76.8	25.4

2 YEAR Modified Rational Method for Entire Site

Subdrainage Area: EXT-1, EXT-2, R103B-R103F, TANK 1-TANK 4 Phase 1 Cistern
 Area (ha): 0.11
 C: 0.61
 Controlled Inflow: R103A

tc (min)	I (2 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m ³)
10	76.8	18.5	6.1	12.4	7.4
20	52.0	14.0	6.1	8.0	9.5
30	40.0	11.9	6.1	5.8	10.5
40	32.9	10.6	6.1	4.5	10.9
50	28.0	9.7	6.1	3.7	11.0
60	24.6	9.1	6.1	3.0	11.0
70	21.9	8.5	6.1	2.5	10.4
80	19.8	7.7	6.1	1.7	8.0
90	18.1	7.1	6.1	1.0	5.5
100	16.7	6.5	6.1	0.5	2.8
110	15.6	6.1	6.1	0.0	0.1
120	14.6	5.7	5.7	0.0	0.0

Storage: Cistern

Stage	Head (m)	Discharge (L/s)	Vreq (cu. m)	Vavail (cu. m)	Volume Check
2-year Water Level	-	6.1	11.0	44.0	OK

Subdrainage Area: EXT-1 External from Phase 3
 Area (ha): 0.01
 C: 0.35

tc (min)	I (2 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m ³)
10	76.8	4.5	4.5		
20	52.0	3.1	3.1		
30	40.0	2.4	2.4		
40	32.9	1.9	1.9		
50	28.0	1.6	1.6		
60	24.6	1.4	1.4		
70	21.9	1.3	1.3		
80	19.8	1.2	1.2		
90	18.1	1.1	1.1		
100	16.7	1.0	1.0		
110	15.6	0.9	0.9		
120	14.6	0.9	0.9		

Subdrainage Area: EXT-2 External from Phase 3
 Area (ha): 0.01
 C: 0.75

tc (min)	I (2 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m ³)
10	76.8	0.9	0.9		
20	52.0	0.6	0.6		
30	40.0	0.5	0.5		
40	32.9	0.4	0.4		
50	28.0	0.3	0.3		
60	24.6	0.3	0.3		
70	21.9	0.3	0.3		
80	19.8	0.2	0.2		
90	18.1	0.2	0.2		
100	16.7	0.2	0.2		
110	15.6	0.2	0.2		
120	14.6	0.2	0.2		

Project #160401895, 1746 Carling Avenue Modified Rational Method Calculations for Storage

100 yr Intensity City of Ottawa	$I = a/(t + b)^c$	a =	1735.688	t (min)	I (mm/hr)
		b =	6.014	10	178.6
		c =	0.820	20	120.0
				30	91.9
			40	75.1	
			50	64.0	
			60	55.9	
			70	49.8	
			80	45.0	
			90	41.1	
			100	37.9	
			110	35.2	
			120	32.9	

100 YEAR Predevelopment Target Release from Portion of Site

Subdrainage Area: Predevelopment Tributary Area to Outlet
 Area (ha): 0.238
 C: 0.50

tc (min)	I (100 yr) (mm/hr)	Qtarget (L/s)
10	178.6	38.6

100 YEAR Modified Rational Method for Entire Site

Subdrainage Area: EXT-1, EXT-2, R103B-R103F, TANK 1-TANK 4 Phase 1 Cistern
 Area (ha): 0.11
 C: 0.76
 Controlled Inflow: R103A

tc (min)	I (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m ³)
10	178.6	44.6	6.1	38.6	23.1
20	120.0	31.5	6.1	25.5	30.5
30	91.9	25.3	6.1	19.2	34.5
40	75.1	21.5	6.1	15.4	37.1
50	64.0	19.0	6.1	12.9	38.8
60	55.9	17.2	6.1	11.1	40.1
70	49.8	15.4	6.1	9.3	41.4
80	45.0	13.5	6.1	7.4	42.7
90	41.1	11.6	6.1	5.5	44.0
100	37.9	9.7	6.1	3.6	45.3
110	35.2	7.8	6.1	1.7	46.6
120	32.9	5.9	5.9	0.0	47.9

Storage: Cistern

Stage	Head (m)	Discharge (L/s)	Vreq (cu. m)	Vavail (cu. m)	Volume Check
100-year Water Level	-	6.1	43.3	44.0	OK

Subdrainage Area: EXT-1 External from Phase 3
 Area (ha): 0.01
 C: 0.44

tc (min)	I (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m ³)
10	178.6	13.1	13.1		
20	120.0	8.8	8.8		
30	91.9	6.7	6.7		
40	75.1	5.5	5.5		
50	64.0	4.7	4.7		
60	55.9	4.1	4.1		
70	49.8	3.7	3.7		
80	45.0	3.3	3.3		
90	41.1	3.0	3.0		
100	37.9	2.8	2.8		
110	35.2	2.6	2.6		
120	32.9	2.4	2.4		

Subdrainage Area: EXT-2 External from Phase 3
 Area (ha): 0.01
 C: 0.94

tc (min)	I (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m ³)
10	178.6	2.8	2.8		
20	120.0	1.8	1.8		
30	91.9	1.4	1.4		
40	75.1	1.2	1.2		
50	64.0	1.0	1.0		
60	55.9	0.9	0.9		
70	49.8	0.8	0.8		
80	45.0	0.7	0.7		
90	41.1	0.6	0.6		
100	37.9	0.6	0.6		
110	35.2	0.5	0.5		
120	32.9	0.5	0.5		

Stormwater Management Calculations

Project #160401895, 1746 Carling Avenue Modified Rational Method Calculations for Storage

Subdrainage Area: R103A		Roof				
Area (ha): 0.09		Maximum Storage Depth: 150 mm				
C: 0.90						
tc (min)	I (2 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m ³)	Depth (mm)
10	76.8	16.4	4.7	11.6	7.0	86.7
20	52.0	11.1	4.7	6.4	7.6	89.4
30	40.0	8.5	4.7	3.8	6.8	86.1
40	32.9	7.0	4.7	2.3	5.4	80.1
50	28.0	6.0	4.7	1.2	3.7	70.6
60	24.6	5.2	4.7	0.5	1.8	54.5
70	21.9	4.7	4.6	0.0	0.2	24.5
80	19.8	4.2	4.2	0.0	0.1	22.2
90	18.1	3.9	3.8	0.0	0.1	20.3
100	16.7	3.6	3.5	0.0	0.1	18.7
110	15.6	3.3	3.3	0.0	0.1	17.4
120	14.6	3.1	3.1	0.0	0.1	16.3

