Stormwater Management and Servicing Report

Proposed 3-Storey Addition to Existing Multi-use Building
1252 Wellington St. W
Ottawa, Ontario

Prepared for:

Wellington Huron Commercial Inc.
371A Richmond Road, Suite 1
Ottawa, ON. K2A 0E7

Attention: Rick Morris

LRL File No.: 210883-02

March 16, 2022
Rev. February 02, 2023

5430 Canotek Road | Ottawa, ON, K1J 9G2 | info@lrl.ca | www.lrl.ca | (613) 842-3434

TABLE OF CONTENTS

APPENDICES

Appendix A	**Pre-consultation / Correspondence / Misc**
Appendix B	**Water Supply Calculations**
Appendix C	**Wastewater Collection Calculations**
Appendix D	**Stormwater Management Calculations**
Appendix E	**Civil Engineering Drawings**
Drawings/Figures	**Proposed Site Plan**
	Legal Survey
	Huron & Wellington Road As-builts

LIST OF TABLES

LIST OF FIGURES

1 INTRODUCTION AND SITE DESCRIPTION

LRL Associates Ltd. was retained by Wellington Huron Commercial Inc. to complete a Stormwater Management Analysis and Servicing Brief for a proposed three (3) storey addition to the existing mixed-use building located at 1252 Wellington St West in Ottawa, Ontario. The legal description of the property is Lot 7, PIN 04036-0115 registered plan **127960,** city of Ottawa.

