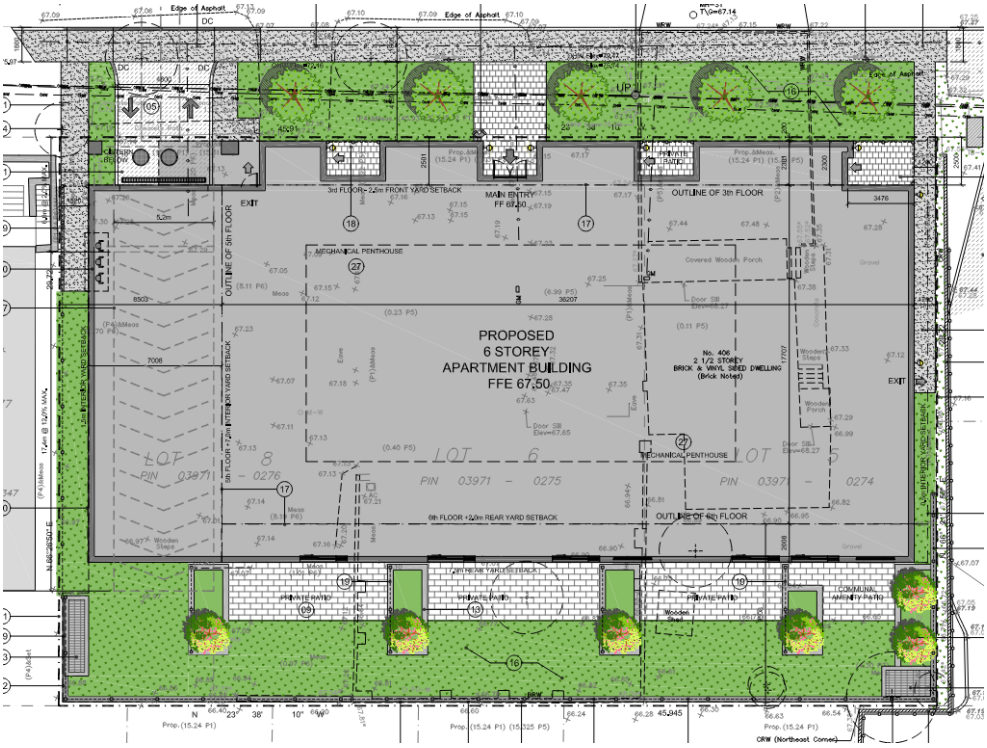
SERVICING & STORMWATER MANAGEMENT REPORT
398-406 ROOSEVELT AVENUE, OTTAWA



Site Plan by RLA

Project No.: CCO-22-3302

City File No.: D07-12-17-0171

Prepared for:

ML Westboro Realty Investments Inc.
c/o Maureen Flanigan, VP Real Estate
651 Churchill Avenue North
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April 6th, 2022

Rev: July 29, 2024

McINTOSH PERRY

egis GROUP

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1.0 PROJECT DESCRIPTION

1.1 Purpose

Egis Canada Ltd. has been retained by ML Westboro Realty Investments Inc to prepare this Servicing and Stormwater Management Report in support of the Site Plan Control application processes for the proposed development located at 398-406 Roosevelt Avenue within the City of Ottawa.

The main purpose of this report is to present a servicing and stormwater management design for the development in accordance with the recommendations and guidelines provided by the City of Ottawa (City), the Rideau Valley Conservation Authority (RVCA), and the Ministry of the Environment, Conservation and Parks (MECP). This report will address the water, sanitary and storm sewer servicing for the development, ensuring that existing and available services will adequately service the proposed development.

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

- CCO-22-3302, C101 – Grading, Drainage and Erosion & Sediment Control Plan
- CCO-22-3302, C102 – Site Servicing Plan
- CCO-22-3302, PRE – Pre-Development Drainage Area Plan (***Appendix E***)
- CCO-22-3302, POST – Post-Development Drainage Area Plan (***Appendix F***)

1.2 Site Description

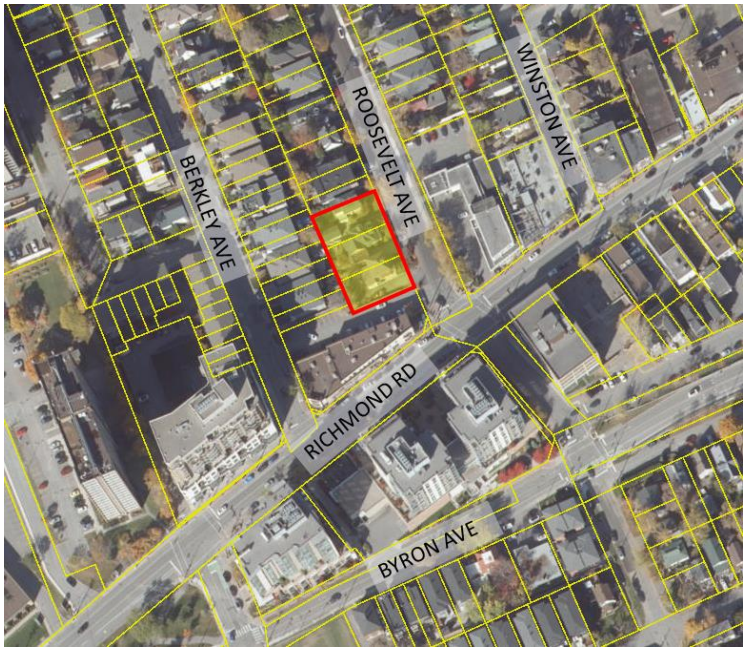


Figure 1: Site Map

The subject property, herein referred to as the site, is located at 398-406 Roosevelt Avenue within the Kitchissippi Ward. The site covers approximately ***0.14 ha*** and is located north of the Roosevelt Avenue and Richmond Road intersection. The site is zoned for Residential Fifth Density use (R5B). See Site Location Plan in ***Appendix A*** for more details.

1.3 Proposed Development and Statistics

The proposed development consists of a 6-storey residential apartment building. The building will contain ***62*** residential units. Underground parking will be provided with access from Roosevelt Avenue. Refer to ***Site Plan*** prepared by Roderick Lahey Architects (RLA) in ***Appendix B*** for further details.

1.4 Existing Conditions and Infrastructures

The site currently contains three single family homes with asphalt & interlock driveways and landscaped areas. The site currently drains from the northeast to southwest corner of the site.

Sewer and watermain mapping collected from the City of Ottawa indicate that the following services exist across the property frontages within the adjacent municipal rights-of-way(s):

- Roosevelt Road
  - 150 mm diameter unlined cast iron watermain,
  - 300 mm diameter concrete sanitary sewer tributary to the West Nepean Trunk collector sewer, and
  - A 300 mm diameter concrete storm sewer tributary to the Ottawa River approximately 633 m downstream.

1.5 Approvals

The proposed development is subject to the City of Ottawa site plan control process. Site plan control requires the City to review, provided concurrence and approve the engineering design package. Permits to construct can be requested once the City has issued a site plan agreement.

An Environmental Compliance Approval (***ECA***) through the Ministry of Environment, Conservation and Parks (***MECP***) is not required for the development since the parcels of land are anticipated to be amalgamated into a single parcel. As a result, the stormwater management system meets the exemption requirements under O. Reg 525/90. DSEL pre-consulted with the MECP on December 17th, 2017, confirming that the subject site is exempt from sections 53(1) and (30 of the Ontario Water Resources Act under Ontario Regulation 525/98.

2.0 BACKROUND STUDIES, STANDARDS, AND REFERENCES

2.1 Background Reports / Reference Information

As-built drawings of existing services, provided by the City of Ottawa Information centre, within the vicinity of the proposed site were reviewed in order to identify infrastructure available to service the proposed development.

A topographic survey (19693-17) of the site was completed by Annis, O'Sullivan, Vollebekk Ltd and dated October 18th, 2017.

The Site Plan (SP-1) was prepared by Roderick Lahey Architects and dated June 22nd, 2024 (***Site Plan***).

The initial engineering application was prepared by DSEL (17-986) and was submitted to City staff in December 2017. Pre-consultation requirements have been applied to the current engineering site design.

2.2 Applicable Guidelines and Standards

City of Ottawa:

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

Ministry of Environment, Conservation and Parks:

- Stormwater Planning and Design Manual, Ministry of the Environment, March 2003. ***(MECP Stormwater Design Manual)***

- Design Guidelines for Sewage Works, Ministry of the Environment, 2008. (***MECP Sewer Design Guidelines***)

3.0 PRE-CONSULTATION SUMMARY

The original pre-consultation meeting was held with City staff on October 2nd, 2017, regarding the proposed site servicing. Specific design parameters to be incorporated within this design include the following:

- Pre-development and post-development flows shall be calculated using a time of concentration (Tc) no less than 10 minutes.
- Control 5 through 100-year post-development flows to the 5-year pre-development flows with a combined C value to a maximum of 0.50.
- Quality controls are not required for this site due to the development design, as per RVCA requirements.

An updated pre-consultation meeting was held with City staff on September 8th, 2023, regarding the proposed development changes. City staff noted that the civil plans and studies are to be revised as required.

4.0 WATERMAIN

4.1 Existing Watermain

There is an existing 152 mm diameter UCI watermain within Roosevelt Avenue. The site is located within the 1W pressure zone, as per the Water Distribution System mapping included in ***Appendix C***. There are two municipal fire hydrants along Roosevelt Avenue and one hydrant along Berkley Avenue (west) available to service the development.

4.2 Proposed Watermain

It is proposed to service the development via a 150 mm diameter service with a water valve located at the property line. The watermain is designed to have a minimum of 2.4 m cover. Refer to drawing ***C102*** for a detailed servicing layout.

The Fire Underwriters Survey 2020 (FUS) method was utilized to estimate the required fire flow for the site. Fire flow requirements were calculated per City of Ottawa Technical Bulletin ***ISTB-2018-03***. The following parameters were coordinated with the architect:

- Type of construction – Non-Combustible Construction
- Occupancy Type – Limited Combustibility
- Sprinkler Protection – Supervised Sprinkler System

The results of the calculations yielded a required fire flow of ***8,000 L/min*** (133.33 L/s). The detailed calculations for the FUS can be found in ***Appendix C***.

The water demands for the proposed building have been calculated to adhere to the ***Ottawa Water Guidelines*** and can be found in ***Appendix C***. The results have been summarized below:

Table 1: Water Supply Design Criteria and Water Demands

Site Area	0.137 ha
Residential	280 L/person/day
Bachelor/1 Bedroom Apartment	1.4 persons/unit
2 Bedroom Apartment	2.1 persons/unit
3 Bedroom Apartment	3.1 persons/unit
Maximum Daily Peaking Factor	9.5 x avg day
Maximum Hour Peaking Factor	14.3 x max day
Average Day Demand (L/s)	0.35
Maximum Daily Demand (L/s)	3.36
Peak Hourly Demand (L/s)	5.05
FUS Fire Flow Requirement (L/s)	133.33 (8,000 L/min)

In accordance with Section 4.3.1 of the ***Ottawa Water Guidelines***, service areas with a basic day demand greater than 50 m^3/day require a dual connection to the municipal system. The basic day demand for the development is estimated to be ***30.5 m^3/day***, therefore a dual connection is not required.

The City provided the estimated water pressures at both for the average day scenario, peak hour scenario and the max day plus fire flow scenario for the demands indicated by the correspondence in ***Appendix C***. The resulting pressures for the boundary conditions results are shown in ***Table 2***, below.

Table 2: Boundary Conditions Results

Scenario	Proposed Demands (L/s)	Connection 1 HGL (m H_2O)*/kPa
Average Day Demand	0.35	47.8 / 468.9
Maximum Daily + Fire Flow Demand	136.69	82 L/s at 138 kPa
Peak Hourly Demand	5.05	41.4 / 406.1
**Adjusted for an estimated ground elevation of 67.2m above the connection point.*		

The normal operating pressure range is anticipated to be 406 kPa to 469 kPa and will not be less than 275 kPa (40 psi) or exceed 689 kPa (100 psi).

National Fire Protection Association (NFPA) standards were utilized to estimate the required fire flow demand for a development with a sprinkler system. In accordance with Section 11.2.2 of the NFPA, fire flow demand requirements are calculated by combining the required flow rate for the sprinkler system and the anticipated hose stream demand. Table 11.2.2.1 and Table 11.2.3.1.2 from the NFPA are included in ***Appendix C***. The anticipated flow rate for the sprinkler system is 3,200 L/min (850 gpm) and the anticipated internal and external combined hose stream demand is 950 L/min (250 gpm). Therefore, it is anticipated that a total fire flow demand of 4,150 L/min (***69.2 L/s***) is required to support the proposed development.

The City indicated that the available fire flow demand at 138 kPa is ***82 L/s*** (4,920 L/min). Based on the NFPA criteria, noted above, a fire flow demand of ***69.2 L/s*** is anticipated for the proposed development sprinkler system indicating that the municipal system can accommodate the development. Actual fire demand will need to be reviewed and confirmed by a fire protection consultant.

To confirm the adequacy of fire flow to protect the proposed development, public fire hydrants within 150 m of the proposed building were analysed per City of Ottawa ***ISTB 2018-02*** Appendix I Table 1. Based on City guidelines (***ISTB-2018-03***), the existing hydrants can provide adequate fire protection to the proposed development. The results are summarized below.

Table 3: Fire Protection Confirmation

Building	Fire Flow Demand (L/min.)	Fire Hydrant(s) within 75m	Fire Hydrant(s) within 150m	Combined Fire Flow (L/min.)
398-406 Roosevelt Ave	8,000 (FUS) 4,150 (NFPA)	2 (FH#1, #2)	1 (FH#3)	15,000

Based on City guidelines (***ISTB-2018-03***), the existing hydrants can provide adequate fire protection to the proposed development.

5.0 SANITARY DESIGN

5.1 Existing Sanitary Sewer

There is an existing 300 mm diameter sanitary sewer within Roosevelt Avenue, fronting the subject site. The subject site currently contributes wastewater to the Roosevelt Avenue sewer system tributary to the West Nepean trunk sewer.

5.2 Proposed Sanitary Sewer

A new 200 mm diameter gravity sanitary service will be connected to the existing 300 mm diameter sanitary sewer. Refer to drawing ***C102*** for a detailed servicing layout.

Table 4, below, summarizes the wastewater design criteria identified by the ***Ottawa Sewer Guidelines***.

Table 4: Sanitary Design Criteria

Design Parameter	Value
Site Area	0.136 ha
Residential	280 L/person/day
1 Bedroom Apartment	1.4 persons/unit
2 Bedroom Apartment	2.1 persons/unit
3 Bedroom Apartment	3.1 persons/unit
Residential Peaking Factor	3.59
Extraneous Flow Allowance	0.33 L/s/ha

Table 5, below, summarizes the estimated wastewater flow from the proposed development. Refer to ***Appendix D*** for detailed calculations.

Table 5: Summary of Estimated Sanitary Flow

Design Parameter	Total Flow (L/s)
Total Estimated Average Dry Weather Flow	0.36
Total Estimated Peak Dry Weather Flow	1.27
Total Estimated Peak Wet Weather Flow	1.31

As noted above, the development is proposed to be serviced via the existing 300 mm diameter sanitary sewer within Roosevelt Avenue.

Capacity of the municipal system was reviewed to demonstrate that the receiving system could accommodate development. Per the wastewater analysis included in ***Appendix D***, the constraining leg of the Roosevelt Avenue sanitary sewer (D to C) is estimated to be at 2.04% capacity and can accommodate an additional ***61.71 L/s*** of wastewater drainage. Therefore, the proposed ***1.31 L/s*** can be collected by the local sewer system. Due to the complexity of the downstream network the City will need to advise of any downstream constraints.

The full flowing capacity of a 200 mm diameter service at a 1% slope is estimated to be ***32.8 L/s***. Per ***Table 5***, a peak wet weather flow of ***1.31 L/s*** will be conveyed within the 200 mm diameter service, therefore the proposed system is sufficient sized for the development.

6.0 STORM SEWER DESIGN

6.1 Existing Storm Sewers

Stormwater runoff from the site is currently tributary to the Ottawa River within the Ottawa Central sub-watershed. There is an existing 300 mm diameter storm sewer within Roosevelt Avenue that is available to service the site. The existing sewer is tributary to the Ottawa River approximately 633 m downstream (outlet ID OUT04490).

6.2 Proposed Storm Sewers

A new 250 mm diameter storm service is proposed to be extended from the existing 300 mm diameter storm sewer within Roosevelt Avenue. The sewer system will provide flow attenuation for the roof area, side yard (north), and private terraces (west) by an internal cistern storage unit complete with a Tempest MHF-A ICD or an approved equivalent. Storage unit details to be provided by building designers.

Foundation drainage is proposed to be conveyed without flow attenuation via the 250 mm diameter storm service downstream of the cistern controls.

See CCO-22-3302 - *POST* include in ***Appendix F*** of this report for more details. The Stormwater Management design for the subject property will be outlined in *Section 7.0* of this report.

7.0 PROPOSED STORMWATER MANAGEMENT

7.1 Design Criteria and Methodology

Stormwater management for the proposed site will be maintained through the use of an internal storage unit and will collect runoff from the at-grade areas within the site. The flow will be directed to the existing 300 mm diameter storm sewer within Roosevelt Avenue.

In summary, the following design criteria have been employed in developing the stormwater management design for the site as directed by the City and the RVCA:

Quality Control

- Based on coordination with the RVCA, quality controls are not required for this site. Refer to ***Appendix B*** for pre-consultation with the RVCA.

Quantity Control

- Any storm events greater than 5-year, up to 100-year, and including 100-year storm event must be detained on site.
- Post-development to be restricted to the 5-year storm event, based on a calculated time of concentration greater than 10 minutes and a rational method coefficient of 0.50. Refer to *Section 7.2* for further details.

7.2 Runoff Calculations

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

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

Where: C = Runoff coefficient
I = Rainfall intensity in mm/hr (City of Ottawa IDF curves)
A = Drainage area in hectares

It is recognized that the Rational Method tends to overestimate runoff rates. As a result, the conservative calculation of runoff ensures that any SWM facility sized using this method is expected to function as intended. The following coefficients were used to develop an average C for each area:

Roofs/Concrete/Asphalt	0.90
Undeveloped and Grass	0.20

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

7.3 Pre-Development Drainage

It has been assumed that the site contains no stormwater management controls for flow attenuation. The estimated pre-development peak flows for the 2, 5, and 100-year events are summarized below in ***Table 6***. See CCO-22-3302 - *PRE* in ***Appendix E*** and ***Appendix G*** for calculations.

Table 6: Pre-Development Runoff Summary

Drainage Area	Area (ha)	Q (L/s)	
		5-Year	100-Year
A1	0.136	25.24	50.95

7.4 Post-Development Drainage

To meet the stormwater objectives the development will contain flow attenuation via internal cistern storage. Based on the criteria listed in *Section 7.2.1*, the development will be required to restrict flow to the 5-year storm event. It is estimated that the target release rate during the 100-year event will be ***19.76 L/s***.

The proposed site drainage limits are demonstrated on the Post-Development Drainage Area Plan. See CCO-22-3302 - *POST* in ***Appendix F*** of this report for more details. A summary of the post-development runoff calculations can be found below.

Table 7: Post-Development Runoff Summary

Drainage Area	Area (ha)	5-year Peak Flow (L/s)	100-year Peak Flow (L/s)	100-year Storage Required (m^3)	100-year Storage Available (m^3)
B1	0.132	9.26	17.74	24.45	35.9
B2	0.004	1.06	2.02	-	-
Total	**0.136**	**10.32**	**19.76**	**24.45**	**36.87**

Runoff for area B1 will be collected by roof drains (uncontrolled) and surface drains and conveyed to the internal cistern. The ***24.45 m^3*** internal storage unit is anticipated to pump stormwater to the outlet, complete with a Tempest MHF A ICD, at a maximum flow rate of ***17.74 L/s***. Based on coordination with City staff, the cistern size has been designed based on a release rate of 8.7 L/s resulting in a total volume of 35.9 m^3 required. Flows in excess of the 100-year storm event will need to be directed towards Roosevelt Avenue via a cistern overflow. Detailed calculations and cistern detail prepared by JRP are included in ***Appendix G***.

Foundation drainage is proposed to be conveyed without flow attenuation via the 250 mm storm service, downstream of cistern controls.

8.0 EROSION AND SEDIMENT CONTROL

8.1 Temporary Measures

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

Silt fences will be installed where shown on the final engineering plans, specifically along the downstream property limits. The Contractor, at their discretion or at the instruction of the City, Conservation Authority or the Contract Administrator shall increase the quantity of sediment and erosion controls on-site to ensure that the site is operating as intended and no additional sediment finds its way off site. The rock flow, straw bale & silt fence check dams and barriers shall be inspected weekly and after rainfall events. Care shall be taken to properly remove sediment from the fences and check dams as required. Fibre roll barriers are to be installed at all existing curb inlet catch basins and filter fabric is to be placed under the grates of all existing catch basins and manholes along the frontage of the site and any new structures immediately upon installation. The measures for the existing/proposed structures is to be removed only after all areas have been paved. Care shall be taken at the removal stage to ensure that any silt that has accumulated is properly handled and disposed of. Removal of silt fences without prior removal of the sediments shall not be permitted.

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

8.2 Permanent Measures

It is expected that the Contractor will promptly ensure that all disturbed areas receive topsoil and seed/sod and that grass be established as soon as possible. Any areas of excess fill shall be removed or levelled as soon as possible and must be located a sufficient distance from any watercourse to ensure that no sediment is washed out into the watercourse. As the vegetation growth within the site provides a key component to the control of sediment for the site, it must be properly maintained once established. Once the construction is complete, it will be up to the landowner to maintain the vegetation and ensure that the vegetation is not overgrown or impeded by foreign objects.

9.0 SUMMARY

- A 6-storey residential apartment building is proposed to be constructed at 398-406 Roosevelt Avenue.
- A single 150 mm diameter water service is proposed to be connected to the existing 152 mm diameter watermain within Roosevelt Avenue.
- A new 200 mm sanitary service is proposed to service the development via the 300 mm diameter sanitary sewer within Roosevelt Avenue tributary to the West Nepean trunk.
- A new 250 mm storm service for rooftop, surface, and foundation drainage is proposed to service the development. The storm service will connect to the 300 mm diameter storm sewer within Roosevelt Avenue, tributary to the Ottawa River approximately 633 m downstream.
- Storage for the 5- through 100-year storm events will be provided through internal cistern attenuation.
- Quality controls are not required for the development, as confirmed by the RVCA.

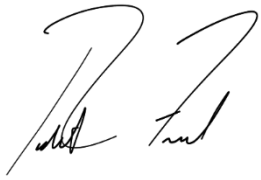
10.0 RECOMMENDATION

Based on the information presented in this report, we recommend that City of Ottawa approve this Servicing and Stormwater Management report in support of the proposed development at 398-406 Roosevelt Avenue.

This report is respectfully being submitted for approval.

Regards,

Egis Canada Ltd.



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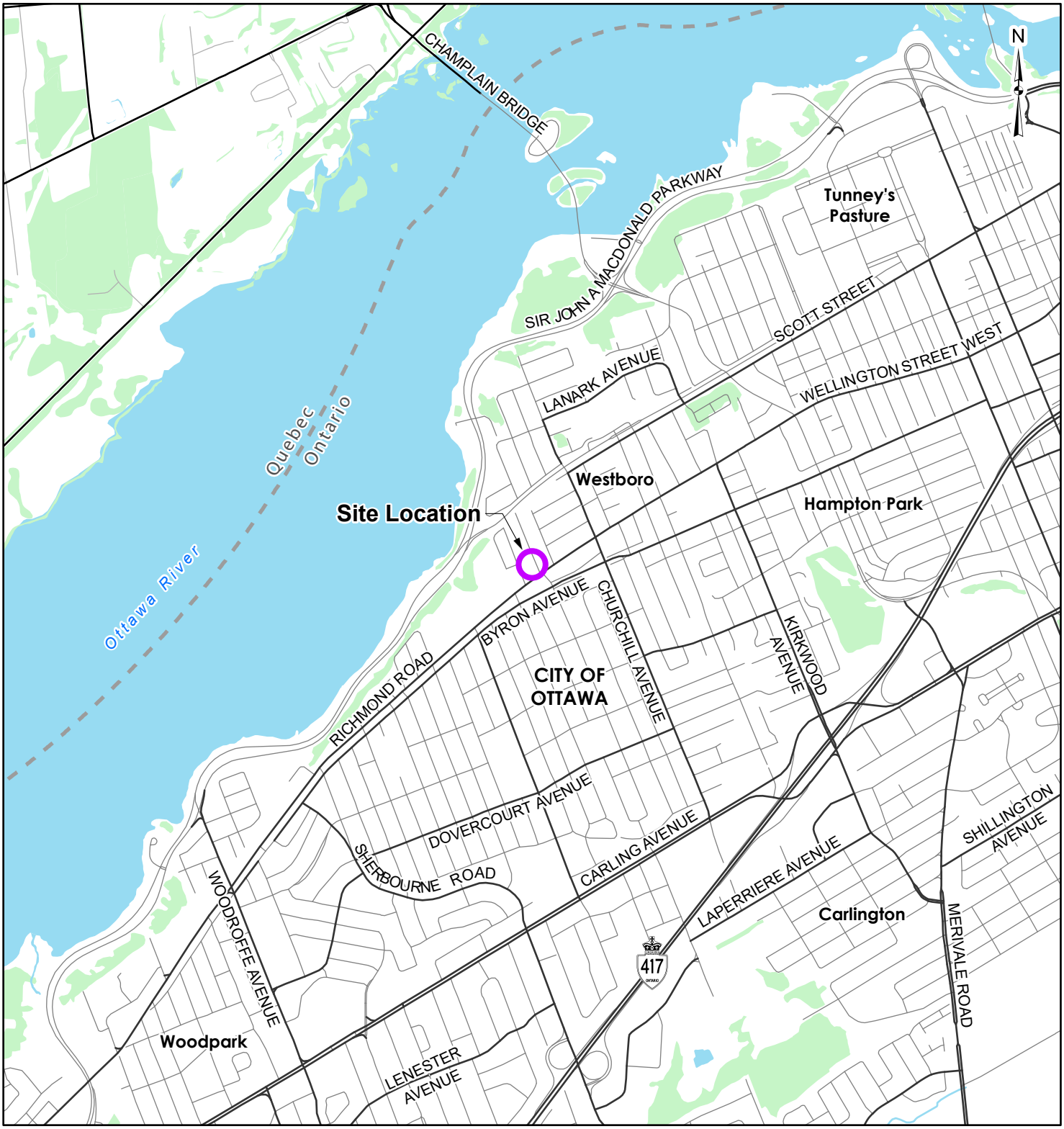
11.0 STATEMENT OF LIMITATIONS

This report was produced for the exclusive use of ML Westboro Realty Investments Inc. The purpose of the report is to assess the existing stormwater management system and provide recommendations and designs for the post-construction scenario that are in compliance with the guidelines and standards from the Ministry of the Environment, Parks and Climate Change, City of Ottawa and local approval agencies. Egis Canada Ltd. reviewed the site information and background documents listed in Section 2.0 of this report. While the previous data was reviewed by Egis Canada Ltd. and site visits were performed, no field verification/measures of any information were conducted.

Any use of this review by a third party, or any reliance on decisions made based on it, without a reliance report is the responsibility of such third parties. Egis Canada Ltd. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions or actions made based on this review.

The findings, conclusions and/or recommendations of this report are only valid as of the date of this report. No assurance is made regarding any changes in conditions subsequent to this date. If additional information is discovered or becomes available at a future date, Egis Canada Ltd. should be requested to re-evaluate the conclusions presented in this report, and provide amendments, if required.

APPENDIX A
KEY PLAN



LEGEND

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

600 300 0 600

Scale 1:25,000 Metres

REFERENCE

GIS data provided by the Ontario Ministry of Natural Resources and Forestry, 2021.

CLIENT:
ML WESTBORO REALTY INVESTMENTS INC.

PROJECT:
398-406 ROOSEVELT AVENUE, OTTAWA, ON

TITLE:
SITE LOCATION

McINTOSH PERRY
egis GROUP
115 Walgreen Rd. Carp, ON K0A 1L0
Tel: 613-836-2184 Fax: 613-836-3742
www.McIntoshPerry.com

PROJECT NO:	CCO-22-3302
Date	Dec., 07, 2021
GIS	EU
Checked By	AG

FIGURE: 1

APPENDIX B
BACKGROUND DOCUMENTS

File No.: PC2023-0215

Tyler Yakichuk
Fotenn Planning + Design
Via email: yakichuk@fotenn.com

Subject: **Pre-Consultation: Meeting Feedback**
Proposed Site Plan Revision Application – 398, 402, & 406 Roosevelt Ave

Please find below information regarding next steps as well as consolidated comments from the above-noted pre-consultation meeting held on September 8, 2023.

Pre-Consultation Preliminary Assessment

1 ☐	**2** ☐	**3** ☐	**4** ☒	**5** ☐

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

Next Steps

1. A review of the proposal and materials submitted for the above-noted pre-consultation has been undertaken. Please proceed to complete a Phase 3 Pre-consultation Application Form and submit it together with the necessary studies and/or plans to planningcirculations@ottawa.ca.

2. In your subsequent pre-consultation submission, please ensure that all comments or issues detailed herein are addressed. A detailed cover letter stating how each issue has been addressed must be included with the submission materials. Please coordinate the numbering of your responses within the cover letter with the comment number(s) herein.

3. Please note, if your development proposal changes significantly in scope, design, or density before the Phase 3 pre-consultation, you may be required to complete or repeat the Phase 2 pre-consultation process.

Supporting Information and Material Requirements

1. The attached **Study and Plan Identification List** outlines the information and material that has been identified, during this phase of pre-consultation, as either required (R) or advised (A) as part of a future complete application submission.

a. The required plans and studies must meet the City's Terms of Reference (ToR) and/or Guidelines, as available on Ottawa.ca. These ToR and Guidelines outline the specific requirements that must be met for each plan or study to be deemed adequate.

