PROPOSED THREE STOREY

RESIDENTIAL APARTMENT BUILDING SITE

PART OF LOT 31

R-PLAN 294

1058, 1062 AND 1066 SILVER STREET

CITY OF OTTAWA

APPLICATION FILE No. : D07-12-21-0112 ; D02-02-21-0073

SERVICEABILITY REPORT

REPORT R-821-10A (REVISION 3)

FEBRUARY 2023

T.L. MAK ENGINEERING CONSULTANTS LTD.

JULY 2021

REFERENCE FILE NUMBER 821-10

Introduction

The developer of this site is proposing to redevelop the existing (3) residential lots described as Part of Lot 31 Registered Plan 294 City of Ottawa by constructing a three (3) storey residential apartment building consisting of thirty two (32)-units, including eleven (2)-bedroom units, five (1)-bedroom units and sixteen (1)-bedroom + den units with underground parking.

The municipal address of the (3) properties are referenced as 1058, 1062 and 1066 Silver Street and it is located in the City Ward (16-River). The site is situated on the north side of Summerville Avenue, west of Silver Street and south of Dorchester Avenue. See site plan and legal survey plan in **Appendix A** for details. City of Ottawa pre-consultation notes for this project are attached in **Appendix A1** for reference.

The area of this property is ±0.158 hectares. In addition to the three (3) storey residential building, the other development features will comprise of an interlock paver access to the front entrance off Silver Street, a barrier free entrance facing Summerville Avenue, including an amenity area located in the rear yard, as well as underground parking level below grade, clearstone landscaping is also proposed along the west side of the building with landscaped areas throughout the site, etc., to meet the City of Ottawa's site plan requirements.

A site geotechnical report was prepared by the owner's soils engineer Paterson Group entitled Geotechnical Investigation – Proposed Residential Building (Project No. PG5573-LET.02) dated April 23, 2021 for this proposed development property. Refer to Page No. 2 of the said geotechnical report regarding grade raise restriction limited to 2.0 m and Page No. 8 regarding pavement structure details.

This serviceability report will provide the City of Ottawa with our serviceability brief to address the proposed servicing scheme for this site.

Existing Site Conditions and Servicing

This property is presently occupied by three (1) storey vinyl-stucco siding residential buildings. The buildings each have its own asphalt driveway for vehicle access and parking. Most of the existing site is currently permeable surface covered and consisting of grass/landscaped areas with the remaining areas being roof area, asphalt laneway, porches, decks, and sheds. For additional details of the site's pre-development conditions, refer to the coloured Google Image and aerial photography from (GeoOttawa 2019) in **Appendix B**.

The existing topography of the land is found to be sloped primarily to drain from south to north across the site. The existing gradient of the (3) amalgamated lots are sloping at an approximate gradient of 5.0%.

The existing house water and sanitary service lateral currently servicing the existing dwellings on 1058, 1062 and 1066 Silver Street will be removed. The existing water services shall be blanked at the main and the existing house laterals shall be capped at the front property line for re-development of this site.

As for the availability of underground municipal services, there are existing municipal services along Summerville Avenue in front of this property consisting of a 300mm diameter storm sewer, a 225mm diameter sanitary sewer, and a 150mm diameter watermain for development of this property. As well, along Silver Street there are existing municipal services consisting of 375mm diameter storm sewer, a 225mm diameter sanitary sewer and a 150mm diameter watermain available to provide services to this site. Refer to the City of Ottawa Summerville Avenue and Silver Street UCC and As-Built plan and profile drawings included in **Appendix C** for details.

Because the site will be connecting to and outletting into the separated storm sewer system along Summerville Avenue in the City of Ottawa, therefore, the approval exemption under Ontario Regulations 525/98 would apply since storm water discharges from this site will outlet flow into a downstream storm sewer. Thus, an Environmental Compliance Approval (ECA) application will not be required to be submitted to the Ministry.

Proposed Residential Apartment Building Site

Vehicle access to underground parking is available for this site and bicycle parking is provided in the underground parking level also. Interlock pavers are proposed at the Silver Street main entrance and at the barrier free entrance located off Summerville Avenue of the new building for pedestrian access. An amenity area is provided in the rear yard.

A. Water Supply

The proposed building within Pressure Zone 2W2C at 1066 Silver St is a 3-storey residential apartment building with underground parking. Originally (Stantec's June 2021 memo), the apartment building consisted of six (6) 1-bedroom+den units, and seventeen (17) 2-bedroom units, for a total of 23 units. Some modifications to the building layout were made since the June 2021 analysis (see the updated **Site Plan** attached in **Appendix D**). The latest layout

contains a total of 32 units, namely five (5) 1-bedroom units, sixteen (16) 1-bedroom + den units, and eleven (11) 2-bedroom units.

Each floor covers an area of approximately 10,409.0 ft^2 (967.0 m^2) for a gross floor area of 31,849.0 ft^2 (2,957 m^2), and the building will be approximately 11.0 m in height. The building is to be serviced by the 150 mm diameter watermain along Summerville Avenue (front of the building).

The ground elevation along Summerville Ave in front of the property in question is approximately 83.8 m.

Demand Projections

The estimated domestic demands for the original building layout were calculated using the City of Ottawa's Water Design Guidelines back in June 2021. A residential consumption rate of 350 L/c/d was then used to estimate average day demands (AVDY). However, the City's guidelines were updated in August 2021 (ISTB2021-03), and a new residential consumption rate of 280 L/c/d shall now be used to estimate AVDY demands.

Maximum day (MXDY) demands were calculated by multiplying AVDY demands by a factor of 2.5. Peak hour (PKHR) demands were calculated by multiplying MXDY by a factor of 2.2. Persons per unit (PPU) for each unit were applied as per the City of Ottawa's Water Design Guidelines. **Table 1** shows the estimated domestic demands of the updated building. **Table 2** compares the estimated domestic demands based on both (original and updated) building layouts, as well as considering the updated residential consumption rate as per ISTB2021-03.

Table 1: Estimated Domestic Demand

Unit Type	Unit Count	PPU	Consumption Rate (L/c/d)	AVDY		MXDY		PKHR	
				L/d	L/s	L/d	L/s	L/d	L/s
Apartment, 1-Bedroom (including units with Den)	21	1.4	280	8,232	0.10	20,580	0.24	45,276	0.52
Apartment, 2-Bedroom	11	2.1		6,468	0.07	16,170	0.19	35,574	0.41
Total	***32***			***14,700***	***0.17***	***36,750***	***0.43***	***80,850***	***0.94***

Table 2: Estimated Domestic Demand Comparison

Scenario	Total Unit Count	Consumption rate (L/c/d)	AVDY		MXDY		PKHR	
			L/d	L/s	L/d	L/s	L/d	L/s
Original Building Layout (June 2021)	23	350*	15,435	0.18	38,588	0.45	84,893	0.98
Updated Building Layout	**32**	**280**	**14,700**	**0.17**	**36,750**	**0.43**	**80,850**	**0.94**

* Prior to August 2021, a residential consumption rate of 350 L/c/d was specified in the City of Ottawa's Water Design Guidelines.

Table 2 shows that the updated domestic water demands are slightly less than what was previously estimated based on the original building layout, even if more units are proposed. This is mainly related to the use of a smaller residential consumption rate (280 L/c/d vs 350 L/c/d), but also a reduction of 2-bedroom units (11 now proposed vs 17 originally).

Since the building is planned to be equipped with a sprinkler system, both the Ontario Building Code (OBC) and the Office of the Fire Marshal (OFM) method defer to the National Fire Protection Association (NFPA) 13 "Standard for the Installation of Sprinkler Systems"[1]. This standard specifies that, for ordinary hazard occupancy, the minimum residual pressure required is 20 psi, and the acceptable flow at the base of the riser is 3,200-5,700 L/min (50-95 L/s), for a duration of 60-90 minutes, as shown by the capture of the standard below.

Table 11.2.2.1 Water Supply Requirements for Pipe Schedule Sprinkler Systems

Occupancy Classification	Minimum Residual Pressure Required		Acceptable Flow at Base of Riser (Including Hose Stream Allowance)		Duration (minutes)
	psi	bar	gpm	L/min	
Light hazard	15	1	500–750	1900-2850	30–60
Ordinary hazard	20	1.4	850–1500	3200-5700	60–90

[1] National Fire Protection Association (2016). NFPA 13: Standard for the Installation of Sprinkler Systems. NFPA Committee on Automatic Sprinklers. 2016 Edition.

However, regardless of the presence of sprinklers, the City has indicated that the OBC Guidelines regarding fire flow shall be used at first to estimate the required fire flow. If the required fire flow from the OBC method is equal to, or exceeds 9,000 L/min, the Fire Underwriters Survey (FUS) Guidelines shall be used. For the proposed building, the OBC method does yield a fire flow of 9,000 L/min, as such the FUS method shall be used. Details are provided in the attached **Fire Flow Calculations** in **Appendix D**.

The proposed building will be an ordinary construction and will have a sprinkler system. Additionally, a fire wall will divide the building in two areas of approximately 595 m^2 (north area) and 392 m^2 (south area), as shown in the attached **Site Plan Update** in **Appendix D**. The resulting total required fire flow (RFF) for the northern area is 8,000 L/min (133 L/s), whereas the RFF for the southern area is 7,000 L/min (117 L/s).

Details are provided in the attached **Fire Flow Calculations**. **Figure 1** in Appendix D provides separation distances from adjacent buildings. For street-facing sides, **Figure 2** in **Appendix D** provides separation distances from the street. The proposed **Site Plan** attached in **Appendix D** was used to determine distances from the proposed building to the property lines.

In summary, the estimated water demands for the proposed building are as follows:

- AVDY = 14,700 L/d (0.17 L/s)
- MXDY = 36,750 L/d (0.43 L/s);
- PKHR = 80,850 L/d (0.94 L/s); and,
- Fire Flow = 8,000 L/min (133 L/s).

Boundary Conditions

The hydraulic gradeline (HGL) boundary conditions for 1066 Silver Street, as presented in **Table 3**, were provided by the City on June 16, 2021 (see attached **Water Boundary Conditions Email** in **Appendix D**). Those boundary conditions were calculated based on the original domestic water demands (June 2021 layout). However, it was deemed acceptable to consider the same boundary conditions as part of this new analysis, as the updated water demands are just slightly lower than the original demands. In other words, it is expected that the updated boundary conditions would be very similar to the ones presented in **Table 3**.

Table 3: Boundary Conditions

Demand Scenario	Head (m)	Flow (L/s)
Minimum HGL (Peak Hour)	124.6	
Maximum HGL (Average Day)	133.1	
Available Fire Flow @ Residual 20 psi		96

Hydraulic Analysis

Peak Hour & Average Day

During peak hour demands, the resulting minimum hydraulic gradeline of 124.6 m corresponds to a peak hour pressure of 400 kPa (58 psi). This value is above the minimum pressure objective of 276 kPa (40 psi) for residential buildings up to two storeys. Adding 5 psi per floor above two stories, a minimum pressure of 310 kPa (45 psi) would be required for the third floor. The peak hour pressure exceeds this objective and is therefore considered acceptable.

During average day demands, the resulting maximum hydraulic gradeline of 133.1 m corresponds to a maximum pressure of 483 kPa (70 psi). This value is less than the maximum pressure objective of 552 kPa (80 psi) and therefore considered acceptable. **Supporting hydraulic calculations** are attached in **Appendix D**.

For the proposed building (32 units), more than 500 fixture units are to be considered based on the Ontario Building Code (Table 7.6.3.2.A) and the hydraulic load per fixture. **Table 4** summarizes the fixture units considered based on the updated **Site Plan** attached in **Appendix D**.

Table 4: Fixture Units

Fixture Type	No. of Fixtures	Hydraulic Load/Fixture	Hydraulic Load/Fixture Units
Water Closet	55	3	165
Shower	55	1.4	77
Sink	91	2	182
Washing Machine	32	1	32
Dishwasher	32	1.4	44.8
Hose Bib (5/8)	3	2.5	7.5
		Total	***508.3***

Considering a 15.5 m long pipe servicing the property, a service line diameter of 2 ½ inches (60 mm) can service up to 431 fixture units, based on the National Plumbing Code[2] (see Table A-2.6.3.1.(2)-A). Since the proposed service line consists of a 6-inch (150 mm) PVC pipe, it is considered acceptable.

[2] National Research Council of Canada (2020). National Plumbing Code of Canada. Issued by the Canadian Commission on Building and Fire Codes. 11th Edition.

Maximum Day + Fire Flow

The reported available fire flow at a residual pressure of 20 psi is 96 L/s (5,760 L/min). This is less than the RFF of 8,000 L/min, as per FUS. However, the City indicated that 8,000 L/min can be met from the local hydrants flowing simultaneously (see attached **Multiple Hydrant Analysis Email** in **Appendix D**). Hydrant coverage and classes in the vicinity of the proposed building are illustrated in **Figure 3** attached in **Appendix D**.

Based on Table 1 of Appendix I of the City of Ottawa Technical Bulletin ISTB-2018-02 and a desktop review (i.e., Google Street View) to confirm hydrant class, the combined hydrant flow coverage for the building is estimated to be 9,463 L/min, which exceeds the FUS RFF value of 8,000 L/min. A breakdown of the hydrant coverage is summarized in **Table 5** below.

Table 5: Fire Hydrant Coverage

Building	Fire Flow Demand (L/min)	Fire Hydrants					Combined Hydrant Flow Coverage (L/min)
		Hydrant Class	Within 75 m		Between 75 m and 122 m		
			Quantity	Max Contrib. to RFF	Quantity	Max Contrib. to RFF	
1066 Silver Street	8,000 L/min (FUS)	AA	1	5,678	1	3,785	9,463*
		A					
		B					
		C					

** The hydrant coverage exceeds the available watermain flow per the City's boundary condition. As such, fire flows are limited to the reported available fire flow noted above (i.e., 8,000 L/min).*

In conclusion, based on the boundary conditions provided, the watermain along Summerville Avenue provides adequate fire flow capacity as per the Fire Underwriters Survey (FUS) method to the proposed 32 units development at 1066 Silver Street. Anticipated demand flows meet the pressure objectives during average and peak demand conditions, as per the City of Ottawa's Drinking Water Design Guidelines.

B. Sanitary Flow

The peak sanitary flow for the 32 units, which comprise of eleven (2)-bedroom, five (1)-bedroom units and sixteen (1)-bedroom apartment + den, is estimated at Q = 0.73 L/s with an infiltration rate of 0.03 L/s. Refer to **Appendix E** sheet 1 of 1 regarding sanitary flow calculations. This flow will enter the existing 225mm diameter sanitary sewer on Summerville Avenue via the proposed 150mm diameter PVC sanitary service lateral from the three (3)-storey residential apartment building.

The existing peak sanitary flow of the site for the (3) existing single detached dwelling units is Q = 0.20 L/s with an infiltration rate of 0.03 L/s. The net increase in flow from this proposed development is 0.53 L/s which is not expected to negatively impact the existing 225mm dia. sanitary sewer.

At the front property line, a waste-water sampling and inspection chamber is proposed as per City requirements and as per City of Ottawa detail S18.1.

Waste water from the Summerville Avenue 225mm dia. sanitary sewer then in turn outlets north into the existing downstream 750mm dia. concrete sanitary collector sewer located along Hollington Street which further outlets to the 750mm dia. Shillington Avenue sanitary collector sewer.

C. Storm Flow

The storm-water outlet for the proposed development property will be the existing 300mm diameter concrete storm sewer located on Summerville Avenue. Storm-water attenuation on site to be controlled to the 2-Year pre-development level will be accomplished by means of rooftop storage with controlled roof drains that regulate flow off site.

The building foundation weeping-tile drainage system shall have its own separate pipe for gravity flow where weeping-tile water is outletted via a 150mm diameter storm pipe to the existing 300mm diameter storm sewer. Whereas storm-water outlet for the rooftop water from roof drains then “wye” into the poposed 150mm diameter PVC pipe of the weeping tile drainage pipe that will entail only outletting one storm pipe into the existing 300mm diameter storm sewer from this site.

Three (3) roof drains are proposed for this apartment building to restrict flow at a maximum release rate of 0.95 L/s each or 3 x 0.95 L/s = 2.85 L/s into the Summerville Avenue storm sewer. Refer to Dwg. 821-10 SWM-1 for details.

Based on the residential site plan from the owner’s architect, the average post-development runoff coefficient is estimated at C = 0.74 and A = 0.158 hectares.

An estimation of the pre-development flow condition was carried out using the criteria accepted by the City of Ottawa. If post-development C valve exceeds the lesser of the C_{pre} = 0.43 or C_{allow} = 0.5 (max) then SWM is required. So from our calculations, the C_{pre} = 0.43 value will be used at t_c = 10 minutes for pre-development allowable flow calculation off-site.

The pre-development flow rate calculation into the 300mm dia. storm sewer for this residential area is the lesser of either the two (2)-year storm event where C_{allow} = 0.5 (max.) runoff value or

the average C_{pre} value which is 0.43 using t_c = 10 minutes. Because this site C_{post} = 0.74 and C_{pre} = 0.43 then SWM measures are required.

Therefore, based on our calculation, on-site retention is required for this proposed development site, because the site post-development C value of 0.74 is greater than the C_{pre} = 0.43.

The storage volume for the two (2)-year and up to the 100-year storm event will be stored by means of flat rooftop on top of the 3 storey apartment building. Also refer to the site storm drainage report (Report No. R-821-10) for further details.

In assessing the 2-Year storm event up to the 100-Year storm events under pre-development conditions to that of the same storm events under post-development conditions with implementation of the proposed on-site SWM measures (flat rooftop storage with (3) specified controlled drains) it was determined that post-development release rates has been improved for the site compared with the current existing flow rates.

The pre-development flow at the 2-Year storm event is 14.56 L/s and 39.22 L/s for the 100-Year event. By incorporating the proposed SWM attenuation measures the post-development 2-Year flow is estimated at 9.77 L/s and the 100-Year flow is estimated at 21.77 L/s.

Therefore for this proposed development site, the two (2) year post development release rate of 9.77 L/s is less than the 2-Year pre-development flow rate of 14.56 L/s. For storm events up to and including the 100-Year event, the total 100-Year post-development release rate of 21.77 L/s is less than the 100-Year pre-development flow of 39.22 L/s.

At this proposed residential site and to develop this site to house a 32 unit apartment building on a 0.158 ha. parcel of land, on-site SWM attenuation will be incorporated by means of the flat rooftop storage at the proposed apartment building. Three (3) controlled roof drains are incorporated and each drainage controlled to a release rate of 0.95 L/s (15.0 U.S. gal/min.). The maximum controlled flow from this site (3 roof drains at 0.95 L/s per drain) totals to 2.85 L/s for the post development condition.

During the two (2)-year storm event for the flat rooftop storage, the ponding depth of rooftop area 1, 2 and 3 is estimated at 100mm at the drain and 0mm at the roof perimeter, assuming a 1.1% minimum roof pitch to the drain and controlling the flow rate at 0.79 L/s per drain. The rooftop storage available at Roof Area 1 is 4.17 m^3, rooftop storage available at Roof Area 2 is 3.81 m^3 and the rooftop storage available at Roof Area 3 is 6.12 m^3, for a total of 14.10 m^3, which is greater than the required volume of 12.84 m^3.

During the 100-year storm event for the flat rooftop storage, the ponding depth of Roof Area 1, 2 and 3 is estimated at 150 mm at the drain and 0 mm at the roof perimeter, assuming a 1.1%

minimum roof pitch to the drain and controlling the flow rate at 0.95 L/s per drain. The rooftop storage available at Roof Area 1 is 13.85 m^3, rooftop storage available at Roof Area 2 is 12.95 m^3 and the rooftop storage available at Roof Area 3 is 19.62 m^3, for a total of 46.42 m^3, which is greater than the required volume of 42.58 m^3.

Therefore, by means of flat building rooftop storage and grading the site to the proposed grades as shown on the Proposed Grading and Servicing Plan and Proposed Rooftop Stormwater Management Plan Dwg. 821-10 G-1 and 821-10 SWM-1 respectively, the desirable two (2)-year storm and 100-year storm event detention volume of 14.10 m^3 and 46.42 m^3 respectively will be available on site. Refer to **Appendix E** of the Storm Drainage Report (Report No. R-821-10 Rev. No. 2) for detailed calculations of available storage volumes.

The building weeping tile drainage will outlet via its separate 150mm diameter PVC storm lateral. The roof drains will be outletted also via a separate 150mm PVC storm lateral which "wye" into the proposed 150mm dia. weeping tile storm lateral, where upon both laterals are outletting to the existing Summerville Avenue 300mm diameter storm sewer with only one (1) connection. The City of Ottawa recommends that pressurized drain pipe material be used in the building for the roof drain leader pipe in the event of surcharging in the City Storm sewer system. Refer to the proposed site grading and servicing plan Dwg. 821-10 G-1 for details.

Water Quality

For this proposed site, the local conservation authority (RVCA) was pre-consulted regarding the issue of water quality treatment on-site.

Correspondence from RVCA dated July 14, 2021 confirms that on-site water quality treatment is not required for this proposed development property and that Best Management Practices are encouraged to be implemented where possible. See **Appendix F**.

Erosion and Sediment Control

The contractor shall implement Best Management Practices by incorporating measures such as a temporary silt fence barrier (per OPSD 219.110) to provide for protection of the receiving storm sewer during construction activities. These practices are required to ensure no sediment and/or associated pollutants are released to the receiving watercourse. These practices include installation of a City approved "siltsack" or equivalent catch basin sediment control device or equal in catch basins as recommended by manufacturer on-site and off-site within the Silver

Street and Summerville Avenue road right of way adjacent to this property. Siltsack shall be inspected every 2 to 3 weeks and after major storm. The deposits will be disposed of as per the requirements of the contract. See Dwg. #821-10 ESC-1 for details.

Refer to **Appendix G** for the summary of the Development Servicing Study Checklist that is applicable to this development.

PREPARED BY T.L. MAK ENGINEERING CONSULTANTS LTD.