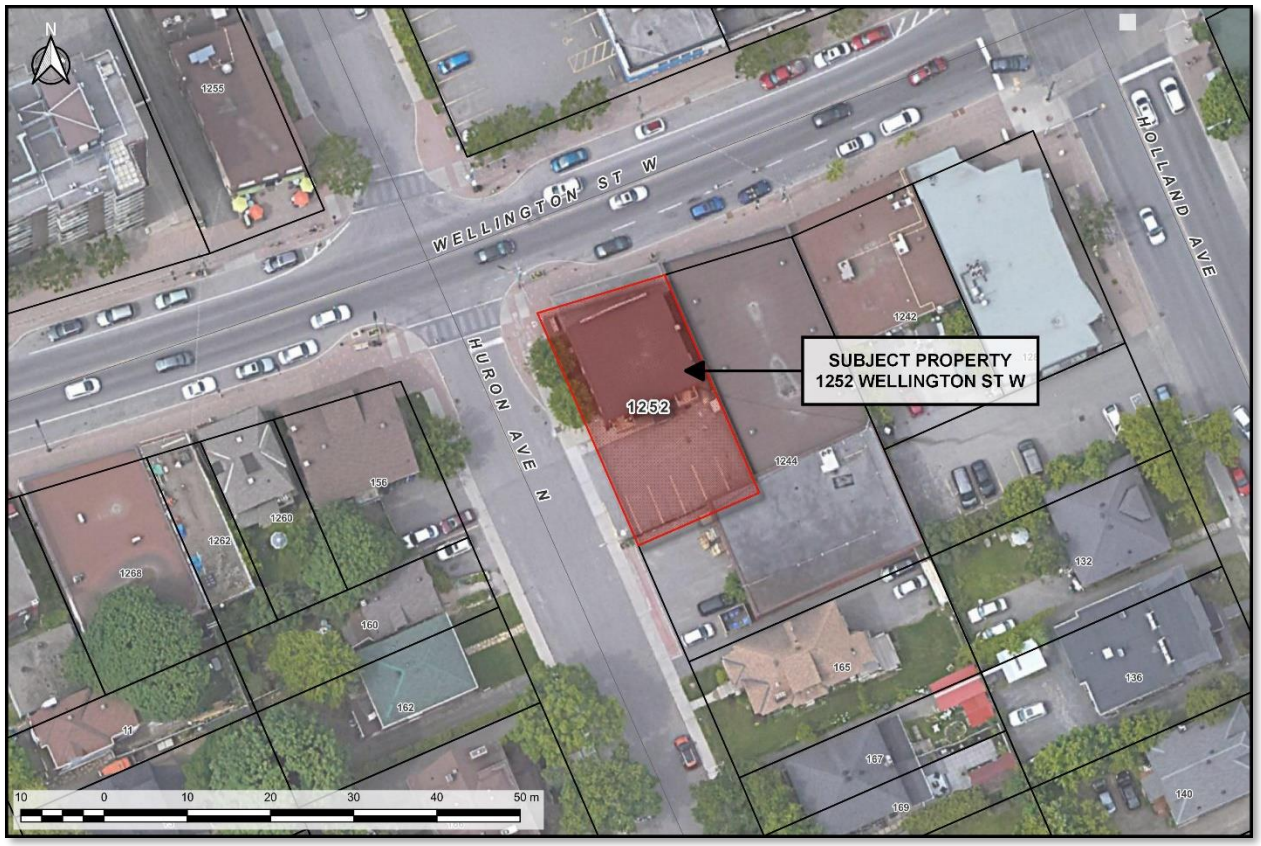


Figure 1: Arial View of Proposed Development

The site at 1252 Wellington St. West has approximately 16 metres of frontage along Wellington St. and a depth of approximately 30 metres along Huron Avenue. The overall lot area is approximately **0.047 ha.**

Currently there is a 2-storey mixed-use building facing the northern side of the property and paved surface parking area at the rear (south) side of the building with access from Huron Avenue.

Under the Zoning By-law 2008-250 the site is zoned under TM11 (Zone). The proposed uses of the site are in conformity with the existing zoning.

The development proposes the addition of a new three (3) storey mixed-used building attached to the existing two (2) storey mixed-use building. The proposed addition will have commercial entrances on the main floor and two (2) 3+ bedroom units on the 2nd & 3rd floors.

This report has been prepared in consideration of the terms and conditions noted above and with the civil drawings prepared for the new development. Should there be any changes in the design features, which may relate to the stormwater considerations, LRL Associates Ltd. Should be advised to review the report recommendations.

2 Existing Site and Drainage Description

The subject site measures ***0.047 ha*** and currently consists of a two (2) storey mixed-use building with two commercial units and two residential units, and rear surface parking. The commercial entrances are from Wellington Street, the residential entrances are from the rear of the building parking area which is accessed from Huron Ave. Elevations of existing site range between 66.43m in the northeast corner, 67.48m at the southeast corner, 67.20m at the southwest corner, and 66.65m in the northwest corner of the site.

Sewer and watermain mapping, along with as-built information collected from the City of Ottawa indicate the following existing infrastructure located within the adjacent right-of-way:

Huron Ave. N:

- 200 mm diameter PVC watermain
- 250 mm diameter PVC sanitary sewer
- 1800 mm diameter Concrete storm sewer

3 Scope of Work

As per applicable guidelines, the scope of work includes the following:

Stormwater management

- Calculate the allowable stormwater release rate.
- Calculate the anticipated post-development stormwater release rates.
- Demonstrate how the target quantity objectives will be achieved.

Water services

- Calculate the expected water supply demand at average and peak conditions.
- Calculate the required fire flow as per the Fire Underwriters Survey (FUS) method.
- Confirm the adequacy of water supply and pressure during peak flow and fire flow.
- Describe the proposed water distribution network and connection to the existing system.

Sanitary services

- Describe the existing sanitary sewers available to receive wastewater from the building.

- Calculate peak flow rates from the development.
- Describe the proposed sanitary sewer system.
- Review impact of increased sanitary flow on downstream sanitary sewer.

4 REGULATORY APPROVALS

The Rideau Valley Conservation Authority will need to be consulted in order to obtain municipal approval for site development. No other approval requirements from other regulatory agencies beyond the City of Ottawa are anticipated.

5 WATER SUPPLY AND FIRE PROTECTION

5.1 Existing Water Supply Services and Fire Hydrant Coverage

The subject property lies within the City of Ottawa 1W water distribution network pressure zone. Refer to ***Appendix B*** for the water network pressure zone map.