Storage: Roof Storage

Depth (mm)	Head (m)	Discharge (L/s)	Vreq (cu. m)	Vavail (cu. m)	Discharge Check	
2-year Water Level	89.4	0.1	4.7	7.6	34.1	0.0

Project #160401895, 1746 Carling Avenue Modified Rational Method Calculations for Storage

Subdrainage Area: R103A		Roof				
Area (ha): 0.09		Maximum Storage Depth: 150 mm				
C: 1.00						
tc (min)	I (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m ³)	Depth (mm)
10	178.6	42.3	4.7	37.5	22.5	129.9
20	120.0	28.4	4.7	23.7	28.4	140.1
30	91.9	21.7	4.7	17.0	30.6	144.0
40	75.1	17.8	4.7	13.1	31.3	145.3
50	64.0	15.1	4.7	10.4	31.2	145.1
60	55.9	13.2	4.7	8.5	30.6	144.0
120	32.9	7.8	4.7	3.1	22.0	129.0
180	23.9	5.7	4.7	0.9	10.0	99.7
240	19.0	4.5	4.5	0.0	0.1	23.7
300	15.9	3.8	3.8	0.0	0.1	19.8
360	13.7	3.2	3.2	0.0	0.1	17.1
420	12.1	2.9	2.9	0.0	0.1	15.1

Storage: Roof Storage

Depth (mm)	Head (m)	Discharge (L/s)	Vreq (cu. m)	Vavail (cu. m)	Discharge Check	
100-year Water Level	145.3	0.1	4.7	31.3	34.1	0.0

Subdrainage Area: R103B - R103F		Tributary to Phase 1 Cistern				
Area (ha): 0.03						
C: 0.90						
tc (min)	I (2 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m ³)	
10	76.8	6.2	6.2			
20	52.0	4.2	4.2			
30	40.0	3.2	3.2			
40	32.9	2.6	2.6			
50	28.0	2.3	2.3			
60	24.6	2.0	2.0			
70	21.9	1.8	1.8			
80	19.8	1.6	1.6			
90	18.1	1.5	1.5			
100	16.7	1.3	1.3			
110	15.6	1.3	1.3			
120	14.6	1.2	1.2			

Subdrainage Area: R103B - R103F		Tributary to Phase 1 Cistern				
Area (ha): 0.03						
C: 1.00						
tc (min)	I (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m ³)	
10	178.6	16.0	16.0			
20	120.0	10.7	10.7			
30	91.9	8.2	8.2			
40	75.1	6.7	6.7			
50	64.0	5.7	5.7			
60	55.9	5.0	5.0			
70	49.8	4.5	4.5			
80	45.0	4.0	4.0			
90	41.1	3.7	3.7			
100	37.9	3.4	3.4			
110	35.2	3.2	3.2			
120	32.9	2.9	2.9			

Subdrainage Area: TANK 1		Tributary to Phase 1 Cistern				
Area (ha): 0.01						
C: 0.20						
tc (min)	I (2 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m ³)	
10	76.8	0.3	0.3			
20	52.0	0.2	0.2			
30	40.0	0.1	0.1			
40	32.9	0.1	0.1			
50	28.0	0.1	0.1			
60	24.6	0.1	0.1			
70	21.9	0.1	0.1			
80	19.8	0.1	0.1			
90	18.1	0.1	0.1			
100	16.7	0.1	0.1			
110	15.6	0.1	0.1			
120	14.6	0.1	0.1			

Subdrainage Area: TANK 1		Tributary to Phase 1 Cistern				
Area (ha): 0.01						
C: 0.25						
tc (min)	I (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m ³)	
10	178.6	0.8	0.8			
20	120.0	0.6	0.6			
30	91.9	0.4	0.4			
40	75.1	0.3	0.3			
50	64.0	0.3	0.3			
60	55.9	0.3	0.3			
70	49.8	0.2	0.2			
80	45.0	0.2	0.2			
90	41.1	0.2	0.2			
100	37.9	0.2	0.2			
110	35.2	0.2	0.2			
120	32.9	0.2	0.2			

Subdrainage Area: TANK 2		Tributary to Phase 1 Cistern				
Area (ha): 0.01						
C: 0.43						
tc (min)	I (2 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m ³)	
10	76.8	1.0	1.0			
20	52.0	0.7	0.7			
30	40.0	0.5	0.5			
40	32.9	0.4	0.4			
50	28.0	0.4	0.4			
60	24.6	0.3	0.3			
70	21.9	0.3	0.3			
80	19.8	0.3	0.3			
90	18.1	0.2	0.2			
100	16.7	0.2	0.2			
110	15.6	0.2	0.2			
120	14.6	0.2	0.2			

Subdrainage Area: TANK 2		Tributary to Phase 1 Cistern				
Area (ha): 0.01						
C: 0.54						
tc (min)	I (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m ³)	
10	178.6	3.0	3.0			
20	120.0	2.0	2.0			
30	91.9	1.5	1.5			
40	75.1	1.3	1.3			
50	64.0	1.1	1.1			
60	55.9	0.9	0.9			
70	49.8	0.8	0.8			
80	45.0	0.8	0.8			
90	41.1	0.7	0.7			
100	37.9	0.6	0.6			
110	35.2	0.6	0.6			
120	32.9	0.6	0.6			

Stormwater Management Calculations

Project #160401895, 1746 Carling Avenue
Modified Rational Method Calculations for Storage

Subdrainage Area: TANK 3		Tributary to Phase 1 Cistern			
Area (ha): 0.02					
C: 0.35					
tc (min)	I (2 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m³)
10	76.8	1.2	1.2		
20	52.0	0.8	0.8		
30	40.0	0.6	0.6		
40	32.9	0.5	0.5		
50	28.0	0.5	0.5		
60	24.6	0.4	0.4		
70	21.9	0.4	0.4		
80	19.8	0.3	0.3		
90	18.1	0.3	0.3		
100	16.7	0.3	0.3		
110	15.6	0.3	0.3		
120	14.6	0.2	0.2		

Subdrainage Area: TANK 4		Tributary to Phase 1 Cistern			
Area (ha): 0.02					
C: 0.75					
tc (min)	I (2 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m³)
10	76.8	3.0	3.0		
20	52.0	2.0	2.0		
30	40.0	1.6	1.6		
40	32.9	1.3	1.3		
50	28.0	1.1	1.1		
60	24.6	1.0	1.0		
70	21.9	0.9	0.9		
80	19.8	0.8	0.8		
90	18.1	0.7	0.7		
100	16.7	0.7	0.7		
110	15.6	0.6	0.6		
120	14.6	0.6	0.6		