Consultation with Technical Agencies

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

Planning

Questions

1. In the initial design, there was a greater effort to provide for a larger public realm and setback from the front lot line. Understanding that the zoning does not require a zoning setback, I am looking to confirm what has led to the changes to build to the lot line and comment on the loss of pedestrian realm. In review of the initial zoning report – it was outlined that *"as part of the site redevelopment, enhancement of the public realm is proposed through extension of the sidewalk along the site's frontage, installation of public bicycle parking, shrub and tree plantings, and street furniture*" – how has this been maintained?

   Response – We initially set the building back to allow for balcony projections, not for provision of public realm.

2. How have the proposed changes affected the provisions of landscaping/amenity area on the site?

   a. With the removal/resizing of the outdoor terrace at the rear yard – are there any deficiencies for amenity area?

      Response: No

   b. Will the privacy fence in the rear yard remain? It is not shown on the updated plans.

      Response: It is to remain but will be redesigned. We are trying to maintain the greenery and will be fine tuning further in the revisions, will be shown on the finalized Landscape Plan.

   c. Regarding the "communal" terraces facing east (front yard) on the new floor plans, please confirm if there will be partitions as the plans seem to indicate as such. If they are communal, where would access be and how will privacy of residents be addressed?

      Response: There will be partitions, therefore private.

3. What has led to the increased units – what space was removed/adjusted to accommodate?

   Response: Reduce lobby area, added common area at back, redistribution of unit size.

4. Is there any zoning relief requested?

   Response: No, we are not wanting to rely on any zoning processes. We have discussed with the Councillor and they were supportive of the change.

5. What is the intention for the hydro lines at the front lot line? Are they to be buried?

   Response: They are to be buried – already in progress.

6. Are there going to be any affordable units?

   Response: Looking to have seven affordable rental units.

Comments

Official Plan

1. Section 3.0 Table 3b) of the Official Plan outlines the framework for the inner urban transect, requiring a large-family household target of 5% for mid-rise buildings.

Zoning By-law

2. Confirm that all bike lock-ups and storage areas conform to Section 111 of the Zoning By-law. In particular, that the requirements of Sec 111(11) are being met.
3. Ensure that amenity areas are in conformity with zoning requirements. Please consider a meaningful outdoor communal amenity space for residents to enjoy at-grade in the rear-yard, understanding that there has been a shift from luxury condo units to smaller rental units which are not afforded as much space or private amenity space.
4. Ensure that appropriate landscaped area is being provided as per 163 (9), which requires 30% landscaped area.
5. Ensure zoning conformity and include a zoning table on the SP which shows how the provisions have been met.

Feel free to contact Jack Smith - Planner I, or John Bernier - Planner II, for follow-up questions.

Urban Design

Submission Requirements

1. Urban Design Brief is required. Please see attached TOR for convenience.
    a. The Urban Design Brief should be structured by generally following the headings highlighted under Section 3 – Contents of these Terms of Reference.
    b. Given that this is a site plan revision, and that the approved site plan was subject to extensive review, and that the revision is significant yet in conformity with the OLT approved zoning, it is important to describe, illustrate, and document changes (design evolution) in the Urban Design Brief.
    c. Other contents such as policy compliance, site context, etc, are not required.
2. Please refer to relevant Terms of Reference available on the City's website (Planning application submission information and materials | City of Ottawa) to prepare additional drawings and studies required, including:
    a. Site Plan
    b. Landscape Plan
    c. Building Elevations

UDRP review

3. The development on these sites has a complex history. The initial development proposal was subject to UDRP review at the rezoning stage even though it was not within a Design Priority Area. A decision on zoning was made by OLT subsequently with conditions for site plan. The previously approved site plan was not subject to UDRP. The proposed revision, though significant comparing with the approved, is in conformity with the zoning and includes elements that supports built form compatibility. It is therefore agreeable that a return to the UDRP is not required.

Revised Design

4. The revised design now has a larger footprint. The building is closer to the street. However, it is in conformity with the zoning.
5. It has been clarified by the project architect that the location of the parking ramp has not changed. The building structure above the parking ramp (the second-floor unit), however, has been brought forward. Whether or not the unit above the parking ramp can effectively screen the garage door as claimed is a question that requires further study. The transition between the proposed development, which sits right on the property line, and the existing building to the immediate north is important. Please study and provide perspective views from the streets and the abutting lot to the immediate north.
6. The newly introduced two-storey building volume along the street provides an opportunity for built form compatibility with the rest of the street. Considerations should be given to differentiated materials between the two-storey volume and floors above it. The two-storey volume should support the residential character of the street.

7. The removal of the balcony canopies on the top floor is helpful to create a more "refrained" background building.
8. The private patios of the ground floor units facing the streets appear to be leveled with the sidewalk. As a general principle, a few steps of grade difference can make these patios more user friendly to residents as well as to pedestrians on the sidewalk.
9. Rear yard landscaping should be further explored. Effective landscaping screening as originally intended should be provided.
10. It is delighted to hear that hydro has been buried as part of the condition for rezoning. Tree planting is possible along the street.

Feel free to contact Randolph Wang, Urban Designer, for follow-up questions.

Engineering

1. All previously approved Environmental, Noise and Civil Studies / Plans are to be revised, or at minimum, the consultant is to provide an engineering memo speaking to new proposal and demonstrate why a revision is not necessary.

Feel free to contact Shawn Wessel or John Wu, Infrastructure Project Managers, for follow-up questions.

Transportation

1. The RMA-2022-TPD-024 had been approved June 14, 2022. Please proceed with the Detailed Design Drawings.

2. The Screening Form has indicated that both the Location Triggers and Safety Triggers have been met. Please proceed with the TIA Step 2 – Scoping as per the revised TIA Guidelines.

3. Please review the revised TIA Guidelines and revised Screening Form.

4. *The following documents the process conducted for the Traffic Impact Assessment (TIA) Guidelines review and the recommended changes to the guidelines to maximize the likelihood of meeting the review timelines associated with Bill 109.*
    a. Revisions to Traffic Impact Assessment Guidelines (ottawa.ca).
    b. City of Ottawa TIA Guidelines Certification and Screening Form.

5. The Owner acknowledges and agrees that all private accesses to Roads shall comply with the City's Private Approach By-Law being By-Law No. 2003-447 as amended https://ottawa.ca/en/living-ottawa/laws-licences-and-permits/laws/law-z/private-approach-law-no-2003-447 or as approved through the Site Plan control process.

6. The Owner shall be required to enter into maintenance and liability agreement for all pavers, plant and landscaping material placed in the City right-of-way and the Owner shall assume all maintenance and replacement responsibilities in perpetuity.

7. Bicycle parking spaces are required as per Section 111 of the Ottawa Comprehensive Zoning By-law. Bicycle parking spaces should be in safe, secure places near main entrances and preferably protected from the weather.

8. Should the property Owner wish to use a portion of the City's Road allowance for construction staging, prior to obtaining a building permit, the property Owner must obtain an approved Traffic Management Plan from the Manager, Traffic Management, Transportation Services Department. The city has the right for any reason to deny use of the Road Allowance and to amend the approved Traffic Management Plan as required.

Feel free to contact Wally Dubyk, Transportation Project Manager, for follow-up questions.

Environment and Trees

Forestry Comments

1. Please ensure the following minimum setback are respected:
    a. Maintain 1.5m from sidewalk or MUP/cycle track or water service laterals.
    b. Maintain 2.5m from curb.

2. Maintain 7.5m between large growing trees, and 4m between small growing trees. Park or open space planting should consider 10m spacing, except where otherwise approved in naturalization / afforestation areas. Adhere to Ottawa Hydro's planting guidelines (species and setbacks) when planting around overhead primary conductors.

3. Tree specifications
    a. Minimum stock size: 50mm tree caliper for deciduous, 200cm height for coniferous.
    b. Maximize the use of large deciduous species wherever possible to maximize future canopy coverage.

4. Tree planting on city property shall be in accordance with the City of Ottawa's Tree Planting Specification; and if possible, include watering and warranty as described in the specification.

5. No root barriers, dead-man anchor systems, or planters are permitted.

6. No tree stakes unless necessary (and only 1 on the prevailing winds side of the tree)

7. Hard surface planting
    a. If there are hard surface plantings, a planting detail must be provided.
    b. Curb style planter is highly recommended.
    c. No grates are to be used and if guards are required, City of Ottawa standard (which can be provided) shall be used.
    d. Trees are to be planted at grade

8. Soil Volume
    a. Please demonstrate as per the **Landscape Plan Terms of Reference** that the available soil volumes for new plantings will meet or exceed the following:

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

    b. It is suggested that the proposed species list include a column listing the available soil volume.
9. The City requests that consideration be given to planting native species where ever there is a high probability of survival to maturity.

10. Efforts shall be made to provide as much future canopy cover as possible at a site level, through tree planting and tree retention. The Landscape Plan shall show/document that the proposed tree planting and retention will contribute to the City's overall canopy cover over time. Please provide a projection of the future canopy cover for the site to 40 years.

Feel free to contact Mark Richardson, Planning Forester, for follow-up questions.

Environmental Comments

1. Bird-Safe Design Guidelines: Review and incorporate design elements from the Bird Safe Design Guidelines into the proposal; demonstrate compliance in Elevations.

2. Plant as much as possible, locally appropriate native vegetation (Trees, shrubs and plants) on the southern and western property edges to block sun & provide shade; it will also contribute to canopy cover

Feel free to contact Sami Rehman, Environmental Planner, for follow-up questions.

Parkland

1. Parkland dedication requirements were satisfied through the original site plan application. Parks staff have no comments on this revision application.

Feel free to contact Kimberley Baldwin, Parks Planner, for follow-up questions.

Other

1. The High Performance Development Standard (HPDS) is a collection of voluntary and required standards that raise the performance of new building projects to achieve sustainable and resilient design. The HPDS was passed by Council on April 13, 2022.

    a. At this time, the HPDS is not in effect and Council has referred the 2023 HPDS Update Report back to staff with direction to bring forward an updated report to Committee with recommendations for revised phasing timelines, resource requirements and associated amendments to the Site Plan Control By-law by no later than Q1 2024.

    b. Please refer to the HPDS information attached and ottawa.ca/HPDS for more information.

Submission Requirements and Fees

1. Please proceed to prepare submission for a Phase 3 Pre-Consultation.
    a. Additional information regarding fees related to planning applications can be found here.
2. The attached **Study and Plan Identification List** outlines the information and material that has been identified as either required (R) or advised (A) as part of a future complete application submission.
    a. The required plans and studies must meet the City's Terms of Reference (ToR) and/or Guidelines, as available on Ottawa.ca. These ToR and

Guidelines outline the specific requirements that must be met for each plan or study to be deemed adequate.

3. All of the above comments or issues should be addressed to ensure the effectiveness of the application submission review.

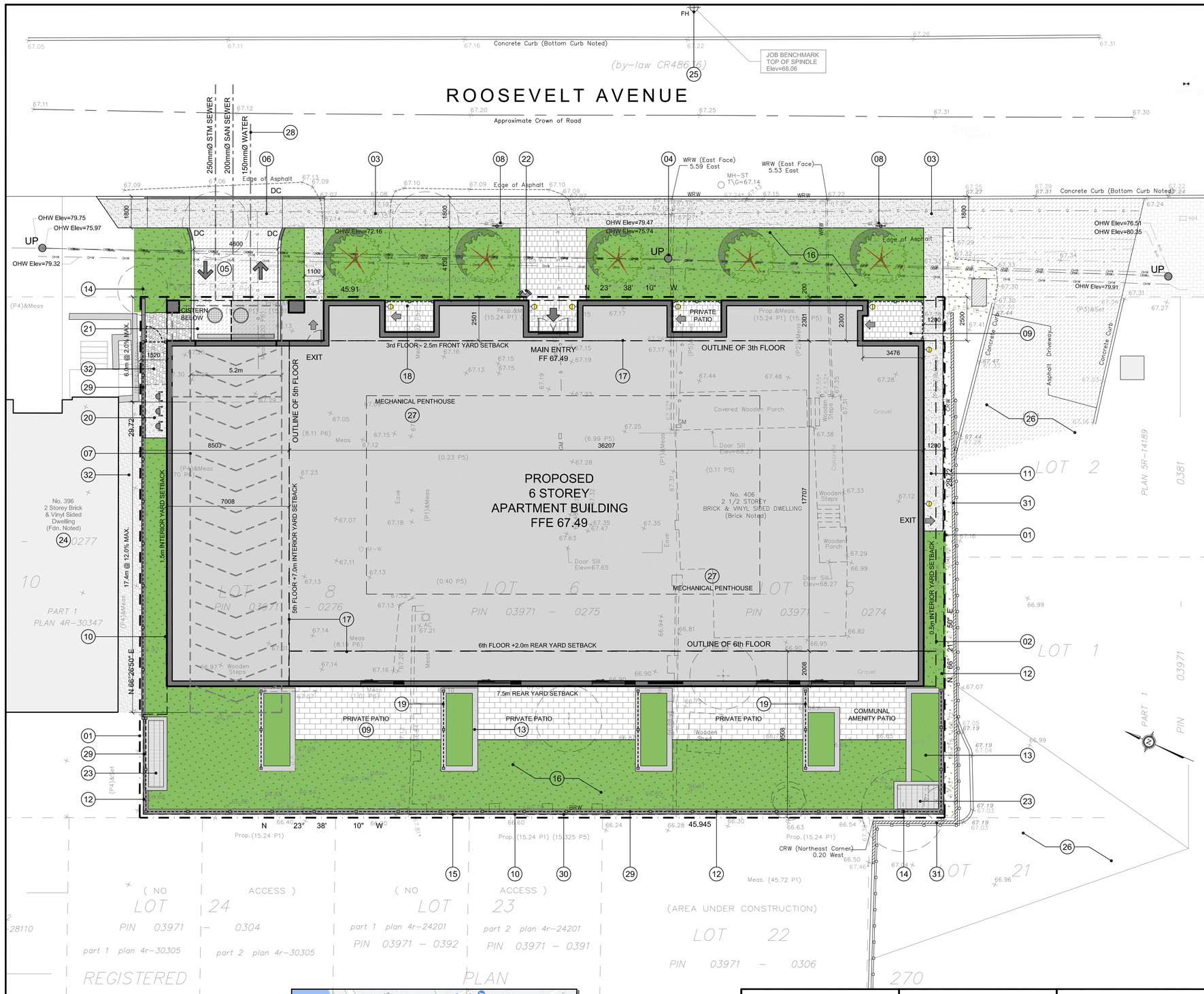
Should there be any questions, please do not hesitate to contact myself or the contact identified for the above areas / disciplines.

Yours Truly,

Jack Smith, Planner I

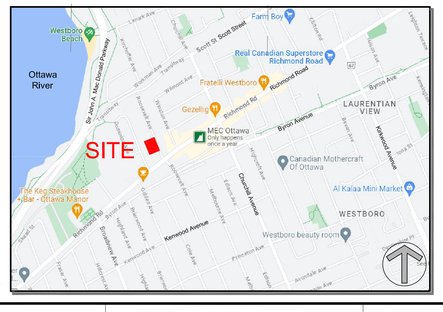
cc.

John Bernier, Planner II
John Wu, Senior Engineer (Infrastructure Project Manager)
Shawn Wessel, Infrastructure Project Manager
Wally Dubyk, Transportation Project Manager
Mark Richardson, Planning Forester
Sami Rehman, Environmental Planner
Kim Baldwin, Parks Planner



1 SITE PLAN
SP-1
SCALE = 1 : 100

0m 5 10
BAR SCALE



KEY MAP

PROJECT INFORMATION

Zoning By-law 2008-250 Consolidation R5B [2472] H(21.0) SITE AREA 0.1365 ha. 1,364.5 sq. m. (14,687) sq. ft.

ZONING	REQUIRED	PROVIDED
BUILDING HEIGHT	6 STOREY'S / 21,0m	6 STOREY'S / 20,8m
GRADE (GEODETIC ELEVATION - ASL)	(GEO, ELEV.) 67,40	(GEO, ELEV.) 67,40
FRONT YARD SETBACK	0,0m	0.2m
FRONT YARD SETBACK ABOVE 2nd STOREY + 2,5m	2,5m	2.5m
INTERIOR YARD SETBACK - SOUTH	0,5m	1.2m
INTERIOR YARD SETBACK - NORTH	1,5m	1.5m
INTERIOR YARD SETBACK - NORTH ABOVE 4th FLOOR + 7,0m	8,5m	8.5m
REAR YARD SETBACK	7,5m	7.5m
REAR YARD SETBACK - ABOVE 5th FLOOR + 2,0m	9,5m	9.5m
AMENITY AREA - TOTAL PER UNIT - 6,0m²	372m²	617m²
VEHICLE PARKING - RESIDENTIAL (AFTER 12 UNITS - 0,5 per unit)	25	25
VEHICLE PARKING - VISITOR ONLY (AFTER 12 UNITS - 0,1 per unit)	5	5
BICYCLE PARKING - RESIDENTIAL - 0,5 PER UNIT	31	78
DRIVEWAY WIDTH - MINIMUM	4,5m	4.8m
AISLE WIDTH - MINIMUM	5,2m	6,0m

DRAWING NOTES

1. PROPERTY LINE
2. BUILDING SETBACKS
3. 1,8m WIDE CITY SIDEWALK & BARRIER CURB
4. EXISTING HYDRO POLES TO BE BURIED AS AGREED UPON WITH OTTAWA HYDRO
5. ENTRANCE DRIVEWAY WITH 150 BARRIER CURBS
6. CONTINUOUS DEPRESSED SIDEWALK THROUGH DRIVE
7. INTERNAL PARKING GARAGE RAMP WITH TRENCH DRAIN
8. RINGED BOLLARD BICYCLE RACK
9. PRIVATE TERRACE AT GRADE
10. OUTLINE OF UNDERGROUND PARKING LEVEL
11. HARD SURFACE WALKWAY
12. LOW RETAINING WALL
13. RAISED PLANTER
14. EXISTING TREE TO BE REMOVED
15. EXISTING CHAIN LINK TO BE REMOVED
16. SOFT LANDSCAPING
17. OUTLINE OF BUILDING ABOVE
18. BALCONY ABOVE
19. PRIVACY SCREEN
20. 1,2m X 3,0m CONCRETE PAD FOR GAS EQUIPMENT, EXACT LOCATION TO BE CONFIRMED
21. STORM WATER TANK WITH ACCESS COVER & OVERFLOW CATCH BASIN - SEE CIVIL PLAN
22. SIAMESE CONNECTION
23. AIR INTAKE / EXHAUST GRILL
24. EXISTING BUILDING ON ADJACENT LAND
25. EXISTING FIRE HYDRANT
26. EXISTING ASPHALT PARKING AREA ON ADJACENT LAND
27. OUTLINE OF MECHANICAL PENTHOUSE
28. PROPOSED SERVICES
29. PRIVACY FENCE 2.1m MAX. HEIGHT FROM GRADE
30. EXISTING RETAINING WALL TO BE REMOVED
31. EXISTING CURB AND 1,5m HT. SOLID WOOD FENCE ON ADJACENT PROPERTY
32. RIVER STONE SURFACE, EXISTING / PROPOSED

SITE PLAN SYMBOLS

- UNIT PAVERS SURFACE
- CONCRETE WALK
- ASPHALT WALK / DRIVEWAY
- SOFT LANDSCAPING
- BIKE RACK
- TWO WAY VEHICLE CIRCULATION
- MAIN ENTRANCE
- COMMERCIAL DOOR / FIRE EXIT
- PROPERTY LINE
- CITY STREET LIGHTING

PROJECT STATISTICS

GROSS BUILDING - AREAS (CITY OF OTTAWA ZONING AREA)

PARKING LEVEL		0,0 sq. m, 000 sq. ft.
GROUND FLOOR		473,8 sq. m, 5,100 sq. ft.
2nd FLOOR		776,2 sq. m, 8,355 sq. ft.
3rd & 4th FLOOR	2 x 710.6 sq. m, 2 x 7,649 sq. ft.	1,421,2 sq. m, 15,298 sq. ft.
5th FLOOR		588,5 sq. m, 6,335 sq. ft.
6th FLOOR		514,4 sq. m, 5,573 sq. ft.
MECHANICAL PENTHOUSE		0,0 sq. m, 000 sq. ft.
TOTAL AREA		3,774,2 sq. m, 40,625 sq. ft.

UNIT STATISTICS

STUDIO UNIT	12
ONE BEDROOM UNIT	12
ONE BEDROOM + DEN UNIT	11
TWO BEDROOM UNIT	25
THREE BEDROOM UNIT	2
TOTAL	62

CAR PARKING

REQUIRED by ZONING BY-LAW

RESIDENCE	- 0,5 PER DWELLING UNIT (AFTER 12 UNITS)	25
VISITOR	- 0,1 PER DWELLING UNIT (AFTER 12 UNITS)	5
TOTAL		30

PROVIDED

RESIDENCE	- 0,24 PER DWELLING UNIT	25
VISITOR	- 0,08 PER DWELLING UNIT	5
TOTAL		30

BICYCLE PARKING

REQUIRED

RESIDENCE	- 0.5 PER UNIT (62 UNITS)	31

PROVIDED

INTERIOR - P1 LEVEL	- 1,0 PER UNIT (62 UNITS)	65
EXTERIOR - ON CITY SIDEWALK		2
TOTAL		67

LOT COVERAGE

PAVED SURFACE =	10,2 sq, m,	0,7%
BUILDING FOOTPRINT =	910,5 sq, m,	66,7%
LANDSCAPE OPEN SPACE =	443,8 sq, m,	32,6%
TOTAL =	1,364,5 sq, m,	100,0%

AMENITY SPACE

PRIVATE TERRACE AT GRADE =	200,0 sq, m,
COMMUNAL AT GRADE =	80,0 sq, m,
1st FLOOR INDOOR AMENITY =	46,0 sq, m,
3rd FLOOR PRIVATE TERRACE =	78,0 sq, m,
5th FLOOR PRIVATE TERRACE =	85,0 sq, m,
6th FLOOR PRIVATE TERRACE =	58,0 sq, m,
PRIVATE BALCONIES =	70,0 sq, m,
TOTAL =	617,0 sq, m,
REQUIRED - 6,0M² PER UNIT (62) =	372,0 sq, m,

REFUGE REQUIREMENT (62 UNITS)

GARBAGE	- 0,11 PER UNIT	7 YARDS
RECYCLING GMP	- 0,018 PER UNIT	2 YARDS
RECYCLING FIBER	- 0,038 PER UNIT	3 YARDS
COMPOST	- 240L PER 50 UNITS	2

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

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

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

DO NOT SCALE DRAWINGS.

NOTATION SYMBOLS:

- (00) INDICATES DRAWING NOTES, LISTED ON EACH SHEET.
- <00> INDICATES ASSEMBLIE TYPE; REFER TO TYPICAL ASSEMBLIES SCHEDUAL.
- (00) INDICATES WINDOW TYPE; REFER TO WINDOW ELEVATIONS AND DETAILS ON A900 SERIES.
- (000) INDICATES DOOR TYPE; REFER TO DOOR SCHEDULE AND DETAILS ON A900 SERIES.
- 00 DETAIL NUMBER
- TITLE
- SCALE
- DETAIL REFERENCE PAGE
- DETAIL CROSS REFERENCE PAGE

No.	DESCRIPTION	DATE
3	ISSUED FOR OWNER / CONSULTANT REVIEW	Apr. 26, 24
2	ISSUED FOR REVISED DESIGN	Feb. 22, 24

REVISIONS:

ARCHITECT SEAL: ONTARIO ASSOCIATION OF ARCHITECTS — R. RODERICK LAHEY — LICENCE 4375 — SEAL DATE: STAMP DATE

NORTH ARROW:

CLIENT:
ML DEVCO
ML Westboro Inc.
C/O ML DEVCO

ARCHITECT:
rla/architecture
roderick lahey architect inc.
56 beech street, ottawa, ontario K1S 3J6
t. 613.724.9932 f. 613.724.1209 rlaarchitecture.ca

PROJECT TITLE:
THE WESTMOUNT
(398 - 406 ROOSEVELT AVENUE)
OTTAWA ONTARIO

SHEET TITLE:
SITE PLAN

DRAWN: R.V. | CHECKED: R.V.
SCALE: 1:100 | SHEET No. SP-1
PROJECT No. 2122

LEGAL DESCRIPTION

SURVEYOR'S REAL PROPERTY REPORT
PART 1 Plan of
LOTS 5, 6 and 8
REGISTERED PLAN 114
CITY OF OTTAWA

Surveyed by Annis, O'Sullivan, Vollebekk Ltd.

SURVEYOR

Annis O'Sullivan Vollebekk Ltd.
Ontario Land Surveyors
14 Concourse Gate, Suite 500,
Nepean, Ontario K2E 7S6
Tel: (613) 727-0850
Fax: (613) 727-1079
Email: ____@aovltd.com

PROJECT DEVELOPER

ML Westboro Inc.
C/O ML DEVCO
300-411 Roosevelt Avenue,
Ottawa ON, K2A 3X9
Tel.: (613) 686-6319
Cell: (613) 219-2287
E-Mail: mflanigan@mldevco.ca
E-Mail: psmale@mldevco.ca

URBAN PLANNER

FoTenn Consultants Inc.
223 McLeod Street
Ottawa, ON Canada, K2P 0Z8
Tel.: (613) 730-5709
Fax: (613) 730-1136
E-Mail: alain@fotenn.com

LANDSCAPE ARCHITECT

Gino J. Aiello Landscape Architect
110 Didsbury Road Unit 9,
Ottawa, Ontario K2E 0C2
Tel: (613) 852-1343
Cell: (613)
Email: gino@giala.com

CIVIL ENGINEER

McINTOSH PERRY
115 Walgreen Road
Ottawa, ON K0A 1L0
Tel: (613) 836-2184
Fax: (613) 836-3742
Email: r.freel@mcintoshperry.com

SURVEYOR'S REAL PROPERTY REPORT

PART 1 Plan of

LOTS 5, 6 and 8 REGISTERED PLAN 114 CITY OF OTTAWA

Surveyed by Annis, O'Sullivan, Vollebekk Ltd.

Scale 1 : 150

6 4.5 3.0 1.5 0 3 6 Metres

Metric

DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

Surveyor's Certificate

I CERTIFY THAT :

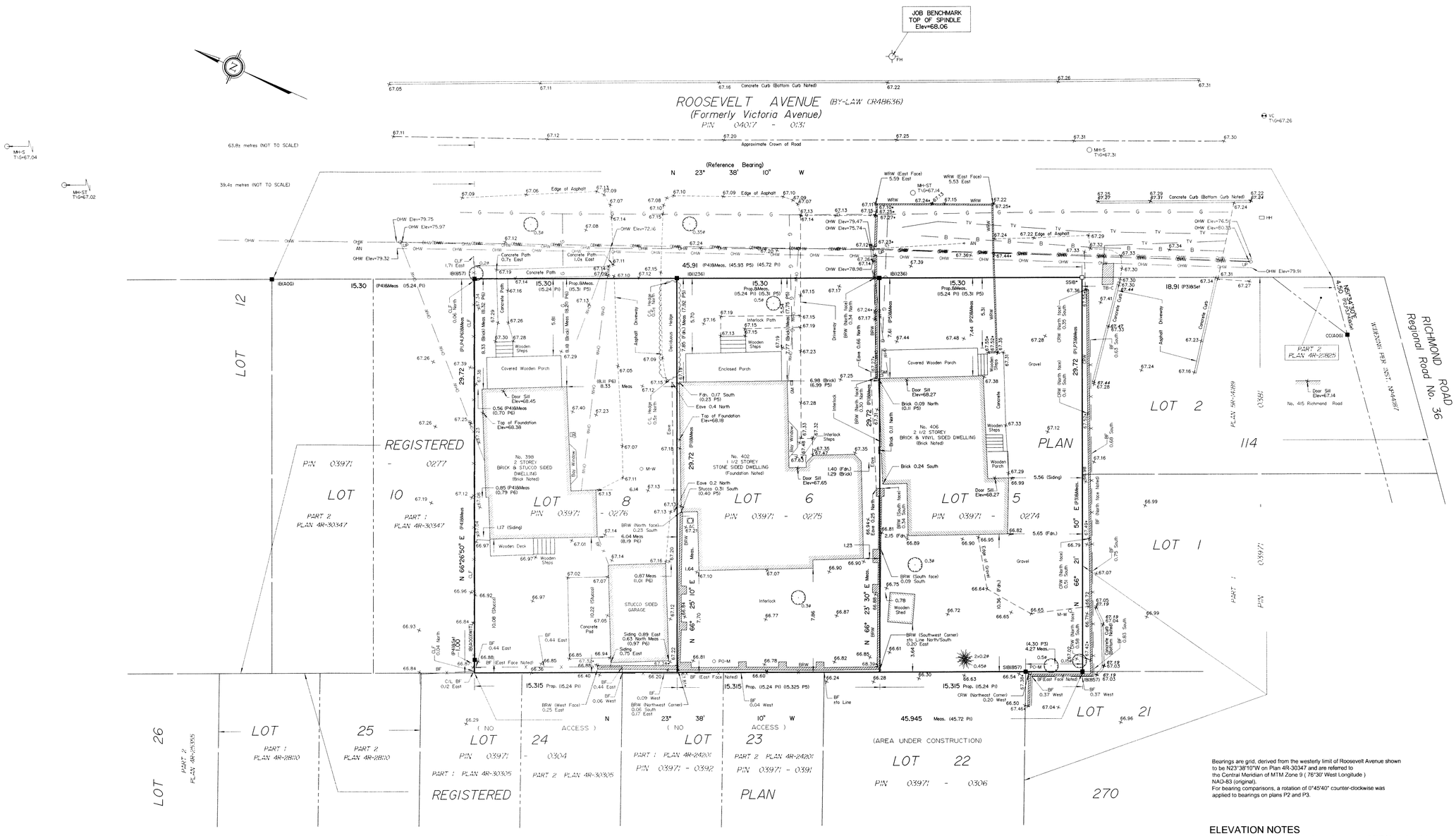
1. This survey and plan are correct and in accordance with the Surveys Act, the Surveyors Act and the Land Titles Act and the regulations made under them.
2. The survey was completed on the 18th day of October, 2017.