The subject property is located within proximity of an existing 305 mm dia. PVC watermain within the Wellington Street West right-of-way, and a 200 mm dia. PVC watermain within the Huron Avenue right-of-way.

There are currently seven (7) existing fire hydrants near the property:

1) At the north-east Wellington St. & Huron Ave., approximately 34m north of the proposed building's side entrance on Huron Ave.
2) At the south-west corner of Wellington St. & Huron Ave., approximately 30m from the proposed building's side entrance on Huron Ave.
3) At 153 Huron Ave., approximately 70m from the proposed building's side entrance on Huron Ave.
4) At 168 Huron Ave., approximately 60m from the proposed building's side entrance on Huron Ave.
5) At the rear of 1230 Wellington St., approximately 120m from the proposed building's side entrance on Huron Ave.
6) At the north-east corner of Wellington St. and Caroline Ave., approximately 135m from the proposed building's side entrance on Huron Ave.
7) At 93 Holland Ave., approximately 200m from the proposed building's side entrance on Huron Ave.

Refer to ***Appendix B*** for the location of fire hydrants.

5.2 Water Supply Servicing Design

The subject property is proposed to be serviced via 50mm diameter PVC DR-18 service lateral connected to the 200mm diameter PVC watermain located within Huron Ave.
Refer to Site Servicing Plan C401 in ***Appendix E*** for servicing layout.
Table 1 summarizes the City of Ottawa Design Guidelines design parameters utilized in the preparation of the water demand estimate.

Table 1: ***City of Ottawa Design Guidelines Design Parameters***

Design Parameter	Value
Residential two-bedroom apartment	2.1 P/unit
Residential single-family dwelling (Assumed value of single-family dwelling as equivalent to 4-bedroom apartment)	3.4 P/unit
Commercial Shopping Centres	2500 L(1000m^2/d)
Average Daily Demand	280 L/d/per
Minimum Depth of Cover	2.4 m from top of watermain to finished grade
Desired operating pressure range during normal operating conditions	350 kPa and 480 kPa
During normal operating conditions pressure must not drop below	275 kPa
During normal operating conditions pressure shall not exceed	552 kPa
During fire flow operating conditions pressure must not drop below	140 kPa
**Table updated to reflect technical Bulletin ISDTB-2018-02*	

The interior layout and architectural floor plans have been reviewed, and it was determined that the existing building and proposed addition will include:

- three (3) commercial units at grade (2 units existing, 1 unit proposed),
- two (2) second storey two-bedroom residential units (existing), and
- two (2) second/third storey four-bedroom residential units (proposed)

Based on the City of Ottawa Design guidelines for population projection, this translates to approximately 11.0 residents.

Table 2 below summarizes the proposed development as interpreted using table 4.1 of the City of Ottawa Design Guidelines.

Table 2: ***Development Residential Population Estimate***

Proposed Unit type	Persons Per Unit	Number of Units	Population
2-bedroom apartment	2.1	2	4.2
4-bedroom apartment (assumed equal value as a single-family dwelling	3.4	2	6.8
	Total Residential Population		11.0

The required water supply requirements for the residential units in proposed building have been calculated using the following formula:

Where: $Q = (q \times P \times M)$
q = average water consumption (L/capita/day)
P = design population (capita)
M = Peak factor

For an approximate population of 11.0 residents, the following factors were used in water demand calculations (Table 3.3, Peaking Factors for Drinking-Water Systems Serving Fewer than 500 People as reference in the Ministry of the Environment (MOE) Design Guidelines for Drinking Water Systems):

- Maximum Daily Demand Residential Factor = **14.6**
- Peak Hour Demand Residential Factor = **22.2**

For commercial water demands, the following factors were used in calculations as per Table 4.2 in the Ottawa Design Guidelines – Water Distribution:

- Maximum Daily Demand Commercial Factor = **1.5**
- Peak Hour Demand Commercial Factor = **1.8**

The combined residential and commercial anticipated demands were calculated as follows:

- Average daily domestic water demand is **0.05** L/s,
- Maximum daily demand is **0.54** L/s, and
- Maximum hourly is **0.82** L/s.