TONY L. MAK, P.ENG

PROPOSED THREE STOREY

RESIDENTIAL APARTMENT BUILDING SITE

PART OF LOT 31

R-PLAN 294

1058, 1062 AND 1066 SILVER STREET

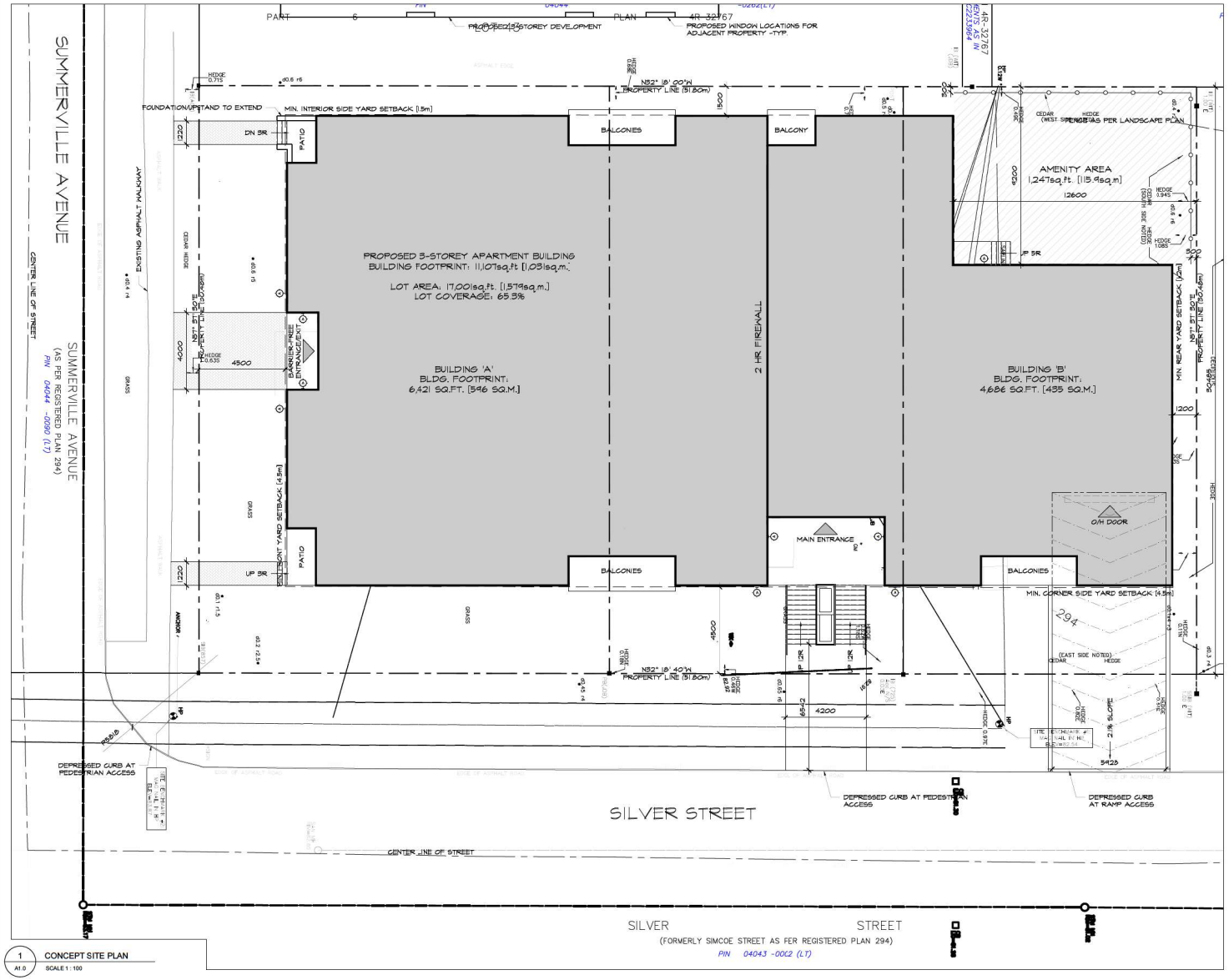
CITY OF OTTAWA

APPENDIX A

SITE PLAN AND LEGAL SURVEY PLAN

LEGEND

- NEW OVERHEAD DOOR (O/H)
- NEW DOOR / ENTRANCE
- PROPOSED RIVERSTONE MULCH
- EXISTING VEGETATION REFER TO LANDSCAPE DWGS (0.3m)
- BICYCLE PARKING SPACE (1.8Mx0.6M)
- NO PARKING LINES
- PROPOSED PRECAST CONCRETE PAVERS
- PROPOSED SOD - REFER TO LANDSCAPE DWGS
- NEW SAWCUT CONCRETE SIDEWALK
- PARKING STALL COUNT PER ROW (#)
- NEW SIGN, REFER TO SGN LEGEND (S#)
- STREET LIGHT (SL)
- HYDRO POST (SL)
- DESIGNATED ACCESSIBLE PARKING SPACE AS PER AODA STANDARDS
- V VISITOR PARKING
- TWO WAY TRAFFIC
- DEPRESSED CURB (DC)
- PROPERTY LINE
- EXISTING FENCE
- MINIMUM SETBACKS (ZONING)
- NEW CONSTRUCTION
- EXISTING BUILDINGS
- BUILDING MOUNTED LIGHTS REFER TO ELECTRICAL DWGS
- *REFER TO LANDSCAPE DWGS



1 A1.0 CONCEPT SITE PLAN
SCALE 1 : 100

KEY PLAN

BUILDING AREAS

	CONSTRUCTION AREA (SQ.M)	CONSTRUCTION AREA (SQ.FT)
LOWER LEVEL		
GROUND FLOOR LEVEL	1004 sq.m	10,817 sq.ft
SECOND FLOOR LEVEL	1004 sq.m	10,817 sq.ft
THIRD FLOOR LEVEL	949 sq.m	10,215 sq.ft
TOTAL	2,957 sqm	31,849 sq.ft

BUILDING FLOOR STATISTICS - RENTAL APARTMENT

FLOOR	SUITES	2 BEDROOM	1 BEDROOM + DEN	1 BEDROOM
LOWER LEVEL	-	-	-	-
GROUND FLOOR	10	4	5	1
SECOND FLOOR	11	4	5	2
THIRD FLOOR	11	3	6	2
TOTAL	32	11	16	5
SUITE MIX		35%	50%	15%

CITY OF OTTAWA ZONING BY-LAW

ZONING PROVISIONS	REQUIRED	PROPOSED
R4UC		
MIN. LOT AREA	450 sq.m	confirm
MAX. LOT AREA	1070 sq.m	1580 sq.m
MIN. LOT WIDTH	15m	30.5m
MAX. LOT WIDTH	15m	46m
MIN. INTERIOR YARD AREA	9.2m x 12.58m	9.2m x 12.58m
MIN. FRONT YARD SETBACK	4.5m	4.5m
MIN. CORNER SIDE YARD SETBACK 4.5m		4.5m
MIN. INTERIOR SIDE YARD SETBACK 1.5m		1.6m
MIN. REAR YARD SETBACK	1.2m	1.35m
MIN. INTERIOR YARD SETBACK	CONFIRM	CONFIRM
MAX BUILDING HEIGHT	11M	11M
AMENITY AREA	40% OF FRONT YARD. 30% OF LOT AREA, 50% OF REAR YARD	70% OF FRONT YARD. 36.4% OF LOT AREA, 100% OF REAR YARD
LOT COVERAGE	N/A	63.6%

AUTOMOBILE PARKING SUMMARY

REQUIRED PARKING	REQUIRED	PROPOSED
RESIDENT PARKING	0.5/UNIT (AFTER 12) X 20 = 10 SPACES	18
VISITOR PARKING	0.1/UNIT (AFTER 12) X 20 = 2 SPACES	2
TOTAL	12	20

ACCESSIBLE PARKING SUMMARY

		REQUIRED	PROPOSED
REGULAR	MIN. 2.6mx5.2m	11	20
ACCESSIBLE	TYPE B 2.4mx5.2m	1	1
TOTAL		12	21

BICYCLE PARKING SUMMARY

REQUIRED PARKING	REQUIRED	PROPOSED
BIKE PARKING	0.5/UNIT X 32 = 16 SPACES	32

POWER-TEK GROUP

NOTES:

1) ALL WORK TO BEIN COMPLIANCE WITH LOCAL BUILDING CODES, REGULATIONS AND BY-LAWS.

2) ADDITIONAL DRAWINGS MAY BE ISSUED FOR CLARIFICATION TO ASSIST PROPER EXECUTION OF WORK. SUCH DRAWINGS WILL HAVE THE SAME MEANING AND INTENT AS IF THEY WERE INCLUDED WITH PLANS IN CONTRACT DOCUMENTS.

3) DO NOT SCALE DRAWINGS.

4) ALL SUBCONTRACTORS TO TAKE THEIR OWN ON-SITE MEASUREMENTS AND BE RESPONSIBLE FOR THEIR ACCURACY.

5) NOTIFY SHAWN J LAWRENCE ARCHITECT FOR ANY ERRORS AND/OR OMISSIONS PRIOR TO START OF WORK.

ONTARIO ASSOCIATION OF ARCHITECTS — SHAWN JAMES LAWRENCE — LICENCE 4442

NORTH ARROW:

No.	DATE	REVISION
08	2022.11.09	RE-ISSUED FOR SPC
07	2022.05.11	ISSUED FOR COORDINATION
06	2022.03.30	RE-ISSUED FOR SPC
05	2022.03.25	ISSUED FOR SPC
04	2022.03.16	ISSUED FOR COORDINATION
03	2022.03.10	ISSUED FOR COORDINATION
02	2021.06.08	ISSUED FOR REVIEW
01	2021.05.27	ISSUED FOR REVIEW

S.J. LAWRENCE ARCHITECT INCORPORATED
18 DEVON STREET SUITE 206 OTTAWA, ONTARIO K2E 8E7
T: (613) 739-7770
F: (613) 739-7733
sjl@lawrence.com

PROJECT:
SILVER STREET DEVELOPMENT
1062 & 1066 SILVER STREET, OTTAWA ON

SHEET TITLE:
SITE PLAN

DRAWN BY: R.R. CHECKED BY: S.L.

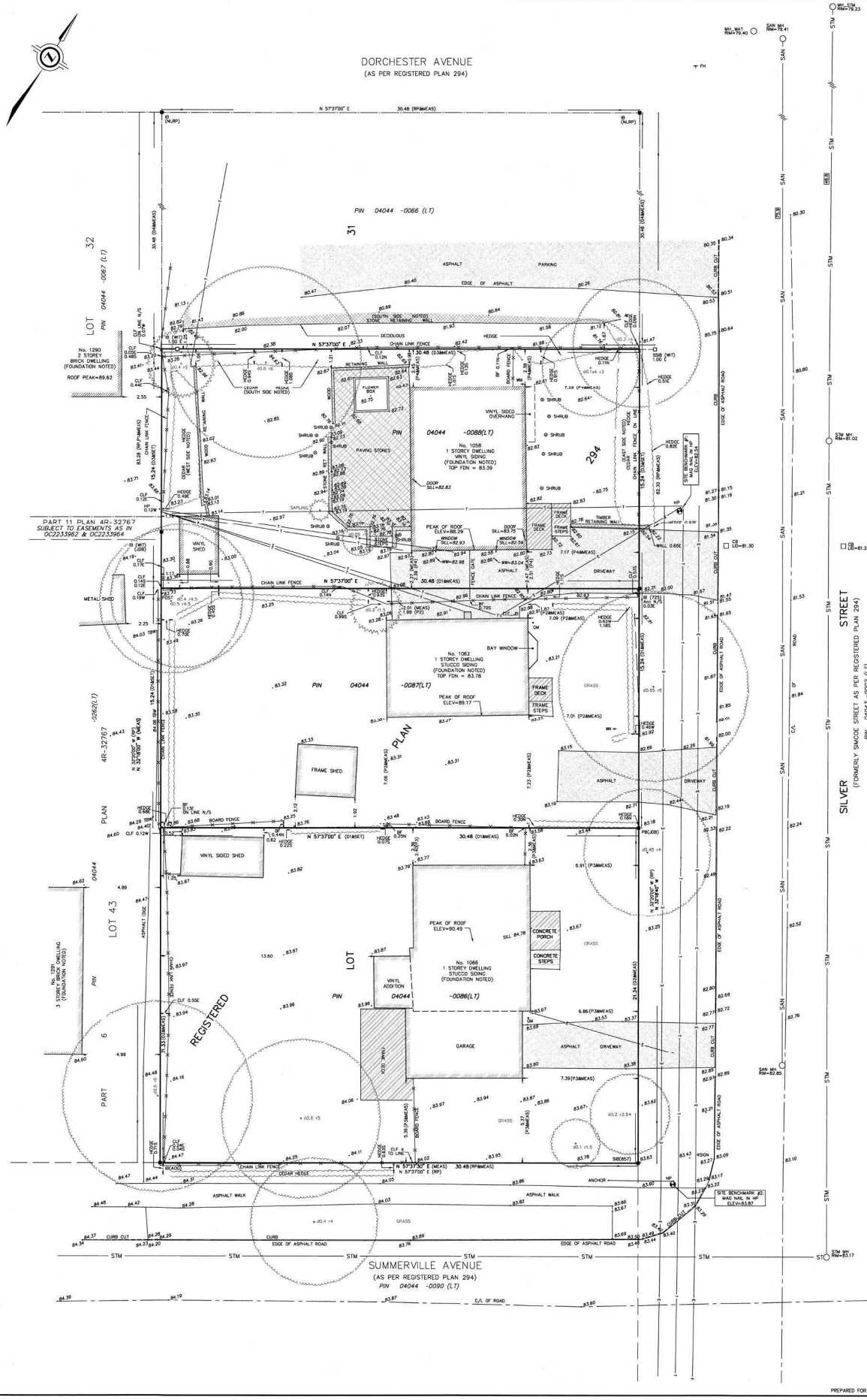
PLOT DATE: 2022-11-09 1:56:16 PM

JOB NUMBER: SL-1046-21 SCALE: As indicated

A1.0

APPLICATION # D07-12-21-0012

PLAN # 18545



SURVEYOR'S REAL PROPERTY REPORT
WITH TOPOGRAPHIC DETAILS
PART 1 - PLAN SHOWING

PART OF LOT 31
REGISTERED PLAN 294
CITY OF OTTAWA

J.D. BARNES LIMITED

SCALE 1 : 100

0 5 0 5 metres

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

PART 2 - SURVEY REPORT

- DESCRIPTION
PART OF LOT 31, REGISTERED PLAN 294 BEING ALL OF PINS 04044-0086(LT), 04044-0087(LT) AND 04044-0088(LT) IN THE CITY OF OTTAWA
- REGISTERED EASEMENTS AND/OR RIGHTS-OF-WAY
NONE
- BOUNDARY FEATURES

NOTE LOCATION OF THE CHAIN LINK FENCES AND CEDAR HEDGE ALONG THE WESTERLY LIMIT OF THE SUBJECT PROPERTIES

NOTE LOCATION OF THE CHAIN LINK FENCE AND THE CEDAR HEDGE ALONG THE SOUTHERLY LIMIT OF PIN 04044-0086(LT)

NOTE LOCATION OF THE CEDAR HEDGE ALONG THE EASTERLY LIMIT OF PIN 04044-0087(LT)

NOTE LOCATION OF THE CHAIN LINK FENCE, THE CEDAR HEDGE AND THE DECIDUOUS HEDGE ALONG THE NORTHERLY LIMIT OF PIN 04044-0088(LT)

NOTE LOCATION OF THE CEDAR HEDGE, THE CHAIN LINK FENCE, THE TIMBER RETAINING WALL AND THE CROSSING TELEPHONE CABLE ALONG THE EASTERLY LIMIT OF PIN 04044-0088(LT)

NOTES

BEARINGS ARE MTM GRID, AND DERIVED FROM GLOBAL NAVIGATION SATELLITE SYSTEMS (GNSS) BY REAL TIME NETWORK (RTN) OBSERVATIONS, MTM ZONE 9, NAD 83, (CSRS) (2010).

FOR BEARING COMPARISONS, A COUNTER-CLOCKWISE ROTATION OF 0°46'00" WAS APPLIED TO BEARINGS ON REGISTERED PLAN 294

DISTANCES ARE GROUND.

COMPLIANCE WITH ONTARIO BUILDING CODE SETBACK REQUIREMENTS ARE NOT VERIFIED BY THIS SURVEY.

NOTES ON TREES
-TREE DIMENSIONS ARE SHOWN +/- HEREON
-DIAMETER OF TREES TAKEN AT 1.2m ABOVE GRADE
-RADIUS DENOTES MEASUREMENT OF CROWN FROM CENTER OF TREE

LEGEND

■	DENOTES	SURVEY MONUMENT FOUND
□	DENOTES	SURVEY MONUMENT SET
SIB	DENOTES	STANDARD IRON BAR
SSIB	DENOTES	SHORT STANDARD IRON BAR
IB	DENOTES	IRON BAR
PB	DENOTES	PLASTIC BAR
MEAS	DENOTES	MEASURED
Acc	DENOTES	ACCEPTED
WIT	DENOTES	WITNESS
RP	DENOTES	INTERCEPTED PLAN 294
P1	DENOTES	PLAN 5R-7867
P2	DENOTES	BUILDING LOCATION SURVEY BY R.W. ARNETT, O.L.S., DATED JUNE 8, 1983
P3	DENOTES	PLAN BY J. ERIC KING, O.L.S., DATED MAY 16, 1972
P4	DENOTES	BUILDING LOCATION SURVEY BY R.W.ARNETT, O.L.S., DATED NOVEMBER 5, 1985
D1	DENOTES	INSTRUMENT NS202020
D2	DENOTES	INSTRUMENT CR612978
D3	DENOTES	INSTRUMENT N677588
D4	DENOTES	INSTRUMENT N396314
857	DENOTES	FARHALL, MOFFATT & WOODLAND LIMITED
AOO	DENOTES	ANNIS, O'SULLIVAN, VOLLEBEKK LTD.
JDB	DENOTES	J.D. BARNES LTD.
725	DENOTES	R.W. ARNETT, O.L.S.
1319	DENOTES	W.J. WEBSTER, O.L.S.
NI	DENOTES	NO IDENTIFICATION
	DENOTES	PROPERTY LINE

N=NORTH / S=SOUTH / E=EAST / W=WEST

TOPOGRAPHIC LEGEND

FDN	DENOTES FOUNDATION
WW	DENOTES WINDOW WELL
C/L	DENOTES CENTERLINE
D	DENOTES DIAMETER
R	DENOTES RADIUS
BF	DENOTES BOARD FENCE
CLF	DENOTES CHAIN LINK FENCE
HP	DENOTES HYDRO POLE
FH	DENOTES FIRE HYDRANT
GM	DENOTES GAS METER
WK	DENOTES WATER KEY
WM	DENOTES WATER METER
CB	DENOTES CATCH BASIN
EJB	DENOTES HYDRO JUNCTION BOX
MH_STM	DENOTES STORM MANHOLE
MH_SAN	DENOTES SANITARY MANHOLE
E	DENOTES OVERHEAD HYDRO CABLE
T	DENOTES OVERHEAD TELEPHONE CABLE
STM	DENOTES UNDERGROUND STORM SEWER
SAN	DENOTES UNDERGROUND SANITARY SEWER
	DENOTES DECIDUOUS TREE
	DENOTES CONIFEROUS TREE

ALL SET SSIB MONUMENTS WERE USED DUE TO LACK OF OVERBURDEN AND/OR PROXIMITY OF UNDERGROUND UTILITIES IN ACCORDANCE WITH SECTION 11 (4) OF O.REG. 525/91.

ELEVATION NOTE:

1. ELEVATIONS SHOWN ON THIS PLAN ARE RELATED TO GEODETIC DATUM (CGVD28 1978) AND WERE DERIVED FROM CITY OF OTTAWA PUBLISHED CONTROL MONUMENT 20160328 HAVING A PUBLISHED ELEVATION OF 82.472 METRES.

2. IT IS THE RESPONSIBILITY OF THE USER OF THIS INFORMATION TO VERIFY THAT THE SITE BENCHMARKS HAVE NOT BEEN ALTERED OR DISTURBED AND THAT ITS RELATIVE ELEVATION AND DESCRIPTION AGREES WITH THE INFORMATION SHOWN ON THIS DRAWING

ASSOCIATION OF ONTARIO LAND SURVEYORS
PLAN SUBMISSION FORM
2160515
THIS PLAN IS NOT VALID UNLESS IT IS AN EMBOSSED ORIGINAL COPY ISSUED BY THE SURVEYOR
In accordance with Regulation 1026, Section 29(3).

SURVEYOR'S CERTIFICATE

I CERTIFY THAT:

1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT, THE SURVEYORS ACT AND THE REGULATIONS MADE UNDER THEM.
2. THE SURVEY WAS COMPLETED ON DECEMBER 20, 2021.

JANUARY 12, 2022
DATE

SHAWN LEROUX
ONTARIO LAND SURVEYOR

PREPARED FOR: HASLETT CONSTRUCTION

J.D.BARNES LIMITED
SURVEYING MAPPING GIS
LAND INFORMATION SPECIALISTS
62 STACIE DRIVE, SUITE 103, KANATA, ON K2K 2A9
T: (613) 731-7244 F: (613) 254-8659 www.jdbarnes.com

DRAWN BY:	CHECKED BY:	REFERENCE NO.:
CE/RP	SL	21-10-008-00

FILE: C:\21-10-008\DWG\Drawing\SURVEY-TOPO(2022)\21-10-008-TOPO.dgn

DATED: 1/12/2022 PLOTTED: 1/12/2022

PROPOSED THREE STOREY

RESIDENTIAL APARTMENT BUILDING SITE

PART OF LOT 31

R-PLAN 294

1058, 1062 AND 1066 SILVER STREET

CITY OF OTTAWA

APPENDIX A1

PRE-CONSULTATION NOTES

FROM

CITY OF OTTAWA

TL MaK

From: Hodgins, Cameron [cameron.hodgins@ottawa.ca]
Sent: June 17, 2021 10:46 AM
To: Murray Chown; Rob@haslettconstruction.com; joseph.pamic@power-tek.on.ca; amanda@sjlarchitect.com; tlmakecl@bellnet.ca; T Mak; Brandon Lawrence; Taylor West
Cc: Richardson, Mark; Gervais, Josiane; Wang, Randolph; Walker, Burl; Cassidy, Tyler; Harrold, Eric; Mitchell, Yvonne
Subject: Pre-con Follow-up - 1062/1066 Silver Street
Attachments: design_brief_TOR_1062-66 Silver.pdf; Parks Comments - 1062 and 1066 Silver Street.docx; 1062 & 1066 Silver - Pre-con Engineering Notes.docx

Hello All,

Please refer to the below notes regarding the Pre-Application Consultation (pre-con) Meeting held on June 8, 2021 for the property at 1062 & 1066 Silver Street for a Complex Site Plan Control and Minor Zoning By-law amendment application in order to allow the development of a low-rise apartment building by Power-Tek Real Estate corporation.

Below are staff's preliminary comments based on the information available at the time of pre-con meeting:

General

Site Plan Control (complex site plan category):

https://app06.ottawa.ca/online_services/forms/ds/site_plan_control_en.pdf

Zoning By-law Amendment (minor, depending upon request):
https://app06.ottawa.ca/online_services/forms/ds/zoning_amendment_en.pdf

Planning Operations has created a detailed process for the receipt and handling of applications sent to the Planning Circulations inbox. PlanningCirculations@ottawa.ca All applications are to be sent to this inbox so that the MAP files can be created, and materials uploaded to both SharePoint and MAP.

Plans and Studies
The following reports and plans are required (all in digital format) in order to support the proposed Site Plan Control application:

1. Site Plan
2. Landscape Plan
3. Survey Plan
4. Architectural Building Elevation Drawings (dimensioned)
5. Planning Rational/ Design Brief
6. Site Servicing Plan
7. Grading Plan. A separate Existing Conditions and Removals Plan may be required depending on the legibility of the Grading Plan.
8. Erosion and Sediment Control Plan
9. Storm Drainage / Ponding Plan
10. Stormwater Management and Site Servicing Report
11. Geotechnical Investigation Report

12. Tree Conservation Report
13. Roof Drain Control Letter (if rooftop storage is proposed)
14. ECA (if applicable)

The aforementioned reports, studies and plans are required to support the proposing Re-zoning and Site Plan Control applications. If the applicant elects to apply for the re-zoning in advance of the Site Plan Control process, additional / alternative submissions may be required.

Planning

- The subject properties are located within the General Urban Area under Schedule B of the City of Ottawa's Official Plan.
    - The General Urban Area policies can be found here: https://ottawa.ca/en/planning-development-and-construction/official-plan-and-master-plans/official-plan/volume-1-official-plan/section-3-designations-and-land-use#3-6-urban-designations
- The property is currently Zoned R4UC, and is located within the following schedules:
    - Area X Schedule 1A
    - Schedule 342 (See Section 139, 144 of the Zoning By-law)
    - Schedule 343 (See Section 139, 144 of the Zoning By-law)
- The R4 Zoning By-law provisions can be found here: https://ottawa.ca/en/living-ottawa/laws-licences-and-permits/laws/law-z/planning-development-and-construction/maps-and-zoning/zoning-law-no-2008-250/zoning-law-2008-250-consolidation/part-6-residential-zones-sections-155-168#r4-residential-fourth-density-zone-sections-161-and-162
- Ensure the proposal complies with the parking queuing and loading provisions of the Zoning By-law: https://ottawa.ca/en/living-ottawa/laws-licences-and-permits/laws/law-z/planning-development-and-construction/maps-and-zoning/zoning-law-no-2008-250/zoning-law-2008-250-consolidation/part-4-parking-queuing-and-loading-provisions-sections-100-114

- Staff have some concerns related to the proposed amendment to increase the slope of the ramp leading from the street to the parking garage, particularly related to the ability to move garbage up the ramp. The Solid Waste guidelines for Multi-residential developments states the following *"For a site that necessitates that the underground parking ramp be used to transport containers from a basement storage room to an at-grade loading area, the grade of the underground parking ramp must be no more than 8%"*

    - Furthermore Section 143 of the Zoning By-law states that for In any R1, R2, R3 or R4 zone, any building exceeding 400 square metres in total floor area a path for the movement of garbage containers between a garbage storage area and the street line or travelled public lane needs to be provided and it must be uninterrupted by any window well, depression or grade change that would impede the movement of a wheeled garbage container

- If proposing to reduce the amount of entrances leading to the right of way under Section 161 (18) (f), sufficient justification on how the proposal is more computable with the area, and that appropriate connections between the private interior space and public exterior space are maintained should be provided. Alternate design strategies that meet these goals as well or better than simple zoning compliance will be considered. Please note if this is proposed there could be Zoning Compliance Issue with Section 144 (5) and (6)
    - Section 144 (5) and (6) only permits the ability to use a 1.2 metre rear yard and an interior yard (opposed to a traditional rear yard) where there is principle entranceways fronting onto and facing different streets). Were you to not propose an additional

entrance on the other frontage, a Zoning by-law amendment will be needed to permit the interior yard.