Oct 19/17
Date

V. Andrew Shelp
Ontario Land Surveyor

PART 2
THIS PLAN MUST BE READ IN CONJUNCTION WITH SURVEY REPORT DATED:- 18 OCTOBER, 2017

ANNIS, O'SULLIVAN, VOLLEBEKK LTD. grants to Domicile Developments Inc. ("The Client"), their solicitors, mortgagees, and other related parties, permission to use original, signed, sealed copies of the Surveyor's Real Property Report in transactions involving The Client.



Bearings are grid, derived from the westerly limit of Roosevelt Avenue shown to be N23°38'10"W on Plan 4R-30347 and are referred to the Central Meridian of MTM Zone 9 (76°30' West Longitude) NAD-83 (original).
For bearing comparisons, a rotation of 0°45'40" counter-clockwise was applied to bearings on plans P2 and P3.

ELEVATION NOTES

1. Elevations shown are geodetic and are referred to the CGVD28 geodetic datum.
2. It is the responsibility of the user of this information to verify that the job benchmark has not been altered or disturbed and that it's relative elevation and description agrees with the information shown on this drawing.

UTILITY NOTES

1. This drawing cannot be accepted as acknowledging all of the utilities and it will be the responsibility of the user to contact the respective utility authorities for confirmation.
2. Only visible surface utilities were located.
3. A field location of underground plant by the pertinent utility authority is mandatory before any work involving breaking ground, probing, excavating etc.
4. Gas, Cable and Bell underground utilities are shown as marked on ground by others.

Notes & Legend

	Denotes	
—○—	•	Survey Monument Planted
—■—	•	Survey Monument Found
SIB	•	Standard Iron Bar
SSIB	•	Short Standard Iron Bar
IB	•	Iron Bar
CC	•	Cut Cross
CP	•	Concrete Pin
*	•	Survey Monument 0.3 metres Long
(WIT)	•	Witness
Meas.	•	Measured
Prop.	•	Proportioned
(AOG)	•	Annis, O'Sullivan, Vollebekk Ltd.
(PI)	•	Registered Plan 114
(P2)	•	Plan 4R-21825
(P3)	•	Plan 5R-14189
(P4)	•	Plan 4R-30347
(P5)	•	(1236) Plan April 15, 1998
(P6)	•	(647) Plan December 19, 1975
○ MH-ST	•	Maintenance Hole (Storm Sewer)
○ MH-S	•	Maintenance Hole (Sanitary)
○ FH	•	Fire Hydrant
—OHW—	•	Overhead Wires
○ UP	•	Utility Pole
∘ AN	•	Anchor
⊖ VC	•	Valve Chamber (Watermain)
T/G	•	Top of Grate
▭ GM	•	Gas Meter
CLF	•	Chain Link Fence
BF	•	Board Fence
▭ AC	•	Air Conditioner
Ø	•	Diameter
+ 65.00	•	Location of Elevations
+ 65.00	•	Top of Wall Elevations
+ 65.00	•	Top of Curb Elevations
C/L	•	Centreline
	•	Property Line
	•	Deciduous Tree
	•	Coniferous Tree
▫ TB-C	•	Cable Terminal Box
—— G ——	•	Underground Gas
—— TV ——	•	Underground Cable
—— B ——	•	Underground Bell
○ M-W	•	Monitoring Well
BRW	•	Brick Retaining Wall
CRW	•	Concrete Retaining Wall
WRW	•	Wooden Retaining Wall
○ PO-M	•	Metal Pole
Fdn.	•	Foundation
▭ HH	•	Handhole

ASSOCIATION OF ONTARIO LAND SURVEYORS
PLAN SUBMISSION FORM
2029596

THIS PLAN IS NOT VALID UNLESS IT IS AN EMBOSSED ORIGINAL COPY ISSUED BY THE SURVEYOR In accordance with Regulation 1026, Section 29 (3).

Ontario Land Surveyors
ANNIS, O'SULLIVAN, VOLLEBEKK LTD.
14 Concourse Gate, Suite 500
Nepean, Ont. K2E 7S6
Phone: (613) 727-0850 / Fax: (613) 727-1079
Email: Nepean@aovltd.com

Job No. 19693-17 Domicile Lt 5 Pl. 114 T F | sj

Alison Gosling

Subject: RE: 22-3302 - 398-406 Roosevelt - Quality Control Requirement

From: Eric Lalande <eric.lalande@rvca.ca>
Sent: December 6, 2021 3:43 PM
To: Alison Gosling <a.gosling@mcintoshperry.com>
Subject: RE: 22-3302 - 398-406 Roosevelt - Quality Control Requirement

Hi Alison,

Based on the proposed site plan, the RVCA shall not require any additional quality control protections. It is still encouraged that best management practices be integrated into the design where possible.

Thank you,

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

From: Alison Gosling <a.gosling@mcintoshperry.com>
Sent: Monday, December 6, 2021 3:34 PM
To: Eric Lalande <eric.lalande@rvca.ca>
Subject: 22-3302 - 398-406 Roosevelt - Quality Control Requirement

Good afternoon Eric,

We wanted to touch base with you regarding the development at 398-406 Roosevelt Ave.

The development involves the construction of a 6-storey residential building with underground parking and above-grade private terraces. Drainage will be collected and conveyed to the 300mm dia storm sewer within Roosevelt Ave. As shown by the attached figure, water travels approximately 633m to the Ottawa River (Outlet ID #04490). Drainage will be collected by roof drains and surface drains within the terraces which will be connected to the internal mechanical system.

Quality controls were previously reviewed by DSEL and Jamie (December 2017). The application proposed a rear yard parking lot at the time of the application. The site design has since changed by removing surface parking and asphalt areas. It is anticipated that quality controls are no longer required. Can you please review and confirm?

Please let me know if you have any questions.

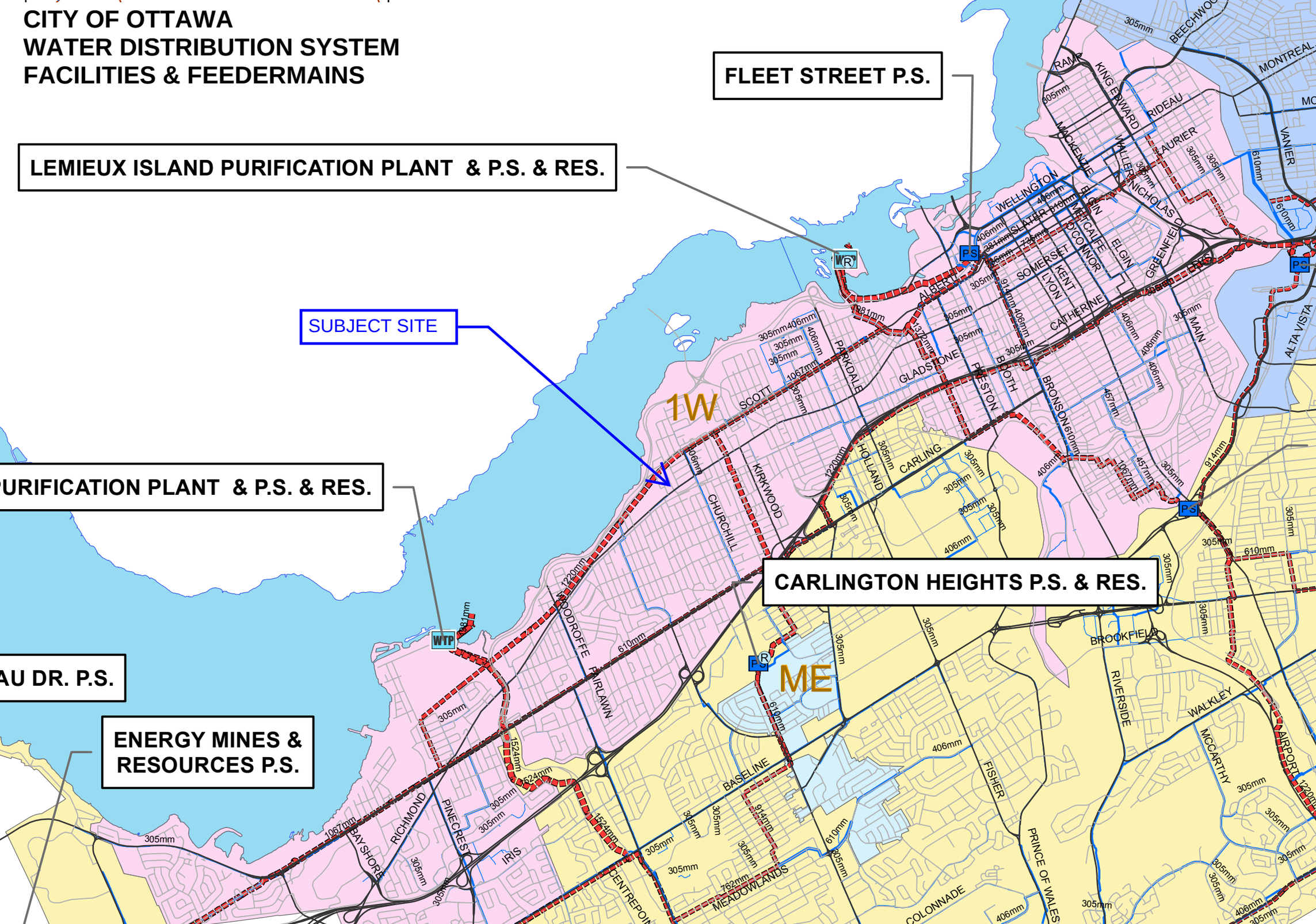
Thank you,

Alison Gosling, P.Eng.
Project Engineer, Land Development
115 Walgreen Road, Carp, ON, K0A 1L0
T. 613.714.4629
a.gosling@mcintoshperry.com | www.mcintoshperry.com

McINTOSH PERRY

Turning Possibilities Into Reality

APPENDIX C
WATERMAIN CALCULATIONS


CITY OF OTTAWA
WATER DISTRIBUTION SYSTEM
FACILITIES & FEEDERMAINS
FLEET STREET P.S.
LEMIEUX ISLAND PURIFICATION PLANT & P.S. & RES.
SUBJECT SITE
URIFICATION PLANT & P.S. & RES.
AU DR. P.S.
ENERGY MINES & RESOURCES P.S.
CARLINGTON HEIGHTS P.S. & RES.
1W
ME
WTP
WR
PS
PR
SCOTT
KIRKWOOD
CHURCHILL
PARKDALE
GLADSTONE
PRESTON
BOOTH
BRONSON
CARLING
HOLLAND
CATHERINE
SOMERSET
LYON
KENT
ELGIN
O'CONNOR
MITCALFE
MACKENZIE
KING EDWARD
RIDEAU
LAURIER
WELLINGTON
SLATER
ALBERT
MAIN
GREENFIELD
ALTA VISTA
VANIER
MONTREAL
BEECHWOOD
BROOKFIELD
RIVERSIDE
WALKLEY
MCCARTHY
AIRPORT
FISHER
PRINCE OF WALES
COLONNADE
BASELINE
MEADOWLANDS
CENTREPOINTE
IRIS
PINECREST
RICHMOND
BAYSHORE
FAIRLAWN
WOODROFFE
RAMP

McINTOSH PERRY

egis GROUP

CCO-22-3302 - 398-406 Roosevelt - Water Demands

Project:	398-406 Roosevelt
Project No.:	CCO-22-3302
Designed By:	AJG
Checked By:	RDF
Date:	March 20, 2024
Site Area:	0.1365 gross ha

Residential	NUMBER OF UNITS	UNIT RATE	
Bachelor Apartment	12 units	1.4	persons/unit
1 Bedroom Apartment	22 units	1.4	persons/unit
2 Bedroom Apartment	26 units	2.1	persons/unit
3 Bedroom Apartment	2 units	3.1	persons/unit

Total Population 109 persons

Commercial m2

Industrial - Light m2

Industrial - Heavy m2

AVERAGE DAILY DEMAND

DEMAND TYPE	AMOUNT	UNITS	
Residential	280	L/c/d	
Industrial - Light	35,000	L/gross ha/d	
Industrial - Heavy	55,000	L/gross ha/d	
Shopping Centres	2,500	L/(1000m² /d	
Hospital	900	L/(bed/day)	
Schools	70	L/(Student/d)	
Trailer Park with no Hook-Ups	340	L/(space/d)	
Trailer Park with Hook-Ups	800	L/(space/d)	
Campgrounds	225	L/(campsite/d)	
Mobile Home Parks	1,000	L/(Space/d)	
Motels	150	L/(bed-space/d)	
Hotels	225	L/(bed-space/d)	
Tourist Commercial	28,000	L/gross ha/d	
Other Commercial	28,000	L/gross ha/d	
AVERAGE DAILY DEMAND	Residential	0.35	L/s
	Commerical/Industrial /Institutional	0.00	L/s

115 Walgreen Road, R.R.3. Carp, ON K0A 1L0 | T. 613-836-2184 | F. 613-836-3742
info.north-america@egis-group.com | www.egis-group.com

MAXIMUM DAILY DEMAND

DEMAND TYPE	AMOUNT		UNITS
Residential	9.5	x avg. day	L/c/d
Industrial	1.5	x avg. day	L/gross ha/d
Commercial	1.5	x avg. day	L/gross ha/d
Institutional	1.5	x avg. day	L/gross ha/d
MAXIMUM DAILY DEMAND	Residential	3.36	L/s
	Commerical/Industrial /Institutional	0.00	L/s

MAXIMUM HOUR DEMAND

DEMAND TYPE	AMOUNT		UNITS
Residential	14.3	x avg. day	L/c/d
Industrial	1.8	x max. day	L/gross ha/d
Commercial	1.8	x max. day	L/gross ha/d
Institutional	1.8	x max. day	L/gross ha/d
MAXIMUM HOUR DEMAND	Residential	5.05	L/s
	Commerical/Industrial /Institutional	0.00	L/s

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

AVERAGE DAILY DEMAND	0.35	L/s
MAXIMUM DAILY DEMAND	3.36	L/s
MAXIMUM HOUR DEMAND	5.05	L/s

CCO-22-3302 - 398-406 Roosevelt Avenue - OBC Fire Calculations

Project:	398-406 Roosevelt
Project No.:	CCO-22-3302
Designed By:	AJG
Checked By:	RDF
Date:	March 20, 2024

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

Water Supply for Fire-Fighting - Residential Building

Building is classified as Group : C (from table 3.2.2.55)

Building is of noncombustible construction or of heavy timber construction conforming to Article 3.1.4.6. Floor assemblies are fire separations but with no fire-resistance rating. Roof assemblies, mezzanines, loadbearing walls, columns and arches do not have a fire-resistance rating.

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

(a) Q = K x V x Stot

where:

Q = minimum supply of water in litres

K = water supply coefficient from Table 1

V = total building volume in cubic metres

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

Stot = 1.0 + [Sside1+Sside2+Sside3+...etc.]

K	16	(from Table 1 pg A-31) (Worst case occupancy {E / F2} 'K' value used)
V	79,258	(Total building volume in m³.)
Stot	1.7	(From figure 1 pg A-32)
Q =	2,155,823.04 L	

From Figure 1 (A-32)

Snorth	70	m	0.0
Seast	26	m	0.0
Ssouth	7.6	m	0.2
Swest	1.5	m	0.5

*approximate distances

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

9000 L/min if Q > 270,000 L

2378 gpm

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CCO-22-3302 - 398-406 Roosevelt - Fire Underwriters Survey

Project:	398-406 Roosevelt
Project No.:	CCO-22-3302
Designed By:	AJG
Checked By:	RDF
Date:	March 20, 2024

From the Fire Underwriters Survey (2020)

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

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

F = 220 x C x √A Where: F = Required fire flow in liters per minute
C = Coefficient related to the type of construction.
A = The total floor area in square meters (including all storey's, but excluding basements at least 50 percent below grade) in the building being considered.

Construction Type Non-Combustible Construction

C 0.8 A 3,774.2 m^2

Total Floor Area (per the 2020 FUS Page 20 - Total Effective Area) 2,512.1 m^2 **Unprotected Vertical Openings*

Calculated Fire Flow	8,821.2 L/min
	9,000.0 L/min

B. REDUCTION FOR OCCUPANCY TYPE (No Rounding)

From Page 24 of the Fire Underwriters Survey:

Limited Combustible -15%

Fire Flow	7,650.0 L/min

C. REDUCTION FOR SPRINKLER TYPE (No Rounding)

Fully Supervised Sprinklered -50%

Reduction	-3,825.0 L/min

D. INCREASE FOR EXPOSURE (No Rounding)

	Separation Distance (m)	Cons.of Exposed Wall	Length Exposed Adjacent Wall (m)	Height (Stories)	Length-Height Factor	
Exposure 1	0 to 3	Wood frame	18	2	36.0	21%
Exposure 2	20.1 to 30	Ordinary - Mass Timber (Unprotected)	48	2	96.0	4%
Exposure 3	10.1 to 20	Ordinary - Mass Timber (Unprotected)	54	2	108.0	10%
Exposure 4	10.1 to 20	Wood frame	44	2	88.0	14%
					% Increase*	49%

Increase*	3,748.5 L/min

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

Fire Flow	7,573.5 L/min
Fire Flow Required**	8,000.0 L/min

*In accordance with Part II, Section 4, the Increase for separation distance is not to exceed 75%
**In accordance with Section 4 the Fire flow is not to exceed 45,000 L/min or be less than 2,000 L/min

CCO-22-3302 - 398-406 Roosevelt - Boundary Condition Unit Conversion

Project:	398-406 Roosevelt
Project No.:	CCO-22-3302
Designed By:	AJG
Checked By:	RDF
Date:	March 20, 2024

Boundary Conditions Unit Conversion

ROOSEVELT AVENUE

Scenario	Height (m)	Elevation (m)	m H_2O	PSI	kPa
Avg. DD	115.0	67.2	47.8	68.0	468.9
Fire Flow (82 L/s or 4,920 L/min)	81.3	67.2	14.1	20.0	137.9
Peak Hour	108.6	67.2	41.4	58.9	406.1

From: Wessel, Shawn <shawn.wessel@ottawa.ca>
Sent: Wednesday, March 6, 2024 3:36 PM
To: GOSLING Alison <Alison.GOSLING@egis-group.com>
Subject: RE: 398-406 Roosevelt Ave - Boundary Condition Request

Hello Alison

This just came in:

The following are boundary conditions, HGL, for hydraulic analysis at 398-406 Roosevelt Avenue (zone 1W) assumed to be a dual connection connected to the 152mm watermain on Roosevelt Avenue (see attached PDF for location).

Minimum HGL: 108.6 m

Maximum HGL: 115.0 m

Available Fire Flow at 20 (psi): 82.0 L/s, assuming ground elevation of 67.2 m

***Please refer to Guidelines and Technical bulletin ISDTB**-2021-**01 concerning residential areas serving 50 or** more dwellings.*

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.

If you require additional information or clarification, please do not hesitate to contact me anytime.

Thank you

Regards,

Shawn Wessel, A.Sc.T.,rcji
Pronouns: he/him | Pronom: il
Project Manager - Infrastructure Approvals
Gestionnaire de projet – Approbation des demandes d'infrastructures

Development Review Central Branch | Direction de l'examen des projets d'aménagement, Centrale
Planning, Real Estate and Economic Development Department | Direction générale de la planification des biens immobiliers et du développement économique
City of Ottawa | Ville d'Ottawa
110 Laurier Ave. W. | 110, avenue Laurier Ouest, Ottawa ON K1P 1J1
(613) 580 2424 Ext. | Poste 33017
Int. Mail Code | Code de Courrier Interne 01-14
shawn.wessel@ottawa.ca

Please also note that, while my work hours may be affected by the current situation and am working from home, I still have access to email, video conferencing and telephone. Feel free to schedule video conferences and/or telephone calls, as necessary.

Sent: Tuesday, February 27, 2024 4:01 PM
To: Wessel, Shawn <shawn.wessel@ottawa.ca>
Subject: 398-406 Roosevelt Ave - Boundary Condition Request

Hi Shawn,

We would like to request updated boundary conditions for the proposed development at 398-406 Roosevelt Avenue. The development proposes a 6-storey apartment building with 62 units.

The proposed connection will be to the existing 152mm dia. watermain within Roosevelt Ave.

- The estimated fire flow is 8,000 L/min based on the 2020 FUS
- Average daily demand: 0.35 L/s
- Maximum daily demand 3.36 L/s
- Maximum hourly daily 5.05 L/s

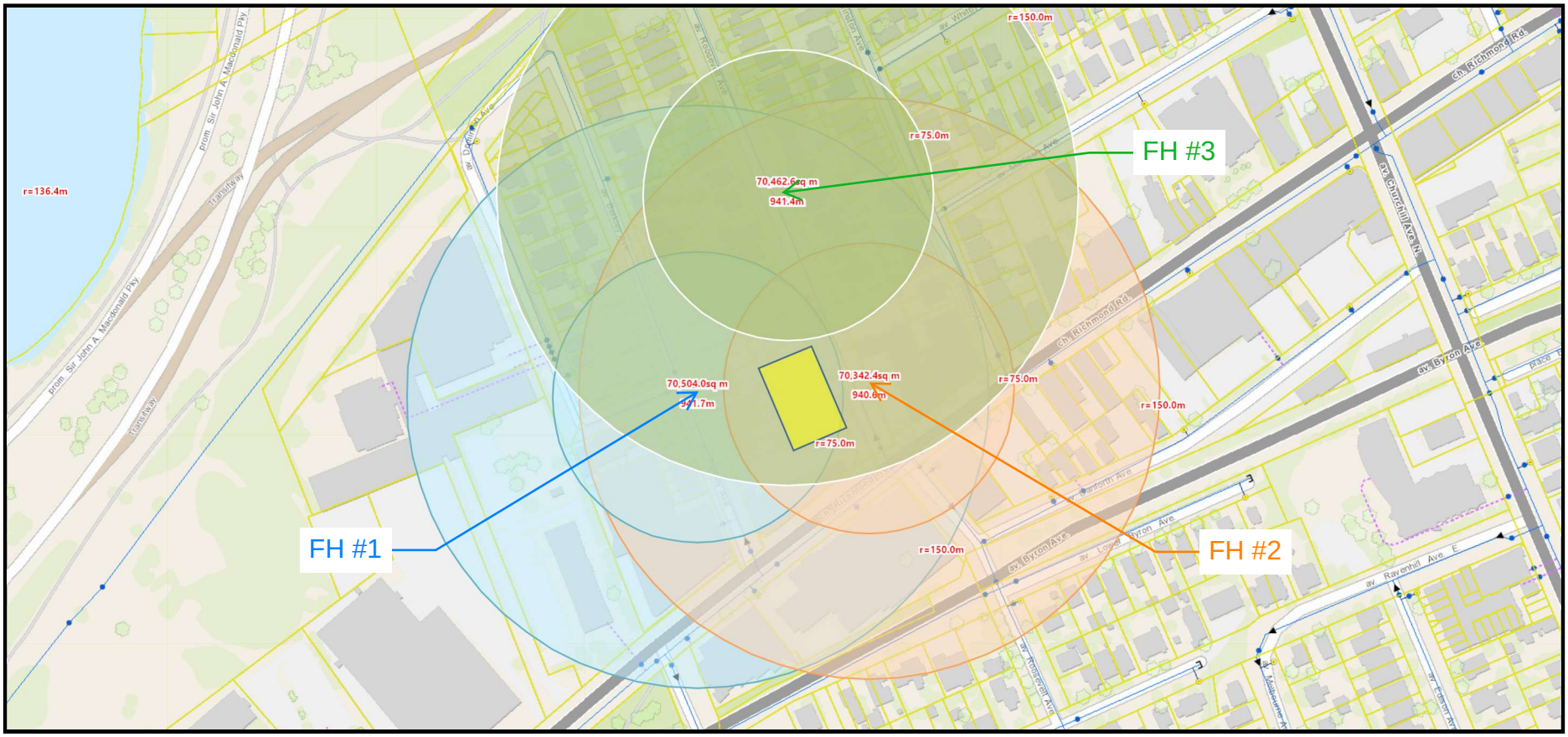
Attached is a map showing the proposed connection location along with the calculations prepared for the demands listed above.

Please let me know if you have any questions.

Thank you,

Alison Gosling, P.Eng.
Project Engineer, Land Development
Phone: +1.613.714.4629

398-406 Roosevelt Avenue
Hydrant Coverage Figure



https://maps.ottawa.ca/geoOttawa/

2021-12-06

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

Table 11.2.3.1.2 Hose Stream Allowance and Water Supply Duration Requirements for Hydraulically Calculated Systems

Occupancy	Inside Hose		Total Combined Inside and Outside Hose		Duration (minutes)
	gpm	L/min	gpm	L/min	
Light hazard	0, 50, or 100	0, 190, or 380	100	380	30
Ordinary hazard	0, 50, or 100	0, 190, or 380	250	950	60–90
Extra hazard	0, 50, or 100	0, 190, or 380	500	1900	90–120

APPENDIX D
SANITARY CALCULATIONS

CCO-22-3302 - 398-406 Roosevelt Avenue - Sanitary Demands

Project:	398-406 Roosevelt Avenue		
Project No.:	CCO-22-3302		
Designed By:	R.R.R.		
Checked By:	A.J.G.		
Date:	March 20, 2024		
Site Area	0.137	Gross ha	
Bachelor	12	1.40	Persons per unit
1 Bedroom	22	1.40	Persons per unit
2 Bedroom	26	2.10	Persons per unit
3 Bedroom	2	3.10	Persons per unit
Total Population	109	Persons	
Commercial Area	0.00	m^2	
Amenity Space	0.00	m^2	

DESIGN PARAMETERS

Institutional/Commercial Peaking Facto	1	
Residential Peaking Factor	3.59	* *Using Harmon Formula* = 1+(14/(4+P^0.5))*0.8 *where P = population in thousands, Harmon's Correction Factor = 0.8*
Mannings coefficient (n)	0.013	
Demand (per capita)	280	L/day
Infiltration allowance	0.33	L/s/Ha

EXTRANEOUS FLOW ALLOWANCES

Infiltration / Inflow	Flow (L/s)
Dry	0.01
Wet	0.04
Total	0.05

AVERAGE DAILY DEMAND

DEMAND TYPE	AMOUNT	UNITS	POPULATION / AREA	Flow (L/s)
Residential	*280*	*L/c/d*	*109*	*0.35*
Industrial - Light**	35,000	L/gross ha/d		0
Industrial - Heavy**	55,000	L/gross ha/d		0
Commercial / Amenity	2,800	L/(1000m² /d)		0
Hospital	900	L/(bed/day)		0
Schools	70	L/(Student/d)		0
Trailer Parks no Hook-Ups	340	L/(space/d)		0
Trailer Park with Hook-Ups	800	L/(space/d)		0
Campgrounds	225	L/(campsite/d)		0
Mobile Home Parks	1,000	L/(Space/d)		0
Motels	150	L/(bed-space/d)		0
Hotels	225	L/(bed-space/d)		0
Office	75	L/7.0m^2/d		0
Tourist Commercial	28,000	L/gross ha/d		0
Other Commercial	28,000	L/gross ha/d		0

AVERAGE RESIDENTIAL FLOW	0.35	L/s
PEAK RESIDENTIAL FLOW	1.27	L/s
AVERAGE ICI FLOW	0.00	L/s
PEAK INSTITUTIONAL/COMMERCIAL FLOW	0.00	L/s
PEAK INDUSTRIAL FLOW	0.00	L/s
TOTAL PEAK ICI FLOW	0.00	L/s

TOTAL SANITARY DEMAND

TOTAL ESTIMATED AVERAGE DRY WEATHER FLOW	0.36	L/s
TOTAL ESTIMATED PEAK DRY WEATHER FLOW	1.27	L/s
TOTAL ESTIMATED PEAK WET WEATHER FLOW	1.31	L/s

SANITARY SEWER DESIGN SHEET

PROJECT: 398-406 Roosevelt Avenue
LOCATION: Ottawa, Ontario
CLIENT: ML Westboro

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LOCATION				RESIDENTIAL									ICI AREAS							INFILTRATION ALLOWANCE			FLOW	SEWER DATA						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
STREET	AREA ID	FROM MH	TO MH	UNIT TYPES				AREA (ha)	POPULATION		PEAK FACTOR	PEAK FLOW (L/s)	AREA (ha)						PEAK FLOW (L/s)	AREA (ha)		FLOW (L/s)	DESIGN FLOW (L/s)	CAPACITY (L/s)	LENGTH (m)	DIA (mm)	SLOPE (%)	VELOCITY (full) (m/s)	AVAILABLE CAPACITY	
				BAC/1-BED	2-BED	2-BED+DEN			IND	CUM			INSTITUTIONAL		COMMERCIAL		INDUSTRIAL			IND	CUM								L/s	(%)
													IND	CUM	IND	CUM	IND	CUM											
Roosevelt Ave		BLDG	EX.300mm SAN	34	26	2		0.14	109	109	3.59	1.27		0.00	0.00	0.00		0.00	0.00	0.14	0.14	0.05	1.31	34.22	9.23	200	1.00	1.055	32.90	96.17

Design Parameters:

Residential			ICI Areas			Peak Factor
BAC/1-BED	1.4	p/p/u				
2-BED	2.1	p/p/u	INST	28,000	L/Ha/day	1
2-BED+DEN	3.1	p/p/u	COM	28,000	L/Ha/day	1
Other	60	p/p/Ha				

Notes:
1. Mannings coefficient (n) = 0.013
2. Demand (per capita): 280 L/day
3. Infiltration allowance: 0.33 L/s/Ha
4. Residential Peaking Factor:
Harmon Formula = 1+(14/(4+P^0.5)*0.8)
where P = population in thousands