Refer to ***Appendix B*** for water demand calculations.
The City of Ottawa was contacted to obtain boundary conditions associated with the estimated water demand, as indicated in the boundary request correspondence included in ***Appendix B***. Table 3 below summarizes boundary conditions for the proposed development.

Table 3: ***Summary of Anticipated Demands and Boundary Conditions***

Design Parameter	**Anticipated Demand (L/s)**	**Boundary Conditions @ Wellington St. W * (m H_20 / kPa)**
Average Daily Demand	0.05	108.2 / 442.43
Max Day + Fire Flow (per FUS)	0.54 + 250	106.0 / 392.50
Peak Hour	0.82	114.9 / 470.98
* *Assumed Ground elevation at connection point = 66.89 m.*		
Water demand calculation per City of Ottawa Water Design guidelines. See Appendix B for details.		

As shown above, pressures from boundary conditions exceed the minimum required threshold in all scenarios.

The estimated fire flow for the proposed buildings was calculated in accordance with *ISTB-2018-02*. The following parameters were provided by the Architect, see ***Appendix A*** for collaborating correspondence:

- Type of construction – Wood Frame construction
- Occupancy type – Free Burning

- Sprinkler Protection – No sprinkler system

The estimated fire flow demand was estimated to be **15,000 L/min**, see ***Appendix B*** for details.

There are seven (7) existing fire hydrants in close proximity to the proposed buildings that are available to provide the required fire flow demands of 15,000 L/min. Refer to ***Appendix B*** for fire hydrant locations. Table 4 below summarizes the aggregate fire flow of the contributing hydrants in close proximity to the proposed development based on Table 18.5.4.3 of *ISTB-2018-02*.

Table 4: ***Fire Protection Summary Table***

Building	Fire Flow Demand (L/min)	Fire Hydrants(s) within 76m	Fire Hydrant(s) within 152m	Fire Hydrant(s) within 200m	Available Combined Fire Flow (L/min)
Proposed 3 Storey Building	15,000	4	/	/	(4 x 5678) = 22,712

The total available fire flow from contributing hydrants within 76m is equal to 22,712 L/min, which is more than adequate to provide fire flow for the proposed development in the event of a fire emergency.

The proposed water supply design conforms to all relevant City Guidelines and Policies.

6 SANITARY SERVICE

6.1 Existing Sanitary Sewer Services

There is an existing 250mm dia. PVC sanitary sewer within Huron Ave. across from the subject site where the wastewater flow is ultimately conveyed to the Cave Creek Collector trunk sewer. Refer to ***Appendix C*** for the trunk sewer map.

The existing mixed-use building is currently serviced from the 250mm dia. PVC sewer on Huron Ave.

The post development flow for the proposed addition was calculated to be an increase of 0.16 L/s to the existing system along Huron Ave. as a result of the proposed residential population (11.0 residents) and commercial area (327m^2) and a small portion of infiltration. Refer to ***Appendix C*** for further information on the calculated sanitary flows.

6.2 Sanitary Sewer Servicing Design

The proposed development will be serviced via a 150mm dia. sanitary service lateral which will connect to an existing 200mm diameter sanitary sewer pipe on the east-side of Huron Ave.

Refer to LRL drawing C401 in ***Appendix E*** for the proposed sanitary servicing.

The parameters used to calculate the anticipated sanitary flows are:

- A residential average population per unit of 3.4 person for 4-bedroom apartments (assumed equivalent value as a single-family dwelling)
- a residential average population per unit of 2.1 person for 2-bedroom apartments
- a residential daily demand of 280 L/p/day
- a residential peaking factor of 4.0
- a commercial space of 327m^2
- a commercial daily demand of 2.8 L/m^2/day
- a commercial peaking factor of 1.5
- a total infiltration rate of 0.33 L/s/ha

Based on these parameters and the total site area of 0.007 ha, the total anticipated wet sanitary flow was estimated to be **0.16 L/s**.