- Please review and ensure compliance is met with Section 161 (18) (b). specifically I am concerned with IV and the ability to meet this with a 1.2 meter rear yard. I have confirmed with the zoning team that this has to exclusively be in the rear yard, the interior yard area can not count towards the requirement.
  Depending on how you wish to proceed with the above 3 points, further discussion on new zoning changes not discussed at the pre-consult may be warranted.

- Given the lack of an amenity area requirement in the zone, reducing the proposed interior yard while also allowing for an increase lot area can be seen as un-desirable. If the reduction is required for practical reasons the amenity area lost through the reduction should be provided else ware. Can the soft landscaping requirements still be met upon a reduction?
- For the proposed lot area increase comment on the intent of the provisions, specifically that it does not result in the undue lot consolidation.
- For the Zoning By-law Amendment, the Applicant must now provide a proposed strategy for public consultation as directed by Bill 73

Urban Design

- Overall, the proposed design is trending in the right direction and appropriate for the context. Urban design supports:
  - The approach to site plan and massing;
  - The preliminary architectural concept;
  - The preliminary concept of the building materials, which are a combination of brick and cement panels.
- Urban design also understand and can appreciate the practical concerns of the use of the ground floor patio spaces and the potential requirement for amendment to the zoning.
- Please maximize opportunities for tree planting and provide continuous tree canopy if possible along both Silver and Summerville.
- Consideration should also be given to tree protection and/or planting in the private amenity space.
- A Design Brief is required as part of the submission. The Terms of Reference of the Design Brief is attached for convenience.

Engineering

The attached “Pre-con Engineering Notes memo” summarizes engineering design considerations as per our discussion.

Feel free to contact the Infrastructure Project Manager, Eric Harold, at eric.harrold@ottawa.ca for follow-up questions.

Transportation

- The Screening Form was reviewed, a TIA is not required.
- Corner triangles as per OP Annex 1 - Road Classification and Rights-of-Way at the following locations on the final plan will be required (measure on the property line/ROW protected line; no structure above or below this triangle): Local Road to Local Road: 3 m x 3 m
- Existing depressed curb will need to be reinstated, as per City Standards.
- Upgrade sidewalk to City standard (concrete) along Silver Street.
- On site plan:
  - Show all details of the roads abutting the site up to and including the opposite curb; include such items as pavement markings, accesses and/or sidewalks.

    - Turning movement diagrams required for internal movements (loading areas, garbage), if applicable.
    - Show all curb radii measurements; ensure that all curb radii are reduced as much as possible.
    - Show slope of garage ramp on site plan. Note that underground ramps should be limited to a 12% grade and must contain a subsurface melting device when exceeding 6%. Ramp grades greater than 15% can be psychological barriers to some drivers.
    - Parking stalls at the end of dead-end parking aisles require adequate turning around space (1.8m is suggested, for a 6m wide drive aisle). Alternatively, provide a turning movement diagram showing how vehicles can access/egress the stall.
    - Show lane/aisle widths (including driving aisles and pedestrian pathways).
    - Grey out any area that will not be impacted by this application.
- As the site proposed is residential, AODA legislation applies for all areas accessible to the public (i.e. outdoor pathways, parking, etc.).
- Stationary Noise Impact Study required if there will be any exposed mechanical equipment due to the proximity to neighboring noise sensitive land uses.

Feel free to contact the Transportation Project Manager, Josiane Gervais, at josiane.gervais@ottawa.ca for follow-up questions.

Parkland

- Cash-in-lieu of parkland requested (Please see attached memo)

City Surveyor

- The determination of property boundaries, minimum setbacks and other regulatory constraints are a critical component of development. An Ontario Land Surveyor (O.L.S.) needs to be consulted at the outset of a project to ensure properties are properly defined and can be used as the geospatial framework for the development.
- Topographic details may also be required for a project and should be either carried out by the O.L.S. that has provided the Legal Survey or done in consultation with the O.L.S. to ensure that the project is integrated to the appropriate control network.

Questions regarding the above requirements can be directed to the City's Surveyor, Bill Harper, at Bill.Harper@ottawa.ca

Forestry

TCR requirements:

1. a Tree Conservation Report (TCR) must be supplied for review along with the suite of other plans/reports required by the City
    a. an approved TCR is a requirement of Site Plan approval.
2. As of January 1 2021, any removal of privately-owned trees 10cm or larger in diameter, or publicly (City) owned trees of any diameter requires a tree permit issued under the Tree Protection Bylaw (Bylaw 2020 – 340); the permit will be based on an approved TCR and made available at or near plan approval.
3. The Planning Forester from Planning and Growth Management as well as foresters from Forestry Services will review the submitted TCR
    a. If tree removal is required, both municipal and privately-owned trees will be addressed in a single permit issued through the Planning Forester
    b. Compensation may be required for city owned trees – if so, it will need to be paid prior to the release of the tree permit

4. the TCR must list all trees on site by species, diameter and health condition
5. please identify trees by ownership – private onsite, private on adjoining site, city owned, co-owned (trees on a property line)
6. the TCR must list all trees on adjacent sites if they have a critical root zone that extends onto the development site
7. If trees are to be removed, the TCR must clearly show where they are, and document the reason they cannot be retained
8. All retained trees must be shown and all retained trees within the area impacted by the development process must be protected as per City guidelines available at Tree Protection Specification or by searching Ottawa.ca
    a. the location of tree protection fencing must be shown on a plan
    b. show the critical root zone of the retained trees
    c. if excavation will occur within the critical root zone, please show the limits of excavation
9. the City encourages the retention of healthy trees; if possible, please seek opportunities for retention of trees that will contribute to the design/function of the site.
10. For more information on the process or help with tree retention options, contact Mark Richardson mark.richardson@ottawa.ca or on City of Ottawa

LP tree planting requirements:

For additional information on the following please contact adam.palmer@Ottawa.ca

Minimum Setbacks

- Maintain 1.5m from sidewalk or MUP/cycle track.
- Maintain 2.5m from curb
- Coniferous species require a minimum 4.5m setback from curb, sidewalk or MUP/cycle track/pathway.
- Maintain 7.5m between large growing trees, and 4m between small growing trees. Park or open space planting should consider 10m spacing.
- Adhere to Ottawa Hydro's planting guidelines (species and setbacks) when planting around overhead primary conductors.

Tree specifications

- Minimum stock size: 50mm tree caliper for deciduous, 200cm height for coniferous.
- Maximize the use of large deciduous species wherever possible to maximize future canopy coverage
- Tree planting on city property shall be in accordance with the City of Ottawa's Tree Planting Specification; and include watering and warranty as described in the specification (can be provided by Forestry Services).
- Plant native trees whenever possible
- No root barriers, dead-man anchor systems, or planters are permitted.
- No tree stakes unless necessary (and only 1 on the prevailing winds side of the tree)

Hard surface planting

- Curb style planter is highly recommended
- No grates are to be used and if guards are required, City of Ottawa standard (which can be provided) shall be used.
- Trees are to be planted at grade

Soil Volume

- Please ensure adequate soil volumes are met:

Tree Type/Size	Single Tree Soil Volume (m3)	Multiple Tree Soil Volume (m3/tree)

Ornamental	15	9
Columnar	15	9
Small	20	12
Medium	25	15
Large	30	18
Conifer	25	15

Sensitive Marine Clay

- Please follow the City's 2017 Tree Planting in Sensitive Marine Clay guidelines

Other

- All PDF submitted documents are to be unlocked and flattened.
- You are encouraged to contact the Ward Councillor about the proposal. You may also consider contacting the local Community Associations.

Please refer to the links to Guide to preparing studies and plans and fees for further information. Additional information is available related to building permits, development charges, and the Accessibility Design Standards. Be aware that other fees and permits may be required, outside of the development review process. You may obtain background drawings by contacting informationcentre@ottawa.ca.

These pre-con comments are valid for one year. If you submit a development application(s) after this time, you may be required to meet for another pre-consultation meeting and/or the submission requirements may change. You are as well encouraged to contact us for a follow-up meeting if the plan/concept will be further refined.

Please do not hesitate to contact me if you have any questions.

Regards,

Cameron Hodgins

Planner I
Development Review (South Services) | Examen des projets d'aménagement (services sud)
Planning, Infrastructure and Economic Development | Services de planification, d'infrastructure et de développement économique

City of Ottawa | Ville d'Ottawa
☎ 613.580.2424 ext./poste 15788
ottawa.ca/planning / ottawa.ca/urbanisme

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M E M O / N O T E D E S E R V I C E

To / Destinataire	Cameron Hodgins, Planner Development Review South Branch	File/N° de fichier: N/A
From / Expéditeur	Burl Walker, Planner Parks and Facilities Planning Branch	
Subject / Objet	Pre-consultation Comments Zoning By-law Amendment and Site Plan Control Applications 1062 and 1066Silver Street	Date: 8June 2021

1. The applicant is proposing to submit rezoning and site plan control applicationsto permit a low-rise apartment building with 25 dwelling units. The lotsare currently occupied by two detached dwellings. The total lot area is 1,115 m^2.

2. Staff do not recommend the conveyance of parkland for this site since the parkland dedication area does not meet the minimum size requirement for a small park.

3. Cash-in-lieu of parkland dedication will be required as a condition of site plan approval. Based on the information submitted with the pre-consultation application, the following is a draft of the condition:

   The Owner agrees to provide cash-in-lieu of parkland dedication on the subject lands within Ward 16 such value of the land to be determined by the City's Realty Services Branch, to the satisfaction of the General Manager, Recreation, Cultural and Facility Services. The Owner further agrees to pay for the cost of the appraisal inclusive of HST. In accordance with the Planning Act and the City of Ottawa Parkland Dedication By-law, a land area of 112 m^2 has been calculated for the amount of cash-in-lieu of parkland dedication as follows:

Proposed Use	***Net Increase in Dwelling Units***	***Cash-in-lieu of Parkland Dedication Rate***	***Parkland Dedication Area (m^2)***
Apartment	*23*	*1 ha (10,000 m^2) per 500 dwelling units to a maximum of 10% of the area of the site being developed*	*112*

The cash-in-lieu of parkland dedication shall be directed 60% towards the Ward 16 cash-in-lieu of parkland reserve(Account 830305) and 40% towards the City-wide cash-in-lieu of parkland reserve (Account 830015).

Description:

A Design Brief is the core submission document that illustrates how the development is designed to work with its existing and planned context, to improve its surroundings and also demonstrate how the proposal supports the overall goals of the Official Plan, relevant secondary plans, Council approved plans and design guidelines. The purpose of the Terms of Reference is to assist the applicant to organize and substantiate the design justification in support of the proposed development and to assist staff and the public in the review of the proposal.

Authority to Request a Design Brief:

The *Planning Act* gives municipalities the authority to require that a Design Brief be prepared. Under Sections 22(4), (5) and Section 41(4) of the *Planning Act*, a Council has the authority to request such other information or material that the authority needs in order to evaluate and make a decision on an application. Section 5.2.6 of the Official Plan sets out the general requirement for a Design Brief.

Preparation:

The Design Brief should be signed by an urban designer, licenced architect, landscape architect, or a full member of the Canadian Institute of Planners.

When Required:

A Design Brief is required for a Site Plan Control planning application.

A Scoped Design Brief* is required when the following planning applications are applied for and not accompanied by a Site Plan Control application:

- Official Plan Amendment
- Zoning By-law Amendment (exception: a change in use which does not result in an increase in height or massing)

The requirement and scope of a Design Brief will be determined at the formal pre-application consultation meeting. Should an application be required to go to the Urban Design Review Panel (UDRP), the Design Brief may be submitted as part of the submission materials to the panel.

Contents for Design Brief Submissions:

A Design Brief will contain and/or address the points identified during the pre-consultation meeting. Failure to address the critical elements identified in the pre-consultation meeting may result in the application being considered incomplete.

** A Scoped Design Brief is composed of:*

- *Section 1 should be combined into the Planning Rationale submission, and*
- *Section 2 items will be confirmed in the pre-application consultation meeting.*

SECTION 1 Note: This section can be combined with the Planning Rationale.

Application Submission:

Not Required	Required	
☐	☒	State the: type of application, legal description, municipal address, purpose of the application and provide an overall vision statement and goals for the proposal.

Response to City Documents:

Not Required	Required	
☐	☒	State the Official Plan land use designation for the subject property and demonstrate how the proposal conforms to the Official Plan as it relates to the design of the subject site. Reference specific policy numbers from the Official Plan to show consistency. Justify areas of non-compliance and explain why there is non-compliance.
☐	☒	State the applicable plans which apply to the subject proposal: community design plan, secondary plan, concept plan and design guideline. Reference the relevant design related polices within the applicable plans/guidelines and provide a comprehensive analysis as to how the proposed development incorporates the objectives or why it does not incorporate the objectives.

Context Plan:

Not Required	Required	
☐	☒	Provide a contextual analysis that discusses/illustrates abutting properties, key destinations and linkages within a 100 meter radius (a larger radius may be requested for larger/more complex projects), such as transit stations, transportation networks for cars, cyclists, and pedestrians, focal points/nodes, gateways; parks/open spaces, topography, views towards the site, the urban pattern (streets, blocks), future and current proposals (if applicable), public art and heritage resources.
☐	☒	Photographs to illustrate existing site conditions and surrounding contexts. Include a map pinpointing (with numbers) where each photo is taken and correspond these numbers with the site photos. Arrows illustrating the direction the photo is taken is also useful.

SECTION 2

Design Proposal:
The purpose of the Design Proposal is to show the building elevations, exterior details, transitions in form, treatment of the public realm and compatibility with adjacent buildings, using 3-D models, illustrations, diagrams, plans, and cross sections. Referencing Official Plan, Section 5.2.1, as determined at time of pre-application consultation meeting, submissions will need to address the following in the form of labelled graphics and written explanation:

Massing and Scale

Not Required	Required	
		Images which show:
		Building massing – from:
X	☐	• at least two sides set within it current context (showing the entire height and width of the building) **OR**
☐	☐	• all four sides set within it current context (showing the entire height and width of the building).
		Views – of the entire block, from:
☐	X	• at least two perspectives to show how the proposed building is set within its current context **OR**
☐	☐	• all four perspectives to show how the proposed building is set within its current context.
☐	X	Building transition – to adjacent uses, with labelled explanation of the transition measures used.
☐	X	Grading – if grades are an issue.
X	☐	Alternative building massing – additional imagery and site layouts considered and provide justification for the ultimate proposal sought.

Public Realm

Not Required	Required	
		Labelled graphics and a written explanation which show:
☐	X	Streetscape – cross sections which illustrate the street design and right of way (referencing the City's design manuals).
☐	X	Relationship to the public realm – illustrating how the first few storeys of the proposed development responds to and relates to the existing context (e.g. through a podium plan and first floor plan). This is to include detailed explanation on: • Architectural responses • Landscaping details • Public art features (in accordance with Official Plan, Section 4.11) • For developments in Design Priority Areas, detail the building and site features, (in accordance with Official Plan, Section 4.11) which will enhance the public realm. Provide explanation for features which are not provided.

Note: Please include two section drawings: a NS section through the middle of the building; a EW section through the location of the parking ramp.

Building Design

Not Required	Required	
☐	X	Labelled graphics (e.g. building elevations and floor plans) and a written explanation which document the proposed exterior architectural details and design (in accordance with Official Plan, Section 5.2.1).
X	☐	For high-rise development applications, detail the building design and massing and scale elements and how they relate to the proposed high-rise development (in accordance with Official Plan, Section 5.2.1).

Sustainability

Not Required	Required	
☐	X	Any sustainable design features to be incorporated, such as green roofs or walls, sun traps, reflective or permeable surfaces.

Heritage

Not Required	Required	
X	☐	How the building relates to the historic details, materials, site and setting of any existing historic resources on or adjacent to the subject property (if applicable).

Additional Contents:

Some proponents may be requested to provide submission material which complements the Design Brief. These additional requirements could be incorporated into the Design Brief submission for ease of review. These will be identified at the time of application consultation meeting:

- x Site Plan
- x Landscape Plan
- x Plan showing existing and proposed servicing
- Shadow Analysis
- Wind Analysis

Submission Requirements

- Six hard copies and one digital copy

MEMO

Date: June 8th, 2021

To / Destinataire	**Cameron Hodgins, Planner**
From / Expéditeur	**Eric Harrold, Project Manager, Infrastructure Approvals**
Subject / Objet	**Pre-Application Consultation** **1062 & 1066 Silver Street, Ward 16** **Low-rise Residential Apartment**

File No. PC2021-1093

The following are the engineering comments pertaining to the Pre-Consultation meeting for 1062 & 1066 Silver Street (Re-Zoning and Site Plan Application) which was held on June 8th.

List of Reports and Plans (Site Plan Control and Re-zoning):

- Site Servicing Plan
- Grading Plan. A separate Existing Conditions and Removals Plan may be required depending on the legibility of the Grading Plan.
- Erosion and Sediment Control Plan
- Storm Drainage / Ponding Plan
- Stormwater Management and Site Servicing Report
- Geotechnical Investigation Report
- Roof Drain Control Letter (if rooftop storage is proposed)
- ECA (if applicable)

The aforementioned reports, studies and plans are required to support the proposing Re-zoning and Site Plan Control applications. If the applicant elects to apply for the re-zoning in advance of the Site Plan Control process, additional / alternative submissions may be required.

Please note the following information regarding the engineering design submissions for the above noted site:

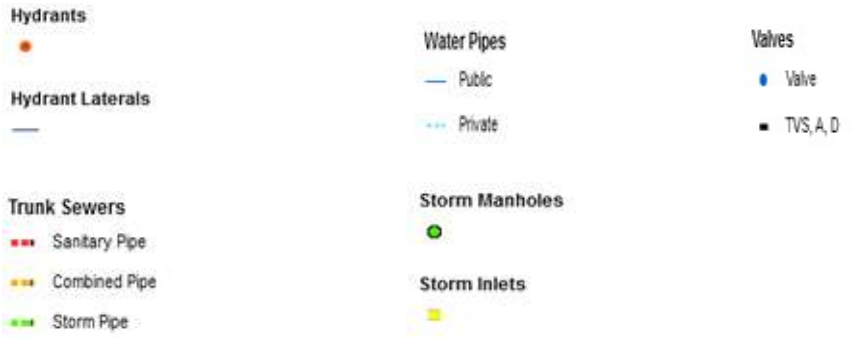
- The Servicing Study Guidelines for Development Applications are available at the following address: https://ottawa.ca/en/city-hall/planning-and-development/how-develop-property/development-application-review-process-2/guide-preparing-studies-and-plans
- Servicing and site works shall be in accordance with the following documents:
  - Ottawa Sewer Design Guidelines (October 2012) and all the Technical Bulletins including, Technical Bulletin PIEDTB-2016-01 and ISTB-2018-01
  - Ottawa Design Guidelines – Water Distribution (2010) and Technical Bulletins ISD-2010-2, ISDTB-2014-02 and ISTB-2018-02

- Geotechnical Investigation and Reporting Guidelines for Development Applications in the City of Ottawa (2007)
- City of Ottawa Slope Stability Guidelines for Development Applications (revised 2012)
- City of Ottawa Environmental Noise Control Guidelines (January, 2016)
- City of Ottawa Park and Pathway Development Manual (2012)
- City of Ottawa Accessibility Design Standards (2012)
- Ottawa Standard Tender Documents (latest version)
- Ontario Provincial Standards for Roads & Public Works (2013)

- Record drawings and utility plans are also available for purchase from the City (Contact the City's Information Centre by email at InformationCentre@ottawa.ca or by phone at (613) 580-2424 x 44455
- The Stormwater Management Criteria, for the subject site, is to be based on the following:
  - The 2-yr storm or 5-yr storm event using the IDF information derived from the Meteorological Services of Canada rainfall data, taken from the MacDonald Cartier Airport, collected 1966 to 1997.
  - For separated sewer system built pre-1970 the design of the storm sewers are based on a 2 year storm.
  - The pre-development runoff coefficient or a maximum equivalent 'C' of 0.5, whichever is less (§ 8.3.7.3).
  - A calculated time of concentration (Cannot be less than 10 minutes).
  - Flows to the storm sewer in excess of the 2-year storm release rate, up to and including the 100-year storm event, must be detained on site.
  - There may be area specific SWM Criteria within SWM &/or Sub-watershed studies that may apply, please check.
  - Quality control requirements to be provided by Rideau Valley Conservation Authority (RVCA).
  - **Please note that the storm system in this area is partially separated and prone to surcharge.** It can be assumed that the 100-year storm surcharges to street level. 30 cm of freeboard is required above the spill-point of the site and the top of the ramp for the parking garage entrance. Sump pump connection(s) are recommended rather than direct connection to the storm sewer, due to the surcharge risk. Floor drains in

the parking garage must be connected to the sanitary sewer, in accordance with the City's Sewer Design Guideline.

- Deep Services:



- *A plan view of the approximate services may be seen above. Services should ideally be grouped in a common trench to minimize the number of road cuts. The sizing of available future services is:*
    - Connections (Silver Street):
        - Existing 375 mm dia. STM (Conc.)

- Existing 152 mm dia. Watermain (UCI)
- Existing 225 mm dia. SAN (Conc.)

- Connections (Summerville Avenue)
  - Existing 300 mm dia. STM (Conc.)
  - Existing 152 mm dia. Watermain (UCI)
  - Existing 225 mm dia. SAN (Conc.)

- *Provide existing servicing information and the recommended location for the proposed connections. Services should ideally be grouped in a common trench to minimize the number of road cuts.*
- *Provide information on the monitoring manhole requirements – should be located in an accessible location on private property near the property line (ie. Not in a parking area).*
- *Provide information on the type of connection permitted*

  Sewer connections to be made above the springline of the sewermain as per:

  - Std Dwg S11.1 for flexible main sewers – *connections made using approved tee or wye fittings.*
  - Std Dwg S11 (For rigid main sewers) – *lateral must be less that 50% the diameter of the sewermain,*
  - Std Dwg S11.2 (for rigid main sewers using bell end insert method) – *for larger diameter laterals where manufactured inserts are not available; lateral must be less that 50% the diameter of the sewermain,*
  - Connections to manholes permitted when the connection is to rigid main sewers where the lateral exceeds 50% the diameter of the sewermain. – Connect obvert to obvert with the outlet pipe unless pipes are a similar size.
  - *No submerged outlet connections.*
- ***The increased sanitary load from the development should be analyzed as well as the capacity of the downstream receiver (750 mm dia. Conc. Sewer on Hollington Street).***
- ***The designer should be aware there may be limited capacity in the***

downstream sanitary sewer system. The sanitary demand needs to be coordinated with the City Planning Dept. to determine if the existing sanitary sewer system has sufficient capacity to support a rezoning. Provide sanitary demands to the City project manager for coordination.

- Civil consultant must request boundary conditions from the City's assigned Project Manager prior to first submission. Water Boundary condition requests must include the location of the service and the expected loads required by the proposed development. Please provide the following information:
    - Location of service(s)
    - Type of development and the amount of fire flow required (as per FUS, 1999).
    - Average daily demand: ___ l/s.
    - Maximum daily demand: ___l/s.
    - Maximum hourly daily demand: ___ l/s.
    - Hydrant location and spacing to meet City's Water Design guidelines.
    - Water supply redundancy will be required for more than 50 m3/day water demand. Provide watermain looped connection or with isolation valve to meet this requirement. Based on the proposed scope of the project, it is unlikely that this criteria will be exceeded.