Designed: RRR
Checked: AJG
Project No.: CCO-22-3302

No.	Revision	Date

Sheet No:
1 of 1

SANITARY SEWER DESIGN SHEET

PROJECT: 398-406 Roosevelt Avenue
LOCATION: Ottawa, Ontario
CLIENT: ML Westboro

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LOCATION				RESIDENTIAL									ICI AREAS							INFILTRATION ALLOWANCE			FLOW	SEWER DATA						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
STREET	AREA ID	FROM MH	TO MH	UNIT TYPES				AREA (ha)	POPULATION		PEAK FACTOR	PEAK FLOW (L/s)	AREA (ha)						PEAK FLOW (L/s)	AREA (ha)		FLOW (L/s)	DESIGN FLOW (L/s)	CAPACITY (L/s)	LENGTH (m)	DIA (mm)	SLOPE (%)	VELOCITY (full) (m/s)	AVAILABLE CAPACITY	
				SF	SD	TH	APT		IND	CUM			INSTITUTIONAL		COMMERCIAL		INDUSTRIAL			IND	CUM								L/s	(%)
													IND	CUM	IND	CUM	IND	CUM											
Roosevelt Ave		D	C	8	4			0.71	30.8	30.8	3.68	0.37		0.00	0.84	0.84		0.00	0.41	1.55	1.55	0.51	1.29	63.00	156.98	300	0.39	0.863	61.71	97.96
		C	B	8	8			0.73	40.0	70.8	3.63	0.83		0.00		0.84		0.00	0.41	0.73	2.28	0.75	1.99	93.27	120.95	375	0.26	0.818	91.27	97.86
		B	A	3	8			0.54	26.5	97.3	3.60	1.13		0.00	0.55	1.39		0.00	0.68	1.09	3.37	1.11	2.92	498.59	111.87	450	2.81	3.037	495.67	99.41

Design Parameters:

Residential			ICI Areas			
						Peak Factor
SF	3.4	p/p/u				
TH/SD	2.7	p/p/u	INST	28,000	L/Ha/day	1.5
APT	2.3	p/p/u	COM	28,000	L/Ha/day	1.5
Other	60	p/p/Ha	IND	35,000	L/Ha/day	MOE Chart

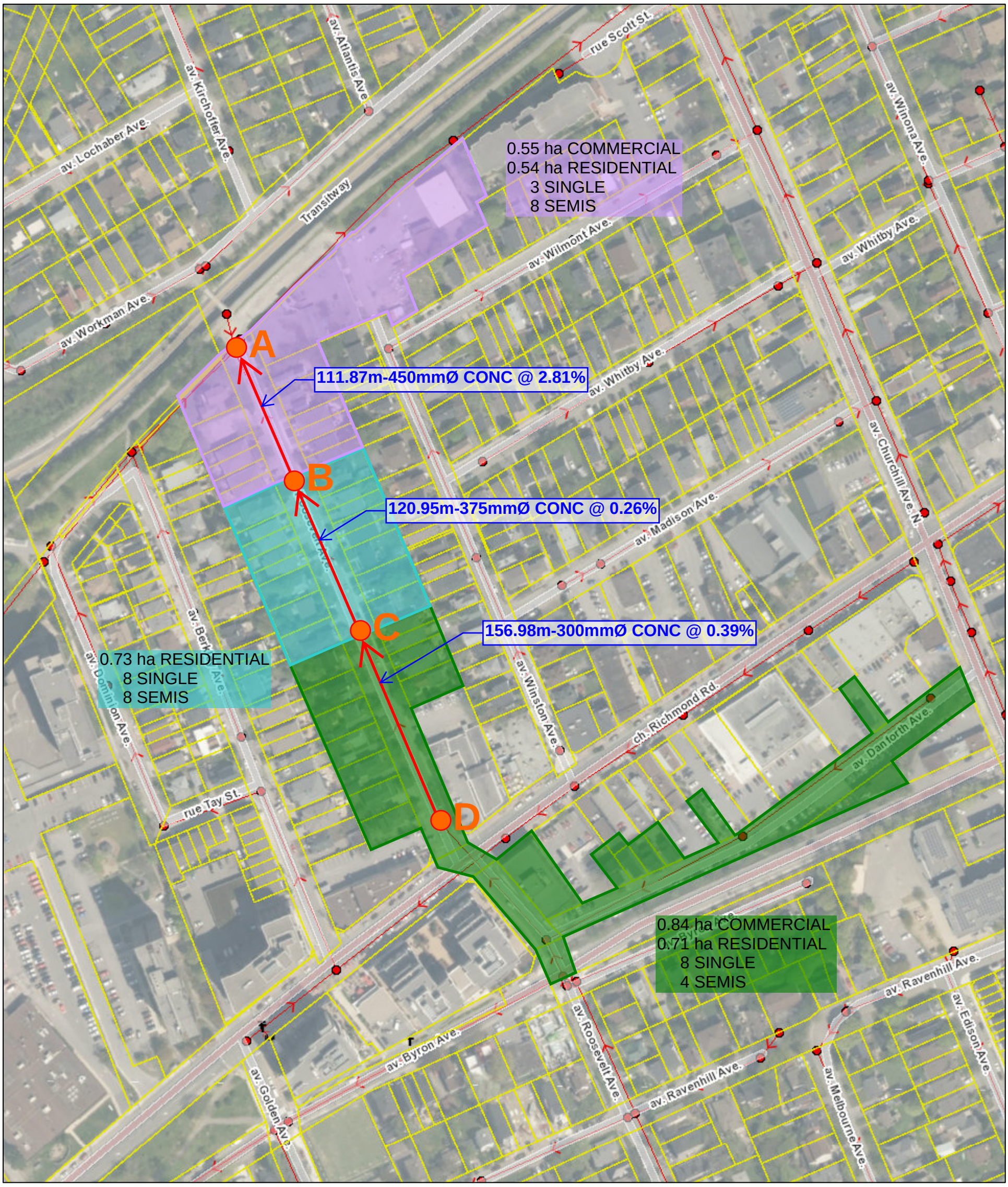
Notes:
1. Mannings coefficient (n) = 0.013
2. Demand (per capita): 280 L/day
3. Infiltration allowance: 0.33 L/s/Ha
4. Residential Peaking Factor:
Harmon Formula = 1+(14/(4+P^0.5)*0.8)
where P = population in thousands

Designed: AJG
Checked: RDF
Project No.: CCO-22-3302

No.	Revision	Date
1.	City Submission #1	2021-12-10

Sheet No:
1 of 1

SANITARY SEWER ANALYSIS



December 18, 2017

1:3,000

0 0.0325 0.065 0.13 mi

0 0.05 0.1 0.2 km

- Property Parcels

Road Names

Road Centrelines

- Provincial Highway
- City Freeway
- Arterial
- Major Collector
- Collector
- Federally Owned
- Local
- Transit
- Open to Traffic
- Commence Work

Sewer Fittings / Raccords

- Cap / bouchon
- Tee / raccord en T
- Sanitary Manholes / Regards d'égout domestique

Sanitary Pipes / Conduites d'égout domestique

- Private / Branchement privé
- Public / Branchement public

Sanitary Pump Stations and Treatment Plants / Installations d'infrastructure

- Sanitary Pump Station / Station de pompage des eaux usées
- Wastewater Treatment Plant / Usine d'épuration des eaux usées
- Combined Manholes / Regards d'égout unitaire

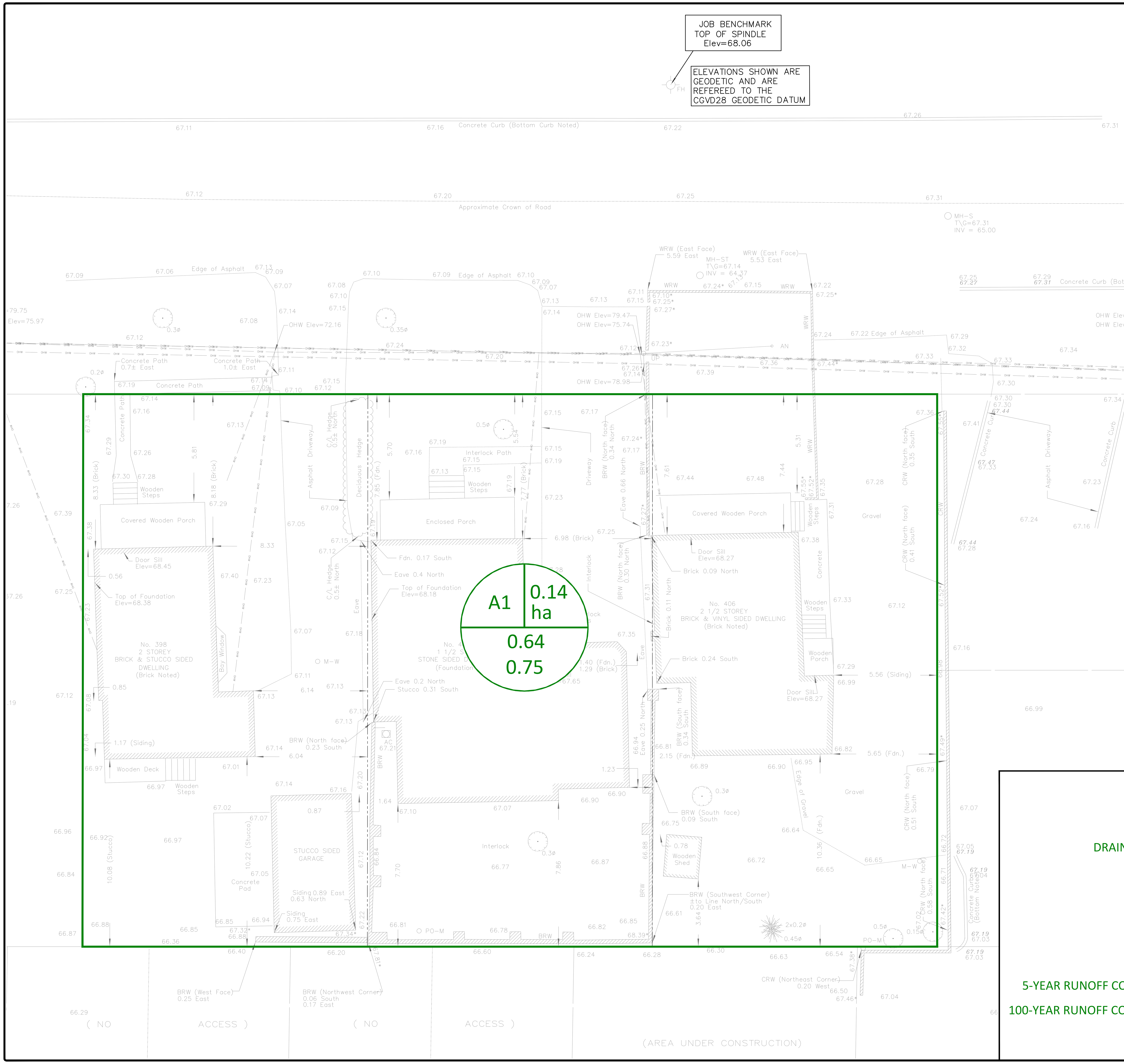
Combined Pipes / Conduites d'égout unitaire

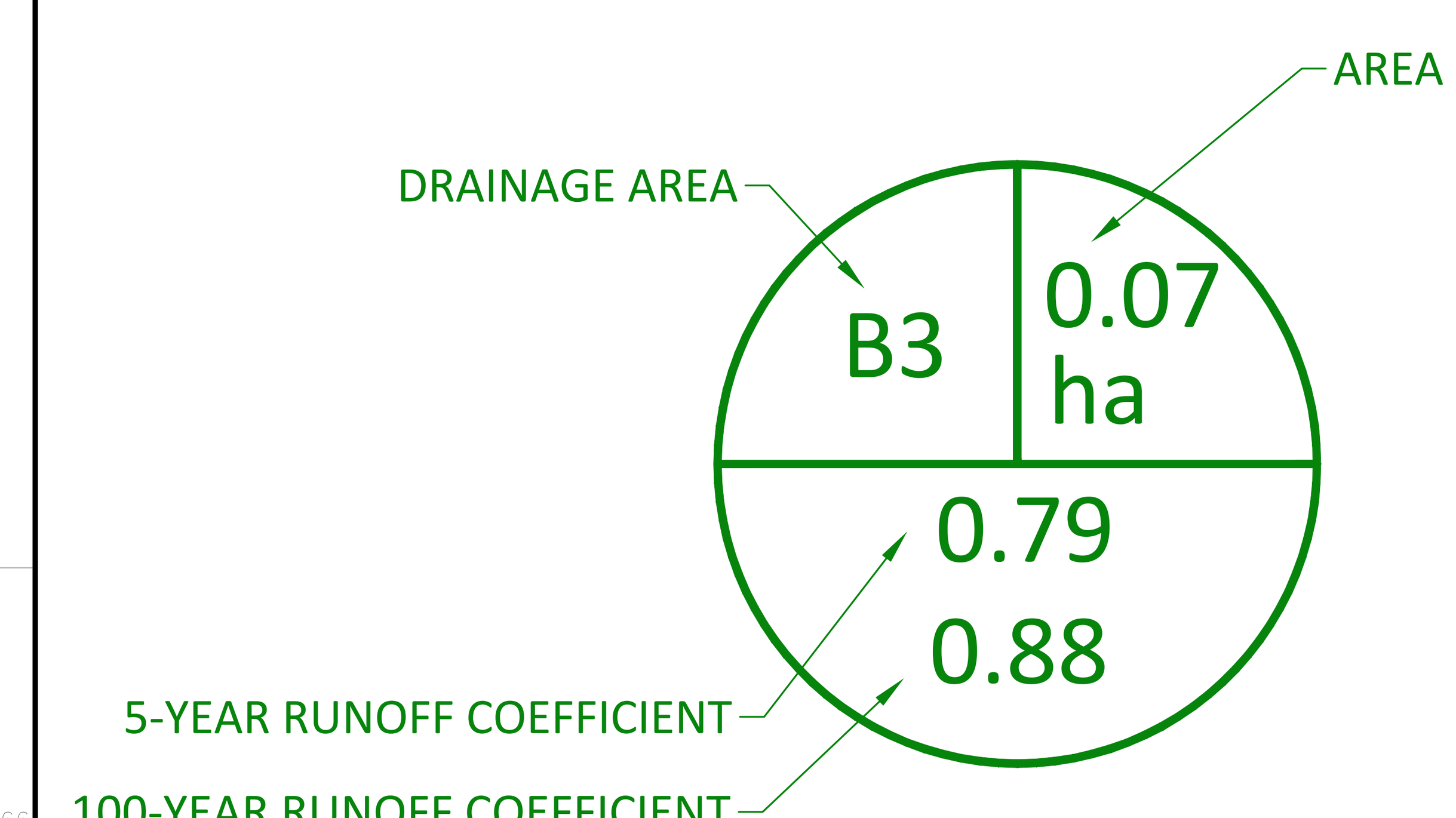
- Private / Branchement privé
- Public / Branchement public

City of Ottawa

2018-11-28 Rev 2021-12

APPENDIX E
PRE-DEVELOPMENT DRAINAGE PLAN





GENERAL NOTES

1. THE ORIGINAL TOPOGRAPHY, GROUND ELEVATION AND SURVEY DATA SHOWN ARE SUPPLIED FOR INFORMATION PURPOSES ONLY, AND IMPLY NO GUARANTEE OF ACCURACY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL INFORMATION SHOWN.
2. THIS PLAN IS NOT A CADASTRAL SURVEY SHOWING LEGAL PROPERTY BOUNDARIES AND EASEMENTS. THE PROPERTY BOUNDARIES SHOWN HEREON HAVE BEEN DERIVED INFORMATION SUPPLIED BY (OR SHOWN ON) ANNIS, O'SULLIVAN, VOLLEBEKK LTD. JOB NO. 19693-17 AND CANNOT BE RELIED UPON TO BE ACCURATE OR COMPLETE. THE PRECISE LOCATION OF THE CURRENT PROPERTY BOUNDARIES AND EASEMENTS CAN ONLY BE DETERMINED BY AN UP-TO-DATE LAND TITLES SEARCH AND A SUBSEQUENT CADASTRAL SURVEY PERFORMED AND CERTIFIED BY AN ONTARIO LAND SURVEYOR.
3. THE CONTRACTOR IS TO OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY BEFORE COMMENCING CONSTRUCTION.
4. THE CONTRACTOR IS RESPONSIBLE FOR ALL LAYOUT.
5. THE CONTRACTOR IS TO DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. PROTECT AND ASSUME ALL RESPONSIBILITY FOR EXISTING UTILITIES WHETHER OR NOT SHOWN ON THESE DRAWINGS. IF THERE IS ANY DISCREPANCY THE CONTRACTOR IS TO NOTIFY THE ENGINEER PROMPTLY.
6. RESTORE ALL TRENCHES AND SURFACES OF PUBLIC ROAD ALLOWANCES TO CONDITION EQUAL OR BETTER THAN ORIGINAL CONDITION AND TO THE SATISFACTION OF THE CITY AUTHORITIES.
7. EXCAVATE AND DISPOSE OF ALL EXCESS EXCAVATED MATERIAL, SUCH AS ASPHALT, CURBING AND DEBRIS, OFF SITE AS DIRECTED BY THE ENGINEER AND THE CITY.
8. TOPSOIL TO BE STRIPPED AND STOCKPILED FOR REHABILITATION. CLEAN FILL TO BE PLACED IN FILL AREAS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.
9. ALL DISTURBED AREAS TO BE RESTORED TO ORIGINAL CONDITION OR BETTER UNLESS OTHERWISE SPECIFIED.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL AND SAFETY MEASURES DURING THE CONSTRUCTION PERIOD, INCLUDING THE SUPPLY, INSTALLATION, AND REMOVAL OF ALL NECESSARY SIGNAGE, DELINEATORS, MARKERS AND BARRIERS.
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    - TELEPHONE SERVICE - BELL CANADA,
    - TELEVISION SERVICE - ROGERS.
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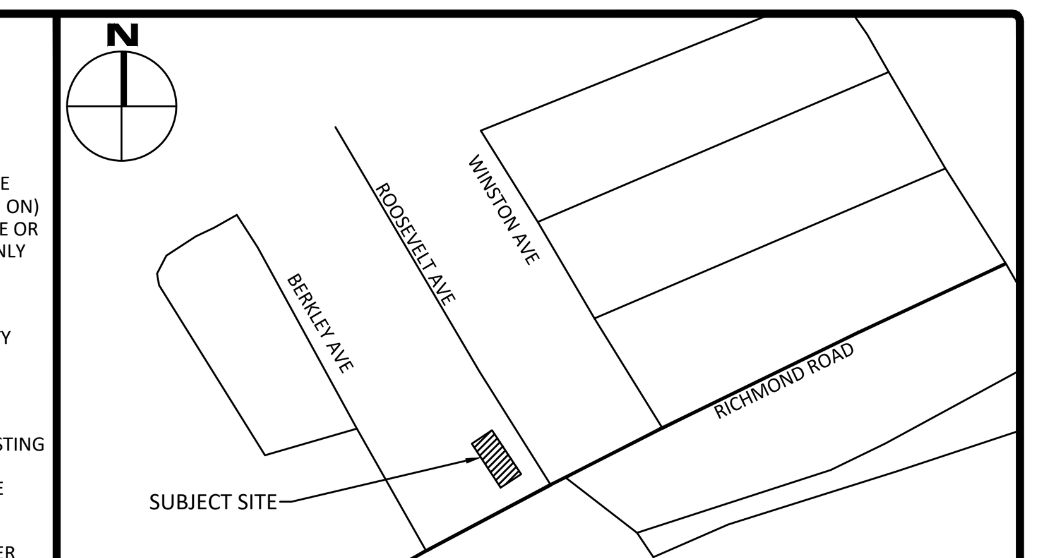

LOCATION PLAN

LEGEND

BARRIER CURB & CURB DEPRESSION	CENTRELINE OF SWALE
PROPOSED ASPHALT	CENTRELINE OF DITCH
CONCRETE WALKWAY	SLOPING AT 3:1 UNLESS SPECIFIED
LANDSCAPE AREA	PROPOSED ELEVATION EXISTING ELEVATION
CONCRETE SIDEWALK	SWALE ELEVATION
STORM MANHOLE	TOP/BOTTOM WALL FACE ELEVATIONS
CATCHBASIN, CURB INLET OR DITCH INLET	EMERGENCY OVERLAND FLOW ROUTE
SANITARY MANHOLE	SILT FENCE BARRIER PER OPSD 219.110
PERFORATED PIPE	BUILDING ENTRANCE BUILDING EXIT
WATER VAVLE/CHAMBER	REDUCER
FIRE HYDRANT	REMOTE WATER METER
PROPOSED WALL	WATER METER
PROPOSED TRENCH DRAIN	GAS METER LOCATION

SUBJECT TO APPROVAL

No.	Revisions	Date
3	ISSUED FOR REVIEW	MAR 20, 2024
2	ISSUED FOR REVIEW	APR 6, 2022
1	ISSUED FOR REVIEW	DEC 10, 2021

Check and verify all dimensions before proceeding with the work

Do not scale drawings

SCALE 1 : 100

0 2 4 6 8 10 Metres

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Tel: 613-836-2184 Fax: 613-836-3742

Stamp: LICENSED PROFESSIONAL ENGINEER
2024 05 01
A. J. GOSLING
100226726
PROVINCE OF ONTARIO

Client:
ML WESTBORO REALTY INVESTMENTS INC
651 CHURCHILL AVE NORTH
OTTAWA, ON K1Z 5G2

Project:
6-STOREY RESIDENTIAL BUILDING
406 ROOSEVELT

OTTAWA ON

Drawing Title:
PRE DEVELOPMENT DRAINAGE PLAN

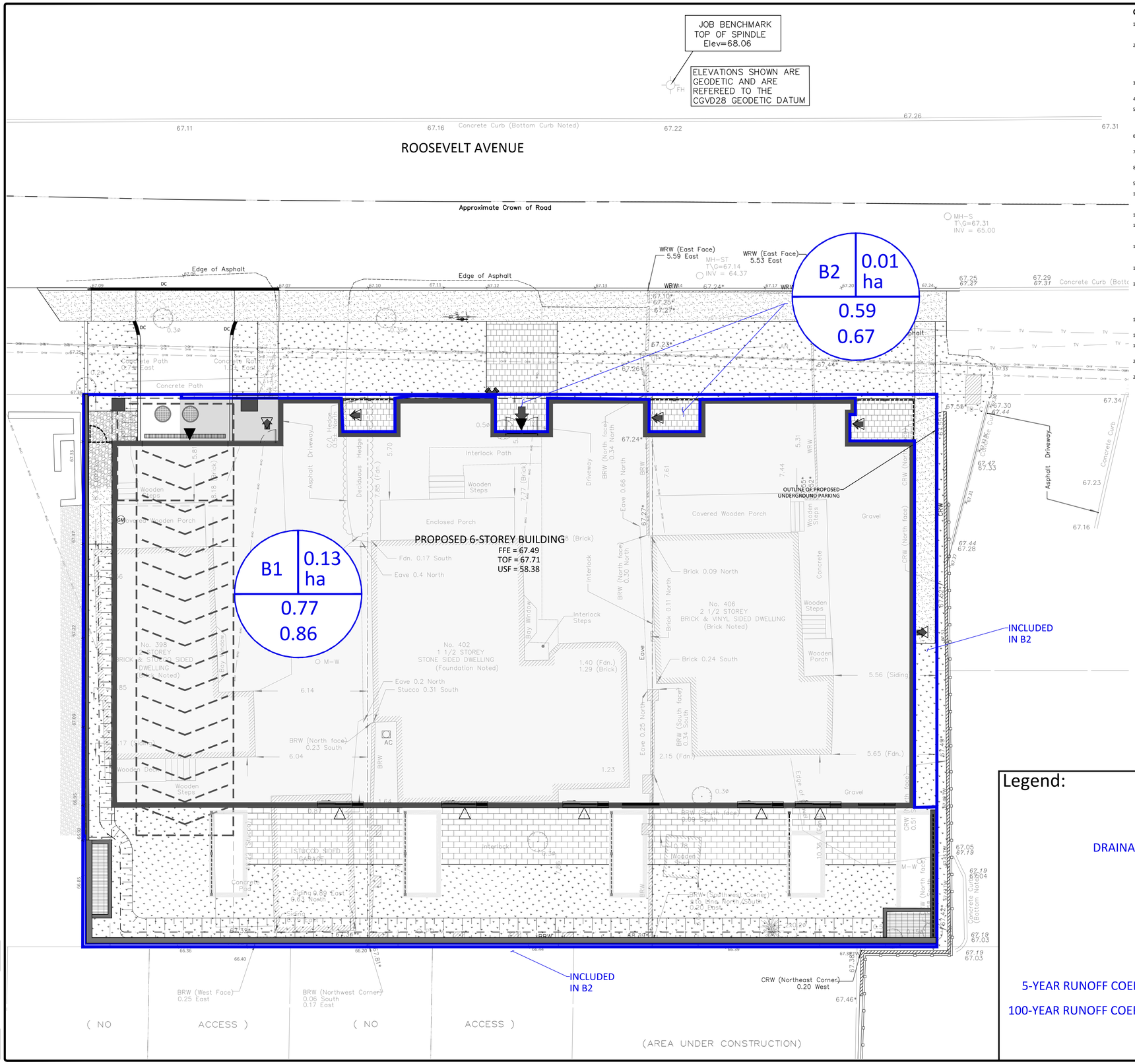
Scale: 1:100	Project Number: CCO-22-3302
Drawn By: R.R.R.	
Checked By: A.J.G.	Drawing Number: PRE
Designed By: A.J.G.	

D07-12-17-0171

#18647

FILENAME: U:\Ottawa\01 Project - Proposals\2022 Jobs\CCO\CCO-22-3302 3Point - 406 Roosevelt\12 - Drawing\CCO-22-3302_Presentation.dwg
LAST SAVED: Wednesday, May 01, 2024
LAST PLOTTED: Wednesday, May 01, 2024

APPENDIX F
POST-DEVELOPMENT DRAINAGE PLAN



GENERAL NOTES

1. THE ORIGINAL TOPOGRAPHY, GROUND ELEVATION AND SURVEY DATA SHOWN ARE SUPPLIED FOR INFORMATION PURPOSES ONLY, AND IMPLY NO GUARANTEE OF ACCURACY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL INFORMATION SHOWN.
2. THIS PLAN IS NOT A CADASTRAL SURVEY SHOWING LEGAL PROPERTY BOUNDARIES AND EASEMENTS. THE PROPERTY BOUNDARIES SHOWN HEREON HAVE BEEN DERIVED INFORMATION SUPPLIED BY (OR SHOWN ON) ANNIS, O'SULLIVAN, VOLLEBEKK LTD. JOB NO. 19693-17 AND CANNOT BE RELIED UPON TO BE ACCURATE OR COMPLETE. THE PRECISE LOCATION OF THE CURRENT PROPERTY BOUNDARIES AND EASEMENTS CAN ONLY BE DETERMINED BY AN UP-TO-DATE LAND TITLES SEARCH AND A SUBSEQUENT CADASTRAL SURVEY PERFORMED AND CERTIFIED BY AN ONTARIO LAND SURVEYOR.
3. THE CONTRACTOR IS TO OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY BEFORE COMMENCING CONSTRUCTION.
4. THE CONTRACTOR IS RESPONSIBLE FOR ALL LAYOUT.
5. THE CONTRACTOR IS TO DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. PROTECT AND ASSUME ALL RESPONSIBILITY FOR EXISTING UTILITIES WHETHER OR NOT SHOWN ON THESE DRAWINGS. IF THERE IS ANY DISCREPANCY THE CONTRACTOR IS TO NOTIFY THE ENGINEER PROMPTLY.
6. RESTORE ALL TRENCHES AND SURFACES OF PUBLIC ROAD ALLOWANCES TO CONDITION EQUAL OR BETTER THAN ORIGINAL CONDITION AND TO THE SATISFACTION OF THE CITY AUTHORITIES.
7. EXCAVATE AND DISPOSE OF ALL EXCESS EXCAVATED MATERIAL, SUCH AS ASPHALT, CURBING AND DEBRIS, OFF SITE AS DIRECTED BY THE ENGINEER AND THE CITY.
8. TOPSOIL TO BE STRIPPED AND STOCKPILED FOR REHABILITATION. CLEAN FILL TO BE PLACED IN FILL AREAS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.
9. ALL DISTURBED AREAS TO BE RESTORED TO ORIGINAL CONDITION OR BETTER UNLESS OTHERWISE SPECIFIED.
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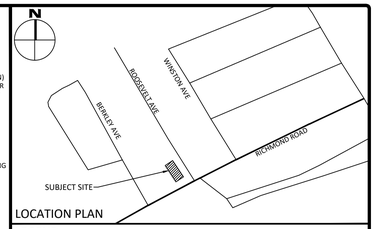

LOCATION PLAN

LEGEND

- BARRIER CURB & CURB DEPRESSION (DC)
- PROPOSED ASHPHALT
- CONCRETE WALKWAY
- LANDSCAPE AREA
- CONCRETE SIDEWALK
- STORM MANHOLE (MH#)
- CATCHBASIN, CURB INLET OR DITCH INLET (CB, CBCB, DI)
- SANITARY MANHOLE (MH#A)
- PERFORATED PIPE
- WATER VAVLE/CHAMBER
- FIRE HYDRANT
- PROPOSED WALL
- PROPOSED TRENCH DRAIN
- CENTRELINE OF SWALE
- CENTRELINE OF DITCH
- SLOPING AT 3:1 UNLESS SPECIFIED
- PROPOSED ELEVATION EXISTING ELEVATION (95.94 / 93.20)
- SWALE ELEVATION (95.94 / (S))
- TOP/BOTTOM WALL FACE ELEVATIONS (TW/100.50 x BW/99.50)
- EMERGENCY OVERLAND FLOW ROUTE
- SILT FENCE BARRIER PER OPSD 219.110
- BUILDING ENTRANCE BUILDING EXIT
- REDUCER
- REMOTE WATER METER (RM)
- WATER METER (M)
- GAS METER LOCATION (GM)

SUBJECT TO APPROVAL

No.	Revisions	Date
3	ISSUED FOR REVIEW	MAR 20, 2024
2	ISSUED FOR REVIEW	APR 6, 2022
1	ISSUED FOR REVIEW	DEC 10, 2021

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

SCALE 1 : 100

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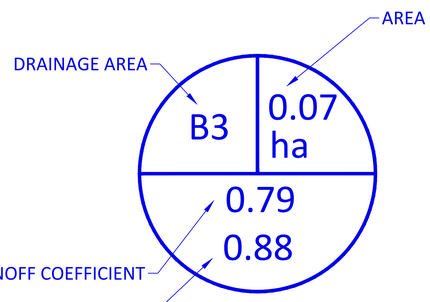

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Tel: 613-836-2184 Fax: 613-836-3742

Stamp: LICENSED PROFESSIONAL ENGINEER — A. J. GOSLING — 100226726 — PROVINCE OF ONTARIO

Client:
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651 CHURCHHILL AVE NORTH
OTTAWA, ON K1Z 5G2

Project:
6-STOREY RESIDENTIAL BUILDING
406 ROOSEVELT
OTTAWA ON

Drawing Title:
POST DEVELOPMENT DRAINAGE PLAN

Scale: 1:100	Project Number: CCO-22-3302
Drawn By: R.R.R.	
Checked By: A.J.G.	Drawing Number: POST
Designed By: A.J.G.	