Subdrainage Area: UNC-1		Uncontrolled - Non-Tributary			
Area (ha): 0.04					
C: 0.64					
tc (min)	I (2 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m³)
10	76.8	5.8	5.8		
20	52.0	4.0	4.0		
30	40.0	3.0	3.0		
40	32.9	2.5	2.5		
50	28.0	2.1	2.1		
60	24.6	1.9	1.9		
70	21.9	1.7	1.7		
80	19.8	1.5	1.5		
90	18.1	1.4	1.4		
100	16.7	1.3	1.3		
110	15.6	1.2	1.2		
120	14.6	1.1	1.1		

Project #160401895, 1746 Carling Avenue
Modified Rational Method Calculations for Storage

Subdrainage Area: TANK 3		Tributary to Phase 1 Cistern			
Area (ha): 0.02					
C: 0.44					
tc (min)	I (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m³)
10	178.6	3.6	3.6		
20	120.0	2.4	2.4		
30	91.9	1.8	1.8		
40	75.1	1.5	1.5		
50	64.0	1.3	1.3		
60	55.9	1.1	1.1		
70	49.8	1.0	1.0		
80	45.0	0.9	0.9		
90	41.1	0.8	0.8		
100	37.9	0.8	0.8		
110	35.2	0.7	0.7		
120	32.9	0.7	0.7		

Subdrainage Area: TANK 4		Tributary to Phase 1 Cistern			
Area (ha): 0.02					
C: 0.94					
tc (min)	I (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m³)
10	178.6	8.8	8.8		
20	120.0	5.9	5.9		
30	91.9	4.5	4.5		
40	75.1	3.7	3.7		
50	64.0	3.1	3.1		
60	55.9	2.8	2.8		
70	49.8	2.4	2.4		
80	45.0	2.2	2.2		
90	41.1	2.0	2.0		
100	37.9	1.9	1.9		
110	35.2	1.7	1.7		
120	32.9	1.6	1.6		

Subdrainage Area: UNC-1		Uncontrolled - Non-Tributary			
Area (ha): 0.04					
C: 0.80					
tc (min)	I (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m³)
10	178.6	17.0	17.0		
20	120.0	11.4	11.4		
30	91.9	8.7	8.7		
40	75.1	7.1	7.1		
50	64.0	6.1	6.1		
60	55.9	5.3	5.3		
70	49.8	4.7	4.7		
80	45.0	4.3	4.3		
90	41.1	3.9	3.9		
100	37.9	3.6	3.6		
110	35.2	3.3	3.3		
120	32.9	3.1	3.1		

Stormwater Management Calculations

Project #160401895, 1746 Carling Avenue
Modified Rational Method Calculations for Storage

Subdrainage Area: UNC-2		Tributary to Parkland			
Area (ha): 0.00					
C: 0.90					
tc (min)	I (2 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m ³)
10	76.8	0.9	0.9		
20	52.0	0.6	0.6		
30	40.0	0.5	0.5		
40	32.9	0.4	0.4		
50	28.0	0.3	0.3		
60	24.6	0.3	0.3		
70	21.9	0.3	0.3		
80	19.8	0.2	0.2		
90	18.1	0.2	0.2		
100	16.7	0.2	0.2		
110	15.6	0.2	0.2		
120	14.6	0.2	0.2		
SUMMARY TO OUTLET					
	Tributary Area	0.190 ha		Vrequired	Vavailable*
	Total 2yr Flow to Sewer	6.1 L/s		0	0 m ³
	Non-Tributary Area	0.047 ha			
	Total 2yr Flow Uncontrolled	6.7 L/s			
	Total Area	0.238 ha			
	Total 2yr Flow	12.8 L/s			
	Target	25.4 L/s			

Project #160401895, 1746 Carling Avenue
Modified Rational Method Calculations for Storage

Subdrainage Area: UNC-2		Tributary to Parkland			
Area (ha): 0.00					
C: 1.00					
tc (min)	I (100 yr) (mm/hr)	Qactual (L/s)	Qrelease (L/s)	Qstored (L/s)	Vstored (m ³)
10	178.6	2.3	2.3		
20	120.0	1.6	1.6		
30	91.9	1.2	1.2		
40	75.1	1.0	1.0		
50	64.0	0.8	0.8		
60	55.9	0.7	0.7		
70	49.8	0.7	0.7		
80	45.0	0.6	0.6		
90	41.1	0.5	0.5		
100	37.9	0.5	0.5		
110	35.2	0.5	0.5		
120	32.9	0.4	0.4		
SUMMARY TO OUTLET					
	Tributary Area	0.190 ha		Vrequired	Vavailable*
	Total 100yr Flow to Sewer	6.1 L/s		0	0 m ³
	Non-Tributary Area	0.047 ha			
	Total 100yr Flow Uncontrolled	19.3 L/s			
	Total Area	0.238 ha			
	Total 100yr Flow	25.4 L/s			
	Target	25.4 L/s			

D.2 Storm Sewer Design Sheet



D.3 SWM Quality Control Confirmation



Wu, Michael

From: Rasool, Rubina <Rubina.Rasool@ottawa.ca>
Sent: November 5, 2025 14:55
To: Gladish, Alyssa; Wu, Michael
Subject: RE: PC2024-0240 - 1746 Carling Avenue Phase 1 - SWM Quality Control Criteria

Great! Thank you for confirming.

I agree with the approach for the TSS removal.

Thanks,

Rubina

Rubina Rasool
Project Manager
Planning, Infrastructure and Economic Development Department
Development Review – West Branch
City of Ottawa
110 Laurier Avenue West Ottawa, ON K1P 1J1
613-580-2424 Ext. 24221
rubina.rasool@ottawa.ca

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From: Gladish, Alyssa <Alyssa.Gladish@stantec.com>
Sent: November 04, 2025 12:35 PM
To: Rasool, Rubina <Rubina.Rasool@ottawa.ca>; Wu, Michael <michael.wu@stantec.com>
Subject: RE: PC2024-0240 - 1746 Carling Avenue Phase 1 - SWM Quality Control Criteria

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Hello Rubina,

1. Yes, we did receive direction regarding the urbanization/drainage issues for Kerr and the corner of Boyd. Please see the attached email from Gabrielle.
2. Regarding the Phase 1 quality control: the loading bay and the exposed portion of the ramp to the underground parking are graded to drain towards the City ROW as per the Private Approach Bylaw. It will not be feasible for us to provide capture and quality treatment of this area. TSS removal will not be provided in Phase 1, but it will be provided for Phase 2-3 for the surface parking areas.