Refer to ***Appendix C*** for the site sanitary sewer design sheet.

7 STORMWATER MANAGEMENT

7.1 Existing Stormwater Infrastructure

Stormwater runoff from the subject property is tributary to the City of Ottawa sewer system as such, approvals for the proposed development within this area are under the approval authority of the City of Ottawa.

In pre-development conditions, the existing multi-use building collects stormwater via roof drains which connect to the existing sewer on Huron Ave (assumed sanitary sewer, as no service connections to the storm sewer were located during site investigations). The stormwater runoff from the rear parking lot of the existing multi-use building (site of the proposed addition) is conveyed overland to Huron Ave. and ultimately enters the municipal storm sewer within the Huron Ave. right-of-way, via municipal catchbasins. The catchbasins connect to an existing 1800mm dia. concrete storm sewer.

A foundation drain system currently surrounds the footing of the current building. Groundwater from the foundation is collected by this system and conveyed to a sump pit & pump, located within the basement of Unit 2. Collected water from the pit is pumped out to the sanitary sewer located along Huron Ave North.

Refer to ***Appendix E*** for pre- and post-development watershed information.

7.2 Design Criteria

The stormwater management criteria for this development are based on the pre-consultation with City of Ottawa officials, the City of Ottawa Sewer Design Guidelines including City of Ottawa Stormwater Management Design Guidelines, 2012 (City standards), as well as the Ministry of the Environment's Stormwater Planning and Design Manual, 2003 (SWMP Manual).

7.2.1 Water Quality

The subject property lies within the Ottawa River West sub-watershed and is therefore subject to review by the Rideau Valley Conservation Authority (RVCA). It was determined that no further treatment is required for stormwater runoff from the proposed development. Correspondence with RVCA is included in ***Appendix A***.

7.2.2 Water Quantity

Based on pre-consultation discussions with the city, correspondence included in ***Appendix A***, the following stormwater management requirements were identified for the subject site:

- Meet an allowable release rate based on the existing Rational Method Coefficient of no more than 0.50, employing the City of Ottawa IDF parameters for a 5-year storm with a calculated time of concentration equal to or greater than 10 minutes.
- Attenuate all storms up to and including the City of Ottawa 100-year storm event on site.
- As the site is already asphalt, rooftop has been controlled to the 5-year storm event in order to satisfy City stormwater requirement.

The allowable release rate for the portion of the subject site analyzed (extent of addition and site changes) was calculated to be **2.90 L/s**.

Refer to ***Appendix D*** for calculations.

7.3 Method of Analysis

The Modified Rational Method has been used to calculate the runoff rate from the site to quantify the detention storage required for quantity control of the development.
Refer to ***Appendix D*** for storage calculations.

7.4 Proposed Stormwater Quantity Controls

The extent of the stormwater management quantity control calculations will focus on the proposed development changes to the site. The proposed changes to the site are as follows;

- Proposed building addition (South of the existing building)
- Grass removal & paving stone installation (West of the existing building)

As the balance of the site will either be reinstatements of existing, or remain unchanged and as it was in pre-development conditions (i.e. no changes to the runoff coefficient, and no requirement of additional control), no further control was proposed outside the building addition area & grass removal area.

The existing site is delineated by catchments EWS-01 (0.018 ha), the existing asphalt parking lot, and EWS-02 (0.002 ha), the existing grassed area. In both delineated areas, stormwater currently flows off the site uncontrolled (West) to Huron Ave, where it is captured by the Huron Ave catchbasins and ultimately conveyed to the Huron 1800mm storm sewer.
Refer to ***Appendix E*** for Civil Plans C701 & C702, delineating the extends of stormwater management required for the site.

The proposed stormwater management quantity control for this development will be accomplished by restricting flows via flow control roof drains installed at the low points of the flat roofs of the proposed building addition. Storage required as a result of quantity control measures will be accomplished via roof ponding. Captured & controlled water will run through the building, and ultimately be conveyed, via underground 100mm storm service, to the Huron Ave storm sewer.