D07-12-17-0171

#18647

FILENAME: U:\Ottawa\01 Project - Proposals\2022 Jobs\CCO\CCO-22-3302 3Point - 406 Roosevelt\12 - Drawings\CCO-22-3302_Presentation.dwg
LAST SAVED: Wednesday, May 01, 2024 LAST SAVED BY: J.Burden
LAST PLOTTED: Wednesday, May 01, 2024 CTB FILE USED: —

APPENDIX G
STORMWATER MANAGEMENT CALCULATIONS

CCO-22-3302 - 406 Roosevelt - Runoff Calculations

Pre-Development Runoff Coefficient

Drainage Area	Area (ha)	Impervious Area (m^2)	C	Gravel Area (m^2)	C	Pervious Area (m^2)	C	C_{AVG} 5-Year	C_{AVG} 100-Year
A1	0.136	503.98	0.90	614.52	0.60	245.99	0.20	0.64	0.75

Pre-Development Runoff Calculations

Drainage Area	Area (ha)	C 5-Year	C 100-Year	Tc (min)	I (mm/hr)			Q (L/s)	
					2-Year	5-Year	100-Year	5-Year	100-Year
A1	0.136	0.64	0.75	10	76.8	104.2	178.6	25.24	50.95
Total	0.136							25.24	50.95

Post-Development Runoff Coefficient

Drainage Area	Area (ha)	Impervious Area (m^2)	C	Gravel Area (m^2)	C	Pervious Area (m^2)	C	C_{AVG} 5-Year	C_{AVG} 100-Year
B1	0.129	1,048.13	0.90	0.00	0.60	244.00	0.20	0.77	0.86
B2	0.007	36.38	0.90	6.78	0.60	29.21	0.20	0.59	0.67

Post-Development Runoff Calculations

Drainage Area	Area (ha)	C 2/5-Year	C 100-Year	Tc (min)	I (mm/hr)		Q (L/s)	
					5-Year	100-Year	5-Year	100-Year
B1	0.129	0.77	0.86	10	104.2	178.6	28.74	55.06
B2	0.007	0.59	0.67	10	104.2	178.6	1.24	2.42
Total	0.136						29.97	57.48

Required Restricted Flow

Drainage Area	Area (ha)	C 5-Year	Tc (min)	I (mm/hr)	Q (L/s)
				5-Year	5-Year
A1	0.136	0.50	10	104.2	19.76
Total	0.136				19.76

Post-Development Restricted Runoff Calculations

Drainage Area	Unrestricted Flow (L/s)		Restricted Flow (L/s)		Storage Required (m^3)		Storage Provided (m^3)		
	5-Year	100-Year	5-Year	100-Year	5-Year	100-Year	5-Year	100-Year	
B1	28.74	55.06	8.81	16.81	12.81	24.58	12.81	24.58	*Restricted*
B2	1.24	2.42	1.24	2.42					*Unrestricted*
Total	29.97	57.48	10.05	19.23	12.81	24.58	12.81	24.58	

CCO-22-3302 - 406 Roosevelt - Runoff Calculations

Storage Requirements for Area B1

5-Year Storm Event

Tc (min)	I (mm/hr)	Runoff (L/s) B1	Allowable Outflow (L/s)	Runoff to be Stored (L/s)	Storage Required (m^3)
10	104.2	28.74	8.81	19.93	11.96
15	83.6	23.05	8.81	14.24	12.81
20	70.3	19.38	8.81	10.57	12.68
25	60.9	16.80	8.81	7.99	11.98
30	53.9	14.87	8.81	6.06	10.91

Maximum Storage Required 5-year =	12.8 m^3

100-Year Storm Event

Tc (min)	I (mm/hr)	Runoff (L/s) B1	Allowable Outflow (L/s)	Runoff to be Stored (L/s)	Storage Required (m^3)
10	178.6	55.06	16.81	38.25	22.95
12	162.1	49.99	16.81	33.18	23.89
14	148.7	45.86	16.81	29.05	24.40
16	137.5	42.41	16.81	25.60	24.58
18	128.1	39.49	16.81	22.68	24.50
20	120.0	36.99	16.81	20.18	24.21
22	112.9	34.81	16.81	18.00	23.75
24	106.7	32.89	16.81	16.08	23.16
26	101.2	31.20	16.81	14.39	22.44
28	96.3	29.69	16.81	12.88	21.63

Maximum Storage Required 100-year =	24.6 m^3

5-Year Storm Event Storage Summary

Storage Available (m^3) = 12.8	*
Storage Required (m^3) = 12.8	

100-Year Storm Event Storage Summary

Storage Available (m^3) = 24.6	*
Storage Required (m^3) = 24.6	

Time of Concentration Pre-Development

Drainage Area ID	Sheet Flow Distance (m)	Slope of Land (%)	Tc (min) (5-Year)	Tc (min) (100-Year)
A1	26	1.76	6	3

**Therefore, a Tc of 10 can be used*

Tc= (3.26(1.1-c)L^0.5/S^0.33)

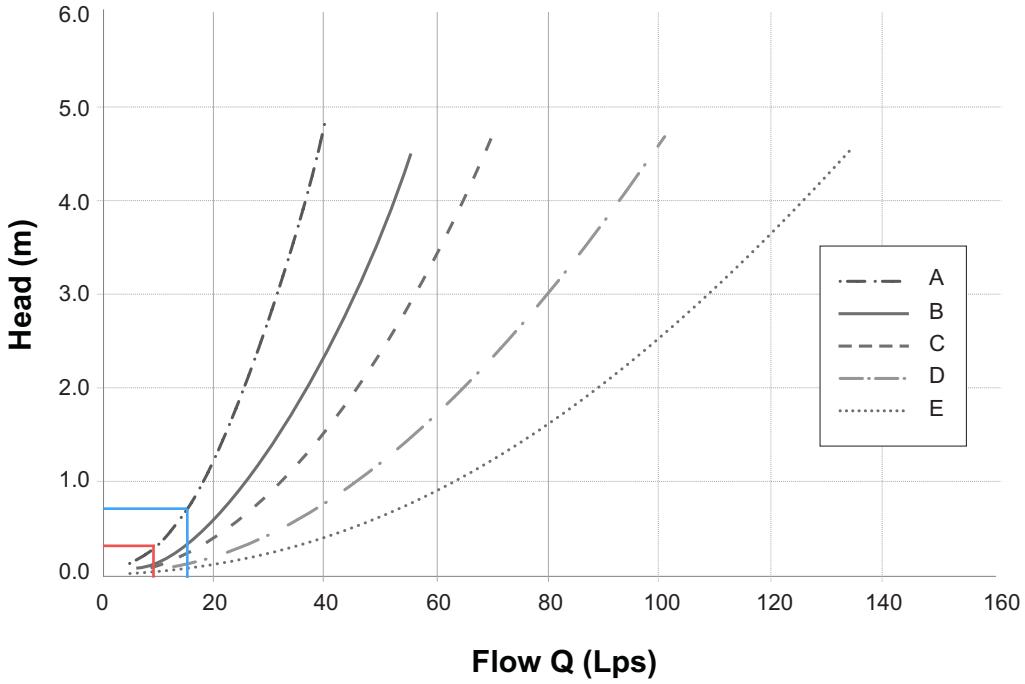
c= Balanced Runoff Coefficient

L= Length of Drainage Area

S= Average Slope of Watershed

Cistern ICD Sizing

Chart 3: HF & MHF Preset Flow Curves



5-Year Storm Scenario

100-Year Storm Scenario

STORM SEWER DESIGN SHEET

PROJECT: Apartment Building
LOCATION: 406 Roosevelt

CLIENT: ML Westboro Realty Investment

McINTOSH PERRY
egis GROUP

LOCATION				CONTRIBUTING AREA (ha)				RATIONAL DESIGN FLOW										SEWER DATA								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
STREET	AREA ID	FROM MH	TO MH	C-VALUE	AREA	INDIV AC	CUMUL AC	INLET (min)	TIME IN PIPE	TOTAL (min)	i (5) (mm/hr)	i (10) (mm/hr)	i (100) (mm/hr)	5yr PEAK FLOW (L/s)	10yr PEAK FLOW (L/s)	100yr PEAK FLOW (L/s)	FIXED FLOW (L/s)	DESIGN FLOW (L/s)	CAPACITY (L/s)	LENGTH (m)	PIPE SIZE (mm)			SLOPE (%)	VELOCITY (m/s)	AVAIL CAP (5yr)	
																					DIA	W	H			(L/s)	(%)
ROOSEVELT AVE	B1	BLDG	EX SEWER	0.77	0.13	0.10	0.10	10.00	0.08	10.08	104.19	122.14	178.56	28.74				28.74	62.04	6.19	250			1.00	1.224	33.30	53.68%

Definitions:
Q = 2.78CiA, where:
Q = Peak Flow in Litres per Second (L/s)
A = Area in Hectares (ha)
i = Rainfall intensity in millimeters per hour (mm/hr)
[i = 998.071 / (TC+6.053)^0.814] 5 YEAR
[i = 1174.184 / (TC+6.014)^0.816] 10 YEAR
[i = 1735.688 / (TC+6.014)^0.820] 100 YEAR

Notes:
1. Mannings coefficient (n) = 0.013

Designed: R.R.R.

Checked: A.J.G.

Project No.: CCO-22-3302

No.	Revision	Date

Date: 2021-01-30

Sheet No: 1 of 1

APPENDIX H
CITY OF OTTAWA DESIGN CHECKLIST

City of Ottawa

4. Development Servicing Study Checklist

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

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

4.1 General Content

Criteria	Location (if applicable)
☐ Executive Summary (for larger reports only).	N/A
☐ Date and revision number of the report.	On Cover
☐ Location map and plan showing municipal address, boundary, and layout of proposed development.	Appendix A
☐ Plan showing the site and location of all existing services.	Site Servicing Plan (C102)
☐ Development statistics, land use, density, adherence to zoning and official plan, and reference to applicable subwatershed and watershed plans that provide context to which individual developments must adhere.	1.1 Purpose 1.2 Site Description 6.0 Proposed Stormwater Management
☐ Summary of pre-consultation meetings with City and other approval agencies.	Appendix B
☐ Reference and confirm conformance to higher level studies and reports (Master Servicing Studies, Environmental Assessments, Community Design Plans), or in the case where it is not in conformance, the proponent must provide justification and develop a defendable design criteria.	1.1 Purpose 1.2 Site Description 6.0 Proposed Stormwater Management
☐ Statement of objectives and servicing criteria.	3.0 Pre-Consultation Summary

☐ Identification of existing and proposed infrastructure available in the immediate area.	N/A
☐ Identification of Environmentally Significant Areas, watercourses and Municipal Drains potentially impacted by the proposed development (Reference can be made to the Natural Heritage Studies, if available).	Site Grading Plan (C101)
☐ 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.	Site Grading Plan (C101)
☐ Identification of potential impacts of proposed piped services on private services (such as wells and septic fields on adjacent lands) and mitigation required to address potential impacts.	N/A
☐ Proposed phasing of the development, if applicable.	N/A
☐ Reference to geotechnical studies and recommendations concerning servicing.	Section 2.0 Background Studies, Standards and References
☐ All preliminary and formal site plan submissions should have the following information: o Metric scale o North arrow (including construction North) o Key plan o Name and contact information of applicant and property owner o Property limits including bearings and dimensions o Existing and proposed structures and parking areas o Easements, road widening and rights-of-way o Adjacent street names	Site Grading Plan (C101)

4.2 Development Servicing Report: Water

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

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

4.3 Development Servicing Report: Wastewater

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

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

4.4 Development Servicing Report: Stormwater Checklist

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

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

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

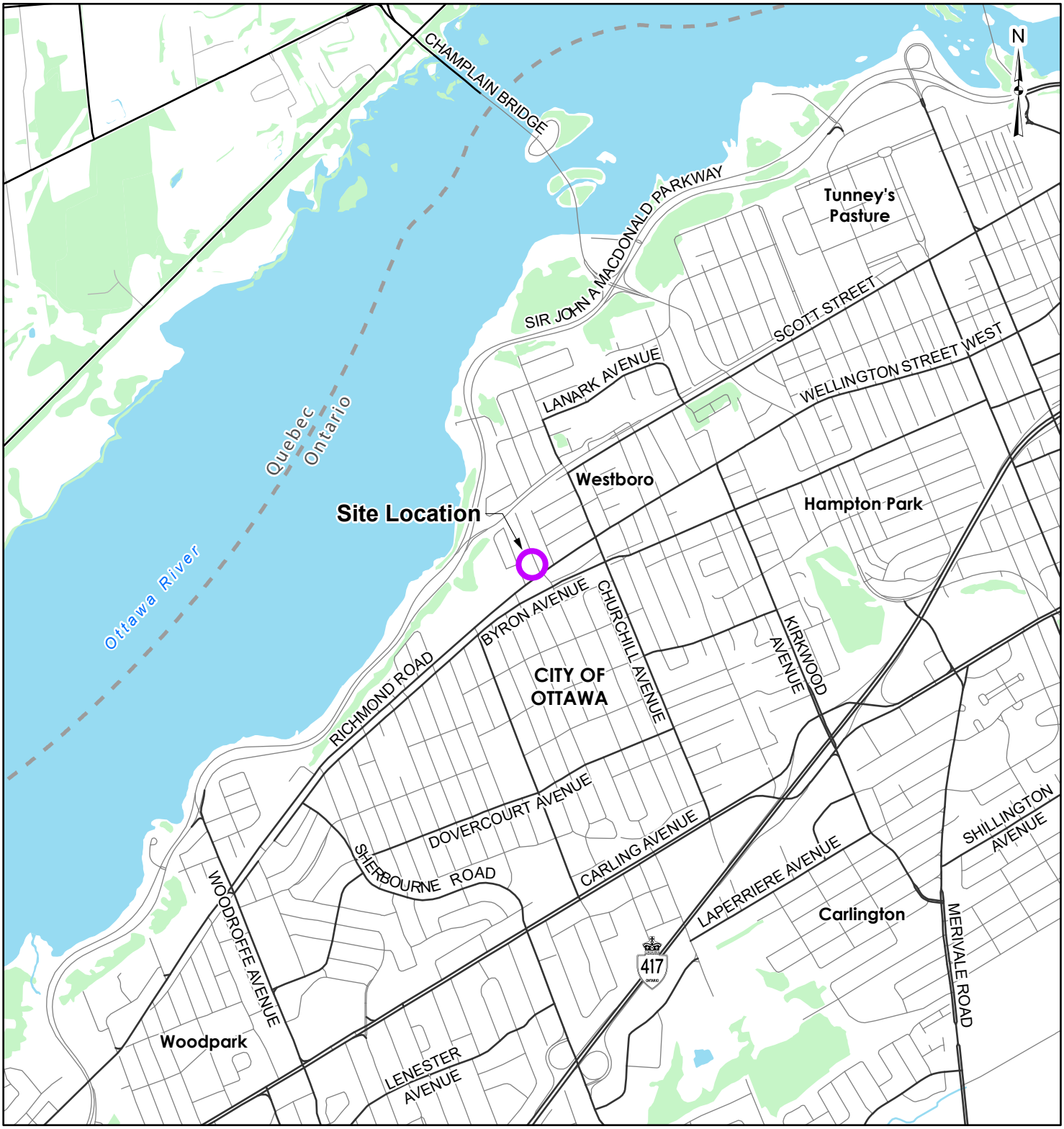
4.5 Approval and Permit Requirements: Checklist

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

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

4.6 Conclusion Checklist

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



LEGEND

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

600 300 0 600

Scale 1:25,000 Metres

REFERENCE

GIS data provided by the Ontario Ministry of Natural Resources and Forestry, 2021.

CLIENT:
ML WESTBORO REALTY INVESTMENTS INC.

PROJECT:
398-406 ROOSEVELT AVENUE, OTTAWA, ON

TITLE:
SITE LOCATION

McINTOSH PERRY
egis GROUP
115 Walgreen Rd. Carp, ON K0A 1L0
Tel: 613-836-2184 Fax: 613-836-3742
www.McIntoshPerry.com

PROJECT NO:	CCO-22-3302
Date	Dec., 07, 2021
GIS	EU
Checked By	AG

FIGURE: 1

C:\Users\e.ungun\McIntosh Perry\GIS - Documents\Projects\2022\CCO\CCO-22-3302 ML Westboro Realty Invest-SPC- Roosevelt\aprx\Key Maps\LandDevelopment\CCO-22-3302_SiteLocationPlan.aprx

File No.: PC2023-0215

Tyler Yakichuk
Fotenn Planning + Design
Via email: yakichuk@fotenn.com

Subject: **Pre-Consultation: Meeting Feedback**
Proposed Site Plan Revision Application – 398, 402, & 406 Roosevelt Ave

Please find below information regarding next steps as well as consolidated comments from the above-noted pre-consultation meeting held on September 8, 2023.

Pre-Consultation Preliminary Assessment

1 ☐	**2** ☐	**3** ☐	**4** ☒	**5** ☐

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

Next Steps

1. A review of the proposal and materials submitted for the above-noted pre-consultation has been undertaken. Please proceed to complete a Phase 3 Pre-consultation Application Form and submit it together with the necessary studies and/or plans to planningcirculations@ottawa.ca.

2. In your subsequent pre-consultation submission, please ensure that all comments or issues detailed herein are addressed. A detailed cover letter stating how each issue has been addressed must be included with the submission materials. Please coordinate the numbering of your responses within the cover letter with the comment number(s) herein.

3. Please note, if your development proposal changes significantly in scope, design, or density before the Phase 3 pre-consultation, you may be required to complete or repeat the Phase 2 pre-consultation process.

Supporting Information and Material Requirements

1. The attached **Study and Plan Identification List** outlines the information and material that has been identified, during this phase of pre-consultation, as either required (R) or advised (A) as part of a future complete application submission.

a. The required plans and studies must meet the City's Terms of Reference (ToR) and/or Guidelines, as available on Ottawa.ca. These ToR and Guidelines outline the specific requirements that must be met for each plan or study to be deemed adequate.

Consultation with Technical Agencies

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

Planning

Questions

1. In the initial design, there was a greater effort to provide for a larger public realm and setback from the front lot line. Understanding that the zoning does not require a zoning setback, I am looking to confirm what has led to the changes to build to the lot line and comment on the loss of pedestrian realm. In review of the initial zoning report – it was outlined that *"as part of the site redevelopment, enhancement of the public realm is proposed through extension of the sidewalk along the site's frontage, installation of public bicycle parking, shrub and tree plantings, and street furniture*" – how has this been maintained?

   Response – We initially set the building back to allow for balcony projections, not for provision of public realm.

2. How have the proposed changes affected the provisions of landscaping/amenity area on the site?

   a. With the removal/resizing of the outdoor terrace at the rear yard – are there any deficiencies for amenity area?

      Response: No

   b. Will the privacy fence in the rear yard remain? It is not shown on the updated plans.

      Response: It is to remain but will be redesigned. We are trying to maintain the greenery and will be fine tuning further in the revisions, will be shown on the finalized Landscape Plan.

   c. Regarding the "communal" terraces facing east (front yard) on the new floor plans, please confirm if there will be partitions as the plans seem to indicate as such. If they are communal, where would access be and how will privacy of residents be addressed?

      Response: There will be partitions, therefore private.

3. What has led to the increased units – what space was removed/adjusted to accommodate?

   Response: Reduce lobby area, added common area at back, redistribution of unit size.

4. Is there any zoning relief requested?

   Response: No, we are not wanting to rely on any zoning processes. We have discussed with the Councillor and they were supportive of the change.

5. What is the intention for the hydro lines at the front lot line? Are they to be buried?

   Response: They are to be buried – already in progress.

6. Are there going to be any affordable units?

   Response: Looking to have seven affordable rental units.

Comments

Official Plan

1. Section 3.0 Table 3b) of the Official Plan outlines the framework for the inner urban transect, requiring a large-family household target of 5% for mid-rise buildings.

Zoning By-law

2. Confirm that all bike lock-ups and storage areas conform to Section 111 of the Zoning By-law. In particular, that the requirements of Sec 111(11) are being met.
3. Ensure that amenity areas are in conformity with zoning requirements. Please consider a meaningful outdoor communal amenity space for residents to enjoy at-grade in the rear-yard, understanding that there has been a shift from luxury condo units to smaller rental units which are not afforded as much space or private amenity space.
4. Ensure that appropriate landscaped area is being provided as per 163 (9), which requires 30% landscaped area.
5. Ensure zoning conformity and include a zoning table on the SP which shows how the provisions have been met.

Feel free to contact Jack Smith - Planner I, or John Bernier - Planner II, for follow-up questions.

Urban Design

Submission Requirements

1. Urban Design Brief is required. Please see attached TOR for convenience.
    a. The Urban Design Brief should be structured by generally following the headings highlighted under Section 3 – Contents of these Terms of Reference.
    b. Given that this is a site plan revision, and that the approved site plan was subject to extensive review, and that the revision is significant yet in conformity with the OLT approved zoning, it is important to describe, illustrate, and document changes (design evolution) in the Urban Design Brief.
    c. Other contents such as policy compliance, site context, etc, are not required.
2. Please refer to relevant Terms of Reference available on the City's website (Planning application submission information and materials | City of Ottawa) to prepare additional drawings and studies required, including:
    a. Site Plan
    b. Landscape Plan
    c. Building Elevations

UDRP review

3. The development on these sites has a complex history. The initial development proposal was subject to UDRP review at the rezoning stage even though it was not within a Design Priority Area. A decision on zoning was made by OLT subsequently with conditions for site plan. The previously approved site plan was not subject to UDRP. The proposed revision, though significant comparing with the approved, is in conformity with the zoning and includes elements that supports built form compatibility. It is therefore agreeable that a return to the UDRP is not required.

Revised Design

4. The revised design now has a larger footprint. The building is closer to the street. However, it is in conformity with the zoning.
5. It has been clarified by the project architect that the location of the parking ramp has not changed. The building structure above the parking ramp (the second-floor unit), however, has been brought forward. Whether or not the unit above the parking ramp can effectively screen the garage door as claimed is a question that requires further study. The transition between the proposed development, which sits right on the property line, and the existing building to the immediate north is important. Please study and provide perspective views from the streets and the abutting lot to the immediate north.
6. The newly introduced two-storey building volume along the street provides an opportunity for built form compatibility with the rest of the street. Considerations should be given to differentiated materials between the two-storey volume and floors above it. The two-storey volume should support the residential character of the street.

7. The removal of the balcony canopies on the top floor is helpful to create a more "refrained" background building.
8. The private patios of the ground floor units facing the streets appear to be leveled with the sidewalk. As a general principle, a few steps of grade difference can make these patios more user friendly to residents as well as to pedestrians on the sidewalk.
9. Rear yard landscaping should be further explored. Effective landscaping screening as originally intended should be provided.
10. It is delighted to hear that hydro has been buried as part of the condition for rezoning. Tree planting is possible along the street.

Feel free to contact Randolph Wang, Urban Designer, for follow-up questions.

Engineering

1. All previously approved Environmental, Noise and Civil Studies / Plans are to be revised, or at minimum, the consultant is to provide an engineering memo speaking to new proposal and demonstrate why a revision is not necessary.

Feel free to contact Shawn Wessel or John Wu, Infrastructure Project Managers, for follow-up questions.

Transportation

1. The RMA-2022-TPD-024 had been approved June 14, 2022. Please proceed with the Detailed Design Drawings.

2. The Screening Form has indicated that both the Location Triggers and Safety Triggers have been met. Please proceed with the TIA Step 2 – Scoping as per the revised TIA Guidelines.

3. Please review the revised TIA Guidelines and revised Screening Form.

4. *The following documents the process conducted for the Traffic Impact Assessment (TIA) Guidelines review and the recommended changes to the guidelines to maximize the likelihood of meeting the review timelines associated with Bill 109.*
    a. Revisions to Traffic Impact Assessment Guidelines (ottawa.ca).
    b. City of Ottawa TIA Guidelines Certification and Screening Form.

5. The Owner acknowledges and agrees that all private accesses to Roads shall comply with the City's Private Approach By-Law being By-Law No. 2003-447 as amended https://ottawa.ca/en/living-ottawa/laws-licences-and-permits/laws/law-z/private-approach-law-no-2003-447 or as approved through the Site Plan control process.

6. The Owner shall be required to enter into maintenance and liability agreement for all pavers, plant and landscaping material placed in the City right-of-way and the Owner shall assume all maintenance and replacement responsibilities in perpetuity.

7. Bicycle parking spaces are required as per Section 111 of the Ottawa Comprehensive Zoning By-law. Bicycle parking spaces should be in safe, secure places near main entrances and preferably protected from the weather.

8. Should the property Owner wish to use a portion of the City's Road allowance for construction staging, prior to obtaining a building permit, the property Owner must obtain an approved Traffic Management Plan from the Manager, Traffic Management, Transportation Services Department. The city has the right for any reason to deny use of the Road Allowance and to amend the approved Traffic Management Plan as required.

Feel free to contact Wally Dubyk, Transportation Project Manager, for follow-up questions.

Environment and Trees

Forestry Comments

1. Please ensure the following minimum setback are respected:
    a. Maintain 1.5m from sidewalk or MUP/cycle track or water service laterals.
    b. Maintain 2.5m from curb.

2. Maintain 7.5m between large growing trees, and 4m between small growing trees. Park or open space planting should consider 10m spacing, except where otherwise approved in naturalization / afforestation areas. Adhere to Ottawa Hydro's planting guidelines (species and setbacks) when planting around overhead primary conductors.

3. Tree specifications
    a. Minimum stock size: 50mm tree caliper for deciduous, 200cm height for coniferous.
    b. Maximize the use of large deciduous species wherever possible to maximize future canopy coverage.

4. Tree planting on city property shall be in accordance with the City of Ottawa's Tree Planting Specification; and if possible, include watering and warranty as described in the specification.

5. No root barriers, dead-man anchor systems, or planters are permitted.

6. No tree stakes unless necessary (and only 1 on the prevailing winds side of the tree)

7. Hard surface planting
    a. If there are hard surface plantings, a planting detail must be provided.
    b. Curb style planter is highly recommended.
    c. No grates are to be used and if guards are required, City of Ottawa standard (which can be provided) shall be used.
    d. Trees are to be planted at grade

8. Soil Volume
    a. Please demonstrate as per the **Landscape Plan Terms of Reference** that the available soil volumes for new plantings will meet or exceed the following:

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

    b. It is suggested that the proposed species list include a column listing the available soil volume.
9. The City requests that consideration be given to planting native species where ever there is a high probability of survival to maturity.

10. Efforts shall be made to provide as much future canopy cover as possible at a site level, through tree planting and tree retention. The Landscape Plan shall show/document that the proposed tree planting and retention will contribute to the City's overall canopy cover over time. Please provide a projection of the future canopy cover for the site to 40 years.

Feel free to contact Mark Richardson, Planning Forester, for follow-up questions.

Environmental Comments

1. Bird-Safe Design Guidelines: Review and incorporate design elements from the Bird Safe Design Guidelines into the proposal; demonstrate compliance in Elevations.

2. Plant as much as possible, locally appropriate native vegetation (Trees, shrubs and plants) on the southern and western property edges to block sun & provide shade; it will also contribute to canopy cover

Feel free to contact Sami Rehman, Environmental Planner, for follow-up questions.

Parkland

1. Parkland dedication requirements were satisfied through the original site plan application. Parks staff have no comments on this revision application.

Feel free to contact Kimberley Baldwin, Parks Planner, for follow-up questions.

Other

1. The High Performance Development Standard (HPDS) is a collection of voluntary and required standards that raise the performance of new building projects to achieve sustainable and resilient design. The HPDS was passed by Council on April 13, 2022.

    a. At this time, the HPDS is not in effect and Council has referred the 2023 HPDS Update Report back to staff with direction to bring forward an updated report to Committee with recommendations for revised phasing timelines, resource requirements and associated amendments to the Site Plan Control By-law by no later than Q1 2024.

    b. Please refer to the HPDS information attached and ottawa.ca/HPDS for more information.

Submission Requirements and Fees

1. Please proceed to prepare submission for a Phase 3 Pre-Consultation.
    a. Additional information regarding fees related to planning applications can be found here.
2. The attached **Study and Plan Identification List** outlines the information and material that has been identified as either required (R) or advised (A) as part of a future complete application submission.
    a. The required plans and studies must meet the City's Terms of Reference (ToR) and/or Guidelines, as available on Ottawa.ca. These ToR and

Guidelines outline the specific requirements that must be met for each plan or study to be deemed adequate.

3. All of the above comments or issues should be addressed to ensure the effectiveness of the application submission review.