  Given the available watermains are 152mm unlined cast iron, water boundary conditions should be coordinated early on to determine any constraints. The water boundary condition request was submitted to the City on June 9th.

- Phase 1 Environmental Site Assessment (ESA) and Phase 2 ESAs must conform to clause 4.8.4 of the Official Plan that requires that development applications conform to Ontario Regulation 153/04. The ESA may provide recommendations where site contamination may be present. The recommendations from the ESA need to be coordinated with the servicing report to ensure compliance with the Sewer Use By-Law.

- MECP ECA Requirements – All development applications should be considered for an Environmental Compliance Approval (ECA) by the Ministry of the Environment, Conservation, and Parks (MECP);
    - The consultants determine if an approval for sewage works under Section 53 of OWRA is required and determines what type of application. The City's project manager may help confirm and coordinate with the MECP as required.
    - The project will be either transfer of review (standard), transfer of review

(additional), direct submission, or exempt as per O. Reg. 525/98.

- Pre-consultation is not required if applying for standard or additional works (Schedule A of the Agreement) under Transfer Review.

- Pre-consultation with local District office of MECP is recommended for direct submission.

- Consultant completes an MECP request form for a pre-consultation. Send request to moeccottawasewage@ontario.ca

- ECA applications are required to be submitted online through the MECP portal. A business account required to submit ECA application. For more information visit https://www.ontario.ca/page/environmental-compliance-approval

- It is unclear if the proposed development will remain as one property. An ECA will be required where the stormwater management services more than one property parcel.

NOTE: Site Plan Approval, or Draft Approval, is required before an application is sent to the MECP.

- Please contact RVCA for specific water quality requirements.

- General Engineering Submission requirements:

  - As per section 53 of the Professional Engineers Act, O. Reg 941/40, R.S.O. 1990, all documents prepared by engineers must be signed and dated on the seal.

  - All required plans are to be submitted on standard A1 size sheets (594mm x 841mm) sheets, utilizing a reasonable and appropriate metric scale as per City of Ottawa Servicing and Grading Plan Requirements: title blocks are to be placed on the right of the sheets and not along the bottom. Engineering plans may be combined, but the Site Plans must be provided separately. Plans shall include the survey monument used to confirm datum. Information shall be provided to enable a non-surveyor to locate the survey monument presented by the consultant.

  - All required plans & reports are to be provided in *.pdf format (at application submission and for any, and all, re-submissions)

Should you have any questions or require additional information, please contact me directly at (613) 580-2424, ext. 21447 or by email at eric.harrold@ottawa.ca.

PROPOSED THREE STOREY

RESIDENTIAL APARTMENT BUILDING SITE

PART OF LOT 31

R-PLAN 294

1058, 1062 AND 1066 SILVER STREET

CITY OF OTTAWA

APPENDIX B

SITE PRE-DEVELOPMENT CONDITION

GOOGLE IMAGE (2019)

AND

AERIAL PHOTOGRAPHY 2019 (GEOOTTAWA)


1281
1276
1280
1265
1267
1061
1063
1269
1271
1065
1058
1062
PROPOSED
DEVELOPMENT
SITE
1066
1290
1291
1295
1305
1074
1294
rue Silver St.
av. Summerville Ave.
rue Silver St.
av.

2019


1281
1280
1290
1058
1062
PROPOSED DEVELOPMENT SITE
1066
1291
1295
1305
av. Summerville Ave.
1294
1074
rue Silver St.
1276
1265
1267
1061
1063
1269
1271
1065
rue Silver St.

2019

2019

2019

2019

2019

PROPOSED THREE STOREY

RESIDENTIAL APARTMENT BUILDING SITE

PART OF LOT 31

R-PLAN 294

1058, 1062 AND 1066 SILVER STREET

CITY OF OTTAWA

APPENDIX C

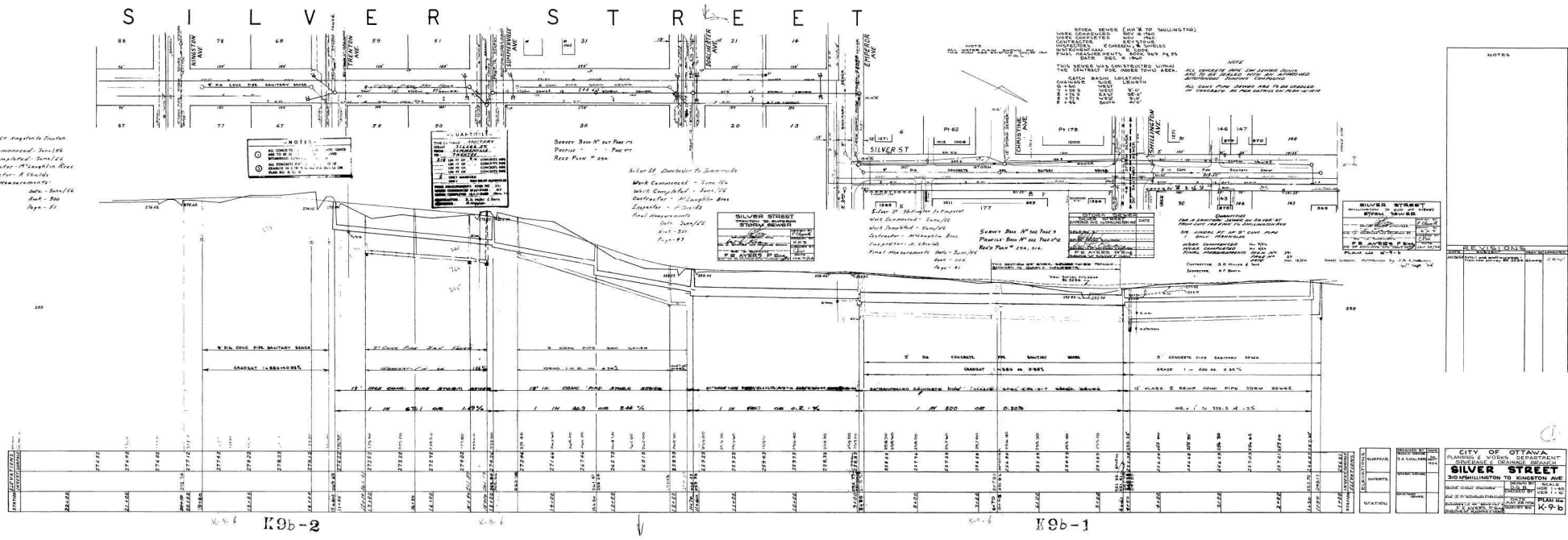
SILVER STREET AND SUMMERVILLE AVENUE

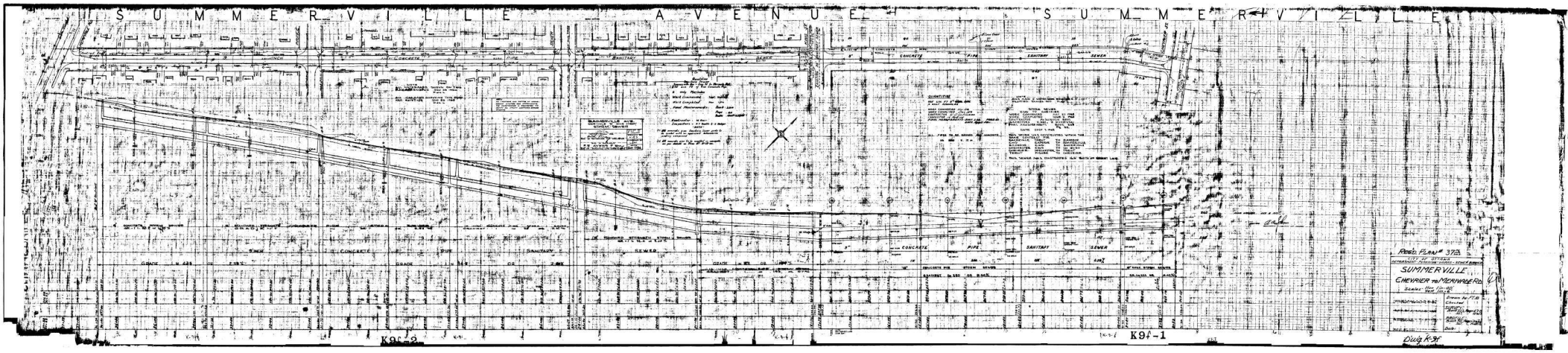
CITY OF OTTAWA

PLAN AND PROFILE

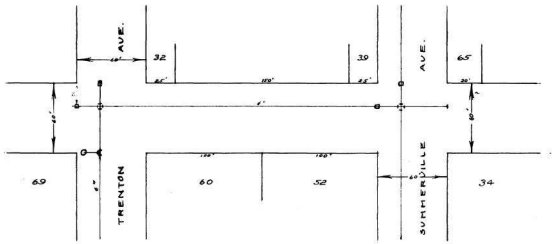
AND

UCC DRAWINGS

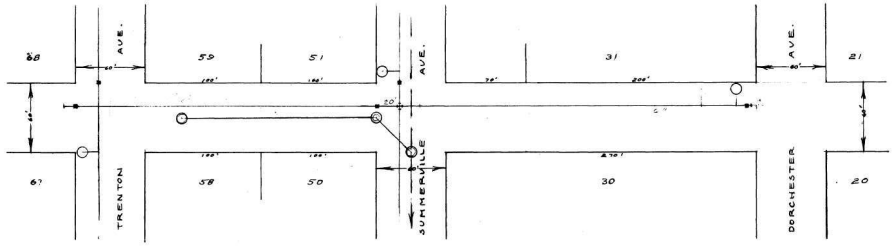

S I L V E R S T R E E T
K9b-2
K9b-1
SILVER ST
SILVER STREET
STORM SEWER
CITY OF OTTAWA
PLANNING & WORKS DEPARTMENT
SEWERAGE & DRAINAGE BRANCH
SILVER STREET
310 N'SHILLINGTON TO KINGSTON AVE.
K-9-b

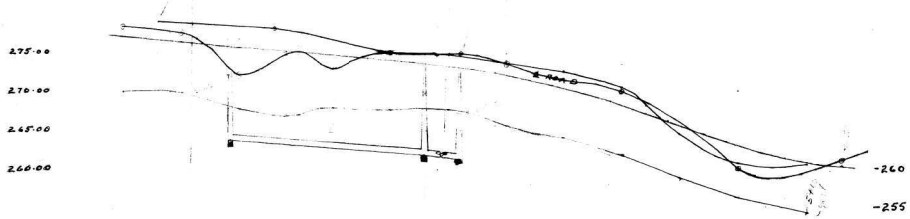

SUMMERVILLE AVENUE
SUMMERVILLE
K9f-2
K9f-1
Road Plan # 378
CITY OF OTTAWA
SUMMERVILLE
CHEVRIER to MERIVALE Rd.

PRINCE AVE.



SILVER STREET





5970

REVISIONS / RÉVISIONS	DATE	BY
REDRAWN FROM VOIDED UTILITY PLAN H-06-06	JULY 2007	XMG

LEGEND

Water Valve, Valve Chamber, Fire Hydrant	
Sewer Manhole, Catch Basin Manhole	
Catch Basin / Drainage, Wing Wall, Head Wall	
Pole, Pole w/ light, Decorative, Lawn Light	
Power Supply, Panel, Pedestal, Transformer, Tower, Regulator	
Amp, Hand Hole, Vault, Gas Valve	
OC Transpo Bus Shelter-No Power, Energized, Isolated	BUS / BUS / BUS
Streetscape; Planter Box, Grate Square, Eng. Soil	TGS
Traffic Connect Box / Disconnect Box, SL Disconnect	
RLI Hand Hole, RLL Camera	
Scadic Hand Hole, Monitoring Panel	
Reducer	
Pipe, Duct, Conduit, Lateral	
Culvert	
Abandoned	
Capped	
Bolted Cable	
Property Line	
Install Year	(2015)

TELECOM GLOSSARY

A – Allstream	P – Primus
AT – Aliis	P2P – Canadian P2P Fibre
B – Bell	R – Rogers
BH – Birch Hill	S – Sprint
F – Fibre Noir	SL – Street Lighting
G – Glosilly	T – Traffic
GT – Group Telecom	TO – Telecom Ottawa
H – Hydro Ottawa	TU – Telus
H1 – Hydro One	V – Videotron
L / L3 – Level 3	Z – Zayo

GLOSSARY - OTHER

DD – Dept. of Defence	PED – Pedestal (owner unknown)
MH – Manhole (owner unknown)	PW – Public Works
O/OC – OCTranspo	UP – Utility Pole (owner unknown)
SCD – Scada	

CAUTION/ATTENTION

Although utility locations are established using the best available information, they cannot be guaranteed.
Property lines were compiled from plans and documents recorded in the Land Registry System and are for indexing purposes only.

Bien que l'emplacement des services publics soient établis en utilisant la meilleure information disponible, ils ne peuvent pas être garantis.
Des lignes de propriété ont été compilées en utilisant des plans et des documents enregistrés dans le système de cadastre et sont pour l'indexation seulement.

Ottawa
Right of Way, Heritage, and Urban Design Services /
Gestionnaire, Services des emprises, du patrimoine, et du design urbain
Planning, Infrastructure and Economic Development Department /
Direction générale de la planification, de l'infrastructure et du développement économique
100 Constellation Cres., 6th Floor East / 6ème Etage Est, Ottawa, ON K2G 6J8

OTTAWA UTILITY COORDINATING COMMITTEE
CENTRAL REGISTRY
COMITÉ DE COORDINATION DES SERVICES PUBLICS D'OTTAWA
ENREGISTREMENT CENTRAL

UCC Ottawa CCSP

PRODUCED BY: GIS & DATA MANAGEMENT BRANCH
INFORMATION CENTRE UNIT

SCALE: 1:250

SHEET NUMBER
H-06-06

REVISIONS / RÉVISIONS	DATE	BY
REDRAWN FROM VOIDED UTILITY PLAN H-06-15	JULY 2007	XMG

LEGEND

Water Valve, Valve Chamber, Fire Hydrant	
Sewer Manhole, Catch Basin Manhole	
Catch Basin / Drainage, Wing Wall, Head Wall	
Pole, Pole w/ light, Decorative, Lawn Light	
Power Supply, Panel, Pedestal, Transformer, Tower, Regulator	
Amp, Hand Hole, Vault, Gas Valve	
OC Transpo Bus Shelter-No Power, Energized, Isolated	BUS BUS BUS
Streetscape; Planter Box, Grate Square, Eng, Soil	TGS
Traffic Connect Box / Disconnect Box, SL Disconnect	
RL Hand Hole, R.L. Camera	
Scadic Hand Hole, Monitoring Panel	
Reducer	
Pipe, Duct, Conduit, Lateral	
Culvert	
Abandoned	
Capped	
Bulled Cable	
Property Line	
Install Year	(2015)

TELECOM GLOSSARY

A.....Allstream	P.....Primus
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H.....Hydro Ottawa	TU.....Telus
H1.....Hydro One	V.....Videotron
L / L3.....Level 3	Z.....Zayo

GLOSSARY - OTHER

DD.....Dept. of Defence	PED.....Pedestal (owner unknown)
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Direction generale de la planification, de l'infrastructure et du developpement economique
100 Constellation Cres., 6th Floor East / 6ème Etage Est, Ottawa, ON K2G 6J8

OTTAWA UTILITY COORDINATING COMMITTEE
CENTRAL REGISTRY
COMITÉ DE COORDINATION DES SERVICES PUBLICS D'OTTAWA
ENREGISTREMENT CENTRAL

UCC Ottawa CCSP

PRODUCED BY: GIS & DATA MANAGEMENT BRANCH
INFORMATION CENTRE UNIT

SCALE: 1:250

SHEET NUMBER
H-06-15

PROPOSED THREE STOREY

RESIDENTIAL APARTMENT BUILDING SITE

PART OF LOT 31

R-PLAN 294

1058, 1062 AND 1066 SILVER STREET

CITY OF OTTAWA

APPENDIX D

CITY OF OTTAWA

- **UPDATED SITE PLAN**
- **FIRE FLOW CALCULATIONS**
- **FUS EXPOSURE DISTANCES (FIGURE 1)**
- **OFM EXPOSURE DISTANCES (FIGURE 2)**
- **WATER BOUNDARY CONDITIONS**
- **SUPPORTING HYDRAULIC CALCULATIONS**
- **MULTI-HYDRANT ANALYSIS**
- **HYDRANT SPACING (FIGURE 3)**

ATTACHMENT 1: UPDATED SITE PLAN

SILVER STREET DEVELOPMENT

1062, 1066 & 1058 SILVER STREET, OTTAW, ON
ISSUED FOR SITE PLAN & ZONING: 2021.12.20

ARCHITECTURAL DRAWINGS

S.J. LAWRENCE ARCHITECT INC.
18 DEAKIN ST. SUITE 205
OTTAWA, ONTARIO K2E 8B7
(P) 613 739-7770
(F) 613 739-7703

STRUCTURAL DRAWINGS

GOODEVE STRUCTURAL INC.
18-27 AURIGA DR.
OTTAWA, ONTARIO, K2E 727
(P) 613 226-4558

CIVIL DRAWINGS

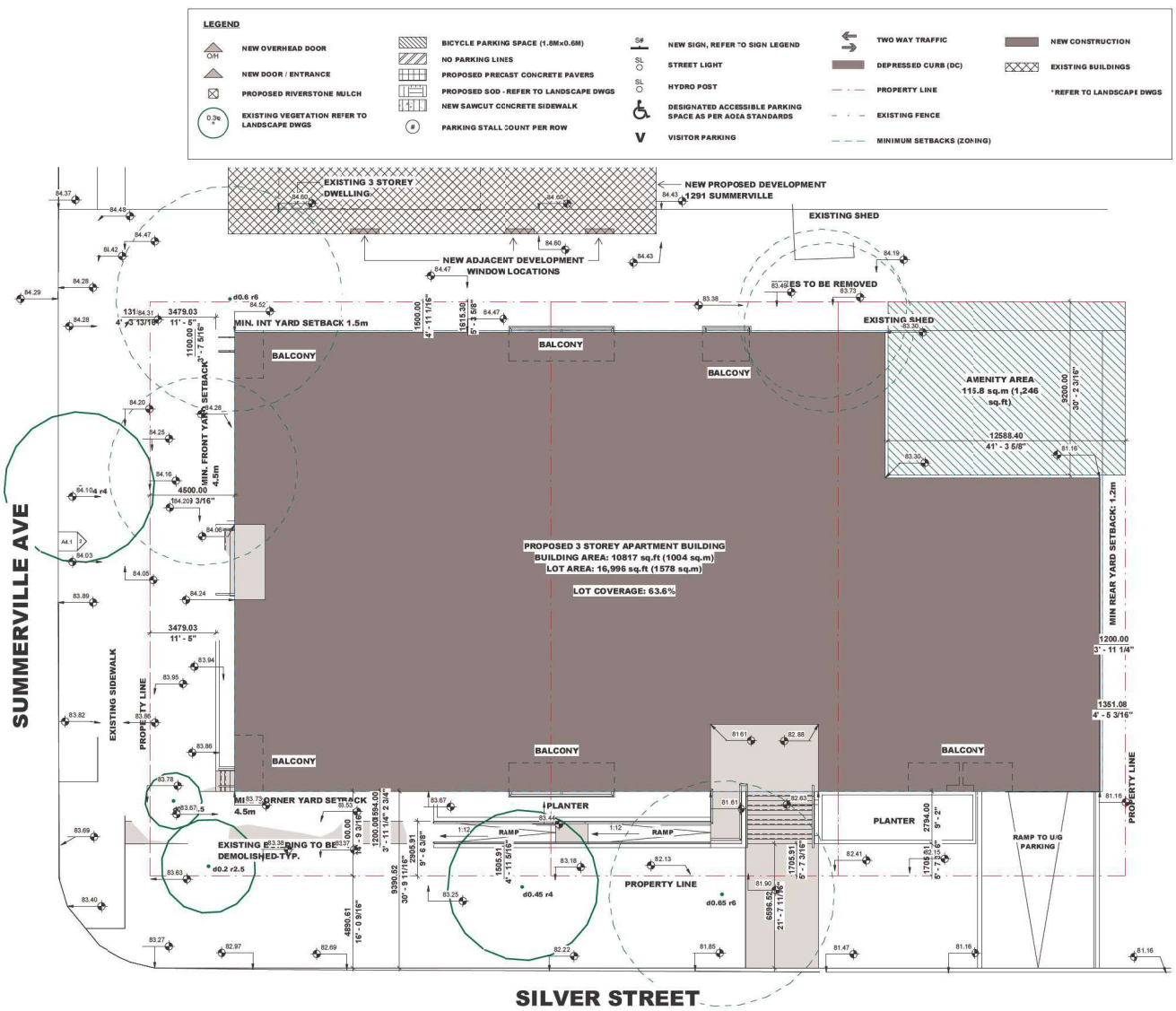
T.L. MAK ENGINEERING
CONSULTANTS LTD.
1455 YOUVILLE DR,
OTTAWA, ONTARIO, K1C 627
(P) 613 837-5516

MECHANICAL / ELECTRICAL DRAWINGS

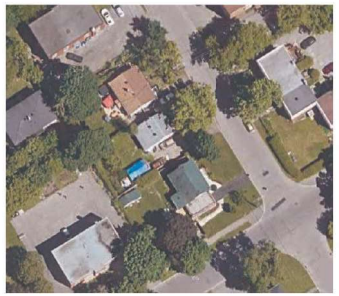
QUADRANT ENGINEERING LIMITED,
CONSULTING ENGINEERS
107 PRETORIA AVE.
OTTAWA, ONTARIO, K1S 1WB
(P) 613 567-1487
(F) 613 567-1493

PLANNER / LANDSCAPER

NOVATECH ENGINEERING
CONSULTANTS LTD.
240 MICHAELCOWPLAN DRIVE,
SUIT 200
OTTAWA, ONTARIO, K2M 1P6
(P) 613 254-9643
(F) 613 254-5867



1 A1.0 CONCEPT SITE PLAN
SCALE 1 : 100



KEY PLAN

BUILDING AREAS

	CONSTRUCTION AREA (SQ.M)	CONSTRUCTION AREA (SQ.FT)
LOWER LEVEL		
GROUND FLOOR LEVEL	1004 sq.m	10,817 sq.ft
SECOND FLOOR LEVEL	1004 sq.m	10,817 sq.ft
THIRD FLOOR LEVEL	949 sq.m	10,215 sq.ft
TOTAL	2,957 sq.m	31,849 sq.ft

BUILDING FLOOR STATISTICS - RENTAL APARTMENT

FLOOR	SUITES	2 BEDROOM	1 BEDROOM + DEN	1 BEDROOM
LOWER LEVEL	-	-	-	-
GROUND FLOOR	10	4	5	1
SECOND FLOOR	11	4	5	2
THIRD FLOOR	11	3	6	2
TOTAL	32	11	16	5
SUITE MIX		35%	50%	15%

CITY OF OTTAWA ZONING BY-LAW

ZONING PROVISIONS	REQUIRED	PROPOSED
R4UC		
MIN. LOT AREA	450 sq.m	confirm
MAX. LOT AREA	1070 sq.m	confirm
MIN. LOT WIDTH	15m	46m
MIN. LOT WIDTH	15m	46m
MIN. FRONT YARD SETBACK	4.5m	4.5m
MIN. CORNER SIDE YARD SETBACK	4.5m	4.5m
MIN. INTERIOR SIDE YARD SETBACK	1.5m	1.6m
MIN. REAR YARD SETBACK	1.2m	1.35m
MIN. INTERIOR YARD SETBACK	CONFIRM	CONFIRM
MAX BUILDING HEIGHT	11M	11M
AMENITY AREA	40% OF FRONT AND CORNER YARDS. 30% OF LOT AREA, 50% OF REAR YARD WITH A 25 sq.m STRIP	11M
LOT COVERAGE	N/A	63.6%

AUTOMOBILE PARKING SUMMARY

REQUIRED PARKING	REQUIRED	PROPOSED
RESIDENT PARKING	0.5/UNIT (AFTER 12) X 20 = 10 SPACES	19
VISITOR PARKING	0.1/UNIT (AFTER 12) X 20 = 2 SPACES	2
TOTAL PROVIDED	12	21
PROVIDED PARKING		
		UNDERGROUND
REGULAR SPACES	MIN. 2.6mx5.2m	20
ACCESSIBLE SPACES	TYPE B 2.4mx5.2m	1
TOTAL	= 21 PROVIDED PARKING SPACES	

BICYCLE PARKING SUMMARY

REQUIRED PARKING	REQUIRED	PROPOSED
BIKE PARKING	0.5/UNIT X 12 = 16 SPACES	32

POWER-TEK GROUP

NOTES:
1) ALL WORK TO BE IN COMPLIANCE WITH LOCAL BUILDING REGULATIONS AND BY-LAWS.
2) ADDITIONAL DRAWINGS MAY BE ISSUED FOR CLARIFICATION TO ASSIST PROPER EXECUTION OF WORK. SUCH DRAWINGS WILL HAVE THE SAME MEANING AND BIND AS IF THEY WERE INCLUDED WITH PLANS IN CONTRACT DOCUMENTS.
3) DO NOT SCALE DRAWINGS
4) ALL SUBCONTRACTORS TO TAKE THEIR OWN ON-SITE MEASUREMENTS AND BE RESPONSIBLE FOR THEIR ACCURACY
5) NOTIFY SHAWN J. LAWRENCE ARCHITECT FOR ANY ERRORS AND/OR OMISSIONS PRIOR TO START OF WORK.