As per the City review comments during the pre-consultation phase, it was recommended that the proposed building storm outlet not be tied directly to the Huron sewer, and instead, be tied to the Wellington sewer. Due to several constructability & feasibility concerns to the existing storm sewer along Wellington Ave, it was decided, in agreement with the City of Ottawa, to allow for the site storm service outlet to tie directly to the storm catchbasin located along the East side of Huron Ave (CB-01). This was under the condition that the existing catchbasin structure would be upgraded to catchbasin/maintenance hole.

The proposed site storm sewer and stormwater management system are shown on drawing C401 and detailed calculations, including the design sheet, can be found in ***Appendix D***.

The proposed site development has been analyzed and post development watersheds have been allocated.

- Watershed WS-01 (0.018 ha), consisting of the proposed addition rooftop, will be captured by flow control roof drains, and conveyed via 100mm storm service through the building, underground, and ultimately to the upgraded CBMH along the East side of Huron Ave.
- Watershed WS-02 (0.002 ha), consisting of paving stone, will convey stormwater overland (uncontrolled) to Huron Ave, ultimately to be collected by the upgraded CBMH located along the East side of Huron Ave.

Table 5 below summarizes post-development drainage areas. Figure 2 below summarizes the design, flow and storage of the proposed roof drains. Detailed calculations can be seen in ***Appendix D.***

Table 5: Post Development *Drainage Areas*

Drainage Area Name	Area	Weighted Runoff Coefficient	100 Year Weighted Runoff Coefficient (25% increase)
WS-01 (roof, controlled)	0.018	0.90	1.00
WS-02 (pave, uncontrolled)	0.002	0.90	1.00

Figure 2: ***Summary of Roof Storage***

Select water depth (h) =	0.100	m	*An Emergency overflow scupper is provided above this height.
Flow per drain=	0.93	L/s	*Watts RD-100-A-ADJ (Weir Opening = 1/2 Exposed)
No. of drain =	2		
Total flow from roof =	1.86	L/s	
Total roof area =	177	m^2	
Effective* roof area (A) =	150	m^2	*Assessment of total area of roof, not considering areas where ponding
Available (provided) roof storage (V) =	5.00	m^3	wouldn't occur (assumed 15%)

For the given controlled release rate, the required roof storage = available roof storage, thus OK

In order to provide adequate control, 2 Watts RD-100-A-ADJ roof drains (or approved equivalent) were proposed, using an opening setting of ½ exposed, at a maximum ponding depth of 0.10m, to provide a maximum flow of 0.93 L/s per drain, 1.86 L/s total.

Roof drain design will need to be reviewed and approved by the Mechanical Engineer prior to installation.

Table 6 below summarizes the release rates and storage volumes required to meet the allowable release rate of 2.90 L/s for 100-year flows.

Table 6: ***Stormwater Release Rate & Storage Volume Summary (100 Year)***

Catchment Area	Drainage Area (ha)	100-year Release Rate (L/s)	100-Year Required Storage (m^3)	Total Available Storage (m^3)
WS-01 (roof, controlled)	0.018	1.86	5.00	5.46
WS-02 (pave, uncontrolled)	0.002	0.99	0.00	0.00
TOTAL	**0.020**	**2.85**	**5.00**	**5.46**

To meet the allowable release rate of **2.90 L/s,** it is calculated that a total of **5.00 m^3** of storage will be required; **5.46 m^3** will be provided in rooftop ponding within WS-01. The 100-year maximum ponding depths can be found on drawing "C601 – Stormwater Management Plan" of ***Appendix E***.

7.5 Proposed Foundation Drain Outlets

It is proposed that a foundation drain is installed along the perimeter of the proposed addition (refer to Architectural plans for greater detail). The proposed new foundation drain will also be tied to the existing sump pit and pump located within Unit 2 of the existing building.