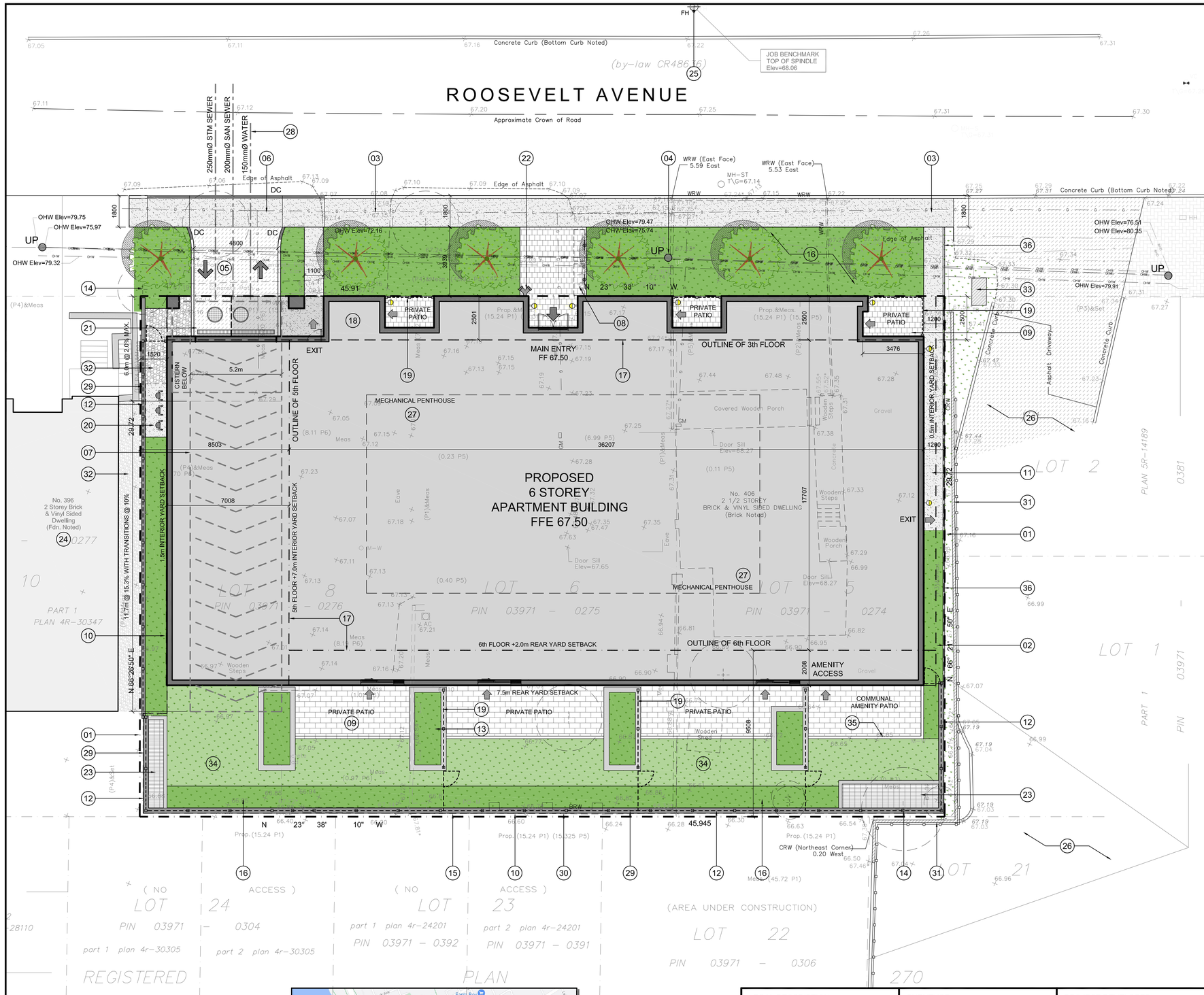
Should there be any questions, please do not hesitate to contact myself or the contact identified for the above areas / disciplines.

Yours Truly,

Jack Smith, Planner I

cc.

John Bernier, Planner II
John Wu, Senior Engineer (Infrastructure Project Manager)
Shawn Wessel, Infrastructure Project Manager
Wally Dubyk, Transportation Project Manager
Mark Richardson, Planning Forester
Sami Rehman, Environmental Planner
Kim Baldwin, Parks Planner



PROJECT INFORMATION

Zoning By-law 2008-250 Consolidation R5B [2472] H(21.0) SITE AREA 0.1365 ha. 1,364.5 sq. m. (14,687) sq. ft.

ZONING	REQUIRED	PROVIDED
BUILDING HEIGHT	6 STOREY'S / 21,0m	6 STOREY'S / 18.9m
GRADE (GEODETIC ELEVATION - ASL)	(GEO, ELEV.) 67,40	(GEO, ELEV.) 67,40
FRONT YARD SETBACK	0,0m	0.0m
FRONT YARD SETBACK ABOVE 2nd STOREY + 2,5m	2,5m	2.5m
INTERIOR YARD SETBACK - SOUTH	0,5m	1.2m
INTERIOR YARD SETBACK - NORTH	1,5m	1.5m
INTERIOR YARD SETBACK - NORTH ABOVE 4th FLOOR + 7,0m	8,5m	8.5m
REAR YARD SETBACK	7,5m	7.5m
REAR YARD SETBACK - ABOVE 5th FLOOR + 2,0m	9,5m	9.5m
AMENITY AREA - TOTAL PER UNIT - 6,0m²	372m²	617m²
VEHICLE PARKING - RESIDENTIAL (AFTER 12 UNITS - 0,5 per unit)	25	25
VEHICLE PARKING - VISITOR ONLY (AFTER 12 UNITS - 0,1 per unit)	5	6
BICYCLE PARKING - RESIDENTIAL - 0,5 PER UNIT	31	78
DRIVEWAY WIDTH - MINIMUM	4,5m	4.8m
AISLE WIDTH - MINIMUM	5,2m	6.0m

DRAWING NOTES

1. PROPERTY LINE
2. BUILDING SETBACKS
3. 1.8m WIDE CITY SIDEWALK & BARRIER CURB
4. EXISTING HYDRO POLES TO BE BURIED AS AGREED UPON WITH OTTAWA HYDRO
5. ENTRANCE DRIVEWAY WITH 150 BARRIER CURBS
6. CONTINUOUS DEPRESSED SIDEWALK THROUGH DRIVE
7. INTERNAL PARKING GARAGE RAMP WITH TRENCH DRAIN
8. RINGED BOLLARD BICYCLE RACK
9. PRIVATE TERRACE AT GRADE
10. OUTLINE OF UNDERGROUND PARKING LEVEL
11. HARD SURFACE WALKWAY
12. LOW RETAINING WALL
13. RAISED PLANTER
14. EXISTING TREE TO BE REMOVED
15. EXISTING CHAIN LINK TO BE REMOVED
16. SOFT LANDSCAPING
17. OUTLINE OF BUILDING ABOVE
18. BALCONY ABOVE
19. PRIVACY SCREEN WITH GATE
20. 1,2m X 3,0m CONCRETE PAD FOR GAS EQUIPMENT, EXACT LOCATION TO BE CONFIRMED
21. STORM WATER TANK WITH ACCESS COVER & OVERFLOW CATCH BASIN - SEE CIVIL PLAN
22. SIAMESE CONNECTION
23. AIR INTAKE / EXHAUST GRILL
24. EXISTING BUILDING ON ADJACENT LAND
25. EXISTING FIRE HYDRANT
26. EXISTING ASPHALT PARKING AREA ON ADJACENT LAND
27. OUTLINE OF MECHANICAL PENTHOUSE
28. PROPOSED SERVICES
29. PRIVACY FENCE 2.1m MAX. HEIGHT FROM GRADE
30. EXISTING RETAINING WALL TO BE REMOVED
31. EXISTING CURB AND 1,5m HT. SOLID WOOD FENCE ON ADJACENT PROPERTY
32. RIVER STONE SURFACE, EXISTING / PROPOSED
33. EXISTING UTILITY BOX TO REMAIN
34. ARTIFICIAL TURF
35. CURB AROUND PATIO, SEE LANDSCAPE
36. 100mm CONCRETE CURB

SITE PLAN SYMBOLS

- UNIT PAVERS SURFACE
- CONCRETE WALK
- ASPHALT WALK / DRIVEWAY
- SOFT LANDSCAPING
- ARTIFICIAL TURF
- BIKE RACK
- TWO WAY VEHICLE CIRCULATION
- MAIN ENTRANCE
- UNIT / FIRE EXIT DOOR
- PROPERTY LINE
- SETBACK LINE

PROJECT STATISTICS

GROSS BUILDING - AREAS (CITY OF OTTAWA ZONING AREA)

PARKING LEVEL		0,0 sq. m, 000 sq. ft.
GROUND FLOOR		473,8 sq. m, 5,100 sq. ft.
2nd FLOOR		776,2 sq. m, 8,355 sq. ft.
3rd & 4th FLOOR	2 x 710.6 sq. m, 2 x 7,649 sq. ft.	1,421,2 sq. m, 15,298 sq. ft.
5th FLOOR		588,5 sq. m, 6,335 sq. ft.
6th FLOOR		514,4 sq. m, 5,573 sq. ft.
MECHANICAL PENTHOUSE		0,0 sq. m, 000 sq. ft.
TOTAL AREA		3,774,2 sq. m, 40,625 sq. ft.

UNIT STATISTICS

STUDIO UNIT	19,7%	12
ONE BEDROOM UNIT	19,7%	12
ONE BEDROOM + DEN UNIT	13,1%	8
TWO BEDROOM UNIT	39,3%	24
TWO BEDROOM + DEN UNIT	6,6%	4
THREE BEDROOM UNIT	1,6%	1
TOTAL	100%	61

CAR PARKING

REQUIRED by ZONING BY-LAW

RESIDENCE	- 0,5 PER DWELLING UNIT (AFTER 12 UNITS)	25
VISITOR	- 0,1 PER DWELLING UNIT (AFTER 12 UNITS)	5
TOTAL		30

PROVIDED

RESIDENCE		25
VISITOR		5
TOTAL		30

BICYCLE PARKING

REQUIRED

RESIDENCE	- 0.5 PER UNIT (61 UNITS)	31

PROVIDED

INTERIOR - P2 LEVEL	- 1,0 PER UNIT (61 UNITS)	65
EXTERIOR - ON CITY BOULEVARD		2
TOTAL		67

LOT COVERAGE

PAVED SURFACE =	10,2 sq, m,	0,7%
BUILDING FOOTPRINT =	910,5 sq, m,	66,7%
LANDSCAPE OPEN SPACE =	443,8 sq, m,	32,6%
TOTAL =	1,364,5 sq, m,	100,0%

AMENITY SPACE

PRIVATE TERRACE AT GRADE =	200,0 sq, m,
COMMUNAL AT GRADE =	80,0 sq, m,
1st FLOOR INDOOR AMENITY =	46,0 sq, m,
3rd FLOOR PRIVATE TERRACE =	78,0 sq, m,
5th FLOOR PRIVATE TERRACE =	85,0 sq, m,
6th FLOOR PRIVATE TERRACE =	58,0 sq, m,
PRIVATE BALCONIES =	70,0 sq, m,
TOTAL =	617,0 sq, m,
REQUIRED - 6,0M² PER UNIT (61) =	366,0 sq, m,

SOLID WASTE (61 UNITS)

GARBAGE	- 0,11 PER UNIT	7 YARDS
RECYCLING GMP	- 0,018 PER UNIT	1 YARDS
RECYCLING FIBER	- 0,038 PER UNIT	3 YARDS
COMPOST	- 240L PER 50 UNITS	2

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

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

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

DO NOT SCALE DRAWINGS.

NOTATION SYMBOLS:

- (00) INDICATES DRAWING NOTES, LISTED ON EACH SHEET.
- <00> INDICATES ASSEMBLIE TYPE; REFER TO TYPICAL ASSEMBLIES SCHEDUAL.
- (00) INDICATES WINDOW TYPE; REFER TO WINDOW ELEVATIONS AND DETAILS ON A900 SERIES.
- (000) INDICATES DOOR TYPE; REFER TO DOOR SCHEDULE AND DETAILS ON A900 SERIES.
- 00 DETAIL NUMBER
- 00 TITLE / SCALE
- DETAIL REFERENCE PAGE
- DETAIL CROSS REFERENCE PAGE

No.	DESCRIPTION	DATE
4	ISSUED FOR PHASE 3 PRE-CONSULT RESPONSE	June 18, 24
3	ISSUED FOR PHASE 3 PRE-CONSULT - AMENDED SPC	May 06, 24
2	ISSUED FOR OWNER / CONSULTANT REVIEW	Apr. 26, 24
1	ISSUED FOR REVISED DESIGN	Feb. 22, 24

REVISIONS:

ARCHITECT SEAL: ONTARIO ASSOCIATION OF ARCHITECTS — RODERICK J. LAHEY LICENCE 4375 — SEAL DATE: STAMP DATE

NORTH ARROW:

CLIENT:
ML DEVCO
ML Westboro Inc.
C/O ML DEVCO

ARCHITECT:
rla/architecture
roderick lahey architect inc.
56 beech street, ottawa, ontario K1S 3J6
t. 613.724.9932 f. 613.724.1209 rlaarchitecture.ca

PROJECT TITLE:
THE WESTMOUNT
(398 - 406 ROOSEVELT AVENUE)
OTTAWA ONTARIO

SHEET TITLE:
SITE PLAN

DRAWN: R.V.
CHECKED: R.V.
SCALE: 1:100
SHEET No. SP-1
PROJECT No. 2122

D02-02- -00

LEGAL DESCRIPTION

SURVEYOR'S REAL PROPERTY REPORT
PART 1 Plan of
LOTS 5, 6 and 8
REGISTERED PLAN 114
CITY OF OTTAWA

Surveyed by Annis, O'Sullivan, Vollebekk Ltd.

SURVEYOR

Annis O'Sullivan Vollebekk Ltd.
Ontario Land Surveyors
14 Concourse Gate, Suite 500,
Nepean, Ontario K2E 7S6
Tel: (613) 727-0850
Fax: (613) 727-1079
Email: ____@aovltd.com

PROJECT DEVELOPER

ML Westboro Inc.
C/O ML DEVCO
300-411 Roosevelt Avenue,
Ottawa ON, K2A 3X9
Tel.: (613) 686-6319
Cell: (613) 219-2287
E-Mail: mflanigan@mldevco.ca
E-Mail: psmale@mldevco.ca

URBAN PLANNER

FoTenn Consultants Inc.
223 McLeod Street
Ottawa, ON Canada, K2P 0Z8
Tel.: (613) 730-5709
Fax: (613) 730-1136
E-Mail: alain@fotenn.com

LANDSCAPE ARCHITECT

Gino J. Aiello Landscape Architect
110 Didsbury Road Unit 9,
Ottawa, Ontario K2E 0C2
Tel: (613) 852-1343
Cell: (613)
Email: gino@giala.com

CIVIL ENGINEER

Egis Group
115 Walgreen Road
Ottawa, ON K0A 1L0
Tel: (613) 836-2184
Fax: (613) 836-3742
Email: Alison.GOSLING@egis-group.com

PAPER SIZE: ISO_B1_(707.00_x_1000.00_MM) | PLOT DATE: Monday, July 22, 2024 | PLOT SCALE: 1:1 | PEN STYLE: 0-RLA-MASTER-100%.ctb | F:\2021\2122 - 398 Roosevelt\01 Design Development\01 Site Plan\2122 SP-1 Site Plan 2024 06 18.dwg

DWG # 22___

SURVEYOR'S REAL PROPERTY REPORT

PART 1 Plan of

LOTS 5, 6 and 8 REGISTERED PLAN 114 CITY OF OTTAWA

Surveyed by Annis, O'Sullivan, Vollebekk Ltd.

Scale 1 : 150

6 4.5 3.0 1.5 0 3 6 Metres

Metric

DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

Surveyor's Certificate

I CERTIFY THAT :

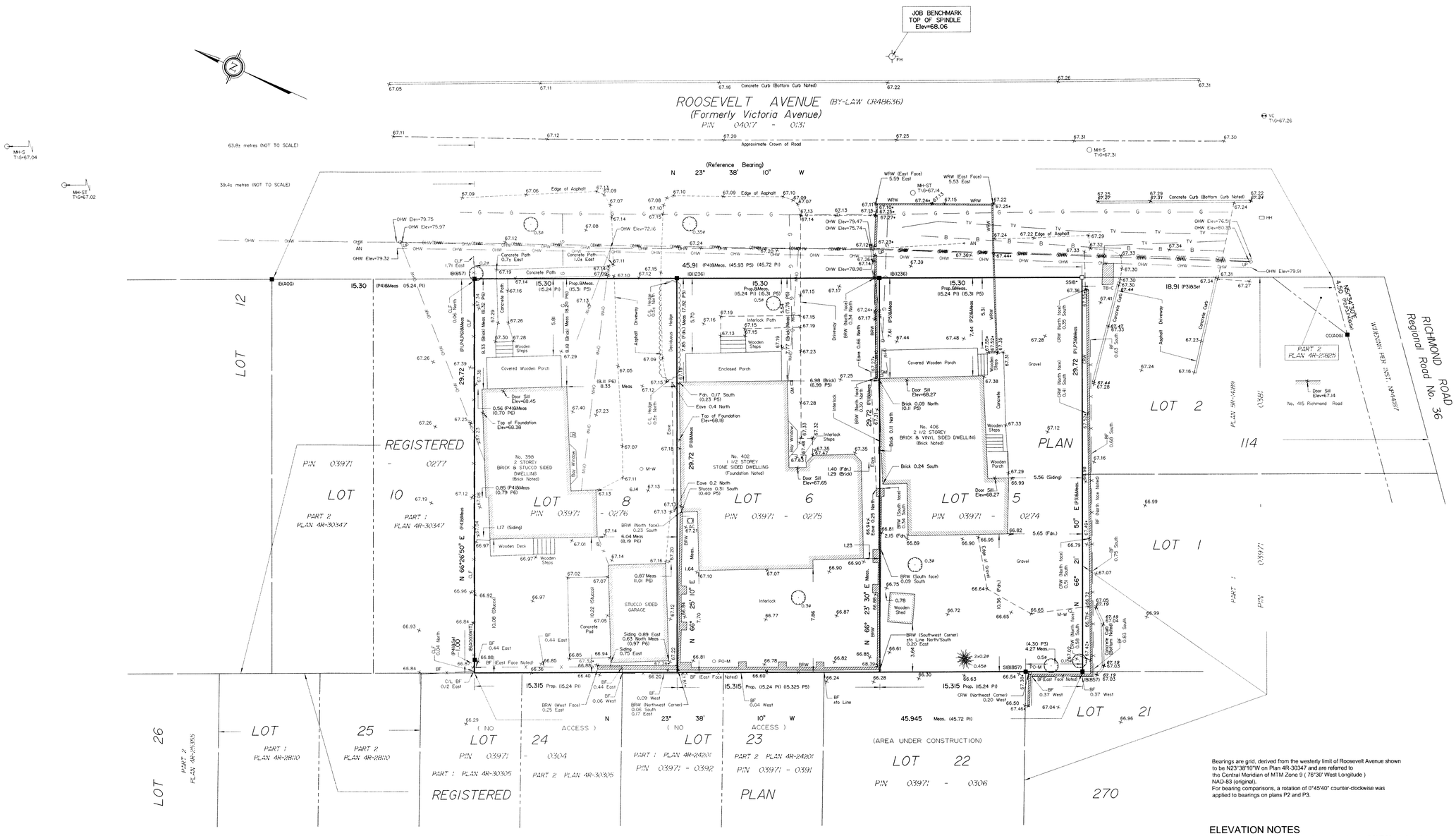
1. This survey and plan are correct and in accordance with the Surveys Act, the Surveyors Act and the Land Titles Act and the regulations made under them.
2. The survey was completed on the 18th day of October, 2017.

Oct 19/17
Date

V. Andrew Shelp
Ontario Land Surveyor

PART 2
THIS PLAN MUST BE READ IN CONJUNCTION WITH SURVEY REPORT DATED:- 18 OCTOBER, 2017

ANNIS, O'SULLIVAN, VOLLEBEKK LTD. grants to Domicile Developments Inc. ("The Client"), their solicitors, mortgagees, and other related parties, permission to use original, signed, sealed copies of the Surveyor's Real Property Report in transactions involving The Client.



Bearings are grid, derived from the westerly limit of Roosevelt Avenue shown to be N23°38'10"W on Plan 4R-30347 and are referred to the Central Meridian of MTM Zone 9 (76°30' West Longitude) NAD-83 (original).
For bearing comparisons, a rotation of 0°45'40" counter-clockwise was applied to bearings on plans P2 and P3.

ELEVATION NOTES

1. Elevations shown are geodetic and are referred to the CGVD28 geodetic datum.
2. It is the responsibility of the user of this information to verify that the job benchmark has not been altered or disturbed and that it's relative elevation and description agrees with the information shown on this drawing.

UTILITY NOTES

1. This drawing cannot be accepted as acknowledging all of the utilities and it will be the responsibility of the user to contact the respective utility authorities for confirmation.
2. Only visible surface utilities were located.
3. A field location of underground plant by the pertinent utility authority is mandatory before any work involving breaking ground, probing, excavating etc.
4. Gas, Cable and Bell underground utilities are shown as marked on ground by others.

Notes & Legend

	Denotes	
—○—	•	Survey Monument Planted
—■—	•	Survey Monument Found
SIB	•	Standard Iron Bar
SSIB	•	Short Standard Iron Bar
IB	•	Iron Bar
CC	•	Cut Cross
CP	•	Concrete Pin
*	•	Survey Monument 0.3 metres Long
(WIT)	•	Witness
Meas.	•	Measured
Prop.	•	Proportioned
(AOG)	•	Annis, O'Sullivan, Vollebekk Ltd.
(PI)	•	Registered Plan 114
(P2)	•	Plan 4R-21825
(P3)	•	Plan 5R-14189
(P4)	•	Plan 4R-30347
(P5)	•	(1236) Plan April 15, 1998
(P6)	•	(647) Plan December 19, 1975
○ MH-ST	•	Maintenance Hole (Storm Sewer)
○ MH-S	•	Maintenance Hole (Sanitary)
○ FH	•	Fire Hydrant
—OHW—	•	Overhead Wires
○ UP	•	Utility Pole
∘ AN	•	Anchor
⊖ VC	•	Valve Chamber (Watermain)
T/G	•	Top of Grate
▭ GM	•	Gas Meter
CLF	•	Chain Link Fence
BF	•	Board Fence
▭ AC	•	Air Conditioner
Ø	•	Diameter
+ 65.00	•	Location of Elevations
+ 65.00	•	Top of Wall Elevations
+ 65.00	•	Top of Curb Elevations
C/L	•	Centreline
	•	Property Line
	•	Deciduous Tree
	•	Coniferous Tree
▫ TB-C	•	Cable Terminal Box
—— G ——	•	Underground Gas
—— TV ——	•	Underground Cable
—— B ——	•	Underground Bell
○ M-W	•	Monitoring Well
BRW	•	Brick Retaining Wall
CRW	•	Concrete Retaining Wall
WRW	•	Wooden Retaining Wall
○ PO-M	•	Metal Pole
Fdn.	•	Foundation
▭ HH	•	Handhole

ASSOCIATION OF ONTARIO LAND SURVEYORS
PLAN SUBMISSION FORM
2029596

THIS PLAN IS NOT VALID UNLESS IT IS AN EMBOSSED ORIGINAL COPY ISSUED BY THE SURVEYOR In accordance with Regulation 1026, Section 29 (3).

Ontario Land Surveyors
ANNIS, O'SULLIVAN, VOLLEBEKK LTD.
14 Concourse Gate, Suite 500
Nepean, Ont. K2E 7S6
Phone: (613) 727-0850 / Fax: (613) 727-1079
Email: Nepean@aovltd.com

Job No. 19693-17 Domicile Lt 5 Pl. 114 T F | sj

Alison Gosling

Subject: RE: 22-3302 - 398-406 Roosevelt - Quality Control Requirement

From: Eric Lalande <eric.lalande@rvca.ca>
Sent: December 6, 2021 3:43 PM
To: Alison Gosling <a.gosling@mcintoshperry.com>
Subject: RE: 22-3302 - 398-406 Roosevelt - Quality Control Requirement

Hi Alison,

Based on the proposed site plan, the RVCA shall not require any additional quality control protections. It is still encouraged that best management practices be integrated into the design where possible.

Thank you,

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

From: Alison Gosling <a.gosling@mcintoshperry.com>
Sent: Monday, December 6, 2021 3:34 PM
To: Eric Lalande <eric.lalande@rvca.ca>
Subject: 22-3302 - 398-406 Roosevelt - Quality Control Requirement

Good afternoon Eric,

We wanted to touch base with you regarding the development at 398-406 Roosevelt Ave.

The development involves the construction of a 6-storey residential building with underground parking and above-grade private terraces. Drainage will be collected and conveyed to the 300mm dia storm sewer within Roosevelt Ave. As shown by the attached figure, water travels approximately 633m to the Ottawa River (Outlet ID #04490). Drainage will be collected by roof drains and surface drains within the terraces which will be connected to the internal mechanical system.

Quality controls were previously reviewed by DSEL and Jamie (December 2017). The application proposed a rear yard parking lot at the time of the application. The site design has since changed by removing surface parking and asphalt areas. It is anticipated that quality controls are no longer required. Can you please review and confirm?

Please let me know if you have any questions.

Thank you,

Alison Gosling, P.Eng.
Project Engineer, Land Development
115 Walgreen Road, Carp, ON, K0A 1L0
T. 613.714.4629
a.gosling@mcintoshperry.com | www.mcintoshperry.com

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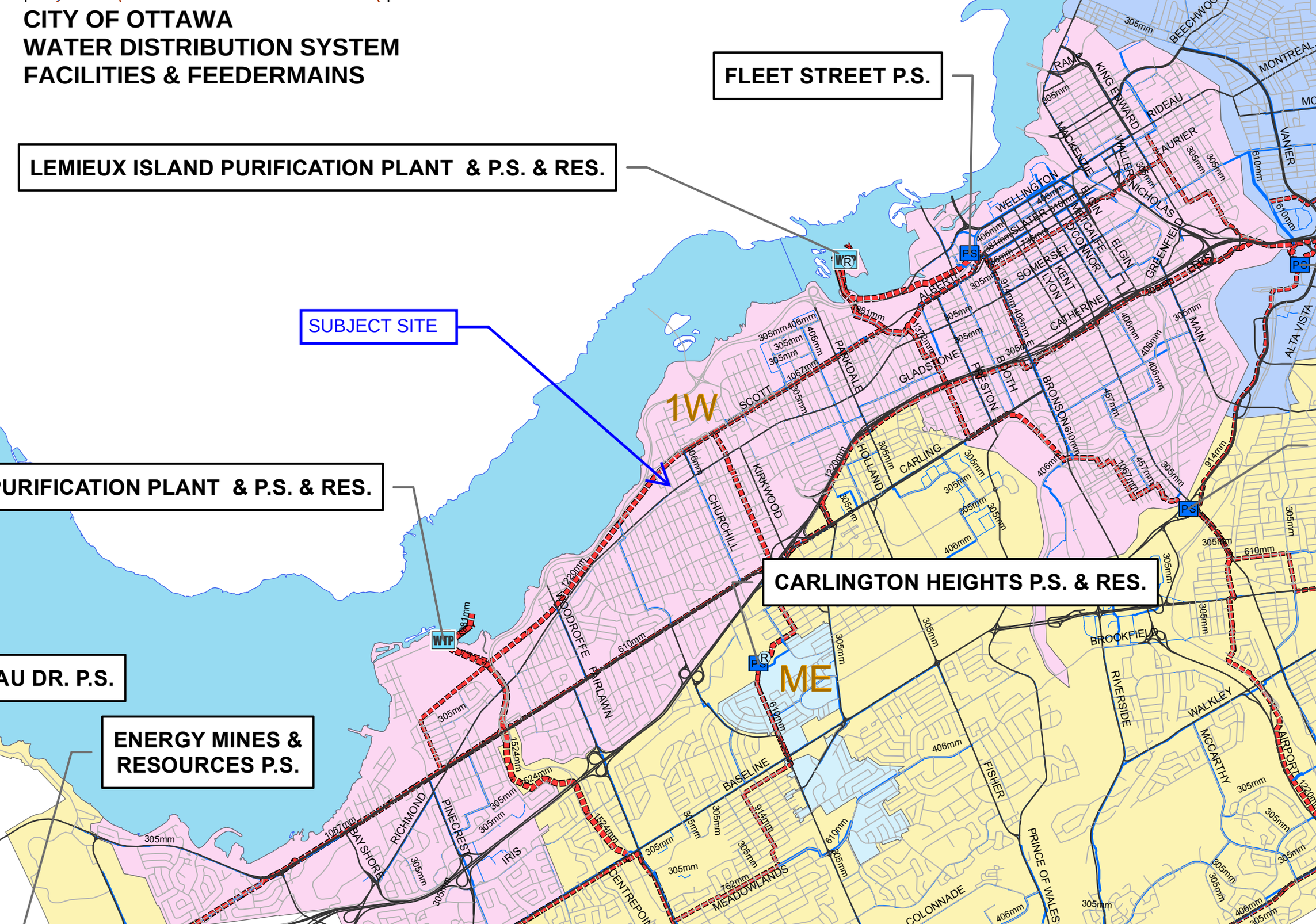
Turning Possibilities Into Reality


CITY OF OTTAWA
WATER DISTRIBUTION SYSTEM
FACILITIES & FEEDERMAINS
FLEET STREET P.S.
LEMIEUX ISLAND PURIFICATION PLANT & P.S. & RES.
SUBJECT SITE
URIFICATION PLANT & P.S. & RES.
AU DR. P.S.
ENERGY MINES & RESOURCES P.S.
CARLINGTON HEIGHTS P.S. & RES.
1W
ME
WTP
WR
PS
PR
SCOTT
KIRKWOOD
CHURCHILL
PARKDALE
GLADSTONE
PRESTON
BOOTH
BRONSON
CARLING
HOLLAND
CATHERINE
SOMERSET
LYON
KENT
ELGIN
O'CONNOR
MITCALFE
MACKENZIE
KING EDWARD
RIDEAU
LAURIER
WELLINGTON
SLATER
ALBERT
MAIN
GREENFIELD
ALTA VISTA
VANIER
MONTREAL
BEECHWOOD
BROOKFIELD
RIVERSIDE
WALKLEY
MCCARTHY
AIRPORT
FISHER
PRINCE OF WALES
COLONNADE
BASELINE
MEADOWLANDS
CENTREPOINTE
IRIS
PINECREST
RICHMOND
BAYSHORE
FAIRLAWN
WOODROFFE
RAMP

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CCO-22-3302 - 398-406 Roosevelt - Water Demands

Project:	398-406 Roosevelt
Project No.:	CCO-22-3302
Designed By:	AJG
Checked By:	RDF
Date:	March 20, 2024
Site Area:	0.1365 gross ha

Residential	NUMBER OF UNITS	UNIT RATE	
Bachelor Apartment	12 units	1.4	persons/unit
1 Bedroom Apartment	22 units	1.4	persons/unit
2 Bedroom Apartment	26 units	2.1	persons/unit
3 Bedroom Apartment	2 units	3.1	persons/unit

Total Population 109 persons

Commercial m2

Industrial - Light m2

Industrial - Heavy m2

AVERAGE DAILY DEMAND

DEMAND TYPE	AMOUNT	UNITS	
Residential	280	L/c/d	
Industrial - Light	35,000	L/gross ha/d	
Industrial - Heavy	55,000	L/gross ha/d	
Shopping Centres	2,500	L/(1000m² /d	
Hospital	900	L/(bed/day)	
Schools	70	L/(Student/d)	
Trailer Park with no Hook-Ups	340	L/(space/d)	
Trailer Park with Hook-Ups	800	L/(space/d)	
Campgrounds	225	L/(campsite/d)	
Mobile Home Parks	1,000	L/(Space/d)	
Motels	150	L/(bed-space/d)	
Hotels	225	L/(bed-space/d)	
Tourist Commercial	28,000	L/gross ha/d	
Other Commercial	28,000	L/gross ha/d	
AVERAGE DAILY DEMAND	Residential	0.35	L/s
	Commerical/Industrial /Institutional	0.00	L/s

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info.north-america@egis-group.com | www.egis-group.com

MAXIMUM DAILY DEMAND

DEMAND TYPE	AMOUNT		UNITS
Residential	9.5	x avg. day	L/c/d
Industrial	1.5	x avg. day	L/gross ha/d
Commercial	1.5	x avg. day	L/gross ha/d
Institutional	1.5	x avg. day	L/gross ha/d
MAXIMUM DAILY DEMAND	Residential	3.36	L/s
	Commerical/Industrial /Institutional	0.00	L/s

MAXIMUM HOUR DEMAND

DEMAND TYPE	AMOUNT		UNITS
Residential	14.3	x avg. day	L/c/d
Industrial	1.8	x max. day	L/gross ha/d
Commercial	1.8	x max. day	L/gross ha/d
Institutional	1.8	x max. day	L/gross ha/d
MAXIMUM HOUR DEMAND	Residential	5.05	L/s
	Commerical/Industrial /Institutional	0.00	L/s

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

AVERAGE DAILY DEMAND	0.35	L/s
MAXIMUM DAILY DEMAND	3.36	L/s
MAXIMUM HOUR DEMAND	5.05	L/s

CCO-22-3302 - 398-406 Roosevelt Avenue - OBC Fire Calculations

Project:	398-406 Roosevelt
Project No.:	CCO-22-3302
Designed By:	AJG
Checked By:	RDF
Date:	March 20, 2024

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

Water Supply for Fire-Fighting - Residential Building

Building is classified as Group : C (from table 3.2.2.55)

Building is of noncombustible construction or of heavy timber construction conforming to Article 3.1.4.6. Floor assemblies are fire separations but with no fire-resistance rating. Roof assemblies, mezzanines, loadbearing walls, columns and arches do not have a fire-resistance rating.