Thank you,
Alyssa

Alyssa Gladish, E.I.T.
Project Manager



From: Rasool, Rubina <Rubina.Rasool@ottawa.ca>
Sent: Tuesday, November 4, 2025 7:43 AM
To: Wu, Michael <Michael.Wu@stantec.com>
Cc: Gladish, Alyssa <Alyssa.Gladish@stantec.com>
Subject: RE: PC2024-0240 - 1746 Carling Avenue Phase 1 - SWM Quality Control Criteria

Hello Michael,

I am still looking if a final answer was provided to you for the urbanization/drainage issues for Boyd and Kerr., but I wanted to provide a response to your latest question.

All phases of the development are expected to provide enhanced TSS removal of 80%. Typically, we assume the drainage from drive lanes/parking areas from vehicle generate most of the TSS and the drainage from soft landscaping areas do not really produce TSS. For Phase 1 I do not see any large parking and drive lanes and would not expect to provide TSS removal; however, depending on how the drive ramp drains outlet, it would be preferred to provide TSS removal, but not required for a small area.

Thank you,

Rubina

Rubina Rasool
Project Manager
Planning, Infrastructure and Economic Development Department
Development Review – West Branch
City of Ottawa
110 Laurier Avenue West Ottawa, ON K1P 1J1
613-580-2424 Ext. 24221
rubina.rasool@ottawa.ca

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From: Wu, Michael <Michael.Wu@stantec.com>
Sent: October 17, 2025 1:32 PM
To: Roy, Jean-Miguel <Jean-Miguel.Roy@ottawa.ca>
Cc: Gladish, Alyssa <alyssa.gladish@stantec.com>
Subject: RE: PC2024-0240 - 1746 Carling Avenue Phase 1 - SWM Quality Control Criteria

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Good afternoon, Jean-Miguel:

Further to below, for your information, the overall site plan is attached with phasing limits shown, where Building C fronting Kerr Avenue is Phase 1.

Michael Wu, EIT
Civil Engineering Intern
He, him



From: Wu, Michael
Sent: October 16, 2025 16:53
To: Roy, Jean-Miguel <Jean-Miguel.Roy@ottawa.ca>
Cc: Gladish, Alyssa <Alyssa.Gladish@stantec.com>
Subject: PC2024-0240 - 1746 Carling Avenue Phase 1 - SWM Quality Control Criteria

Good afternoon, Jean-Miguel:

Hope this email finds you well. We are looking for quick confirmation if there are any stormwater quality control measures applicable for Phase 1 of the 1746 Carling Avenue site.

Thanks,

Michael Wu, EIT
Civil Engineering Intern
He, him

Direct: (613) 738 6033
michael.wu@stantec.com



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D.4 Kerr and Boyd Avenue Urbanization Correspondence



Wu, Michael

From: Schaeffer, Gabrielle <gabrielle.schaeffer@Ottawa.ca>
Sent: July 17, 2025 11:49
To: Gladish, Alyssa; Baldwin, Kimberley
Cc: Wu, Michael; Roy, Jean-Miguel; Davidson, Amanda; Giampa, Mike
Subject: RE: 1746 Carling Avenue (PC2024-0240) - Building C Servicing

Hi Alyssa,

I have reached out to various City stakeholders regarding drainage, and all seem to be ok with urbanization of the north side of Kerr should your team be able to show there will be no negative impacts to the storm sewer system nor the localized area. Unfortunately, since Rubina is not here, I cannot ask her why she gave differing direction, however I am confident I have spoken with all the relevant City stakeholders on this matter.

Regarding the CB relocation on Boyd, from an infrastructure perspective, if the CB remains functional and there are no negative impacts, I don't see why a relocation cannot work. We will review the design once provided in your submission package.

As noted in the Pre-Consultation notes, there is a road renewal project on Kerr slated for 2-3 years from now. We have reached out to the project team and note that their scope may be expanding to other streets and additional works (i.e. an integrated project). This may delay the road renewal and change their scope. Once we know more and if there's any impact or coordination required with this project, we will let you know. I noticed that the pre-consults previously held for this project are for rezonings, however many of the questions asked appear to be at a site plan level. Can you please let us know what type(s) of application(s) we should expect for this file in the near future?

I am also sharing the following feedback on behalf of Planning/Urban Design/Transportation. Please reach out to Kim, cc'd, if you have any questions on the below:

- The section of Kerr as shown on the sketch looks reasonable.
- We also agree with the approach continue the curb/ sidewalk on the West side of Boyd, to align with the sidewalk further northward.
- No concerns with the proposed lay-by along Kerr Avenue as we understand it's needed to support the Senior's Care Facility along that frontage. The lay-by is preferred to the stand alone pick-up drop off area that was previously proposed.
- Staff are still looking to understand how the revised Senior's Care Facility will fit in the context of the overall redevelopment plan. Staff have consistently provided direction to internalize and consolidate auto-oriented and back-of-house uses like parking access, loading, waste pick-up and other matters. The Applicant should look to relocate the driveway access and loading area so that it is internal to the site, as supported by the UDRP direction attached.

Finally, I should also let you know that I have changed roles within the department. Going forward Jean-Miguel, cc'd, will be the Infrastructure Project Manager for this file.

Best regards,

Gabrielle (Gabi) Schaeffer, P.Eng.

Senior Project Manager, Infrastructure Projects | Gestionnaire principal, Projets d'infrastructure
Planning Operations | Opérations de planification

City of Ottawa | Ville d'Ottawa
110 Laurier Avenue West | 110, avenue Laurier Ouest
Ottawa, ON, K1P 1J1
Mail Code | Code postal 01-14
Tel. | Tél. 613-580-2424, ext. | poste 22517

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From: Gladish, Alyssa <Alyssa.Gladish@stantec.com>
Sent: Thursday, July 3, 2025 2:32 PM
To: Baldwin, Kimberley <Kimberley.Baldwin@ottawa.ca>
Cc: Wu, Michael <Michael.Wu@stantec.com>; Roy, Jean-Miguel <Jean-Miguel.Roy@ottawa.ca>; Schaeffer, Gabrielle <gabrielle.schaeffer@Ottawa.ca>; Davidson, Amanda <amanda.davidson@ottawa.ca>; Giampa, Mike <Mike.Giampa@ottawa.ca>
Subject: RE: 1746 Carling Avenue (PC2024-0240) - Building C Servicing

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Hello Kim,

Thank you for the update. We look forward to hearing from you mid-late next week.