The current sump pump outlet is tied to the Huron Ave North sanitary sewer. In order to comply with City of Ottawa requirements, the sump pump outlet to the sanitary sewer will need to be decommissioned, and a new outlet to the City storm sewer will need to be installed. As we cannot tie any service/pipe directly to the Huron storm sewer, is it proposed to install a new foundation

outlet (100mm storm service pipe) from the sump pit to CHMH-01 located along Huron Ave North (running parallel to the roof drain outlet). Greater detail can be found in Civil Plan C401.

8 Erosion and Sediment Control

During construction, erosion and sediment controls will be provided primarily via a sediment control fence to be erected along the perimeter of the site where runoff has the potential of leaving the site. Inlet sediment control devices are also to be provided in any catch basin and/or manholes in and around the site that may be impacted by the site construction. Construction and maintenance requirements for erosion and sediment controls are to comply with Ontario Provincial Standard Specification OPSS 577.

Refer to drawing C101 in ***Appendix E*** for erosion and sediment control details.

9 Conclusion

This Stormwater Management and Servicing Report for the development proposed at 1252 Wellington St. West presents the rationale and details for the servicing requirements for the subject property.

In accordance with the report objectives, the servicing requirements for the development are summarized below:

Water Service

- The maximum required fire flow was calculated at **15,000 L/min** using the FUS method.
- There are seven (7) existing fire hydrants available to service the proposed development. They will provide a combined fire flow greater than the required fire flow.
- The new proposed addition to the existing multi-use building will be serviced by one (1) new connections: a new 50mm diameter water service to be connected to the existing 200mm diameter watermain within Huron Ave.
- Boundary conditions received from the City of Ottawa indicate that sufficient pressure is available to service the proposed site.

Sanitary Service

- The anticipated sanitary flow from the proposed development is **0.16 L/s.**
- The proposed development will be serviced by a 150mm dia. sanitary service lateral which will connect to an existing 200mm diameter sanitary sewer on Huron Ave.

Stormwater Management

- Stormwater quality controls are not required as per consultation with the RVCA.
- The storm water release rates from the proposed development will meet calculated allowable release rate of **2.90 L/s.**
- Stormwater quantity control objectives will be met through on-site stormwater ponding on the roof of the proposed building addition, and controlled will be provided via flow control roof drains.

10 REPORT CONDITIONS AND LIMITATIONS

The report conclusions are applicable only to this specific project described in the preceding pages. Any changes, modifications or additions will require a subsequent review by LRL Associates Ltd. to ensure the compatibility with the recommendations contained in this document. If you have any questions or comments, please contact the undersigned.

Prepared by:
LRL Associates Ltd.

Virginia Johnson, P. Eng.
Civil Engineer

Kyle Herold
Civil Designer

APPENDIX A

Pre-consultation / Correspondance

Pre-Application Consultation Meeting Notes

1248-1252 Wellington Street West
File Number PC2021-0391
Thursday November 18, 2021, MS Teams

Attendees:

City of Ottawa:
Andrew McCreight, File Lead
Margot Linker, Student Planner
Masha Wakula, Planner
Reza Bakhit, Project Manager
Amy Whelan, Civil Engineer
Matthew Ippersiel, Urban Design

Applicant Team:
Nathan Petryshyn
Rick Morris
Matt McElligott
Susan Smith
Greg Boyle
Thanh Do

Community Association:
Gillian Salmond, Wellington Village Community Association

Regret(s):
Wally Dubyk, Transportation

Subject: 1248-1252 Wellington St W

Meeting Notes:

Opening & attendee introduction

- Introduction of meeting attendees.
- Planning staff can confirm that an NDA has been signed.

Proposal Overview

- The site is currently occupied by an office and retail store fronting onto Wellington Street.
- Rear contains surface parking lot (where proposed addition will be located).
- Existing building is proposed to be retained (two commercial units, two residential units).
- Proposing a three-storey addition to the rear of the property containing two commercial units at grade, and two new four-bedroom residential units above, with access from Huron.
- Garbage placement – looking for guidance from City.
- Additional entrance, glazing activating ground floor.