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

(a) Q = K x V x Stot

where:

Q = minimum supply of water in litres

K = water supply coefficient from Table 1

V = total building volume in cubic metres

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

Stot = 1.0 + [Sside1+Sside2+Sside3+...etc.]

K	16	(from Table 1 pg A-31) (Worst case occupancy {E / F2} 'K' value used)
V	79,258	(Total building volume in m³.)
Stot	1.7	(From figure 1 pg A-32)
Q =	2,155,823.04 L	

From Figure 1 (A-32)

Snorth	70	m	0.0
Seast	26	m	0.0
Ssouth	7.6	m	0.2
Swest	1.5	m	0.5

*approximate distances

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

9000 L/min if Q > 270,000 L

2378 gpm

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CCO-22-3302 - 398-406 Roosevelt - Fire Underwriters Survey

Project:	398-406 Roosevelt
Project No.:	CCO-22-3302
Designed By:	AJG
Checked By:	RDF
Date:	March 20, 2024

From the Fire Underwriters Survey (2020)

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

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

F = 220 x C x √A Where: F = Required fire flow in liters per minute
C = Coefficient related to the type of construction.
A = The total floor area in square meters (including all storey's, but excluding basements at least 50 percent below grade) in the building being considered.

Construction Type Non-Combustible Construction

C 0.8 A 3,774.2 m^2

Total Floor Area (per the 2020 FUS Page 20 - Total Effective Area) 2,512.1 m^2 **Unprotected Vertical Openings*

Calculated Fire Flow	8,821.2 L/min
	9,000.0 L/min

B. REDUCTION FOR OCCUPANCY TYPE (No Rounding)

From Page 24 of the Fire Underwriters Survey:

Limited Combustible -15%

Fire Flow	7,650.0 L/min

C. REDUCTION FOR SPRINKLER TYPE (No Rounding)

Fully Supervised Sprinklered -50%

Reduction	-3,825.0 L/min

D. INCREASE FOR EXPOSURE (No Rounding)

	Separation Distance (m)	Cons.of Exposed Wall	Length Exposed Adjacent Wall (m)	Height (Stories)	Length-Height Factor	
Exposure 1	0 to 3	Wood frame	18	2	36.0	21%
Exposure 2	20.1 to 30	Ordinary - Mass Timber (Unprotected)	48	2	96.0	4%
Exposure 3	10.1 to 20	Ordinary - Mass Timber (Unprotected)	54	2	108.0	10%
Exposure 4	10.1 to 20	Wood frame	44	2	88.0	14%
					% Increase*	49%

Increase*	3,748.5 L/min

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

Fire Flow	7,573.5 L/min
Fire Flow Required**	8,000.0 L/min

*In accordance with Part II, Section 4, the Increase for separation distance is not to exceed 75%
**In accordance with Section 4 the Fire flow is not to exceed 45,000 L/min or be less than 2,000 L/min

CCO-22-3302 - 398-406 Roosevelt - Boundary Condition Unit Conversion

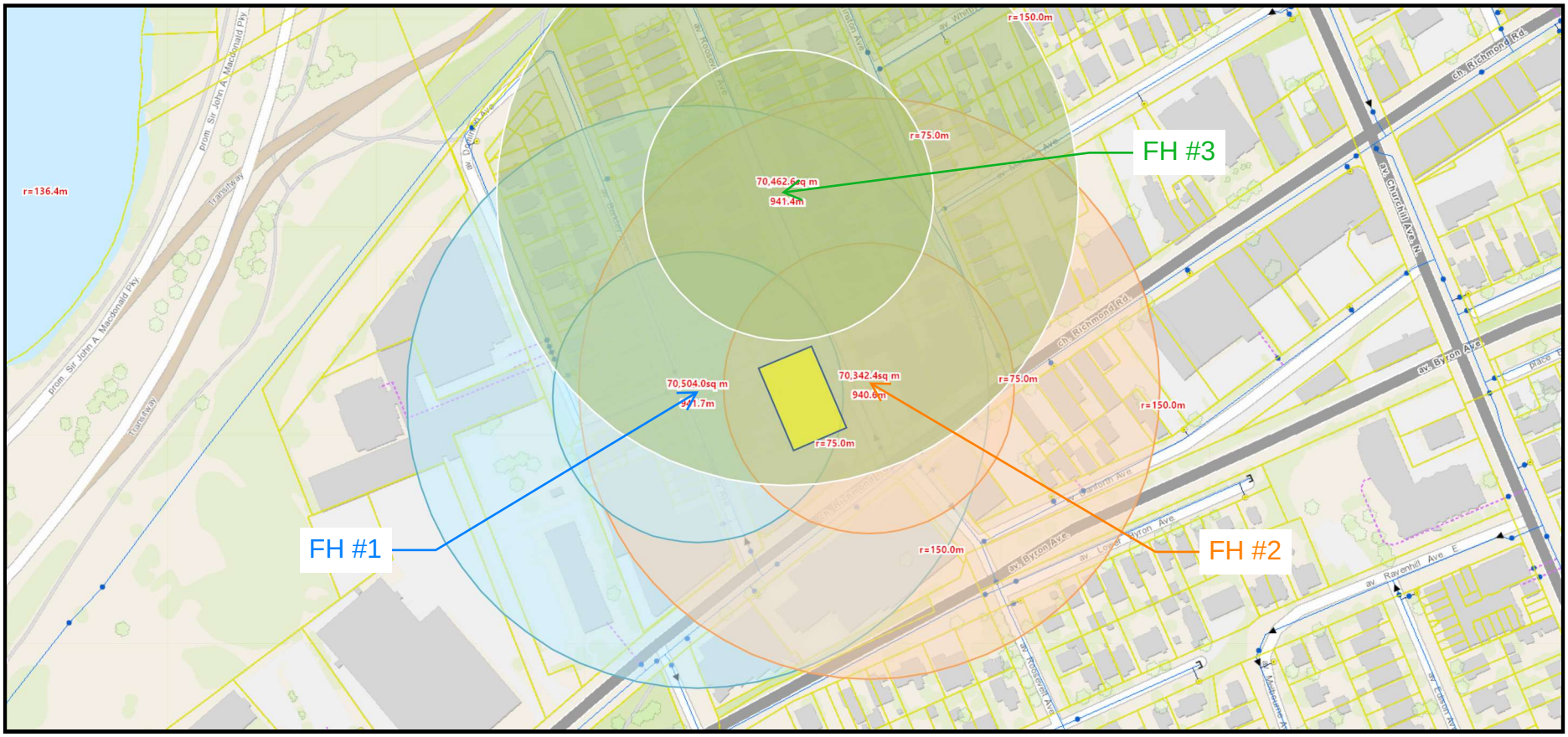
Project:	398-406 Roosevelt
Project No.:	CCO-22-3302
Designed By:	AJG
Checked By:	RDF
Date:	March 20, 2024

Boundary Conditions Unit Conversion

ROOSEVELT AVENUE

Scenario	Height (m)	Elevation (m)	m H_2O	PSI	kPa
Avg. DD	115.0	67.2	47.8	68.0	468.9
Fire Flow (82 L/s or 4,920 L/min)	81.3	67.2	14.1	20.0	137.9
Peak Hour	108.6	67.2	41.4	58.9	406.1

398-406 Roosevelt Avenue
Hydrant Coverage Figure



https://maps.ottawa.ca/geoOttawa/

2021-12-06

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

Table 11.2.3.1.2 Hose Stream Allowance and Water Supply Duration Requirements for Hydraulically Calculated Systems

Occupancy	Inside Hose		Total Combined Inside and Outside Hose		Duration (minutes)
	gpm	L/min	gpm	L/min	
Light hazard	0, 50, or 100	0, 190, or 380	100	380	30
Ordinary hazard	0, 50, or 100	0, 190, or 380	250	950	60–90
Extra hazard	0, 50, or 100	0, 190, or 380	500	1900	90–120

From: Wessel, Shawn <shawn.wessel@ottawa.ca>
Sent: Wednesday, March 6, 2024 3:36 PM
To: GOSLING Alison <Alison.GOSLING@egis-group.com>
Subject: RE: 398-406 Roosevelt Ave - Boundary Condition Request

Hello Alison

This just came in:

The following are boundary conditions, HGL, for hydraulic analysis at 398-406 Roosevelt Avenue (zone 1W) assumed to be a dual connection connected to the 152mm watermain on Roosevelt Avenue (see attached PDF for location).

Minimum HGL: 108.6 m

Maximum HGL: 115.0 m

Available Fire Flow at 20 (psi): 82.0 L/s, assuming ground elevation of 67.2 m

***Please refer to Guidelines and Technical bulletin ISDTB**-2021-**01 concerning residential areas serving 50 or** more dwellings.*

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.

If you require additional information or clarification, please do not hesitate to contact me anytime.

Thank you

Regards,

Shawn Wessel, A.Sc.T.,rcji
Pronouns: he/him | Pronom: il
Project Manager - Infrastructure Approvals
Gestionnaire de projet – Approbation des demandes d'infrastructures

Development Review Central Branch | Direction de l'examen des projets d'aménagement, Centrale
Planning, Real Estate and Economic Development Department | Direction générale de la planification des biens immobiliers et du développement économique
City of Ottawa | Ville d'Ottawa
110 Laurier Ave. W. | 110, avenue Laurier Ouest, Ottawa ON K1P 1J1
(613) 580 2424 Ext. | Poste 33017
Int. Mail Code | Code de Courrier Interne 01-14
shawn.wessel@ottawa.ca

Please also note that, while my work hours may be affected by the current situation and am working from home, I still have access to email, video conferencing and telephone. Feel free to schedule video conferences and/or telephone calls, as necessary.

Sent: Tuesday, February 27, 2024 4:01 PM
To: Wessel, Shawn <shawn.wessel@ottawa.ca>
Subject: 398-406 Roosevelt Ave - Boundary Condition Request

Hi Shawn,

We would like to request updated boundary conditions for the proposed development at 398-406 Roosevelt Avenue. The development proposes a 6-storey apartment building with 62 units.

The proposed connection will be to the existing 152mm dia. watermain within Roosevelt Ave.

- The estimated fire flow is 8,000 L/min based on the 2020 FUS
- Average daily demand: 0.35 L/s
- Maximum daily demand 3.36 L/s
- Maximum hourly daily 5.05 L/s

Attached is a map showing the proposed connection location along with the calculations prepared for the demands listed above.

Please let me know if you have any questions.

Thank you,

Alison Gosling, P.Eng.
Project Engineer, Land Development
Phone: +1.613.714.4629

Boundary Conditions for 398-406 Roosevelt Avenue

CCO-22-3302 - 398-406 Roosevelt Avenue - Sanitary Demands

Project:	398-406 Roosevelt Avenue		
Project No.:	CCO-22-3302		
Designed By:	R.R.R.		
Checked By:	A.J.G.		
Date:	March 20, 2024		
Site Area	0.137	Gross ha	
Bachelor	12	1.40	Persons per unit
1 Bedroom	22	1.40	Persons per unit
2 Bedroom	26	2.10	Persons per unit
3 Bedroom	2	3.10	Persons per unit
Total Population	109	Persons	
Commercial Area	0.00	m^2	
Amenity Space	0.00	m^2	

DESIGN PARAMETERS

Institutional/Commercial Peaking Facto	1	
Residential Peaking Factor	3.59	* *Using Harmon Formula* = 1+(14/(4+P^0.5))*0.8 *where P = population in thousands, Harmon's Correction Factor = 0.8*
Mannings coefficient (n)	0.013	
Demand (per capita)	280	L/day
Infiltration allowance	0.33	L/s/Ha

EXTRANEOUS FLOW ALLOWANCES

Infiltration / Inflow	Flow (L/s)
Dry	0.01
Wet	0.04
Total	0.05

AVERAGE DAILY DEMAND

DEMAND TYPE	AMOUNT	UNITS	POPULATION / AREA	Flow (L/s)
Residential	*280*	*L/c/d*	*109*	*0.35*
Industrial - Light**	35,000	L/gross ha/d		0
Industrial - Heavy**	55,000	L/gross ha/d		0
Commercial / Amenity	2,800	L/(1000m² /d)		0
Hospital	900	L/(bed/day)		0
Schools	70	L/(Student/d)		0
Trailer Parks no Hook-Ups	340	L/(space/d)		0
Trailer Park with Hook-Ups	800	L/(space/d)		0
Campgrounds	225	L/(campsite/d)		0
Mobile Home Parks	1,000	L/(Space/d)		0
Motels	150	L/(bed-space/d)		0
Hotels	225	L/(bed-space/d)		0
Office	75	L/7.0m^2/d		0
Tourist Commercial	28,000	L/gross ha/d		0
Other Commercial	28,000	L/gross ha/d		0

AVERAGE RESIDENTIAL FLOW	0.35	L/s
PEAK RESIDENTIAL FLOW	1.27	L/s
AVERAGE ICI FLOW	0.00	L/s
PEAK INSTITUTIONAL/COMMERCIAL FLOW	0.00	L/s
PEAK INDUSTRIAL FLOW	0.00	L/s
TOTAL PEAK ICI FLOW	0.00	L/s

TOTAL SANITARY DEMAND

TOTAL ESTIMATED AVERAGE DRY WEATHER FLOW	0.36	L/s
TOTAL ESTIMATED PEAK DRY WEATHER FLOW	1.27	L/s
TOTAL ESTIMATED PEAK WET WEATHER FLOW	1.31	L/s

SANITARY SEWER DESIGN SHEET

PROJECT: 398-406 Roosevelt Avenue
LOCATION: Ottawa, Ontario
CLIENT: ML Westboro

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egis GROUP

LOCATION				RESIDENTIAL									ICI AREAS							INFILTRATION ALLOWANCE			FLOW	SEWER DATA						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
STREET	AREA ID	FROM MH	TO MH	UNIT TYPES				AREA (ha)	POPULATION		PEAK FACTOR	PEAK FLOW (L/s)	AREA (ha)						PEAK FLOW (L/s)	AREA (ha)		FLOW (L/s)	DESIGN FLOW (L/s)	CAPACITY (L/s)	LENGTH (m)	DIA (mm)	SLOPE (%)	VELOCITY (full) (m/s)	AVAILABLE CAPACITY	
				BAC/1-BED	2-BED	2-BED+DEN			IND	CUM			INSTITUTIONAL		COMMERCIAL		INDUSTRIAL			IND	CUM								L/s	(%)
													IND	CUM	IND	CUM	IND	CUM											
Roosevelt Ave		BLDG	EX.300mm SAN	34	26	2		0.14	109	109	3.59	1.27		0.00	0.00	0.00		0.00	0.00	0.14	0.14	0.05	1.31	34.22	9.23	200	1.00	1.055	32.90	96.17

Design Parameters:

Residential			ICI Areas			Peak Factor
BAC/1-BED	1.4	p/p/u				
2-BED	2.1	p/p/u	INST	28,000	L/Ha/day	1
2-BED+DEN	3.1	p/p/u	COM	28,000	L/Ha/day	1
Other	60	p/p/Ha				

Notes:
1. Mannings coefficient (n) = 0.013
2. Demand (per capita): 280 L/day
3. Infiltration allowance: 0.33 L/s/Ha
4. Residential Peaking Factor:
Harmon Formula = 1+(14/(4+P^0.5)*0.8)
where P = population in thousands

Designed: RRR
Checked: AJG
Project No.: CCO-22-3302

No.	Revision	Date

Sheet No:
1 of 1

SANITARY SEWER DESIGN SHEET

PROJECT: 398-406 Roosevelt Avenue
LOCATION: Ottawa, Ontario
CLIENT: ML Westboro

McINTOSH PERRY
egis GROUP

LOCATION				RESIDENTIAL									ICI AREAS							INFILTRATION ALLOWANCE			FLOW	SEWER DATA						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
STREET	AREA ID	FROM MH	TO MH	UNIT TYPES				AREA (ha)	POPULATION		PEAK FACTOR	PEAK FLOW (L/s)	AREA (ha)						PEAK FLOW (L/s)	AREA (ha)		FLOW (L/s)	DESIGN FLOW (L/s)	CAPACITY (L/s)	LENGTH (m)	DIA (mm)	SLOPE (%)	VELOCITY (full) (m/s)	AVAILABLE CAPACITY	
				SF	SD	TH	APT		IND	CUM			INSTITUTIONAL		COMMERCIAL		INDUSTRIAL			IND	CUM								L/s	(%)
													IND	CUM	IND	CUM	IND	CUM											
Roosevelt Ave		D	C	8	4			0.71	30.8	30.8	3.68	0.37		0.00	0.84	0.84		0.00	0.41	1.55	1.55	0.51	1.29	63.00	156.98	300	0.39	0.863	61.71	97.96
		C	B	8	8			0.73	40.0	70.8	3.63	0.83		0.00		0.84		0.00	0.41	0.73	2.28	0.75	1.99	93.27	120.95	375	0.26	0.818	91.27	97.86
		B	A	3	8			0.54	26.5	97.3	3.60	1.13		0.00	0.55	1.39		0.00	0.68	1.09	3.37	1.11	2.92	498.59	111.87	450	2.81	3.037	495.67	99.41

Design Parameters:

Residential			ICI Areas			
						Peak Factor
SF	3.4	p/p/u				
TH/SD	2.7	p/p/u	INST	28,000	L/Ha/day	1.5
APT	2.3	p/p/u	COM	28,000	L/Ha/day	1.5
Other	60	p/p/Ha	IND	35,000	L/Ha/day	MOE Chart

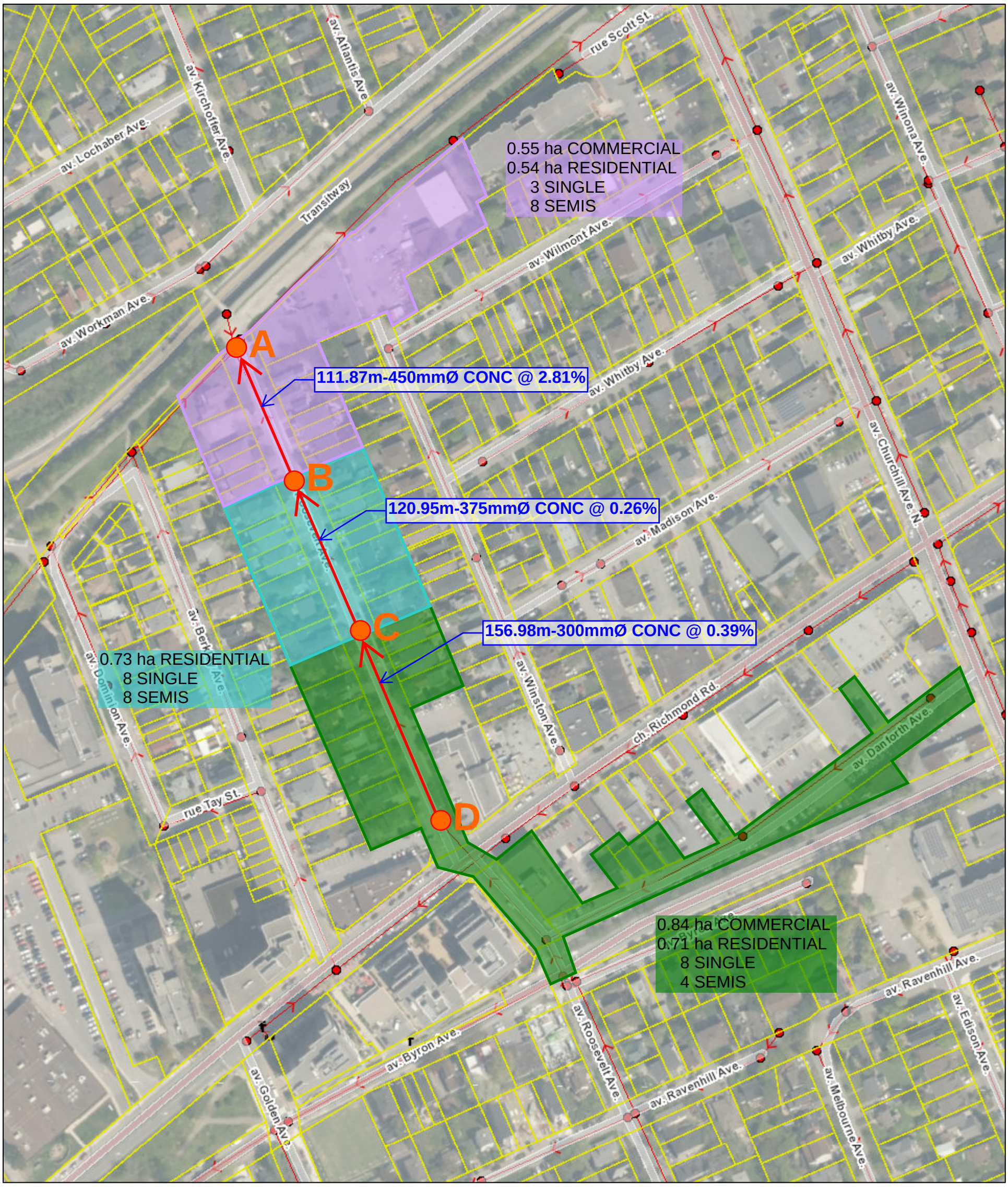
Notes:
1. Mannings coefficient (n) = 0.013
2. Demand (per capita): 280 L/day
3. Infiltration allowance: 0.33 L/s/Ha
4. Residential Peaking Factor:
Harmon Formula = 1+(14/(4+P^0.5)*0.8)
where P = population in thousands

Designed: AJG
Checked: RDF
Project No.: CCO-22-3302

No.	Revision	Date
1.	City Submission #1	2021-12-10

Sheet No:
1 of 1

SANITARY SEWER ANALYSIS



December 18, 2017

1:3,000

0 0.0325 0.065 0.13 mi

0 0.05 0.1 0.2 km

- Property Parcels

Road Names

Road Centrelines

- Provincial Highway
- City Freeway
- Arterial
- Major Collector
- Collector
- Federally Owned
- Local
- Transit
- Open to Traffic
- Commence Work

Sewer Fittings / Raccords

- Cap / bouchon
- Tee / raccord en T
- Sanitary Manholes / Regards d'égout domestique

Sanitary Pipes / Conduites d'égout domestique

- Private / Branchement privé
- Public / Branchement public

Sanitary Pump Stations and Treatment Plants / Installations d'infrastructure

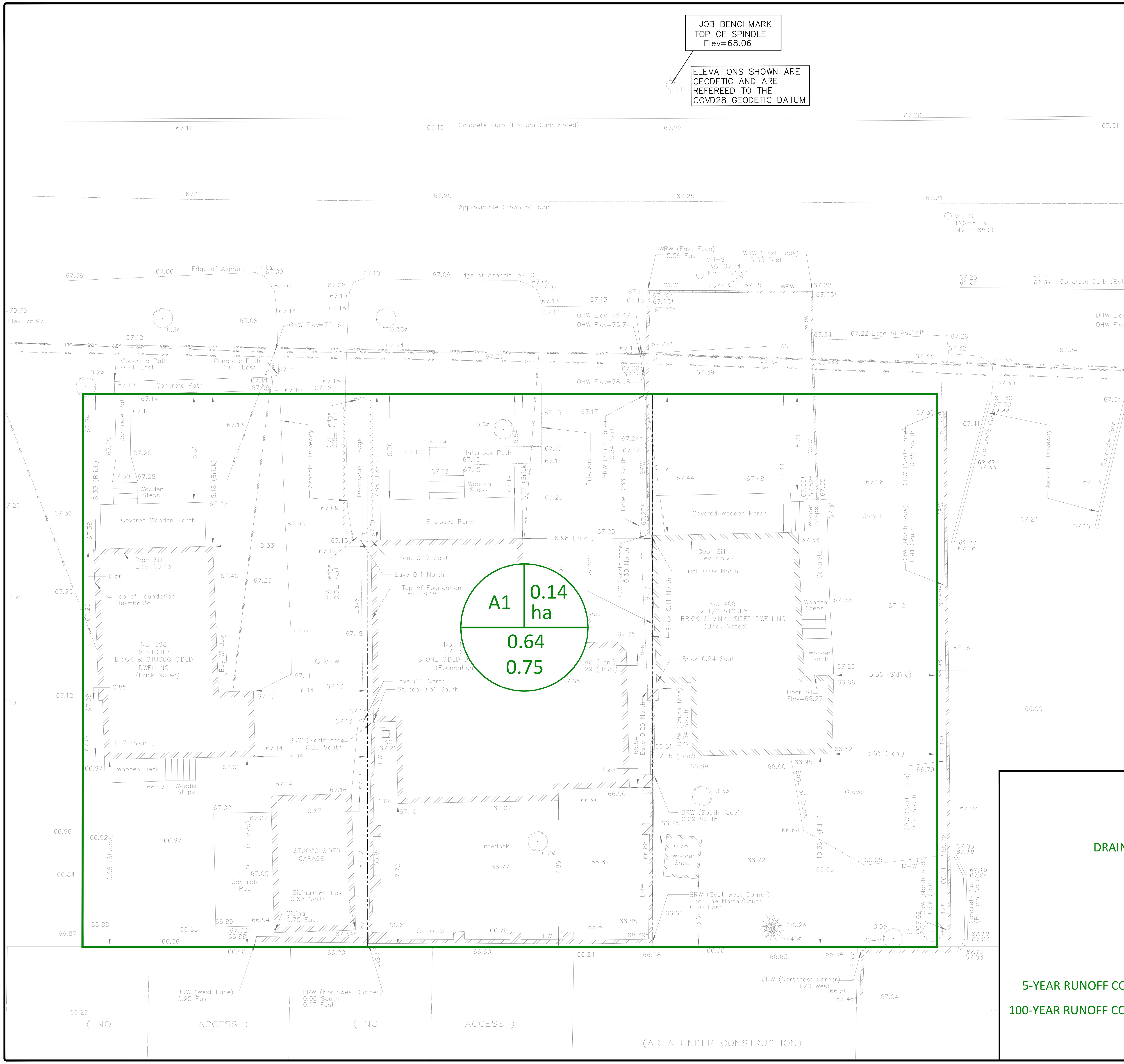
- Sanitary Pump Station / Station de pompage des eaux usées
- Wastewater Treatment Plant / Usine d'épuration des eaux usées
- Combined Manholes / Regards d'égout unitaire