NORTH ARROW

No.	DATE	REVISION
01	2021.06.08	ISSUED FOR REVIEW
01	2021.05.27	ISSUED FOR REVIEW

S. J. LAWRENCE ARCHITECT INCORPORATED
19 DEAKIN STREET SUITE 300 OTTAWA, ONT.K1N1C3 K2E1B7
T: (613) 730 7770 F: (613) 730 7772
sj@sjlarchitect.com

LAWRENCE ARCHITECT INCORPORATED

PROJECT:
SILVER STREET DEVELOPMENT
1060 & 1066 SILVER STREET, OTTAWA ON

SHEET TITLE:
CONCEPT SITE PLAN

DRAWN: RVA | CHECKED BY: S.L. SJL

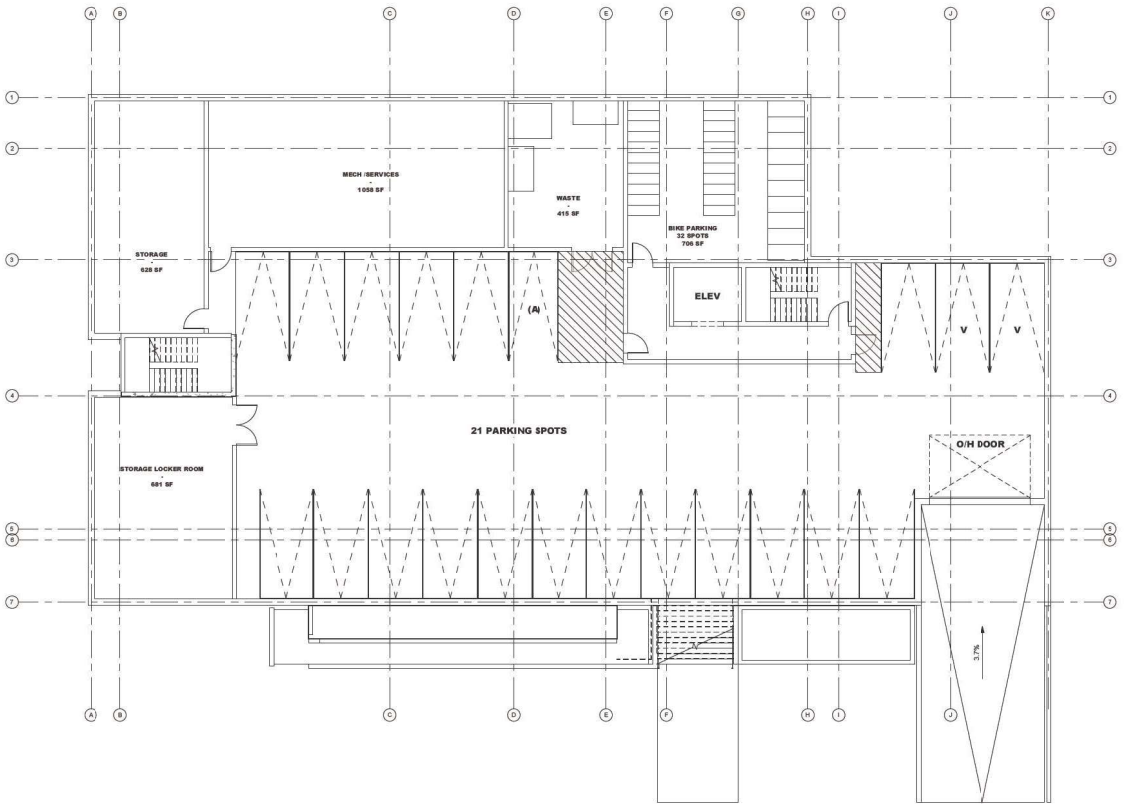
PLOT DATE: 2022-01-09 2:12:46 PM

JOB NUMBER: SL-1046-21 | SCALE: As indicated

A1.0

PLAN #

APPLICATION #



A4.1 2

1 A2.0 BASEMENT CONCEPT PLAN
SCALE 1 : 100

POWER-TEK GROUP

NOTES:

1) ALL WORK TO BE IN COMPLIANCE WITH LOCAL BUILDING REGULATIONS AND BY-LAWS.

2) ADDITIONAL DRAWINGS MAY BE ISSUED FOR CLARIFICATION TO ASSIST PROPER EXECUTION OF WORK. SUCH DRAWINGS WILL HAVE THE SAME MEANING AND/BUT AS IF THEY WERE INCLUDED WITH PLANS IN CONTRACT DOCUMENTS.

3) DO NOT SCALE DRAWINGS

4) ALL SUBCONTRACTORS TO TAKE THEIR OWN ON-SITE MEASUREMENTS AND BE RESPONSIBLE FOR THEIR ACCURACY

5) NOTIFY SHAWN J. LAWRENCE ARCHITECT FOR ANY ERRORS AND/OR OMISSIONS PRIOR TO START OF WORK.

NORTH ARROW

No.	DATE	REVISION
01	2021.06.09	ISSUED FOR REVIEW
01	2021.05.27	ISSUED FOR REVIEW

S. J. LAWRENCE ARCHITECT INCORPORATED
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LAWRENCE ARCHITECT INCORPORATED

PROJECT:
SILVER STREET DEVELOPMENT
1060 & 1066 SILVER STREET, OTTAWA ON

SHEET TITLE:
BASEMENT CONCEPT PLAN

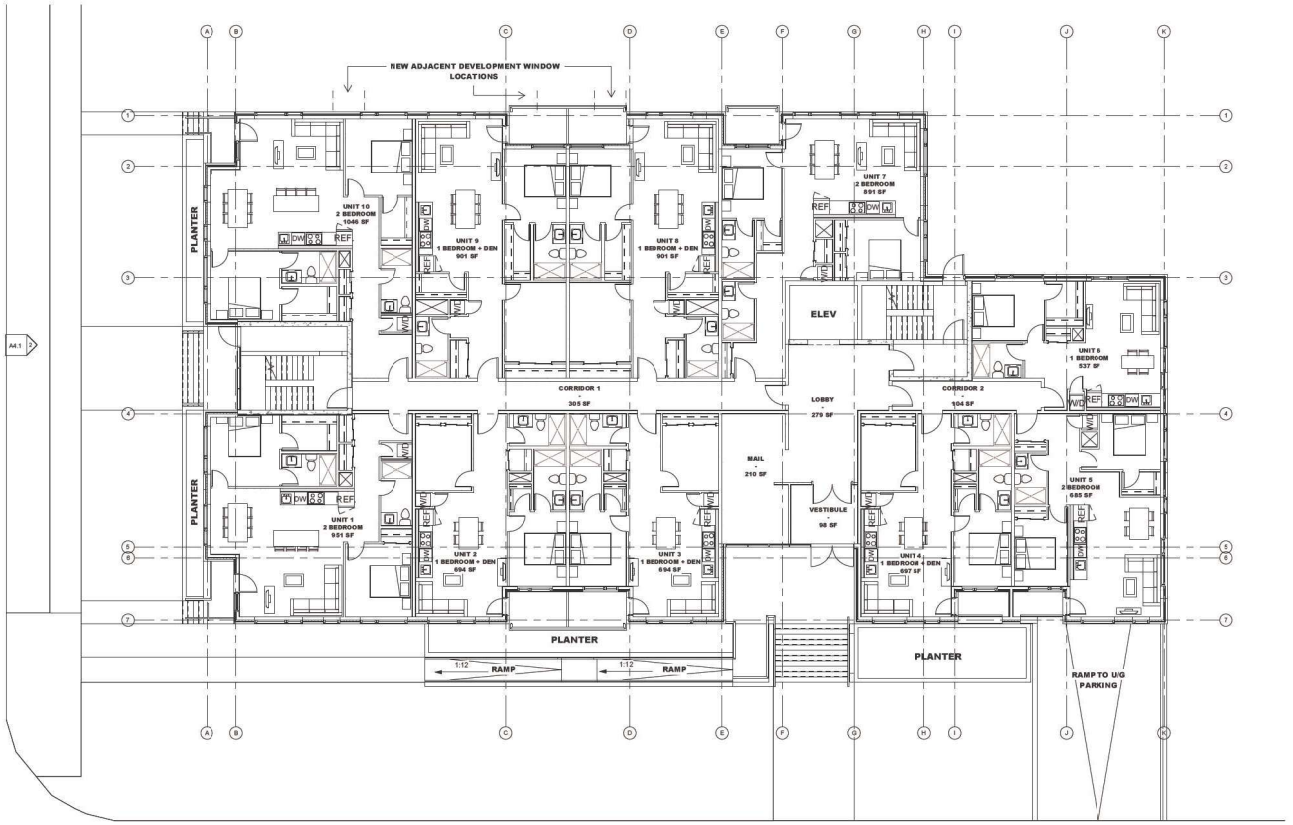
DRAWN:	CHECKED BY:
P.P.	S.L. S.J.L.

PLOT DATE:
2022-01-09 2:12:47 PM

JOB NUMBER:	SCALE:
SL-1046-21	1 : 100

A2.0
PLAN #

APPLICATION #



1 / A2.1 GROUND FLOOR CONCEPT PLAN

SCALE 1 : 100

POWER-TEK GROUP

NOTES:

1) ALL WORK TO BE IN COMPLIANCE WITH LOCAL BUILDING REGULATIONS AND BY-LAWS.

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NORTH ARROW

No.	DATE	REVISION
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01	2021.05.27	ISSUED FOR REVIEW

S. J. LAWRENCE ARCHITECT INCORPORATED
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SJL LAWRENCE ARCHITECT INCORPORATED

PROJECT:
SILVER STREET DEVELOPMENT
1060 & 1066 SILVER STREET, OTTAWA ON

SHEET TITLE:
GROUND FLOOR CONCEPT PLAN

DRAWN: RVL | CHECKED BY: S.L. SJL

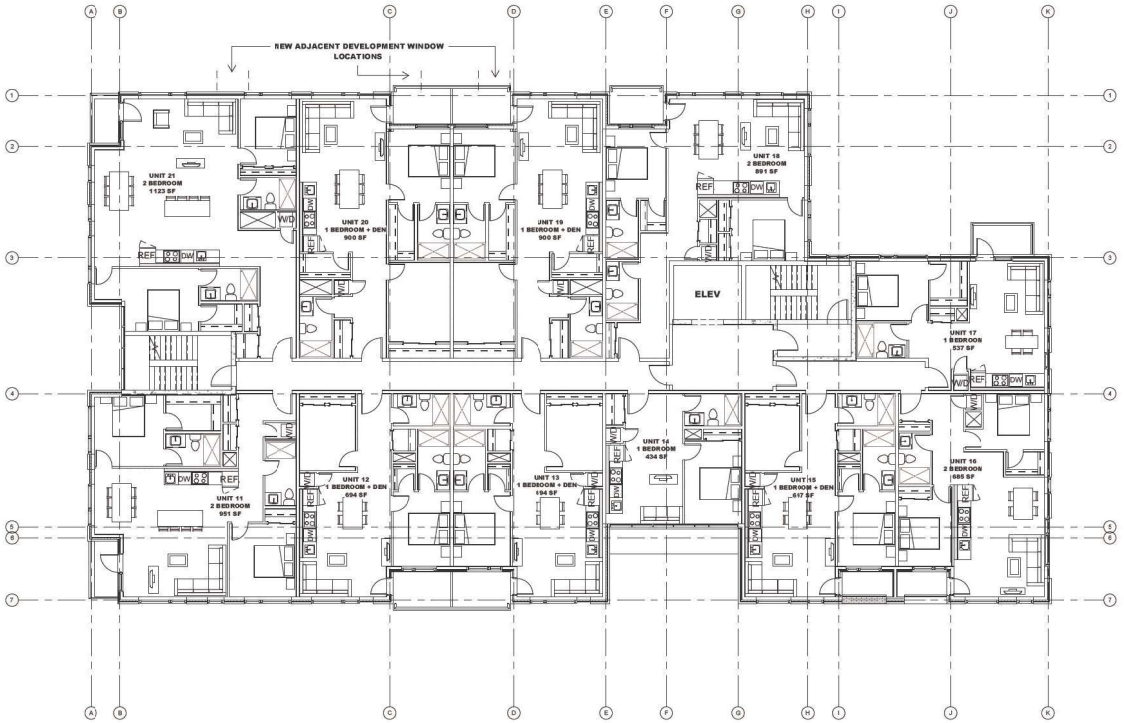
PLOT DATE: 2022-01-09 2:12:49 PM

JOB NUMBER: SL-1046-21 | SCALE: 1 : 100

A2.1

PLAN #

APPLICATION #



1 / A2.2 SECOND FLOOR CONCEPT PLAN

SCALE 1 : 100

POWER-TEK GROUP

NOTES:

1) ALL WORK TO BE IN COMPLIANCE WITH LOCAL BUILDING REGULATIONS AND BY-LAWS.

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NORTH ARROW

No.	DATE	REVISION
01	2021.06.08	ISSUED FOR REVIEW
01	2021.05.27	ISSUED FOR REVIEW

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LAWRENCE ARCHITECT INCORPORATED

PROJECT:
SILVER STREET DEVELOPMENT
1060 & 1066 SILVER STREET, OTTAWA ON

SHEET TITLE:
SECOND FLOOR CONCEPT PLAN

DRAWN: P.P. | CHECKED BY: S.L. S.J.L.

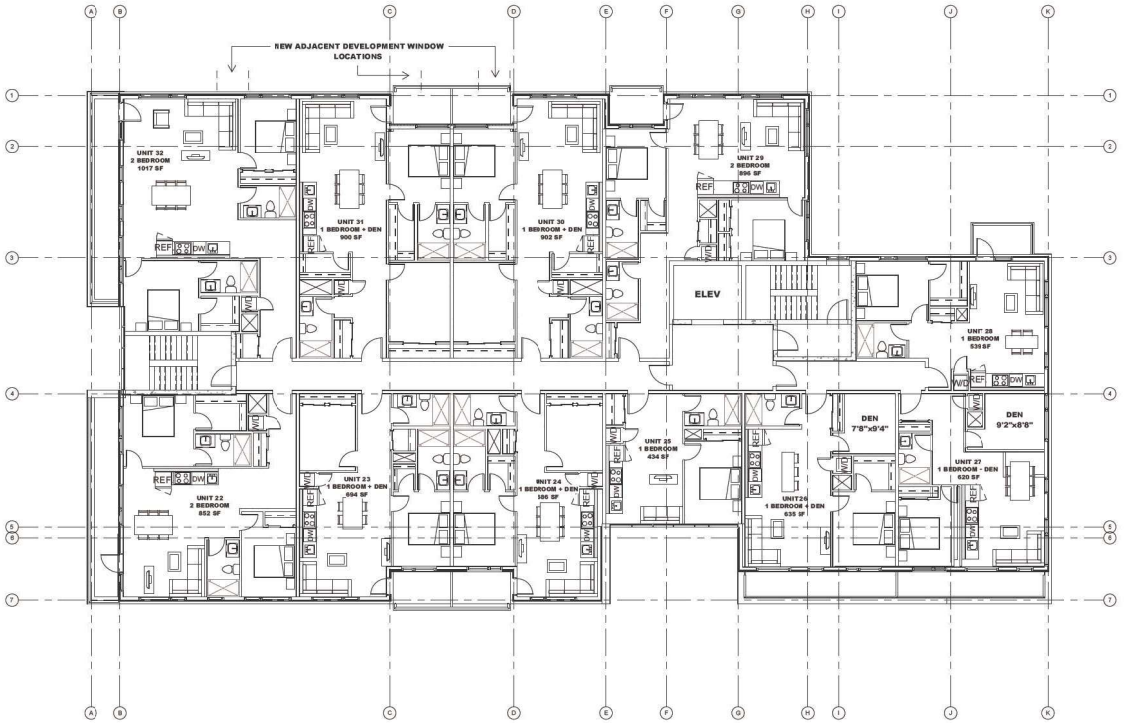
PLOT DATE: 2022-01-09 2:12:50 PM

JOB NUMBER: SL-1046-21 | SCALE: 1 : 100

A2.2

PLAN #

APPLICATION #



1 / A2.3 THIRD FLOOR CONCEPT PLAN
SCALE: 1 : 100

POWER-TEK GROUP

NOTES:

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01	2021.05.27	ISSUED FOR REVIEW

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LAWRENCE ARCHITECT INCORPORATED

PROJECT:
SILVER STREET DEVELOPMENT
1060 & 1066 SILVER STREET, OTTAWA ON

SHEET TITLE:
THIRD FLOOR CONCEPT PLAN

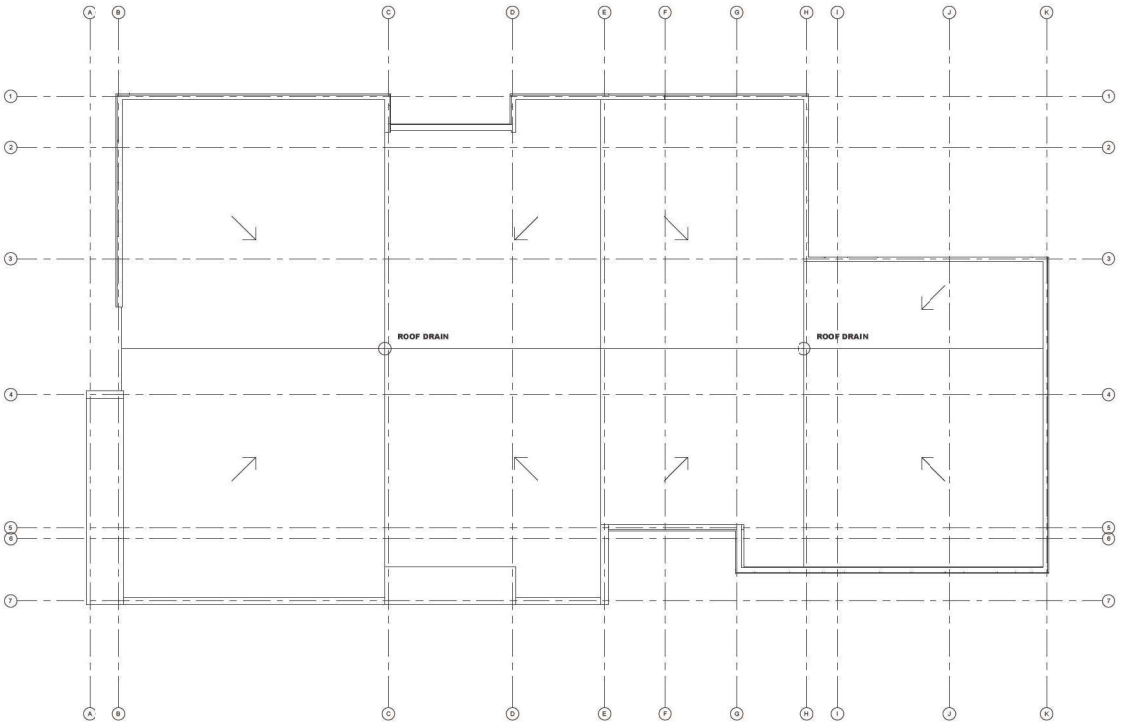
DRAWN: P.P.
CHECKED BY: S.L. S.J.L.

PLOT DATE: 2022-01-09 2:12:52 PM

JOB NUMBER: SL-1046-21
SCALE: 1 : 100

A2.3
PLAN #

APPLICATION #



A4.1

1 / A2.4 ROOF CONCEPT PLAN
SCALE 1 : 100

POWER-TEK GROUP

NOTES:

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NORTH ARROW

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01	2021.05.27	ISSUED FOR REVIEW

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SJL LAWRENCE ARCHITECT INCORPORATED

PROJECT:
SILVER STREET DEVELOPMENT
1060 & 1066 SILVER STREET, OTTAWA ON

SHEET TITLE:
ROOF CONCEPT PLAN

DRAWN:	CHECKED BY:
P.P.	S.L. S.J.L.

PLOT DATE:
2022-01-09 2:12:52 PM

JOB NUMBER:	SCALE:
SL-1046-21	1 : 100

A2.4

PLAN #

APPLICATION #

1 A4.0 EAST (FRONT) ELEVATION

SCALE 1 : 100

2 A4.0 WEST ELEVATION

SCALE 1 : 100

POWER-TEK GROUP

NOTES:

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NORTH ARROW

No.	DATE	REVISION
01	2021.06.09	ISSUED FOR REVIEW
01	2021.05.27	ISSUED FOR REVIEW

S. J. LAWRENCE ARCHITECT INCORPORATED

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sj@sjlarch.com

SJL LAWRENCE ARCHITECT INCORPORATED

PROJECT:
SILVER STREET DEVELOPMENT
1060 & 1066 SILVER STREET, OTTAWA ON

SHEET TITLE:
SCHEMATIC ELEVATIONS

DRAWN:	CHECKED BY:
PDI.	S.L. SJL

PLOT DATE:
2022-01-09 2:13:05 PM

JOB NUMBER:	SCALE:
SL-1046-21	1 : 100

A4.0

PLAN #

APPLICATION #

1 A4.1 NORTH ELEVATION

SCALE 1 : 100

2 A4.1 SOUTH ELEVATION

SCALE 1 : 100

POWER-TEK GROUP

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NORTH ARROW:

No.	DATE	REVISION
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01	2021.05.27	ISSUED FOR REVIEW

S.J.LAWRENCE ARCHITECT INCORPORATED

19 DEAKIN STREET SUITE 300 OTTAWA, ONT.K1N6J1 K2E 6S7

T: (613) 739.7770 F: (613) 739.7780 sj@sjlarch.com

LAWRENCE ARCHITECT INCORPORATED

PROJECT:
SILVER STREET DEVELOPMENT
1060 & 1066 SILVER STREET, OTTAWA ON

SHEET TITLE:
SCHEMATIC ELEVATIONS

DRAWN: RVA. CHECKED BY: S.L. SJL.