Thanks again,
Alyssa

Alyssa Gladish E.I.T.
Project Manager, Community Development

Direct: 780 917-8567
Mobile: 587 721-1241
Alyssa.Gladish@stantec.com

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From: Baldwin, Kimberley <Kimberley.Baldwin@ottawa.ca>
Sent: Thursday, July 3, 2025 11:35 AM
To: Gladish, Alyssa <Alyssa.Gladish@stantec.com>
Cc: Wu, Michael <Michael.Wu@stantec.com>; Roy, Jean-Miguel <Jean-Miguel.Roy@ottawa.ca>; Schaeffer, Gabrielle <gabrielle.schaeffer@Ottawa.ca>; Davidson, Amanda <amanda.davidson@ottawa.ca>; Giampa, Mike <Mike.Giampa@ottawa.ca>
Subject: RE: 1746 Carling Avenue (PC2024-0240) - Building C Servicing

Hi Alyssa,

City staff are meeting to discuss early next week so I anticipate providing direction by mid-late next week. That said, you have the option to provide the first submission and the City can provide our feedback through the formal application review process.

Kim

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From: Gladish, Alyssa <Alyssa.Gladish@stantec.com>
Sent: July 02, 2025 12:27 PM
To: Baldwin, Kimberley <Kimberley.Baldwin@ottawa.ca>
Cc: Wu, Michael <Michael.Wu@stantec.com>; Roy, Jean-Miguel <Jean-Miguel.Roy@ottawa.ca>; Schaeffer, Gabrielle <gabrielle.schaeffer@Ottawa.ca>; Davidson, Amanda <amanda.davidson@ottawa.ca>; Giampa, Mike <Mike.Giampa@ottawa.ca>
Subject: RE: 1746 Carling Avenue (PC2024-0240) - Building C Servicing

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Hello Kimberley,

Can we expect to receive a response by the end of this week? Or early next week?

We would like to resolve these issues as soon as possible so that we can move ahead with the first submissions.

Thank you,
Alyssa

Alyssa Gladish E.I.T.
Project Manager, Community Development

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Mobile: 587 721-1241
Alyssa.Gladish@stantec.com

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From: Baldwin, Kimberley <Kimberley.Baldwin@ottawa.ca>
Sent: Monday, June 30, 2025 2:54 PM
To: Gladish, Alyssa <Alyssa.Gladish@stantec.com>
Cc: Wu, Michael <Michael.Wu@stantec.com>; Roy, Jean-Miguel <Jean-Miguel.Roy@ottawa.ca>; Schaeffer, Gabrielle <gabrielle.schaeffer@Ottawa.ca>; Davidson, Amanda <amanda.davidson@ottawa.ca>; Giampa, Mike <Mike.Giampa@ottawa.ca>
Subject: FW: 1746 Carling Avenue (PC2024-0240) - Building C Servicing

Hi Alyssa,

We are confirming receipt of these questions. The city team will review and get back to you soon.

Thanks,
Kim

Kimberley Baldwin MCIP RPP

Planner III (T) | Urbaniste III (t)

Development Review West | *Examen des projets d'aménagement, Ouest*

Planning, Development and Building Services | *Direction générale des services de la planification, de l'aménagement et du bâtiment*

110 Laurier Avenue West, 4th Floor, Ottawa, ON K1P 1J1

City of Ottawa | *Ville d'Ottawa*

613.580.2424 ext./poste 23032 (office)

613.710.0380 (cell)

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From: Gladish, Alyssa <Alyssa.Gladish@stantec.com>

Sent: Tuesday, June 24, 2025 4:37:53 PM

To: Schaeffer, Gabrielle <gabrielle.schaeffer@Ottawa.ca>

Cc: Wu, Michael <Michael.Wu@stantec.com>; Roy, Jean-Miguel <Jean-Miguel.Roy@ottawa.ca>

Subject: RE: 1746 Carling Avenue (PC2024-0240) - Building C Servicing

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Hello Gabrielle,

Thank you for providing the additional information and AMB decision on this item.

I am surprised that the new requirements are contradictory to what was conveyed by Rubina on May 30; but I truly appreciate this firm decision to move forward.

Please confirm the following:

1. Assuming 20m ROW along this segment of Kerr, please confirm the overall section proposed for Kerr Avenue, including reinstatement of the south side per the attached PDF
2. Please confirm the roadway section that will be required for the south end and west side of Boyd. In the attached Site Plan, the architects have continued the proposed a curb along Boyd as well. Please let me know if this will be acceptable, with the relocation of the catch basin as shown. The proposed sidewalk in this segment aligns with the current sidewalk at the north end of Boyd.

Best Regards,
Alyssa

Alyssa Gladish E.I.T.

Project Manager, Community Development

Direct: 780 917-8567

Mobile: 587 721-1241

Alyssa.Gladish@stantec.com

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From: Schaeffer, Gabrielle <gabrielle.schaeffer@Ottawa.ca>
Sent: Monday, June 23, 2025 4:24 PM
To: Gladish, Alyssa <Alyssa.Gladish@stantec.com>
Cc: Wu, Michael <Michael.Wu@stantec.com>; Roy, Jean-Miguel <Jean-Miguel.Roy@ottawa.ca>
Subject: RE: 1746 Carling Avenue (PC2024-0240) - Building C Servicing

Hi Alyssa,

I have spoken with Asset Management about this site. They and I are in agreement that an urbanized north side of Kerr Ave makes the most sense. A concrete barrier curb is required. The concern AMB has is that the storm sewer in Boyd Ave is surcharging under frequent events, including the 5-year event. To add to minor system capture by installing CBs on Kerr Ave, we would want to ensure the surcharging storm pipe on Boyd Ave does not get worse.

If the applicant wishes to design for catchbasins for the storm sewer extension on Kerr Ave to Boyd Ave, here are the answers to the questions below:

1. The applicant can request through the City Geoinformation Centre, geoinformation@ottawa.ca, the DEM surface for the catchment leading to Boyd Ave in order to delineate the catchment draining to Boyd Ave.
2. A post to pre drainage analysis will be required to demonstrate that the minor system design on Kerr Ave will not negatively impact the storm sewer on Boyd Ave.
3. N/A now that the north side of Kerr will be urbanized.

While you can reach out to geoinformation centre, I have already reached out to them to see if I can get this info for you. I'll let you know once I get this info to aid in your analysis of the existing system.

Best regards,

Gabrielle (Gabi) Schaeffer, P.Eng.