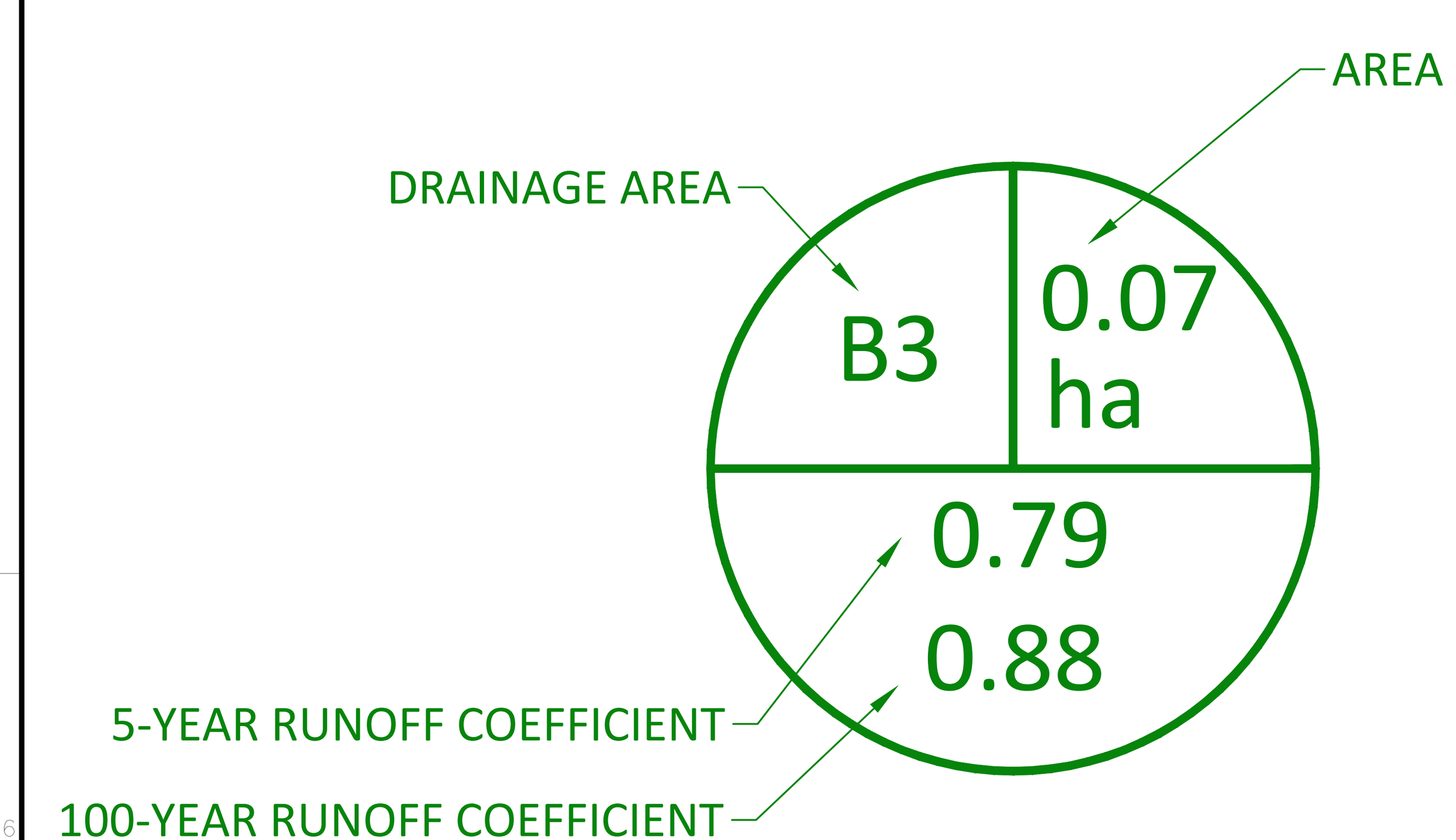
Combined Pipes / Conduites d'égout unitaire

- Private / Branchement privé
- Public / Branchement public

City of Ottawa

2018-11-28 Rev 2021-12





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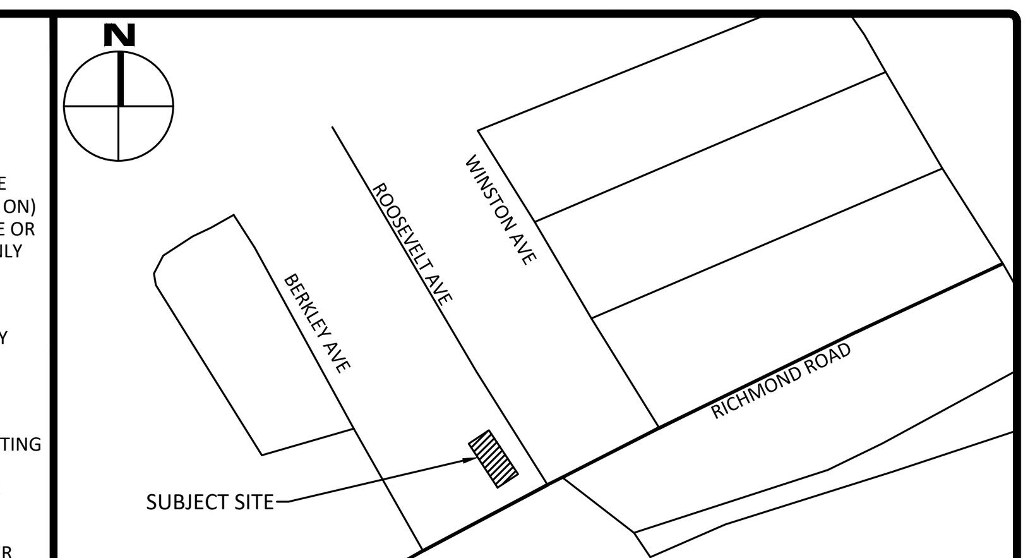

LOCATION PLAN

LEGEND

- BARRIER CURB & CURB DEPRESSION
- PROPOSED ASHPHALT
- CONCRETE WALKWAY
- LANDSCAPE AREA
- CONCRETE SIDEWALK
- STORM MANHOLE
- CATCHBASIN, CURB INLET OR DITCH INLET
- SANITARY MANHOLE
- PERFORATED PIPE
- WATER VAVLE/CHAMBER
- FIRE HYDRANT
- PROPOSED WALL
- PROPOSED TRENCH DRAIN
- CENTRELINE OF SWALE
- CENTRELINE OF DITCH
- SLOPING AT 3:1 UNLESS SPECIFIED
- PROPOSED ELEVATION / EXISTING ELEVATION
- SWALE ELEVATION
- TOP/BOTTOM WALL FACE ELEVATIONS
- EMERGENCY OVERLAND FLOW ROUTE
- SILT FENCE BARRIER PER OPSD 219.110
- BUILDING ENTRANCE / BUILDING EXIT
- REDUCER
- REMOTE WATER METER
- WATER METER
- GAS METER LOCATION

SUBJECT TO APPROVAL

No.	Revisions	Date
3	ISSUED FOR REVIEW	MAR 20, 2024
2	ISSUED FOR REVIEW	APR 6, 2022
1	ISSUED FOR REVIEW	DEC 10, 2021

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

SCALE 1 : 100 (0 2 4 6 8 10 Metres)

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info.north-america@egis-group.com
www.egis-group.com
115 Walgreen Road
RR3, Carp, ON K0A 1L0
Tel: 613-836-2184 Fax: 613-836-3742

Stamp: LICENSED PROFESSIONAL ENGINEER — 2024 05 01 — A. J. GOSLING — 100226726 — PROVINCE OF ONTARIO

Client: ML WESTBORO REALTY INVESTMENTS INC
651 CHURCHILL AVE NORTH
OTTAWA, ON K1Z 5G2

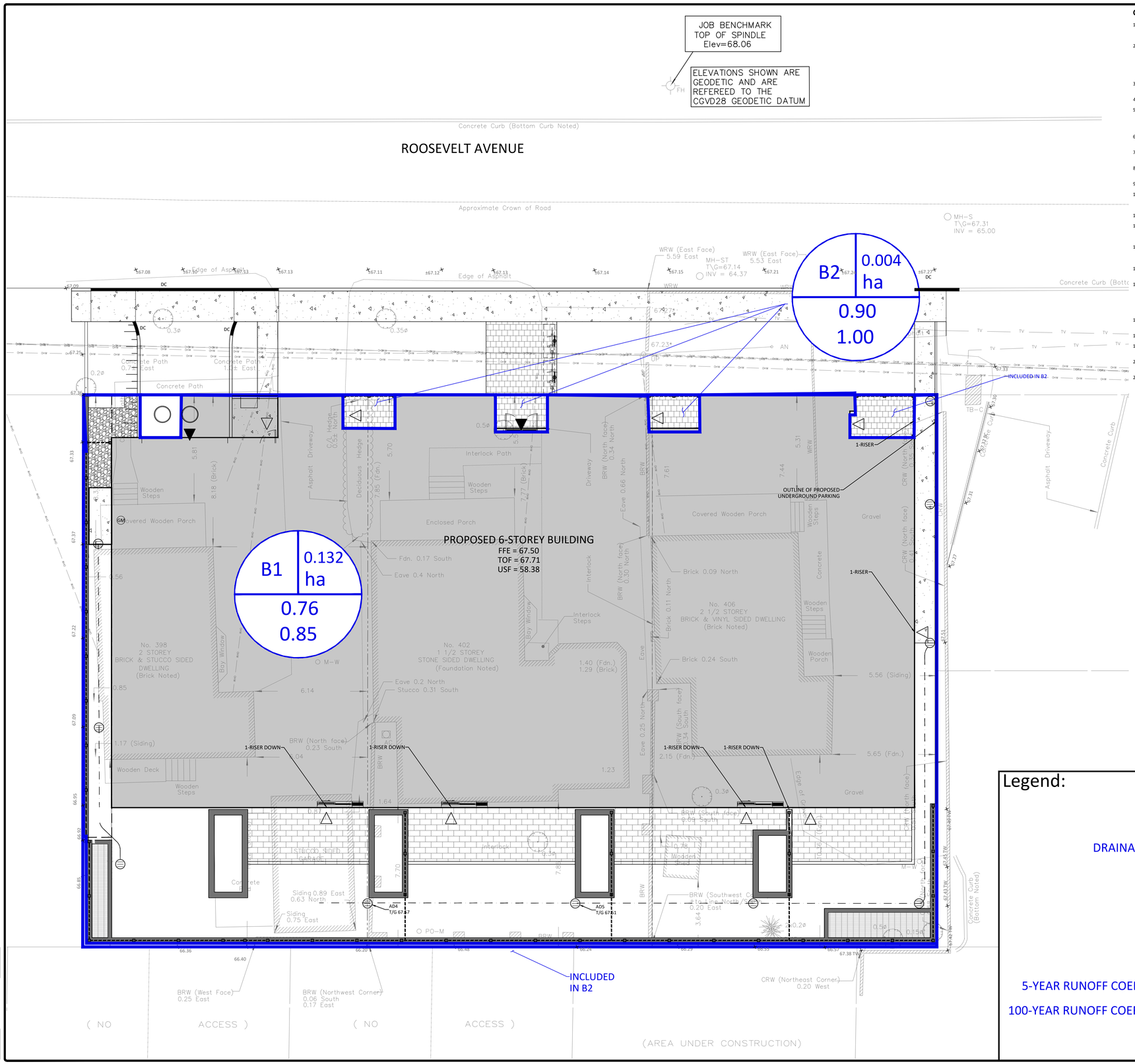
Project: 6-STOREY RESIDENTIAL BUILDING
406 ROOSEVELT
OTTAWA ON

Drawing Title: PRE DEVELOPMENT DRAINAGE PLAN

Scale:	1:100	Project Number:	CCO-22-3302
Drawn By:	R.R.R.		
Checked By:	A.J.G.	Drawing Number:	PRE
Designed By:	A.J.G.		

D07-12-17-0171

#18647



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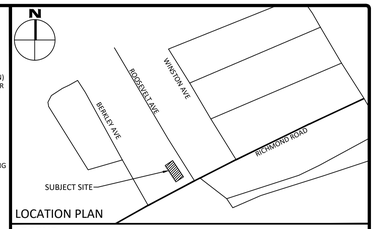

LOCATION PLAN

LEGEND

- BARRIER CURB & CURB DEPRESSION (DC)
- PROPOSED ASHPHALT
- CONCRETE WALKWAY
- RIVERSTONE AREA
- CONCRETE SIDEWALK
- STORM MANHOLE (MH#)
- CATCHBASIN, CURB INLET OR DITCH INLET (CB, CBCB, DI)
- SANITARY MANHOLE (MH#A)
- PERFORATED PIPE
- WATER VAVLE/CHAMBER
- FIRE HYDRANT
- PROPOSED WALL
- FENCE PER SITE PLAN
- CENTRELINE OF SWALE
- CENTRELINE OF DITCH
- SLOPING AT 3:1 UNLESS SPECIFIED
- PROPOSED ELEVATION EXISTING ELEVATION (95.94 / 93.20)
- SWALE ELEVATION (95.94 / 1%)
- TOP/BOTTOM WALL FACE ELEVATIONS (TW/BW 100.50 / 90.50)
- EMERGENCY OVERLAND FLOW ROUTE
- SILT FENCE BARRIER PER OPSD 219.110
- BUILDING ENTRANCE BUILDING EXIT
- REDUCER
- REMOTE WATER METER (RM)
- WATER METER (M)
- GAS METER LOCATION (GM)

SUBJECT TO APPROVAL

No.	Revisions	Date
4	ISSUED FOR REVIEW	JUNE 18, 2024
3	ISSUED FOR REVIEW	MAR 20, 2024
2	ISSUED FOR REVIEW	APR 6, 2022
1	ISSUED FOR REVIEW	DEC 10, 2021

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

SCALE 1 : 100

0 2 4 6 8 10 Metres

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www.egis-group.com
115 Walgreen Road
RR3, Carp, ON K0A 1L0
Tel: 613-836-2184 Fax: 613-836-3742

Stamp: LICENSED PROFESSIONAL ENGINEER A. J. GOSLING 100226726 PROVINCE OF ONTARIO

Client:
ML WESTBORO REALTY INVESTMENTS INC
651 CHURCHHILL AVE NORTH
OTTAWA, ON K1Z 5G2

Project:
6-STOREY RESIDENTIAL BUILDING
406 ROOSEVELT
OTTAWA ON

Drawing Title:
POST DEVELOPMENT DRAINAGE PLAN

Scale: 1:100	Project Number: CCO-22-3302
Drawn By: R.R.R.	
Checked By: A.J.G.	Drawing Number: POST
Designed By: A.J.G.	

D07-12-17-0171

#18647

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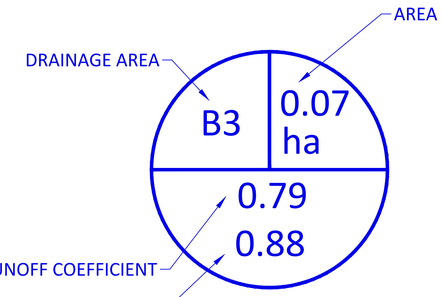

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LAST SAVED: Monday, June 17, 2024 LAST SAVED BY: r.robineau
USE PLOTTED: Tuesday, June 18, 2024 CTB FILE USED:

CCO-22-3302 - 406 Roosevelt - Runoff Calculations

Pre-Development Runoff Coefficient

Drainage Area	Area (ha)	Impervious Area (m^2)	C	Gravel Area (m^2)	C	Pervious Area (m^2)	C	C_{AVG} 5-Year	C_{AVG} 100-Year
A1	0.136	503.98	0.90	614.52	0.60	245.99	0.20	0.64	0.75

Pre-Development Runoff Calculations

Drainage Area	Area (ha)	C 5-Year	C 100-Year	Tc (min)	I (mm/hr)			Q (L/s)	
					2-Year	5-Year	100-Year	5-Year	100-Year
A1	0.136	0.64	0.75	10	76.8	104.2	178.6	25.24	50.95
Total	0.136							25.24	50.95

Post-Development Runoff Coefficient

Drainage Area	Area (ha)	Impervious Area (m^2)	C	Gravel Area (m^2)	C	Pervious Area (m^2)	C	C_{AVG} 5-Year	C_{AVG} 100-Year
B1	0.132	1,059.89	0.90	8.00	0.60	256.00	0.20	0.76	0.85
B2	0.004	40.60	0.90	0.00	0.60	0.00	0.20	0.90	1.00

Post-Development Runoff Calculations

Drainage Area	Area (ha)	C 2/5-Year	C 100-Year	Tc (min)	I (mm/hr)		Q (L/s)	
					5-Year	100-Year	5-Year	100-Year
B1	0.132	0.76	0.85	10	104.2	178.6	29.25	56.09
B2	0.004	0.90	1.00	10	104.2	178.6	1.06	2.02
Total	0.136						30.31	58.10

Required Restricted Flow

Drainage Area	Area (ha)	C 5-Year	Tc (min)	I (mm/hr)	Q (L/s)
				5-Year	5-Year
A1	0.136	0.50	10	104.2	19.76
Total	0.136				19.76

Post-Development Restricted Runoff Calculations

Drainage Area	Unrestricted Flow (L/s)		Restricted Flow (L/s)		Storage Required (m^3)		Storage Provided (m^3)		
	5-Year	100-Year	5-Year	100-Year	5-Year	100-Year	5-Year	100-Year	
B1	29.25	56.09	9.26	17.74	13.18	24.45	36.87	36.87	*Restricted*
B2	1.06	2.02	1.06	2.02					*Unrestricted*
Total	30.31	58.10	10.32	19.76	13.18	24.45	36.87	36.87	

Storage Requirements for Area B1

5-Year Storm Event

Tc (min)	I (mm/hr)	Runoff (L/s) B1	Allowable Outflow (L/s)	Runoff to be Stored (L/s)	Storage Required (m^3)
10	104.2	29.25	8.81	20.44	12.27
15	83.6	23.46	8.81	14.65	13.18
20	70.3	19.72	8.81	10.91	13.10
25	60.9	17.10	8.81	8.29	12.43
30	53.9	15.14	8.81	6.33	11.39

Maximum Storage Required 5-year =	13.2	m^3

100-Year Storm Event

Tc (min)	I (mm/hr)	Runoff (L/s) B1	Allowable Outflow (L/s)	Runoff to be Stored (L/s)	Storage Required (m^3)
10	178.6	56.09	17.74	38.35	23.01
12	162.1	50.93	17.74	33.19	23.89
14	148.7	46.72	17.74	28.98	24.34
16	137.5	43.21	17.74	25.47	24.45
18	128.1	40.23	17.74	22.49	24.29
20	120.0	37.68	17.74	19.94	23.93
22	112.9	35.46	17.74	17.72	23.39
24	106.7	33.51	17.74	15.77	22.71
26	101.2	31.78	17.74	14.04	21.90
28	96.3	30.24	17.74	12.50	21.00

Maximum Storage Required 100-year =	24.4	m^3

Cistern Sizing: 100-Year Storm Event - 50% Release Rate

Tc (min)	I (mm/hr)	Runoff (L/s)	Allowable Outflow (L/s)	Runoff to be Stored (L/s)	Storage Required (m^3)*
10	178.6	56.09	8.87	47.22	28.33
12	162.1	50.93	8.87	42.06	30.28
14	148.7	46.72	8.87	37.85	31.79
16	137.5	43.21	8.87	34.34	32.96
18	128.1	40.23	8.87	31.36	33.87
20	120.0	37.68	8.87	28.81	34.57
22	112.9	35.46	8.87	26.59	35.10
24	106.7	33.51	8.87	24.64	35.48
26	101.2	31.78	8.87	22.91	35.74
28	96.3	30.24	8.87	21.37	35.90

Maximum Storage Required 100-year @ 50% Required Release Rate =	35.9	m^3

**Note the proposed cistern has been sized to accommodate 50% of the required 100-year restricted release rate.*

5-Year Storm Event Storage Summary

Storage Available (m^3) = 36.9
Storage Required (m^3) = 13.2

100-Year Storm Event Storage Summary

Storage Available (m^3) = 36.9
Storage Required (m^3) = 24.4

Cistern Sizing: 100-Year Storm Event - 50% Release Rate

Storage Available (m^3) = 36.9
Storage Required (m^3) = 35.9

Time of Concentration Pre-Development

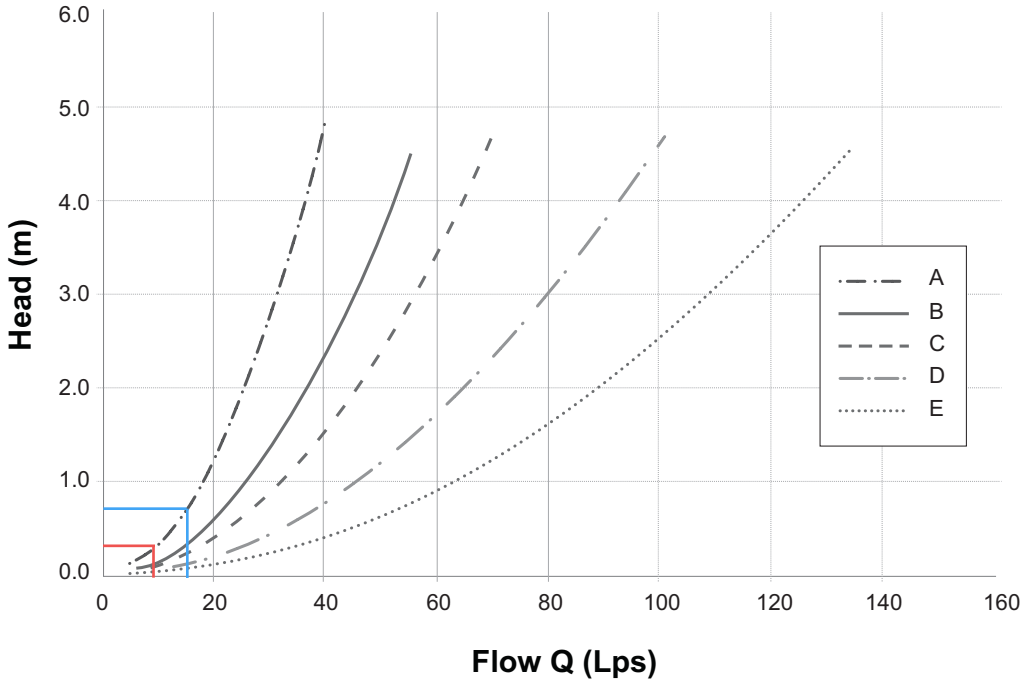
Drainage Area ID	Sheet Flow Distance (m)	Slope of Land (%)	Tc (min) (5-Year)	Tc (min) (100-Year)
A1	26	1.76	6	3

**Therefore, a Tc of 10 can be used*

Tc= (3.26(1.1-c)L^0.5/S^0.33)
c= Balanced Runoff Coefficient
L= Length of Drainage Area
S= Average Slope of Watershed

Cistern ICD Sizing

Chart 3: HF & MHF Preset Flow Curves



5-Year Storm Scenario

100-Year Storm Scenario

STORM SEWER DESIGN SHEET

PROJECT: Apartment Building
LOCATION: 406 Roosevelt

CLIENT: ML Westboro Realty Investment

McINTOSH PERRY
egis GROUP

LOCATION				CONTRIBUTING AREA (ha)				RATIONAL DESIGN FLOW										SEWER DATA								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
STREET	AREA ID	FROM MH	TO MH	C-VALUE	AREA	INDIV AC	CUMUL AC	INLET (min)	TIME IN PIPE	TOTAL (min)	i (5) (mm/hr)	i (10) (mm/hr)	i (100) (mm/hr)	5yr PEAK FLOW (L/s)	10yr PEAK FLOW (L/s)	100yr PEAK FLOW (L/s)	FIXED FLOW (L/s)	DESIGN FLOW (L/s)	CAPACITY (L/s)	LENGTH (m)	PIPE SIZE (mm)			SLOPE (%)	VELOCITY (m/s)	AVAIL CAP (5yr)	
																					DIA	W	H			(L/s)	(%)
ROOSEVELT AVE	B1	BLDG	EX SEWER	0.76	0.13	0.10	0.10	10.00	0.08	10.08	104.19	122.14	178.56	29.25				29.25	62.04	6.19	250			1.00	1.224	32.79	52.85%

Definitions:
Q = 2.78CiA, where:
Q = Peak Flow in Litres per Second (L/s)
A = Area in Hectares (ha)
i = Rainfall intensity in millimeters per hour (mm/hr)
[i = 998.071 / (TC+6.053)^0.814] 5 YEAR
[i = 1174.184 / (TC+6.014)^0.816] 10 YEAR
[i = 1735.688 / (TC+6.014)^0.820] 100 YEAR

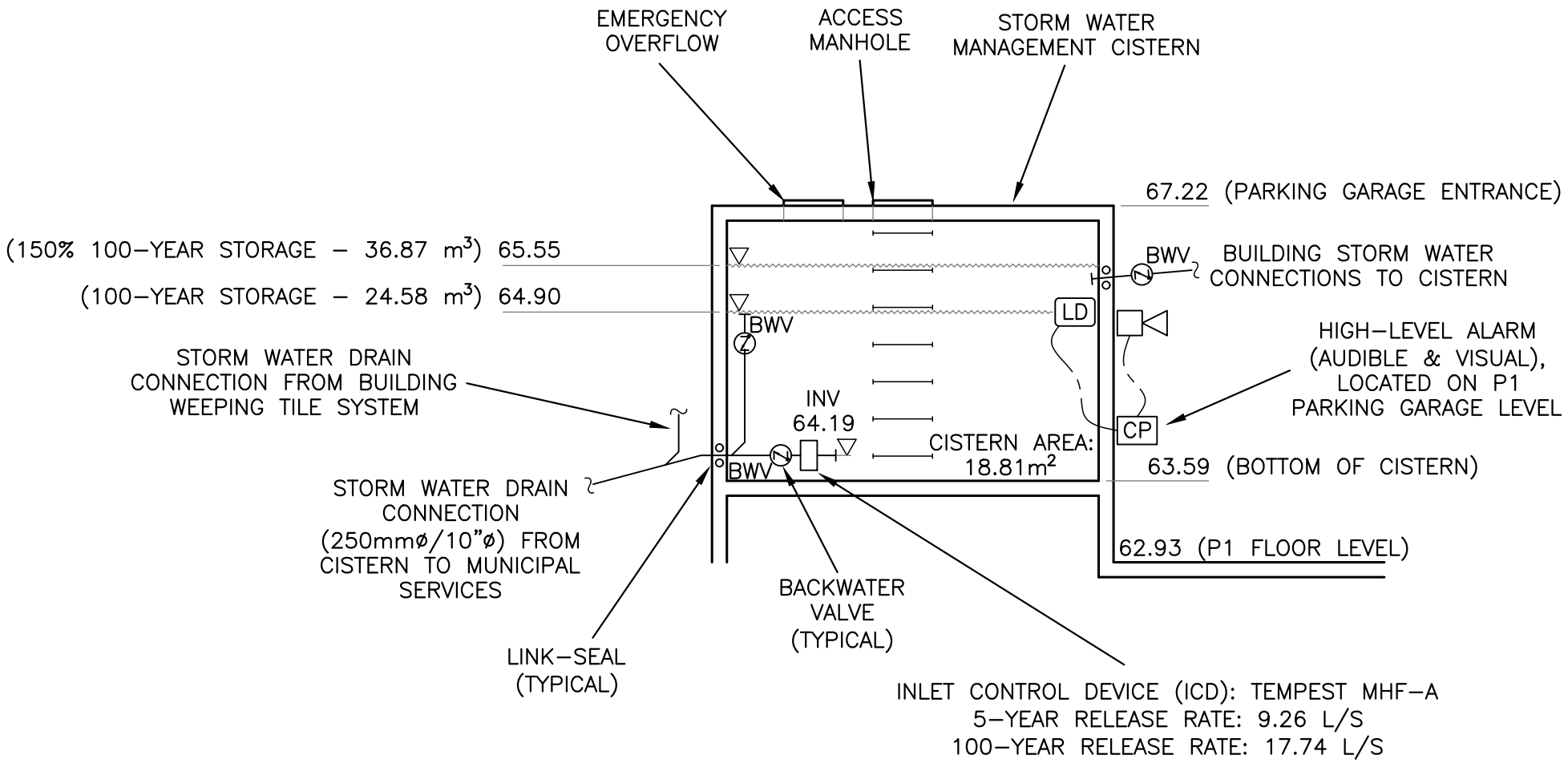
Notes:
1. Mannings coefficient (n) = 0.013

Designed: R.R.R.
Checked: A.J.G.
Project No.: CCO-22-3302

No.	Revision	Date

Date: 2021-01-30

Sheet No: 1 of 1


EMERGENCY OVERFLOW
ACCESS MANHOLE
STORM WATER MANAGEMENT CISTERN
67.22 (PARKING GARAGE ENTRANCE)
(150% 100–YEAR STORAGE – 36.87 m³) 65.55
(100–YEAR STORAGE – 24.58 m³) 64.90
BWV
BUILDING STORM WATER CONNECTIONS TO CISTERN
LD
BWV
HIGH–LEVEL ALARM (AUDIBLE & VISUAL), LOCATED ON P1 PARKING GARAGE LEVEL
STORM WATER DRAIN CONNECTION FROM BUILDING WEEPING TILE SYSTEM
INV 64.19
CP
CISTERN AREA: 18.81m²
BWV
63.59 (BOTTOM OF CISTERN)
STORM WATER DRAIN CONNECTION (250mmø/10"ø) FROM CISTERN TO MUNICIPAL SERVICES
62.93 (P1 FLOOR LEVEL)
BACKWATER VALVE (TYPICAL)
LINK–SEAL (TYPICAL)
INLET CONTROL DEVICE (ICD): TEMPEST MHF–A
5–YEAR RELEASE RATE: 9.26 L/S
100–YEAR RELEASE RATE: 17.74 L/S