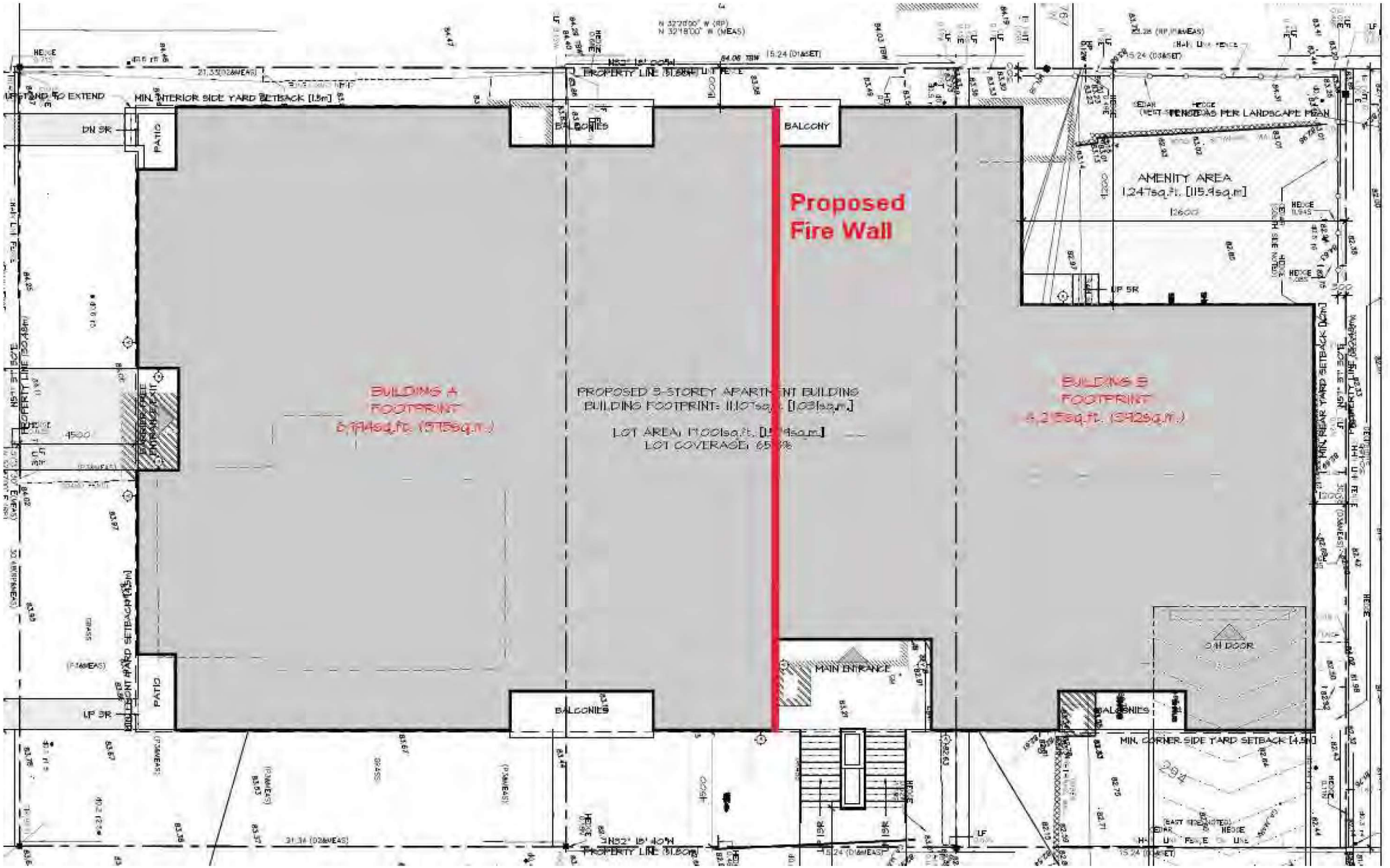
PLOT DATE: 2022-01-06 2:13:17 PM

JOB NUMBER: SL-1046-21 SCALE: 1 : 100

A4.1

PLAN #

APPLICATION #


Proposed
Fire Wall
BUILDING A
FOOTPRINT
PROPOSED 3-STOREY APARTMENT BUILDING
BUILDING FOOTPRINT:
LOT AREA:
LOT COVERAGE:
BUILDING B
FOOTPRINT
AMENITY AREA
1,247sq.ft. [115.9sq.m]
MIN. INTERIOR SIDE YARD SETBACK [1.5m]
MIN. REAR YARD SETBACK [6m]
MIN. CORNER SIDE YARD SETBACK [4.5m]
PROPERTY LINE
BALCONY
BALCONIES
PATIO
MAIN ENTRANCE
O/H DOOR
HEDGE
PROVIDED PER LANDSCAPE PLAN

ATTACHMENT 2: FIRE FLOW CALCULATIONS

Stantec

OFM Fire Flow Calculation

Calculations based on *Fire Protection Water Supply Guideline for Part 3 in the Ontario Building Code* by the Office of the Fire Marshal (OFM 1999)

Stantec Project #: 163401084
Project Name: 1066 Silver Street
Date: August 22, 2022
Data inputted by: Alexandre Mineault-G., M.A.Sc., ing., P.Eng.
Data reviewed by: Kevin Alemany, M.A.Sc., P.Eng.

Fire Flow Calculation #: 1
Building Type/Description/Name: Residential

Table A: Office of the Fire Marshal Determination of Required Fire Protection Water Supply

Step	Task	Term	Options	Multiplier Associated with Option	Choose:	Value Used	Unit
1	**General Building Details**						
1.1	**Enter Number of Storeys**	Number of Floors/Storeys in the Unit (incl. basement):			4	4	Storeys
1.2	**Choose Type of Housing (if TH, Enter Number of Units Per TH Block)**	Type of Housing	Single Family	0	Other (Comm, Ind, Apt etc.)	32	Units
			Townhouse - indicate # of units	0			
			Other (Comm, Ind, Apt etc.)	32			
1.3	**Choose Presence of Sprinklers**	Sprinklers?			Yes	Yes	N/A
1.4	**Choose Presence of Firewalls**	Firewall separations?			None	None	N/A
1.5	**Choose Presence of Stand-Pipe System**	Stand-pipe system?			None	None	N/A
2	**Determining Water Supply Coefficient K**						
2.1	**Choose Type of Construction**	**Type of Construction**					
		Type of Construction	Non-combustible construction + fire separations + fire-resistance ratings in accordance with Section 3.2.2 of OBC	Type I	Type III	N/A	N/A
			Non-combustible construction + fire separations + no fire-resistance rating	Type II			
			Combustible construction + fire separations + fire-resistance ratings in accordance with Section 3.2.2 of OBC	Type III			
			Combustible construction + fire separations + no fire-resistance rating	Type IV			
2.2	**Choose Classification**	**Building Classification**					
		Occupancy Classification (OBC)	A-2, B-1, B-2, B-3, C, D	18	C	A-2, B-1, B-2, B-3, C, D	N/A
			A-4, F-3	22			
			A-1, A-3	25			
			E, F-2	31			
			F-1	41			
2.3	**Water Supply Coefficient (K)**	Water Supply Coefficient K				18	N/A
3	**Determining Building Volume V**						
3.1	**Enter Ground Floor Area of One Unit**	**Floor Space Area**					
		Average Floor Area (A) :			986 Square Metres (m2)	986	Area in Square Meters (m^2)
3.2	**Building Height (h)**	**Building Height**					
		Bottom Elevation :			0.0 Meters (m)	12.3	Height in Meters (m)
		Top Elevation :			12.3 Meters (m)		
3.3	**Building Volume (V)**	Building Volume V = A * h				12,130	Volume in Meters Cube (m^3)
4	**Determining Spatial Coefficient S**						
4.1	**Choose Exposure Distances from Building to Property Line**	Exposure Distance from Building to Property Line in Meters (m)	**North Side**	1.2	0.50	1.00	Distance in Meters (m)
			Property Line to Street Centreline (Street Facing)	0			
			Total Exposure Distance	1.2			
			East Side	4.5	0.00		
			Property Line to Street Centreline (Street Facing)	7.5			
			Total Exposure Distance	12.0			
			South Side	4.5	0.00		
			Property Line to Street Centreline (Street Facing)	8.5			
			Total Exposure Distance	13.0			
			West Side	1.5	0.50		
			Property Line to Street Centreline (Street Facing)	0			
			Total Exposure Distance	1.5			
4.2	**Total Spatial Coefficient**	Total Spatial Coefficient $S_{tot} = 1 + \Sigma S_x$				2.00	N/A
5	**Determining Required Minimum Supply of Water Q and Fire Flow**						
5.1	**Obtain Required Fire Volume, Flow & Duration**	***Minimum Supply of Water, rounded to nearest 1,000 L; Q = K*V*S tot***				**437,000 L**	
		Required Minimum Water Supply Flow Rate (L/min)				**9,000 L/min**	
		Required Minimum Water Supply Flow Rate (L/s)				**150 L/s**	
		Required Minimum Duration of Fire Flow (min)				**50 min**	

FUS Fire Flow Calculation - Long Method

Calculations based on: "*Water Supply for Public Fire Protection*" by Fire Underwriters' Survey, 2020

Stantec Project #: 163401084
Project Name: 1066 Silver Street
Date: August 22, 2022
Data inputted by: Alexandre Mineault-G., M.A.Sc., ing., P.Eng.
Data reviewed by: Kevin Alemany, M.A.Sc., P.Eng.

Fire Flow Calculation #: 2
Building Type/Description/Name: Residential

Notes: *Basement (parking) is more than 50% below grade & Sprinklers proposed.*
Assumed Type III Construction Type - with a firewall (running "East/West" dividing the building into 2 separate areas.
"North Area" - 595 sq. meters.

Table A: Fire Underwriters Survey Determination of Required Fire Flow - Long Method

Step	Task	Term	Options	Multiplier Associated with Option	Choose:	Value Used	Unit	Total Fire Flow (L/min)
1	Choose Frame Used for Construction of Unit	**Framing Material**						
		Coefficient related to type of construction (C)	Type V - Wood Frame	1.5	Type III - Ordinary construction	1	m	
			Type IV-A - Mass Timber	0.8				
			Type IV-B - Mass Timber	0.9				
			Type IV-C - Mass Timber	1				
			Type IV-D - Mass Timber	1.5				
			Type III - Ordinary construction	1				
			Type II - Non-combustible construction	0.8				
			Type I - Fire resistive construction	0.6				
2	Choose Type of Housing (if TH, Enter Number of Units Per TH Block)	**Floor Space Area**						
		Type of Housing	Single Family	0	Other (Comm, Ind, Apt etc.)	1	Units	
			Townhouse - indicate # of units	0				
			Other (Comm, Ind, Apt etc.)	1				
2.2	# of Storeys	Number of Floors/Storeys in the Unit (do not include basement if 50% below grade):			3	3	Storeys	
3	Enter Ground Floor Area of One Unit	Average Floor Area (A) based total floor area of all floors for one unit (non-fire resistive construction):			595 Square Metres (m^2)	595	Area in Square Metres (m^2)	
3.1	Obtain Total Effective Building Area	Total Effective Building Area (# of Storeys x # of Units x Average Floor Area):			1,785	1,785		
4	Obtain Required Fire Flow without Reductions	Required Fire Flow (without reductions or increases per FUS) (F = 220 * C * √A) Round to nearest 1,000 L/min						**9,000**
5	Apply Factors Affecting Burning	**Reductions/Increases Due to Factors Affecting Burning**						
5.1	Choose Combustibility of Building Contents	Occupancy content hazard reduction or surcharge	Non-combustible	-0.25	Limited combustible	-0.15	N/A	**7,650**
			Limited combustible	-0.15				
			Combustible	0				
			Free burning	0.15				
			Rapid burning	0.25				
5.2	Choose Reduction Due to Presence of Sprinklers	Sprinkler reduction	Adequate Sprinkler conforms to NFPA13	-0.3	Adequate Sprinkler conforms to NFPA13	-0.3	N/A	**-2,295**
			None	0				
		Water Supply Credit	Water supply is standard for sprinkler and fire dept. hose line	-0.1	Water supply is standard for sprinkler and fire dept. hose line	-0.1	N/A	**-765**
			Water supply is not standard or N/A	0				
		Sprinkler Supervision Credit	Sprinkler system is fully supervised	-0.1	Sprinkler system is fully supervised	-0.1	N/A	**-765**
			Sprinkler not fully supervised or N/A	0				
5.3	Choose Separation Distance Between Units	Exposure Distance Between Units	North Side	3.1 to 10.0m	0.2	0.6	m	**4,590**
			East Side	20.1 to 30.1m	0.1			
			South Side	Fire Wall	0.1			
			West Side	3.1 to 10.0m	0.2			
6	Obtain Required Fire Flow, Duration & Volume	*Total Required Fire Flow, rounded to nearest 1,000 L/min, with max/min limits applied:*						**8,000**
		Total Required Fire Flow (above) in L/s:						**133**
		Required Duration of Fire Flow (hrs)						**2.00**
		Required Volume of Fire Flow (m^3)						**960**

FUS Fire Flow Calculation - Long Method

Calculations based on: "*Water Supply for Public Fire Protection*" by Fire Underwriters' Survey, 2020

Stantec Project #: 163401084
Project Name: 1066 Silver Street
Date: August 22, 2022
Data inputted by: Alexandre Mineault-G., M.A.Sc., ing., P.Eng.
Data reviewed by: Kevin Alemany, M.A.Sc., P.Eng.

Fire Flow Calculation #: 3
Building Type/Description/Name: Residential

Notes: *Basement (parking) is more than 50% below grade & Sprinklers proposed.*
Assumed Type III Construction Type - with a firewall (running "East/West" dividing the building into 2 separate areas.
"South Area" - 392 sq. meters.

Table A: Fire Underwriters Survey Determination of Required Fire Flow - Long Method

Step	Task	Term	Options	Multiplier Associated with Option	Choose:	Value Used	Unit	Total Fire Flow (L/min)
1	**Choose Frame Used for Construction of Unit**	**Framing Material**						
		Coefficient related to type of construction (C)	Type V - Wood Frame	1.5	Type III - Ordinary construction	1	m	
			Type IV-A - Mass Timber	0.8				
			Type IV-B - Mass Timber	0.9				
			Type IV-C - Mass Timber	1				
			Type IV-D - Mass Timber	1.5				
			Type III - Ordinary construction	1				
			Type II - Non-combustible construction	0.8				
			Type I - Fire resistive construction	0.6				
2	**Choose Type of Housing (if TH, Enter Number of Units Per TH Block)**	**Floor Space Area**						
		Type of Housing	Single Family	0	Other (Comm, Ind, Apt etc.)	1	Units	
			Townhouse - indicate # of units	0				
			Other (Comm, Ind, Apt etc.)	1				
2.2	**# of Storeys**	Number of Floors/Storeys in the Unit (do not include basement if 50% below grade):			3	3	Storeys	
3	**Enter Ground Floor Area of One Unit**	Average Floor Area (A) based total floor area of all floors for one unit (non-fire resistive construction):			392 Square Metres (m^2)	392	Area in Square Metres (m^2)	
3.1	**Obtain Total Effective Building Area**	Total Effective Building Area (# of Storeys x # of Units x Average Floor Area):			1,176	1,176		
4	**Obtain Required Fire Flow without Reductions**	Required Fire Flow (without reductions or increases per FUS) (F = 220 * C * √A) Round to nearest 1,000 L/min						**8,000**
5	**Apply Factors Affecting Burning**	**Reductions/Increases Due to Factors Affecting Burning**						
5.1	**Choose Combustibility of Building Contents**	Occupancy content hazard reduction or surcharge	Non-combustible	-0.25	Limited combustible	-0.15	N/A	**6,800**
			Limited combustible	-0.15				
			Combustible	0				
			Free burning	0.15				
			Rapid burning	0.25				
5.2	**Choose Reduction Due to Presence of Sprinklers**	Sprinkler reduction	Adequate Sprinkler conforms to NFPA13	-0.3	Adequate Sprinkler conforms to NFPA13	-0.3	N/A	**-2,040**
			None	0				
		Water Supply Credit	Water supply is standard for sprinkler and fire dept. hose line	-0.1	Water supply is standard for sprinkler and fire dept. hose line	-0.1	N/A	**-680**
			Water supply is not standard or N/A	0				
		Sprinkler Supervision Credit	Sprinkler system is fully supervised	-0.1	Sprinkler system is fully supervised	-0.1	N/A	**-680**
			Sprinkler not fully supervised or N/A	0				
5.3	**Choose Separation Distance Between Units**	Exposure Distance Between Units	North Side	Fire Wall	0.1	0.5	m	**3,400**
			East Side	20.1 to 30.1m	0.1			
			South Side	20.1 to 30.1m	0.1			
			West Side	3.1 to 10.0m	0.2			
6	**Obtain Required Fire Flow, Duration & Volume**	*Total Required Fire Flow, rounded to nearest 1,000 L/min, with max/min limits applied:*						**7,000**
		Total Required Fire Flow (above) in L/s:						**117**
		Required Duration of Fire Flow (hrs)						**2.25**
		Required Volume of Fire Flow (m^3)						**945**

ATTACHMENT 3: FIGURE 1 – FUS EXPOSURE DISTANCES

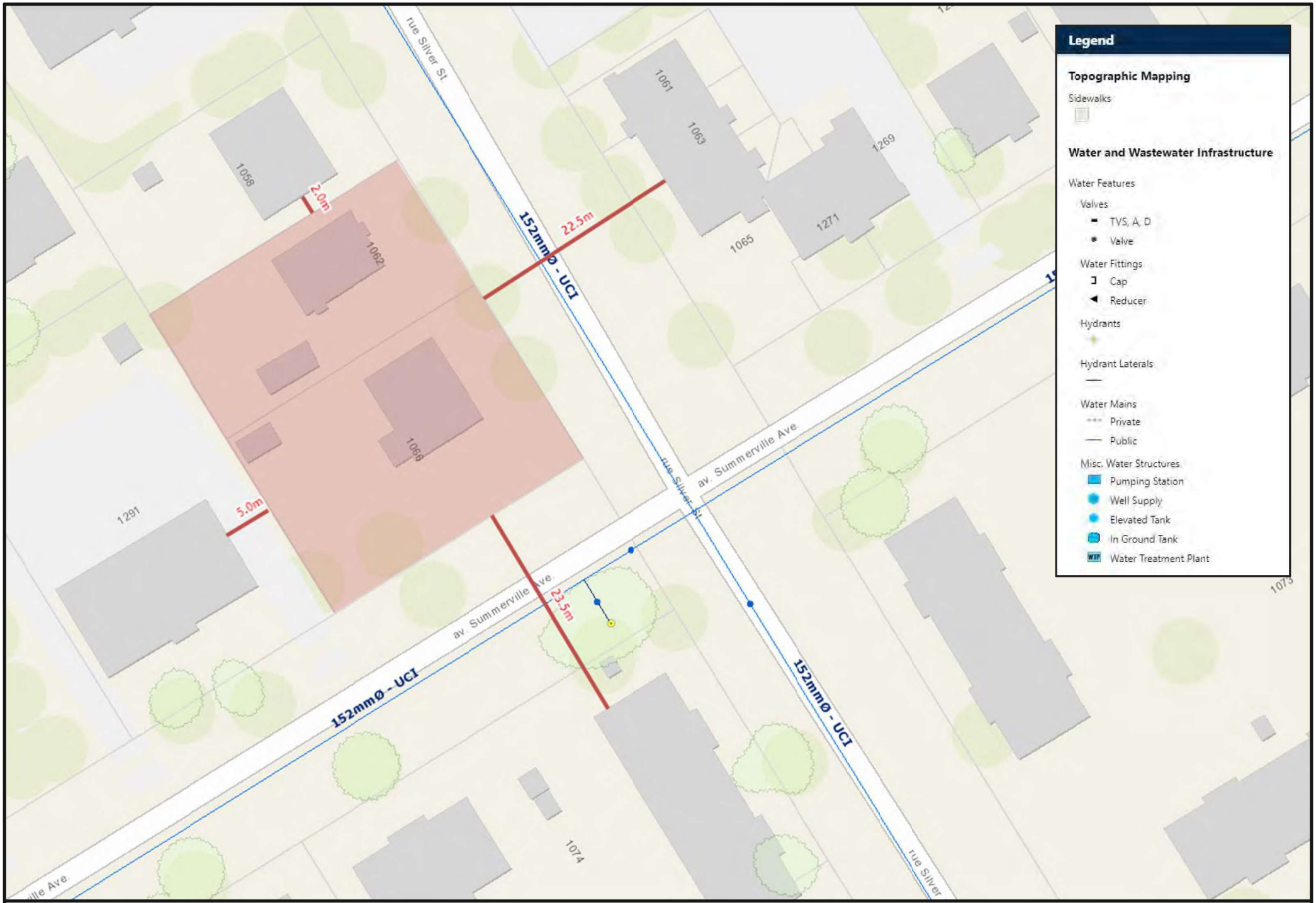


Figure 1: FUS Exposure Distances (Property Line to Adjacent Buildings)

Source: geoOttawa 2020; *Contains information licensed under the Open Government Licence – City of Ottawa.*

ATTACHMENT 4: FIGURE 2 – OFM EXPOSURE DISTANCES

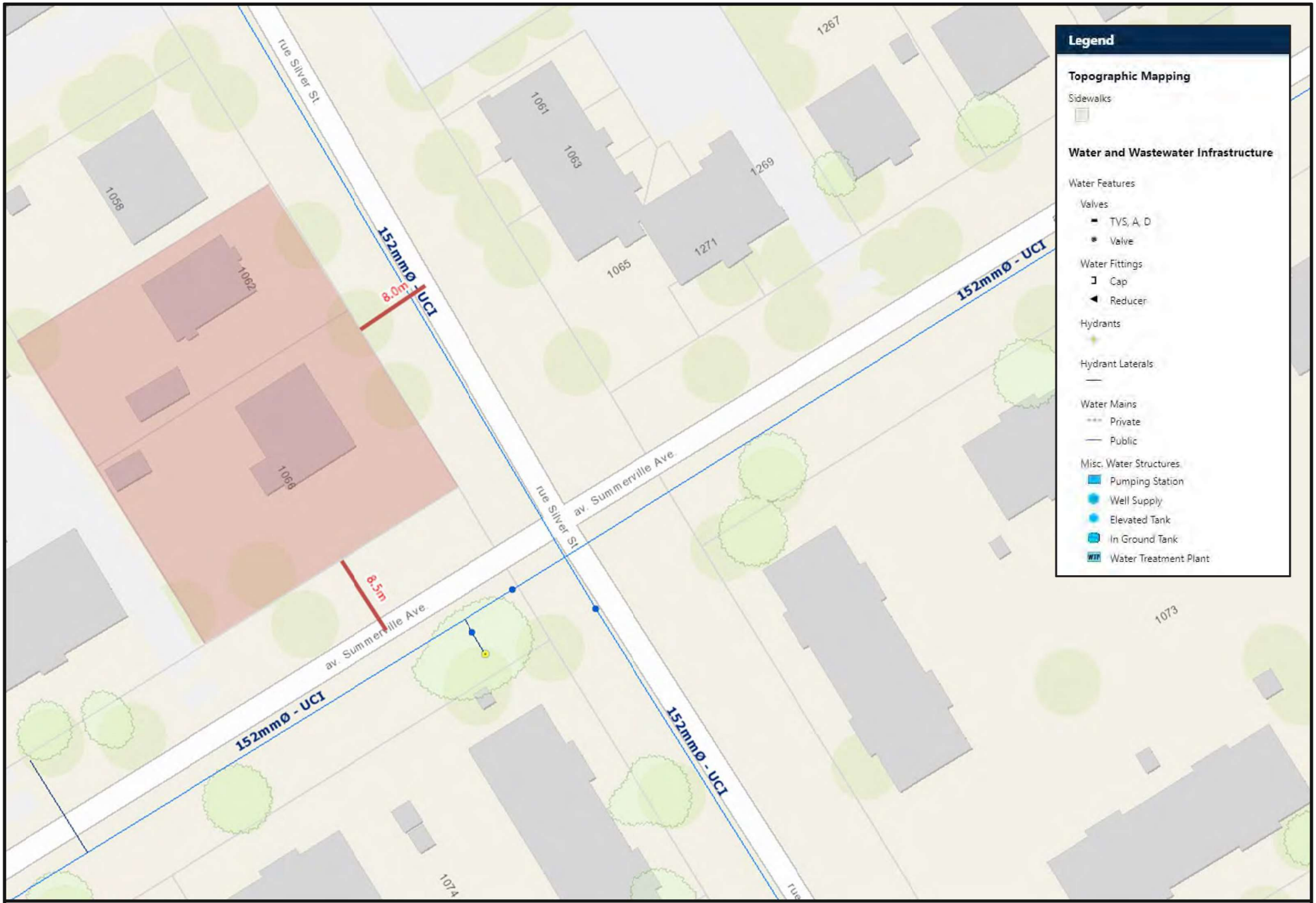


Figure 2: OFM Exposure Distances (Property Line to Street)

Source: geoOttawa 2021; *Contains information licensed under the Open Government Licence – City of Ottawa.*

ATTACHMENT 5: WATER BOUNDARY CONDITIONS

Razafimaharo, Christene

From: TL MaK <tlmakecl@bellnet.ca>
Sent: Wednesday, June 16, 2021 11:58 AM
To: Alemany, Kevin
Cc: Razafimaharo, Christene
Subject: FW: 1066 Silver Street - Water Boundary Conditions Request
Attachments: 1066 Silver Street June 2021.pdf

Hi Kevin,

Attached please find water boundary conditions received today from the City of Ottawa regarding 1066 Silver Street.