Senior Engineer, Infrastructure Applications | Ingénieur senior, Projets d'infrastructure
Development Review – West | Direction de l'examen des projets d'aménagement - Ouest
Planning, Development and Building Services | Direction générale des services de la planification, de l'aménagement et du bâtiment

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Mail Code | Code postal 01-14
Tel. | Tél. 613-580-2424, ext. | poste 22517

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From: Gladish, Alyssa <Alyssa.Gladish@stantec.com>
Sent: Saturday, June 7, 2025 1:40 PM
To: Rasool, Rubina <Rubina.Rasool@ottawa.ca>
Cc: Wu, Michael <Michael.Wu@stantec.com>
Subject: RE: 1746 Carling Avenue (PC2024-0240) - Building C Servicing

Hello Rubina,

Thank you for the phone conversation on May 30.

I am hoping that we can have a follow-up conversation- particularly regarding the frontage on Kerr Avenue. I understand that you are on leave, so I will forward this as per your out-of-office notice.

1. Would you be able to provide us with the drainage path information that you showed to me from the stormwater drainage/modelling group? A shapefile of these flow paths would be extremely helpful.
2. Would you be able to provide us with the rate of overland flow or a shapefile of the drainage area that we expect to receive in the north ditch/swale along Kerr Avenue?
3. It appears that there is presently a culvert under the site access from Kerr Avenue, but the roadside ditches/swales are not deep enough for culverts to have sufficient cover or to be practical under the proposed driveway and layby.



We need to maintain the drainage path across the Kerr Avenue frontage. Since this is not feasible with ditches and culverts, we are proposing to use a concrete mountable curb with a wide gutter as per OPSD 600.030. This will provide separation between the layby and the walkway and provide a continuous flow path across the front of the Phase 3 area. Please see attached for the latest Concept Plan with the wide gutter highlighted with the yellow line, and attached is OPSD 600.030. Would the City support the use of this wide gutter along Kerr?

Best,
Alyssa

Alyssa Gladish E.I.T.

Project Manager, Community Development

Direct: 780 917-8567
Mobile: 587 721-1241
Alyssa.Gladish@stantec.com

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From: Rasool, Rubina <Rubina.Rasool@ottawa.ca>
Sent: Thursday, May 29, 2025 10:16 AM
To: Gladish, Alyssa <Alyssa.Gladish@stantec.com>
Cc: Wu, Michael <Michael.Wu@stantec.com>
Subject: RE: 1746 Carling Avenue (PC2024-0240) - Building C Servicing

Hi Alyssa,

I am emailing to confirm that I will be following up with AM on this file.

Thank you,

Rubina

Rubina Rasool
Project Manager
Planning, Infrastructure and Economic Development Department
Development Review – West Branch
City of Ottawa
110 Laurier Avenue West Ottawa, ON K1P 1J1
613-580-2424 Ext. 24221
rubina.rasool@ottawa.ca

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From: Gladish, Alyssa <Alyssa.Gladish@stantec.com>
Sent: May 27, 2025 10:45 PM
To: Rasool, Rubina <Rubina.Rasool@ottawa.ca>
Cc: Wu, Michael <Michael.Wu@stantec.com>
Subject: RE: 1746 Carling Avenue (PC2024-0240) - Building C Servicing

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Hello Rubina,

I am following up on this inquiry regarding the Kerr and Boyd Avenue Roadway sections.

Please advise when we will be receiving a response from the city.

Sincerely,
Alyssa

Alyssa Gladish E.I.T.

Project Manager, Community Development

Direct: 780 917-8567
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From: Gladish, Alyssa
Sent: Wednesday, April 23, 2025 3:06 PM
To: Rasool, Rubina <Rubina.Rasool@ottawa.ca>
Cc: Wu, Michael <Michael.Wu@stantec.com>
Subject: RE: 1746 Carling Avenue (PC2024-0240) - Building C Servicing

Hello Rubina,

Great to hear from you. Thank you for this information.

Regarding Kerr Avenue, the latest Site Plan for Phase 3 (Tower C on Kerr) is showing sidewalks, boulevard, and curbs along the Kerr and Boyd frontages (see attached).

Please confirm whether the City will require the full width of Kerr Avenue to be upgraded to an urban road section along the site (approximately 114m length of roadway along Kerr). With the storm sewer extension required for this site, we acknowledge that the urban road section will require the installation of catchbasins along this segment of the roadway.

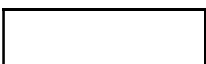
Alternatively, if the Kerr Avenue roadway is to remain as the current "rural" section, would it be best NOT to have curb along the Kerr Frontages?

Thank you,
Alyssa

Alyssa Gladish E.I.T.
Project Manager, Community Development

Direct: 780 917-8567
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Alyssa.Gladish@stantec.com

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From: Rasool, Rubina <Rubina.Rasool@ottawa.ca>
Sent: Wednesday, April 16, 2025 2:51 PM

To: Gladish, Alyssa <Alyssa.Gladish@stantec.com>
Cc: Wang, Ziyi <Ziyi.Wang@stantec.com>; Wu, Michael <Michael.Wu@stantec.com>
Subject: RE: 1746 Carling Avenue (PC2024-0240) - Building C Servicing

Good afternoon,

There are no concerns with connecting Building 3 (2.8 L/s) on Kerr Avenue. The south portion of the existing site also drains to Boyd and the City does not see any concerns with connecting to Boyd after the 2-year control.

Thank you,

Rubina

Rubina Rasool
Project Manager
Planning, Infrastructure and Economic Development Department
Development Review – West Branch
City of Ottawa
110 Laurier Avenue West Ottawa, ON K1P 1J1
613-580-2424 Ext. 24221
rubina.rasool@ottawa.ca

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From: Gladish, Alyssa <Alyssa.Gladish@stantec.com>
Sent: March 25, 2025 11:11 AM
To: Rasool, Rubina <Rubina.Rasool@ottawa.ca>
Cc: Wang, Ziyi <Ziyi.Wang@stantec.com>; Wu, Michael <Michael.Wu@stantec.com>
Subject: 1746 Carling Avenue (PC2024-0240) - Building C Servicing

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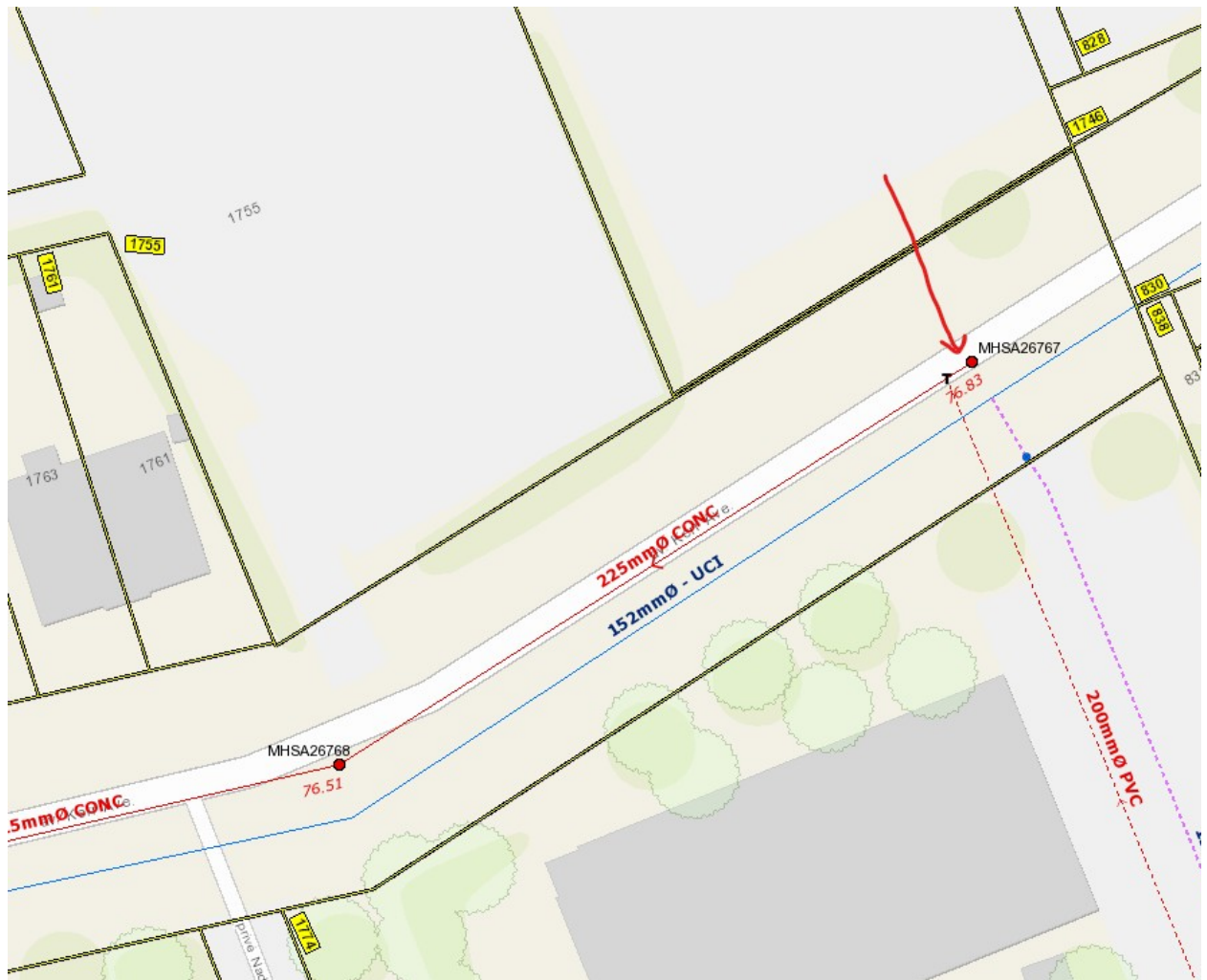
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Hello Rubina,

The owner of 1746 Carling Avenue (City Project No. PC2024-0240) is considering an Option where Building C (9-storey building fronting Boyd Avenue) is constructed separately from the other two buildings.

In this scenario, Building C would have 128 Dwelling Units and unique service connections for Water, Sanitary, and Storm. Please confirm the following:

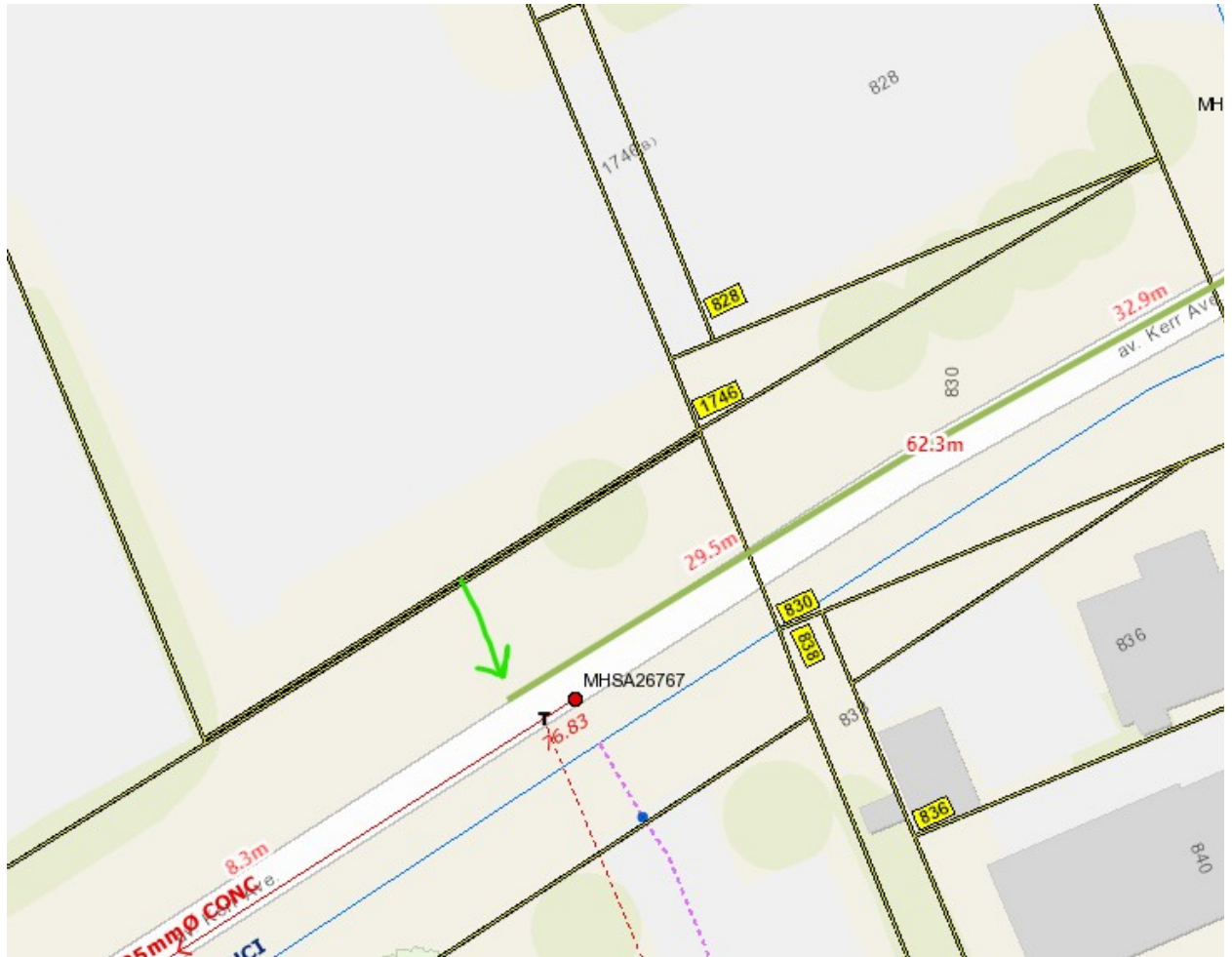
1. The peak **sanitary flow rate** is calculated to be **2.8 L/s**.
 - a. Would this service be permitted to connect to the upstream sanitary manhole MHSA26767 on Kerr Avenue?