Could you please proceed with your calculations at your earliest convenience for our serviceability report preparation.

Let us know if you have any questions or comments.

Regards,

Tony Mak

T.L. Mak Engineering Consultants Ltd.
1455 Youville Drive, Suite 218
Ottawa, ON. K1C 6Z7
Tel. 613-837-5516 | Fax: 613-837-5277
E-mail: tlmakecl@bellnet.ca

From: Harrold, Eric [mailto:eric.harrold@ottawa.ca]
Sent: June 16, 2021 10:26 AM
To: TL MaK
Cc: Cassidy, Tyler; 'Amanda Lawrence'
Subject: RE: 1066 Silver Street - Water Boundary Conditions Request

Hi Tony,

Please see the water boundary condition information provided below:

The following are boundary conditions, HGL, for hydraulic analysis at 1066 Silver Street (zone 2W2C) assumed to be connected to the 152 mm on Summerville Avenue (see attached PDF for location).

Minimum HGL = 124.6 m

Maximum HGL = 133.1 m

Available fire flow at 20 psi = 96 L/s, assuming ground elevation of 83.8 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.

Please let me know if you have any follow-up questions.

Best,
Eric

From: TL MaK <tlmakecl@bellnet.ca>
Sent: June 09, 2021 9:59 AM
To: Harrold, Eric <eric.harrold@ottawa.ca>
Cc: Cassidy, Tyler <tyler.cassidy@ottawa.ca>; 'Amanda Lawrence' <amanda@sjlarchitect.com>
Subject: RE: 1066 Silver Street - Water Boundary Conditions Request

Hi Eric,

This will serve to confirm that the proposed building is for 23 units. We had confirmation from the project architect yesterday.

Regards,

Tony Mak

T.L. Mak Engineering Consultants Ltd.
1455 Youville Drive, Suite 218
Ottawa, ON. K1C 6Z7
Tel. 613-837-5516 | Fax: 613-837-5277
E-mail: tlmakecl@bellnet.ca

From: Harrold, Eric [mailto:eric.harrold@ottawa.ca]
Sent: June 8, 2021 3:45 PM
To: tlmakecl@bellnet.ca
Cc: Cassidy, Tyler
Subject: 1066 Silver Street - Water Boundary Conditions Request

Hi Tony,

Adam forwarded me the attached email regarding the water boundary condition request for 1066 Silver Street. I can submit the request to the City now that the pre-consultation is complete. I just wanted to confirm that the criteria in the request is up to date; the pre-consultation documents indicate that there are 25 units, whereas the water boundary request email indicates 23. Once you've confirmed that the details are correct I can send the request.

Additionally, please note that I confirmed that 30 cm of freeboard is required from the spillpoint for the site to the top of the ramp for the underground parking garage.

Best,
Eric
Eric Harrold, P.Eng

Planning, Infrastructure and Economic Development Department - Services de la Planification, de l'Infrastructure et du Développement Économique
Development Review
City of Ottawa | Ville d'Ottawa
110 Laurier Avenue West, Ottawa, ON | 110, Avenue. Laurier Ouest, Ottawa (Ontario) K1P 1J1
613.580.2424 ext./poste 21447, eric.harrold@ottawa.ca

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This e-mail originates from the City of Ottawa e-mail system. Any distribution, use or copying of this e-mail or the information it contains by other than the intended recipient(s) is unauthorized. Thank you.

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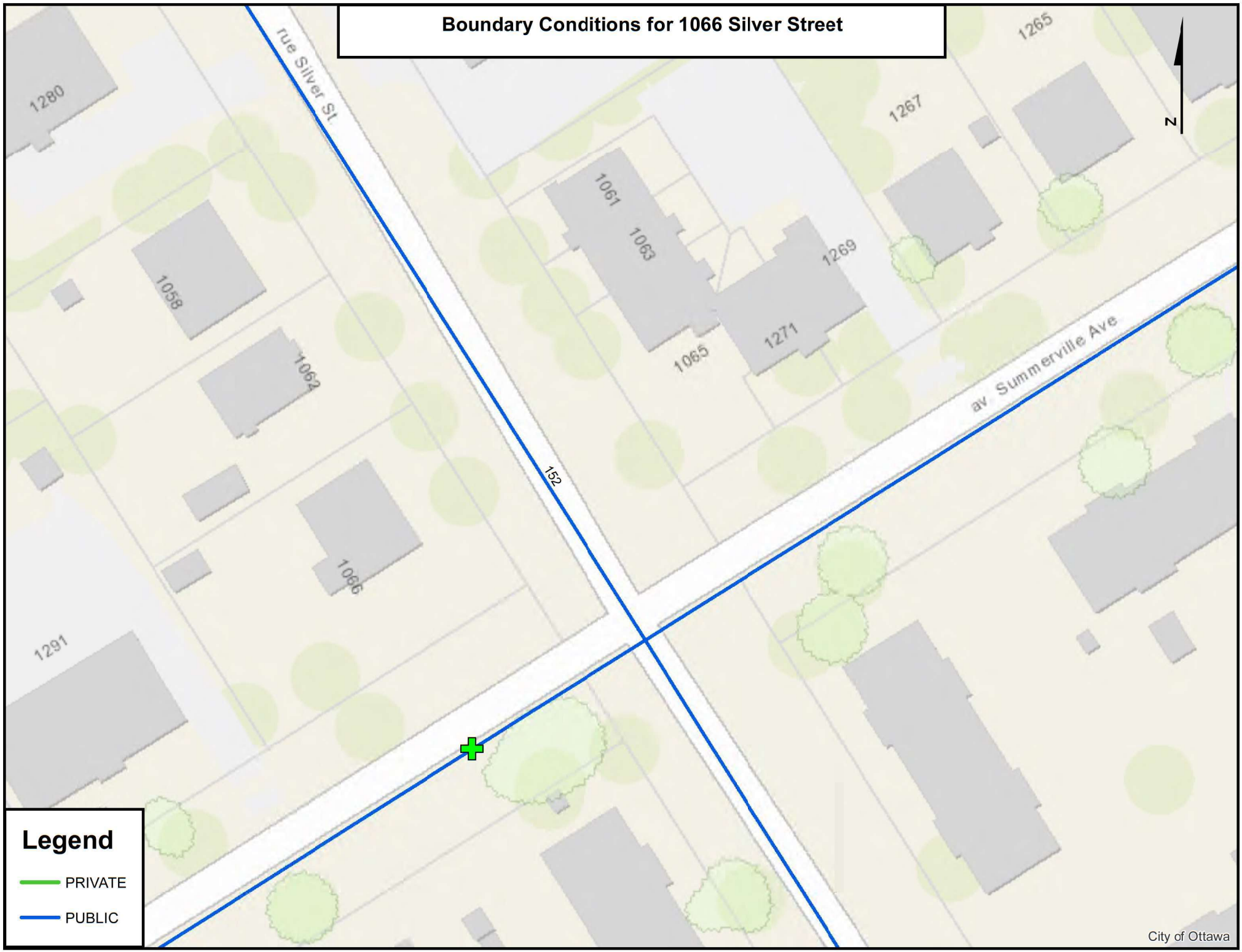
'


Boundary Conditions for 1066 Silver Street
rue Silver St
av Summerville Ave
152
1280
1265
1267
1061
1063
1269
1271
1065
1058
1062
1066
1291
N
Legend
PRIVATE
PUBLIC
City of Ottawa

ATTACHMENT 6: SUPPORTING HYDRAULIC CALCULATIONS

Supporting Hydraulic Calculations

Stantec Project #: 163401084
Project Name: 1066 Silver St
Date: June 21, 2021
Data inputted by: Christène Razafimaharo, M.Sc., EIT
Data reviewed by: Kevin Alemany, M.A.Sc., P.Eng.

Boundary Conditions provided by the City:

Scenario 1: Peak Hour (Min HGL): 124.6 m;
Scenario 2: Average Day (Max HGL): 133.1 m; and
Scenario 3: Maximum Day plus Fire Flow: 97.9 m.

Sample Calculations

HGL (m) = hp + hz *(1)*

where: hp = Pressure Head (m); and hz = Elevation Head (m), estimated from topography.

For Scenario 1, we have:

HGL(m) = 124.6 and hz (m) = 83.8.

Rearranging Equation 1, we can calculate the Pressure Head (hp) as follow:

hp (m) = HGL - hz
∴ hp = 124.6 - 83.8 m = 40.8 m.

To convert from Pressure Head (m) to a pressure value (kPa), the following equation can be used:

P (kPa) = (ρ * g * hp) / 1000 *(2)*

where: ρ = density of water = 1000 kg/m^3; and g = gravitational acceleration = 9.81 m/s^2.

Using Equation 2, we can calculate the Pressure (hp) as follow:

P (kPa) = (1000 * 9.81 * 40.8) / 1000
∴ P = 400 kPa.

Considering that 1 kPa = 0.145 psi, the pressure under Scenario 1 is equal to:

P = 58 psi.

Applying the same procedures, the pressures under Scenario 2 and Scenario 3 are calculated as follows:
Scenario 2: P = 70 psi; and Scenario 3: P = 20 psi.

To summarize:

Scenario 1: Minimum Pressure under Peak Hour Demand: 400 kPa (58 psi)
Scenario 2: Maximum Pressure under Average Day Demand: 483 kPa (70 psi)
Scenario 3: Minimum Pressure under Maximum Day + Fire Flow Demand: 138 kPa (20 psi)

ATTACHMENT 7: MULTI-HYDRANT ANALYSIS

TL MaK

From: Bramah, Bruce [bruce.bramah@ottawa.ca]
Sent: February 6, 2023 1:28 PM
To: TL MaK
Subject: FW: 1058, 1062 & 1066 Silver Street - RFF
Attachments: image001.jpg; image002.jpg; image003.png; image004.jpg; image005.png

Hi Tony,

As discussed, please see the email correspondence below regarding the available fire flow from the existing hydrants.
Thanks,
--
Bruce Bramah, EIT
Project Manager
Planning, Real Estate and Economic Development Department / Direction générale de la planification, des biens immobiliers et du développement économique
Development Review - South Branch
City of Ottawa | Ville d'Ottawa
110 Laurier Avenue West Ottawa, ON | 110, avenue. Laurier Ouest. Ottawa (Ontario) K1P 1J1
613.580.2424 ext./poste 29686, Bruce.Bramah@ottawa.ca

From: Bramah, Bruce
Sent: September 28, 2022 1:10 PM
To: Mineault-Guitard, Alexandre <Alexandre.Mineault-Guitard@stantec.com>
Cc: Alemany, Kevin <kevin.alemany@stantec.com>; Harrold, Eric <eric.harrold@ottawa.ca>
Subject: RE: 1058, 1062 & 1066 Silver Street

Hi Alexandre,

The two hydrants identified flowing simultaneously can deliver the required 8,000 L/min. A 9000 L/min is **NOT** achievable from a multi hydrant analysis.
Please let me know if you have any questions.
Thank you,

Bruce Bramah, EIT
Project Manager
Planning, Real Estate and Economic Development Department / Direction générale de la planification, des biens immobiliers et du développement économique
Development Review - South Branch
City of Ottawa | Ville d'Ottawa
110 Laurier Avenue West Ottawa, ON | 110, avenue. Laurier Ouest. Ottawa (Ontario) K1P 1J1
613.580.2424 ext./poste 29686, Bruce.Bramah@ottawa.ca

From: Mineault-Guitard, Alexandre <Alexandre.Mineault-Guitard@stantec.com>
Sent: September 19, 2022 3:06 PM
To: Bramah, Bruce <bruce.bramah@ottawa.ca>
Cc: Alemany, Kevin <kevin.alemany@stantec.com>
Subject: FW: 1058, 1062 & 1066 Silver Street

Hello Bruce,

Back in July, Eric Harrold and I exchanged some emails (see below) regarding the available fire flow from a multi-hydrant analysis along Silver Street.

I'm contacting you today, as Eric is out of the office and your contact information was included in his automatic reply.

Attached is the location of the two hydrants in the vicinity of the proposed building at 1066 Silver Street.

Based on previous results, the City indicated that 8,000 L/min is achievable at that location, but 10,000 L/min is not.

We are wondering if the two hydrants in the vicinity of the proposed building can achieve 9,000 L/min?

Let me know if you have any questions.

Thank you,
Alexandre

Alexandre Mineault-G, M.A.Sc., ing., P.Eng.
Water Resources Engineer

Direct: 613-725-3130
alexandre.mineault-guitard@stantec.com

Stantec

From: Mineault-Guitard, Alexandre
Sent: Monday, September 19, 2022 2:59 PM
To: Harrold, Eric <eric.harrold@ottawa.ca>
Cc: Alemany, Kevin <kevin.alemany@stantec.com>
Subject: RE: 1058, 1062 & 1066 Silver Street

Hello Eric,

I hope all is well.

I'm reconnecting on this project we exchanged some time back.

Some changes to the proposed building are anticipated by the Architects team, which would bring the RFF based on FUS to 9,000 L/min.

Based on previous results, the City indicated that 8,000 L/min is achievable at that location, but 10,000 L/min is not.

We are wondering if the two hydrants in the vicinity of the proposed building can meet the required fire flow of 9,000 L/min?

Let me know if you have any questions.

Thank you,
Alexandre

Alexandre Mineault-G, M.A.Sc., ing., P.Eng.
Water Resources Engineer

Direct: 613-725-3130
alexandre.mineault-guitard@stantec.com

Stantec

From: Mineault-Guitard, Alexandre
Sent: Friday, July 22, 2022 9:08 AM
To: Harrold, Eric <eric.harrold@ottawa.ca>
Cc: Alemany, Kevin <kevin.alemany@stantec.com>
Subject: RE: 1058, 1062 & 1066 Silver Street

Hi Eric,

Thanks for providing the information.

Have a wonderful weekend,
Alexandre

Alexandre Mineault-G, M.A.Sc., ing., P.Eng.
Water Resources Engineer

Direct: 613-725-3130
alexandre.mineault-guitard@stantec.com

Stantec

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From: Harrold, Eric <eric.harrold@ottawa.ca>
Sent: Friday, July 22, 2022 8:51 AM
To: Mineault-Guitard, Alexandre <Alexandre.Mineault-Guitard@stantec.com>
Cc: Alemany, Kevin <kevin.alemany@stantec.com>
Subject: RE: 1058, 1062 & 1066 Silver Street

Hi Alexandre,

I appreciate your patience. I can confirm that the two hydrants which were identified (364026H074 & 364026H075) flowing simultaneously can deliver the required 8,000 L/min.

Best,
Eric
Eric Harrold, P.Eng
Project Manager, Infrastructure Approvals
Planning, Real Estate and Economic Development Department
City of Ottawa | Ville d'Ottawa

110 Laurier Avenue West, Ottawa, ON
613.580.2424 ext. 21447, eric.harrold@ottawa.ca

From: Mineault-Guitard, Alexandre <Alexandre.Mineault-Guitard@stantec.com>
Sent: July 15, 2022 3:15 PM
To: Harrold, Eric <eric.harrold@ottawa.ca>
Cc: Alemany, Kevin <kevin.alemany@stantec.com>
Subject: RE: 1058, 1062 & 1066 Silver Street

Hello Eric,

I hope you are doing well.

Circulating back to this project - the architects proposed to add a firewall to split the building into two parts, which would yield a lower fire flow requirements based on FUS.

With the proposed changes, a required fire flow of 8,000 L/min is obtained.

Based on previous email exchanges (see attached email), the multi-hydrant analysis that was completed at that site was able to meet a fire flow requirement of 7,000 L/min, but 10,000 L/min was too much.

However, we are wondering if the two hydrants in the vicinity of the proposed building can meet the required fire flow of 8,000 L/min?

Let me know if you have any questions. I would gladly provide further explanations if required.

Thank you and have a great weekend,
Alexandre

Alexandre Mineault-G, M.A.Sc., ing., P.Eng.
Water Resources Engineer

Direct: 613-725-3130
alexandre.mineault-guitard@stantec.com

Stantec

From: Mineault-Guitard, Alexandre
Sent: Wednesday, June 8, 2022 1:35 PM
To: Harrold, Eric <eric.harrold@ottawa.ca>
Cc: Alemany, Kevin <kevin.alemany@stantec.com>
Subject: RE: 1058, 1062 & 1066 Silver Street

Hi Eric,

Thank you for providing the information and clarification. We will finalize our analysis accordingly.

Best,
Alexandre

Alexandre Mineault-G, M.A.Sc., ing., P.Eng.
Water Resources Engineer

Direct: 613-725-3130
alexandre.mineault-guitard@stantec.com

Stantec

From: Harrold, Eric <eric.harrold@ottawa.ca>
Sent: Wednesday, June 8, 2022 1:15 PM
To: Mineault-Guitard, Alexandre <Alexandre.Mineault-Guitard@stantec.com>
Cc: Alemany, Kevin <kevin.alemany@stantec.com>; Kumar, Akhil <akhil.kumar@ottawa.ca>; Steele, Matt <Matt.Steele@ottawa.ca>; Sevigny, John <john.sevigny@ottawa.ca>; Evans, Allan <Allan.Evans@ottawa.ca>
Subject: RE: 1058, 1062 & 1066 Silver Street

Hi Alexandre,

I'll respond to your questions below in red:

1. If a fire pump is provided to ensure that the sprinkler system can deliver the acceptable flow at a residual pressure of 50 psi at the highest elevation, would this be considered acceptable by the City?
   Yes, from a Building Code perspective, this would be acceptable. However, from a Development Review perspective, the FUS or OBC method should be used. Please see the below comment for additional information.
2. Does the building have to be designed such that the FUS fire flow requirements are met based on the available hydrant flow (7,000 L/min as per the multi-hydrant analysis), regardless of NFPA sprinkler requirements? In other words, are both requirements (acceptable sprinkler flow based on NFPA, and hydrant flow based on FUS) needed, or if the NFPA requirements are met, it would be considered acceptable by the City ?
   Based on the guidance in the City's Water Design Guidelines and technical bulletins, the fire flow should be calculated using the OBC ($Q=KVS_{tot}$) method for flows less than 9,000 L/min, or the FUS method for flows exceeding 9,000 L/min. Technical bulletin ISTB-2021-03 does not make a direct reference to the NFPA 13 standard, although it is referenced in Appendix A of the Ontario Building Code. Since this is a sprinklered building, conformance to the NFPA standards would nonetheless be reviewed at the building permit stage, following approval of the Site Plan Control application. Compliance with NFPA standards is also required under the FUS method, if the sprinkler credits are to be applied.

Best,
Eric

Eric Harrold, P.Eng
Project Manager, Infrastructure Approvals
Planning, Real Estate and Economic Development Department
City of Ottawa | Ville d'Ottawa
110 Laurier Avenue West, Ottawa, ON
613.580.2424 ext. 21447, eric.harrold@ottawa.ca

From: Mineault-Guitard, Alexandre <Alexandre.Mineault-Guitard@stantec.com>
Sent: June 06, 2022 3:15 PM
To: Harrold, Eric <eric.harrold@ottawa.ca>
Cc: Alemany, Kevin <kevin.alemany@stantec.com>
Subject: RE: 1058, 1062 & 1066 Silver Street

Hi Eric,

Thank you for providing the information.

We had a look at the different sprinkler requirements, and are seeking further clarifications from the City, if that is possible, to finalize our analysis.

Here are a few notes:

- As per Table 19.3.2.1 (NFPA 13, 2019), the acceptable flow at the base of the building for an ordinary hazard is 3,200-5,700 L/min.
- Based on 19.3.2.3 (see below), this flow can be used for new systems exceeding 465 m^2 (the proposed building is **986 m^2**) given that it is provided at a minimum residual pressure of 50 psi at the highest elevation of the sprinkler system.

Table 19.3.2.1 Water Supply Requirements for Pipe Schedule Sprinkler Systems

Occupancy Classification	Minimum Residual Pressure Required		Acceptable Flow at Base of Riser (Including Hose Stream Allowance)		Duration (minutes)
	psi	bar	gpm	L/min	
Light hazard	15	1	500–750	1900–2850	30–60
Ordinary hazard	20	1.4	850–1500	3200–5700	60–90

19.3.2.3 The pipe schedule method shall be permitted as follows:

(1) Additions or modifications to existing pipe schedule systems sized according to the pipe schedules of Section 27.5
(2) Additions or modifications to existing extra hazard pipe schedule systems
(3) New systems of 5000 ft^2 (465 m^2) or less
(4) New systems exceeding 5000 ft^2 (465 m^2) where the flows required in Table 19.3.2.1 are available at a minimum residual pressure of 50 psi (3.4 bar) at the highest elevation of sprinkler

As such, could the City advise on the following questions:

1) If a fire pump is provided to ensure that the sprinkler system can deliver the acceptable flow at a residual pressure of 50 psi at the highest elevation, would this be considered acceptable by the City?

2) Does the building have to be designed such that the FUS fire flow requirements are met based on the available hydrant flow (7,000 L/min as per the multi-hydrant analysis), regardless of NFPA sprinkler requirements? In other words, are both requirements (acceptable sprinkler flow based on NFPA, and hydrant flow based on FUS) needed, or if the NFPA requirements are met, it would be considered acceptable by the City ?

Let me know if you have any questions. I would gladly provide further explications if required.

Thanks,
Alexandre

Alexandre Mineault-G, M.A.Sc., ing., P.Eng.
Water Resources Engineer

Direct: 613-725-3130
alexandre.mineault-guitard@stantec.com

Stantec

From: Harrold, Eric <eric.harrold@ottawa.ca>
Sent: Wednesday, June 1, 2022 1:17 PM
To: Mineault-Guitard, Alexandre <Alexandre.Mineault-Guitard@stantec.com>
Cc: Alemany, Kevin <kevin.alemany@stantec.com>; TL MaK <tlmakecl@bellnet.ca>
Subject: RE: 1058, 1062 & 1066 Silver Street

Hi Alexandre,

Water Resources has indicated that the two hydrants identified in your request are capable of providing the required fire flow for Scenario 3, only.

Best,
Eric

Eric Harrold, P.Eng
Project Manager, Infrastructure Approvals
Planning, Real Estate and Economic Development Department
City of Ottawa | Ville d'Ottawa
110 Laurier Avenue West, Ottawa, ON
613.580.2424 ext. 21447, eric.harrold@ottawa.ca

*** OUT OF OFFICE NOTICE – Please note that I will be out of office on June 2nd and 3rd. I will respond to your email upon my return to office on June 6th ***

From: Mineault-Guitard, Alexandre <Alexandre.Mineault-Guitard@stantec.com>
Sent: May 26, 2022 11:30 AM
To: Harrold, Eric <eric.harrold@ottawa.ca>
Cc: Alemany, Kevin <kevin.alemany@stantec.com>; TL MaK <tlmakecl@bellnet.ca>
Subject: RE: 1058, 1062 & 1066 Silver Street

Good morning Eric,

Sorry for the delay in getting back to you, I was out of town until yesterday.

Please find below the updated FUS fire flow calculations. As shown, three (3) scenarios were considered, based on different building types as described in the updated FUS Guidelines.