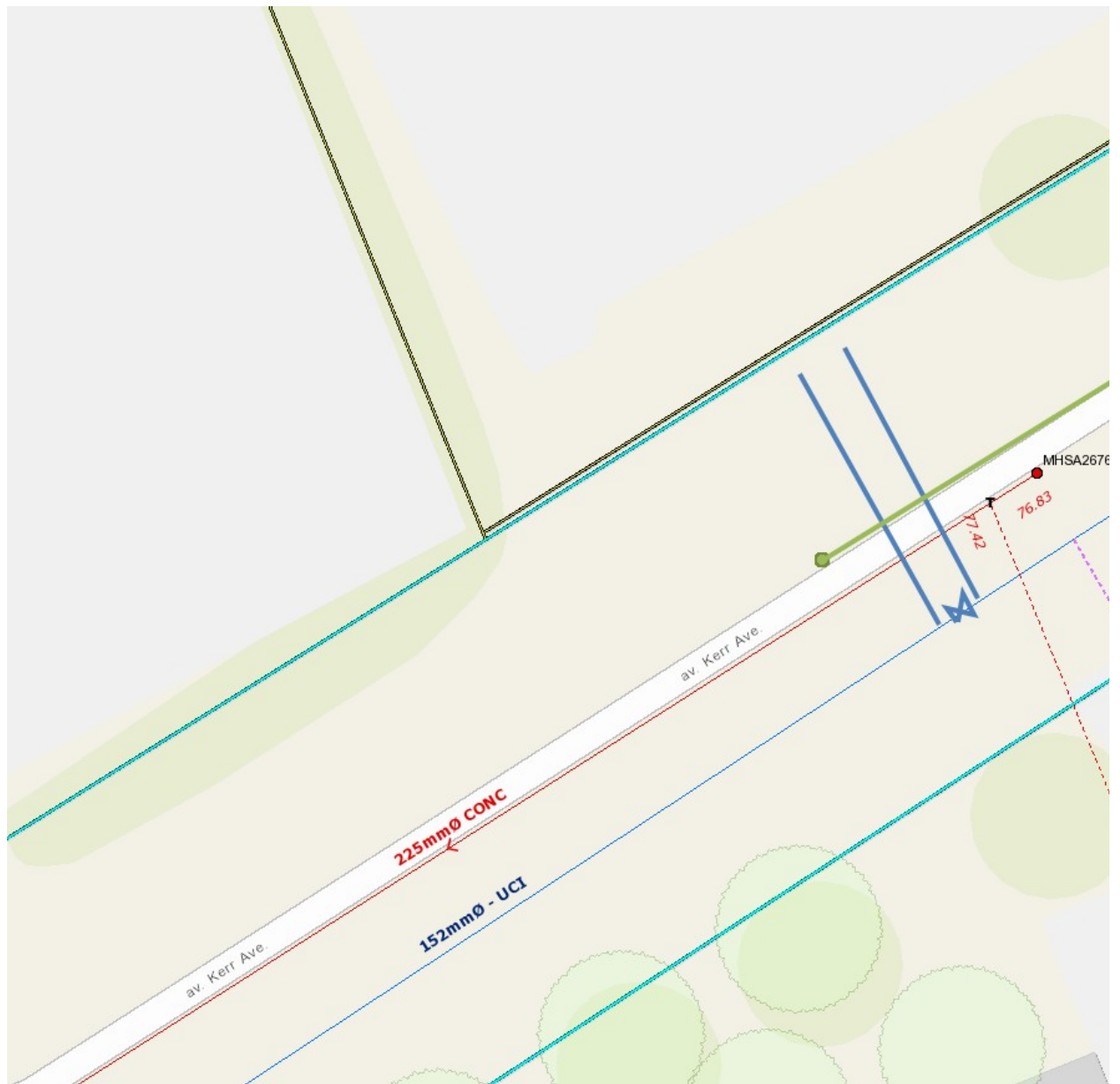
b. Does the downstream sanitary sewer system have the capacity to receive the proposed peak wastewater flow rate of 2.8 L/s?

2. The stormwater for Building C (Phase 3 area – 0.26 ha) will be controlled onsite to the pre-development 2-year storm event release rate. Assuming a pre-development $C=0.5$, City of Ottawa IDF Curves, and a Time of Concentration of 10 minutes, the post-development release rate for the phase three area will be restricted to **27.5 L/s**.

a. A 300 mm diameter storm sewer extension will be required on Kerr Avenue from the storm sewer manhole on Boyd Avenue (MHST27733) to the Building C services (approximately 62 m west of the existing manhole). We understand that this extension would require Utilities Circulation for approvals. Would the City be open to this servicing approach?



- b. Does the downstream storm sewer system on Boyd Avenue have the capacity to receive the proposed 2-year peak stormwater release rate of 27.5 L/s?
3. The potable water and fire servicing for Building 3 is proposed to have a connection to the municipal watermain on Kerr Avenue.
 - a. Building C will include more than 50 dwelling units – consequently two water service connections (separated by an isolation valve) will be required.



- b. A new municipal fire hydrant is to be installed on Kerr Avenue within 45m of the building's Siamese connection.
- c. To provide sufficient fire flows and pressures to the 1746 Carling Avenue Site, the watermain is to be upsized to a 200mm diameter watermain on Boyd Avenue from Carling to Kerr, as per previous discussions with the City of Ottawa.
- d. Please provide new Boundary Conditions for the Building C water service. A separate email with this request will follow.
- e. Based on the new boundary conditions, will watermain upsizing also be required on Boyd Avenue? To what extent?

Thank you,
Alyssa

Alyssa Gladish E.I.T.
Project Manager, Community Development

Direct: 780 917-8567
Mobile: 587 721-1241
Alyssa.Gladish@stantec.com

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