Note that the building type of the proposed building would depend on the available fire flow based on the multi-hydrant analysis, hence the different scenarios that were considered.

1) FUS – "Type III - Ordinary construction" (C coefficient of 1): 12,000 L/min or 200 L/s.
2) FUS – "Type IV-A - Mass Timber" (C coefficient of 0.8 – see definitions below): 10,000 L/min or 167 L/s.
3) FUS – "Type I - Fire resistive construction" (C coefficient of 0.6 – see definitions below): 7,000 L/min or 117 L/s.

Type IV-A (Encapsulated Mass Timber)

- A building is considered to be of Mass Timber Type IV-A (Encapsulated Mass Timber) construction when structural elements, walls, arches, and floors have a minimum 2-hour fire resistance rating and the roof has a minimum 1 hour fire resistance rating. Additionally all elements of the building must meet the requirements set out for Encapsulated Mass Timber Construction within the 2020 National Building Code of Canada . For types of mass timber construction that do not fully meet these criteria, treat as Type IV-B, Type IV-C or Type IV-D.

Fire-Resistive Construction (Type I)

A building is considered to be of Fire-resistive construction (Type I) when all structural elements, walls, arches, floors, and roofs are constructed with a minimum 2-hour fire resistance rating, and all materials used in the construction of the structural elements, walls, arches, floors, and roofs are constructed with noncombustible materials.

Let me know if you need anything else from us to proceed.

Kind regards,,
Alexandre

Alexandre Mineault-G, M.A.Sc., ing., P.Eng.
Water Resources Engineer

Direct: 613-725-3130
alexandre.mineault-guitard@stantec.com

Stantec

From: Harrold, Eric <eric.harrold@ottawa.ca>
Sent: Thursday, May 19, 2022 3:14 PM
To: Mineault-Guitard, Alexandre <Alexandre.Mineault-Guitard@stantec.com>

Cc: Alemany, Kevin <kevin.alemany@stantec.com>
Subject: RE: 1058, 1062 & 1066 Silver Street

Hi Alexandre,

Apologies for the delay. I spoke with Water Resources this afternoon, and they have requested the updated fire flow calculations in order to conduct the multi-hydrant analysis. Water Resources also suggested considering using lower-coefficient building materials to reduce the fire flow, if needed.

Regards,
Eric
Eric Harrold, P.Eng
Project Manager, Infrastructure Approvals
Planning, Real Estate and Economic Development Department
City of Ottawa | Ville d'Ottawa
110 Laurier Avenue West, Ottawa, ON
613.580.2424 ext. 21447, eric.harrold@ottawa.ca

From: Mineault-Guitard, Alexandre <Alexandre.Mineault-Guitard@stantec.com>
Sent: May 16, 2022 12:16 PM
To: Harrold, Eric <eric.harrold@ottawa.ca>
Cc: Alemany, Kevin <kevin.alemany@stantec.com>
Subject: RE: 1058, 1062 & 1066 Silver Street

Hello Eric,

Thank you again for meeting with us last week to discuss this project.

Further to what was discussed, would it be possible for the City to conduct a multi-hydrant analysis to confirm the hydrant flow coverage at the proposed location ?

This value is key to identify the requirements in terms of fire protection, and to assess alternatives, in the event that the required fire flow for the envisioned building is greater than what is available.

Attached is a figure showing the hydrants in the vicinity of the proposed building, namely two (2) Class AA hydrants within 150 m (with one being within 75 m).

Let me know if you have any questions or would like to discuss.

Kind regards,
Alexandre

Alexandre Mineault-G, M.A.Sc., ing., P.Eng.
Water Resources Engineer

Direct: 613-725-3130
alexandre.mineault-guitard@stantec.com

Stantec

From: Mineault-Guitard, Alexandre
Sent: Wednesday, May 11, 2022 10:52 AM
To: Harrold, Eric <eric.harrold@ottawa.ca>
Cc: Alemany, Kevin <kevin.alemany@stantec.com>
Subject: RE: 1058, 1062 & 1066 Silver Street

Good morning Eric,

Thank you for your reply.

Would it be possible to have a quick chat (+/- 15 min) discussing this matter ? We want to confirm the City's requirements to adequately address comments that we made regarding the Serviceability Report. We believe that phone call / Teams Meeting would be more efficient.

We would be available during the following timeslots:

- Thursday, May 12, between 9 and 10 a.m.
- Thursday, May 12, between 3 and 4 p.m.
- Friday, May 13, between 9 a.m. and noon.

Would any of those times work for you?

Kind regards,
Alex

Alexandre Mineault-G, M.A.Sc., ing., P.Eng.
Water Resources Engineer

Direct: 613-725-3130
alexandre.mineault-guitard@stantec.com

Stantec

From: Harrold, Eric <eric.harrold@ottawa.ca>
Sent: Wednesday, May 11, 2022 8:32 AM
To: TL MaK <tlmakecl@bellnet.ca>
Cc: Alemany, Kevin <kevin.alemany@stantec.com>; Mineault-Guitard, Alexandre <Alexandre.Mineault-Guitard@stantec.com>; 'Robert Haslett' <Rob@haslettconstruction.com>
Subject: RE: 1058, 1062 & 1066 Silver Street

Hi Tony,

Thanks for your patience. I discussed this matter internally, and received the following response:

Typically, either the OBC or the FUS methods are used for calculating the required flow. The following also needs to be considered in the calculation of the required fire flow:

- There may be sprinkler systems (governed by NFPA 13) and stand pipe systems (governed by NFPA 14) in addition to the load due to fire fighting and domestic water use (required by OBC Part 7).
- There may also be a fire pump required (governed by NFPA 20) that could affect the flow rates.

The NFPA 13 standard only relates to the sprinkler performance. Please provide confirmation whether the proposed design considers all other building water requirements, as outlined in the above bullets.

Best,
Eric
Eric Harrold, P.Eng
Project Manager, Infrastructure Approvals
Planning, Real Estate and Economic Development Department
City of Ottawa | Ville d'Ottawa
110 Laurier Avenue West, Ottawa, ON
613.580.2424 ext. 21447, eric.harrold@ottawa.ca

From: TL MaK <tlmakecl@bellnet.ca>
Sent: May 09, 2022 2:12 PM
To: Harrold, Eric <eric.harrold@ottawa.ca>
Cc: Alemany, Kevin <kevin.alemany@stantec.com>; 'Mineault-Guitard, Alexandre' <Alexandre.Mineault-Guitard@stantec.com>; 'Robert Haslett' <Rob@haslettconstruction.com>
Subject: 1058, 1062 & 1066 Silver Street

Further to our Teams meeting today, our water services consultants for this project, Stantec, has requested clarification on your comments #B1 and #B2 from the City's amalgamated comments of May 4, 2022.

Could you please review the following as listed below and provide further clarification on Stantec's inquiries.

The City is requested to provide clarification on the application of design guidelines specific to fire flows for sprinklered buildings to be serviced by existing watermain.

In previous studies, the City has indicated that for a new development in which new watermain is not constructed (i.e., an infill development on an existing watermain is in place that will service the proposed development) that the OBC can be used for determining the fire flow requirements. It was further clarified that if the OBC method was used and yields a fire flow (equal to) or exceeding 9,000L/min that the Fire Underwriters Survey (FUS) method for determining the fire flow is to be used. Since the proposed development at 1058, 1062 & 1066 Silver Street is an infill development to be serviced by an existing watermain, it is our understanding that the OBC method can be used/tested first.

If the Office of the Fire Marshall (OFM) Fire Protection Water Supply Guideline for Part 3 in the Ontario Building Code (1999) is followed (i.e. the OBC method), the OFM guideline states in ***Section 6.2 Sprinklered Buildings*** *"For sprinklered buildings, NFPA 13, "Standard for the Installation of Sprinkler Systems", as referenced by Article 3.2.5.13. of the Building Code, shall be used to obtain sprinkler and hose stream water requirements." Hence for the development at 1058, 1062 & 1066 Silver Street we have deferred to NFPA13 for determining fire flow requirements.*

*Further, **Section 6.3 Buildings Requiring On-Site Fire Protection Water Supply** of the OFM guidelines states that (a) **Except for sprinklered buildings** and as required by Sections 6.3 (c) and 6.3 (d), new buildings shall be provided with a supply of water available for fire fighting purposes not less than the quantity derived from the following formula Q = $KVS_{Tot.}$ As such, following the OFM Guideline, the formula in Section 6.3 does not apply to sprinklered buildings and there is no calculation specific for hydrant flows.*

We kindly request that the City clarify the use of the OFM guidelines for sprinklered buildings. Further, since the OFM guideline for sprinklered buildings does not require a hydrant flow calculation, is a multi-hydrant analysis still required? If so, what flow is to be used for the hydrants?

Thank you,

Tony Mak

T.L. Mak Engineering Consultants Ltd.
1455 Youville Drive, Suite 218
Ottawa, ON. K1C 6Z7
Tel. 613-837-5516 | Fax: 613-837-5277
E-mail: tlmakecl@bellnet.ca

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ATTACHMENT 8: FIGURE 3 – HYDRANT SPACING

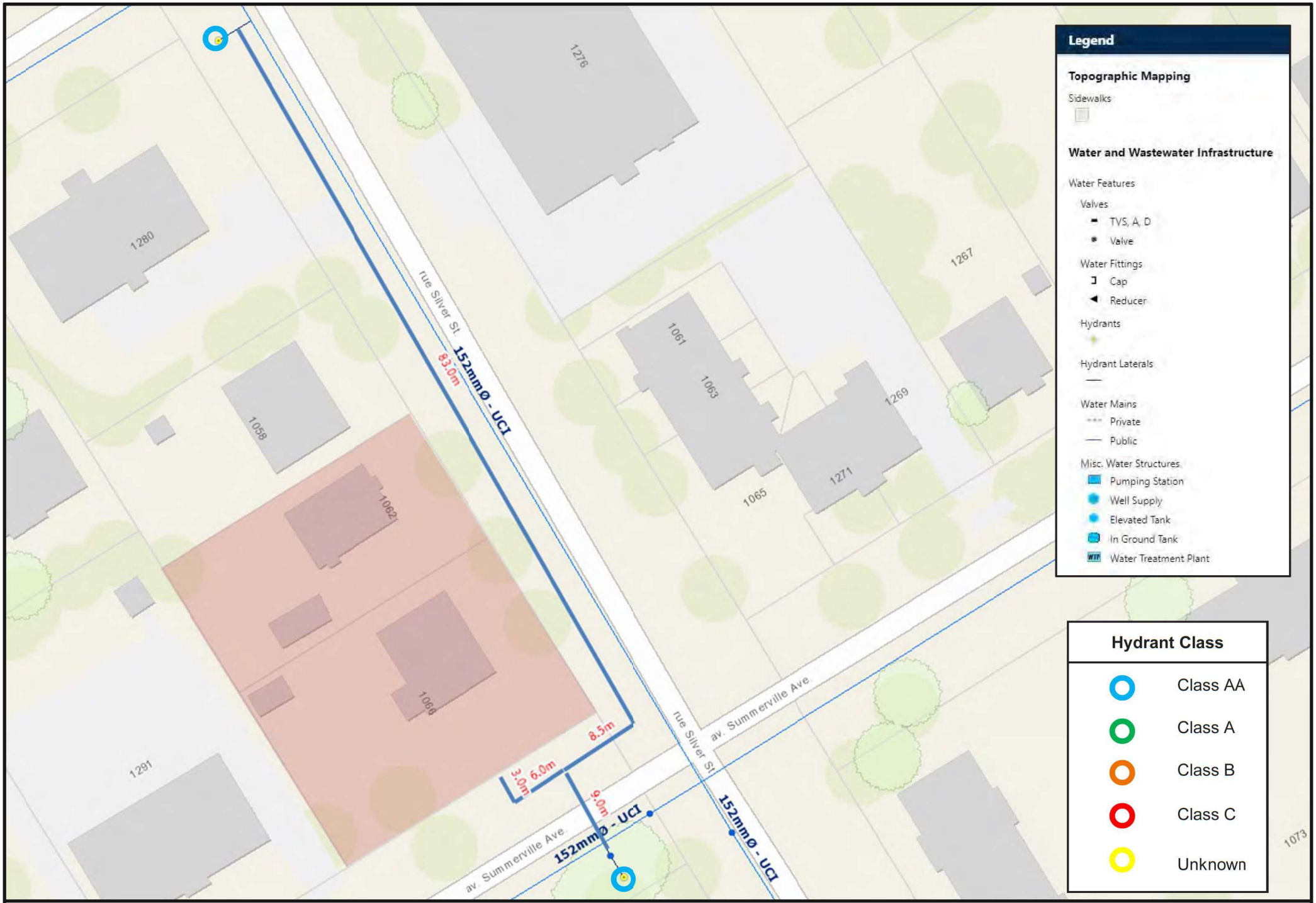


Figure 3: Hydrant Spacing

Source: geoOttawa 2021; *Contains information licensed under the Open Government Licence – City of Ottawa.*

PROPOSED THREE STOREY

RESIDENTIAL APARTMENT BUILDING SITE

PART OF LOT 31

R-PLAN 294

1058, 1062 AND 1066 SILVER STREET

CITY OF OTTAWA

APPENDIX E

CITY OF OTTAWA

SANITARY SEWER DESIGN SHEET

SHEET No. 1 OF 1

SANITARY SEWER DESIGN SHEET

q = average daily per capita flow 280 L/cap. d)
I = unit of peak extraneous flow (0.28 L/ha. s)
M = peaking factor
Q (p) = peak population flow (L/s)
Q (I) = peak extraneous flow (L/s)
Q (d) = peak design flow

RESIDENTIAL DENSITY
2 BEDROOM - 2.1 PPU
1 BEDROOM - 1.4

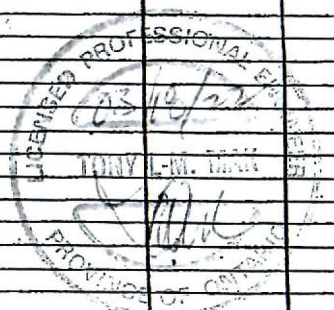
$M = 1 + \frac{14}{4 + \sqrt{P}}$ where P population in 1000's

$Q(p) = \frac{PqM}{86.4}$ (L/s)

Q(i) = IA (L/s) where A = area in hectares

Q(d) = Q(p) + Q(i) (L/s)

LOCATION			INDIVIDUAL		CUMULATIVE		Peaking factor M	Pop. flow Q(p) (L/s)	Peak extraneous flow Q(i) (L/s)	Peak design flow Q(d) (L/s)	PROPOSED SEWER						
STREET	FROM	TO	Pop.	Area A (hectares)	Pop.	Area A (hectares)					Length (m)	Pipe size (mm)	Type of pipe	Grade %	Capacity (L/s) n=0.013	Full flow velocity (m/s)	Actual velocity at Q(d)
1058, 1062 AND 1066 SILVER	SITE	EX. 225Ø SAN	52.5	0.158	52.5	0.158	4	0.68	0.05	0.73	15.5	150	PVC	1.0 (min)	19.8	1.12	



DESIGN TLM	PROJECT 1058, 1062 AND 1066 SILVER STREET - PROPOSED THREE STOREY APARTMENT BUILDING SITE OTTAWA	SHEET No. 1 of 1
CHECKED TLM		
DATE MARCH 2022		

(FILE# 821-10) REV# 1

PROPOSED THREE STOREY

RESIDENTIAL APARTMENT BUILDING SITE

PART OF LOT 31

R-PLAN 294

1058, 1062 AND 1066 SILVER STREET

CITY OF OTTAWA

APPENDIX F

CITY OF OTTAWA

CORRESPONDENCE FROM RVCA

DATED JULY 14, 2021

TL MaK

From: Eric Lalande [eric.lalande@rvca.ca]
Sent: July 14, 2021 10:24 AM
To: TL MaK
Subject: RE: 1066 Silver Street

Hi Tony,

Based on the provided Site plan, the RVCA would require no additional water quality protection be provided on-site.

Thank you,

Eric Lalande, MCIP, RPP
Planner, RVCA
613-692-3571 x1137

From: TL MaK <tlmakecl@bellnet.ca>
Sent: Monday, July 12, 2021 3:26 PM
To: Eric Lalande <eric.lalande@rvca.ca>
Subject: 1066 Silver Street

Hi Eric,

Presently we are contacting the RVCA for pre-consultation regarding our project at 1066 Silver Street.

Could you please review and let us know whether there are any water quality requirements for the proposed development at 1066 Silver Street. We will be implementing storm water management regarding quantity control as required by the City of Ottawa (by means of flat rooftop SWM attenuation only).

Attached please find the PDFs of our engineering drawings for your review and comments. They are as follows:

1. Proposed Site Grading and Servicing Plan (Dwg. #821-10, G-1 Rev. 1)
2. Landscape Plan (Dwg. No. 121139-L1, Rev. No. 1)
3. Concept Site Plan (Dwg. No. A1.0, Rev. No. 4)

Let us know if you have any questions.

Regards,

Tony Mak

T.L. Mak Engineering Consultants Ltd.
1455 Youville Drive, Suite 218
Ottawa, ON. K1C 6Z7
Tel. 613-837-5516 | Fax: 613-837-5277
E-mail: tlmakecl@bellnet.ca

PROPOSED THREE STOREY

RESIDENTIAL APARTMENT BUILDING SITE

PART OF LOT 31

R-PLAN 294

1058, 1062 AND 1066 SILVER STREET

CITY OF OTTAWA

APPENDIX G

DEVELOPMENT SERVICING STUDY CHECKLIST SUMMARY

Servicing study guidelines for development applications

4. Development Servicing Study Checklist

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

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

4.1 General Content

- ☐ Executive Summary (for larger reports only).
- ☒ Date and revision number of the report.
- ☒ Location map and plan showing municipal address, boundary, and layout of proposed development.
- ☒ Plan showing the site and location of all existing services.
- ☐ Development statistics, land use, density, adherence to zoning and official plan, and reference to applicable subwatershed and watershed plans that provide context to which individual developments must adhere.
- ☐ Summary of Pre-consultation Meetings with City and other approval agencies.
- ☐ Reference and confirm conformance to higher level studies and reports (Master Servicing Studies, Environmental Assessments, Community Design Plans), or in the case where it is not in conformance, the proponent must provide justification and develop a defendable design criteria.
- ☒ Statement of objectives and servicing criteria.
- ☒ Identification of existing and proposed infrastructure available in the immediate area.
- ☐ Identification of Environmentally Significant Areas, watercourses and Municipal Drains potentially impacted by the proposed development (Reference can be made to the Natural Heritage Studies, if available).
- ☐ Concept level master grading plan to confirm existing and proposed grades in the development. This is required to confirm the feasibility of proposed stormwater management and drainage, soil removal and fill constraints, and potential impacts to neighbouring properties. This is also required to confirm that the proposed grading will not impede existing major system flow paths.
- ☐ Identification of potential impacts of proposed piped services on private services (such as wells and septic fields on adjacent lands) and mitigation required to address potential impacts.
- ☐ Proposed phasing of the development, if applicable.

☒ Reference to geotechnical studies and recommendations concerning servicing.

☒ All preliminary and formal site plan submissions should have the following information:
- Metric scale
- North arrow (including construction North)
- Key plan
- Name and contact information of applicant and property owner
- Property limits including bearings and dimensions
- Existing and proposed structures and parking areas
- Easements, road widening and rights-of-way
- Adjacent street names

4.2 Development Servicing Report: Water

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

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

4.3 Development Servicing Report: Wastewater

- ☒ Summary of proposed design criteria (Note: Wet-weather flow criteria should not deviate from the City of Ottawa Sewer Design Guidelines. Monitored flow data from relatively new infrastructure cannot be used to justify capacity requirements for proposed infrastructure).
- ☐ Confirm consistency with Master Servicing Study and/or justifications for deviations.
- ☐ Consideration of local conditions that may contribute to extraneous flows that are higher than the recommended flows in the guidelines. This includes groundwater and soil conditions, and age and condition of sewers.
- ☒ Description of existing sanitary sewer available for discharge of wastewater from proposed development.
- ☐ Verify available capacity in downstream sanitary sewer and/or identification of upgrades necessary to service the proposed development. (Reference can be made to previously completed Master Servicing Study if applicable)
- ☒ Calculations related to dry-weather and wet-weather flow rates from the development in standard MOE sanitary sewer design table (Appendix 'C') format.
- ☐ Description of proposed sewer network including sewers, pumping stations, and forcemains.
- ☐ Discussion of previously identified environmental constraints and impact on servicing (environmental constraints are related to limitations imposed on the development in order to preserve the physical condition of watercourses, vegetation, soil cover, as well as protecting against water quantity and quality).
- ☐ Pumping stations: impacts of proposed development on existing pumping stations or requirements for new pumping station to service development.
- ☐ Forcemain capacity in terms of operational redundancy, surge pressure and maximum flow velocity.
- ☐ Identification and implementation of the emergency overflow from sanitary pumping stations in relation to the hydraulic grade line to protect against basement flooding.
- ☐ Special considerations such as contamination, corrosive environment etc.

4.4 Development Servicing Report: Stormwater Checklist

- ☒ Description of drainage outlets and downstream constraints including legality of outlets (i.e. municipal drain, right-of-way, watercourse, or private property)
- ☐ Analysis of available capacity in existing public infrastructure.
- ☒ A drawing showing the subject lands, its surroundings, the receiving watercourse, existing drainage patterns, and proposed drainage pattern.
- ☒ Water quantity control objective (e.g. controlling post-development peak flows to pre-development level for storm events ranging from the 2 or 5 year event (dependent on the receiving sewer design) to 100 year return period); if other objectives are being applied, a rationale must be included with reference to hydrologic analyses of the potentially affected subwatersheds, taking into account long-term cumulative effects.
- ☐ Water Quality control objective (basic, normal or enhanced level of protection based on the sensitivities of the receiving watercourse) and storage requirements.
- ☒ Description of the stormwater management concept with facility locations and descriptions with references and supporting information.
- ☐ Set-back from private sewage disposal systems.
- ☐ Watercourse and hazard lands setbacks.
- ☐ Record of pre-consultation with the Ontario Ministry of Environment and the Conservation Authority that has jurisdiction on the affected watershed.
- ☐ Confirm consistency with sub-watershed and Master Servicing Study, if applicable study exists.
- ☒ Storage requirements (complete with calculations) and conveyance capacity for minor events (1:5 year return period) and major events (1:100 year return period).
- ☐ Identification of watercourses within the proposed development and how watercourses will be protected, or, if necessary, altered by the proposed development with applicable approvals.
- ☒ Calculate pre and post development peak flow rates including a description of existing site conditions and proposed impervious areas and drainage catchments in comparison to existing conditions.
- ☐ Any proposed diversion of drainage catchment areas from one outlet to another.
- ☒ Proposed minor and major systems including locations and sizes of stormwater trunk sewers, and stormwater management facilities.
- ☐ If quantity control is not proposed, demonstration that downstream system has adequate capacity for the post-development flows up to and including the 100 year return period storm event.
- ☐ Identification of potential impacts to receiving watercourses
- ☐ Identification of municipal drains and related approval requirements.
- ☒ Descriptions of how the conveyance and storage capacity will be achieved for the development.
- ☒ 100 year flood levels and major flow routing to protect proposed development from flooding for establishing minimum building elevations (MBE) and overall grading.

- ☐ Inclusion of hydraulic analysis including hydraulic grade line elevations.
- ☒ Description of approach to erosion and sediment control during construction for the protection of receiving watercourse or drainage corridors.
- ☐ Identification of floodplains – proponent to obtain relevant floodplain information from the appropriate Conservation Authority. The proponent may be required to delineate floodplain elevations to the satisfaction of the Conservation Authority if such information is not available or if information does not match current conditions.
- ☐ Identification of fill constraints related to floodplain and geotechnical investigation.

4.5 Approval and Permit Requirements: Checklist

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

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

4.6 Conclusion Checklist

- ☒ Clearly stated conclusions and recommendations
- ☐ Comments received from review agencies including the City of Ottawa and information on how the comments were addressed. Final sign-off from the responsible reviewing agency.
- ☒ All draft and final reports shall be signed and stamped by a professional Engineer registered in Ontario