- Relief required (re: zoning application) – corner side yard setback, outdoor commercial patio (for where it's contemplated right now), permitted projections, etc.
- While there is no bicycle parking existing for the current building, with the proposed addition, would required bicycle parking only include addition or the existing building as well? Similarly, will required amenity area include both or only the proposed addition?
- Looking into lowering height of existing ground floor by one to two risers closer to the sidewalk, which will help animate the street and make the units accessible.
- Proposed patio will be located within the side yard setback, will have an area of approximately 360 square feet with 19 metres distance from the residential lot line.
    - Andrew: Consider the size of the patio and designing it to have screening or mitigation where there are residential uses in close proximity. See Wellington Diner example.

Engineering (Reza Bakhit / Amy Whelan)

- Confirmation that the existing building will be retained, the use of existing building is mixed-use (2 commercial, two residential)
- Rick: LRL engineering will be retained for this project
- Considering this is an addition, consider whether existing services can accommodate the addition.
- Regarding, stormwater management, the site is already asphalt. If retained engineer can control roof only to 5-year storm water control, this will probably be able to satisfy our requirement.
- Standard requirements for site plan.

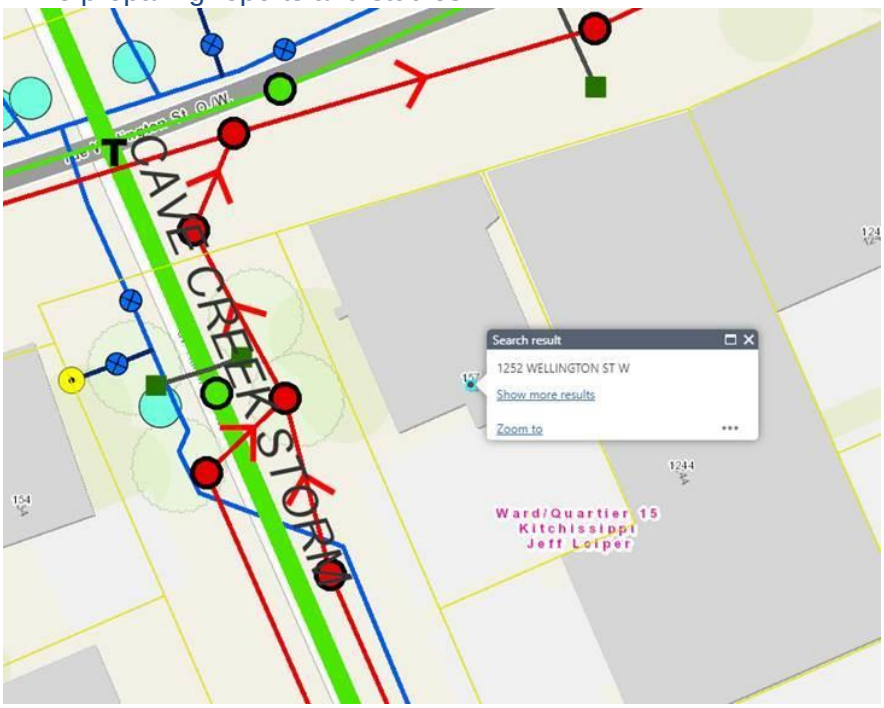
Post-Meeting notes:

General:

- It is the sole responsibility of the consultant to investigate the location of existing underground utilities in the proposed servicing area and submit a request for locates to avoid conflict(s). The location of existing utilities and services shall be documented on an **Existing Conditions Plan**.
- Any easements on the subject site shall be identified and respected by any development proposal and shall adhere to the conditions identified in the easement agreement. A **legal survey plan** shall be provided and all easements shall be shown on the engineering plans.
- A deep excavation and dewatering operations have the potential to cause damages to the neighboring adjacent buildings/ City infrastructure. Document that construction activities (excavation, dewatering, vibrations associated with construction, etc.) will not have an impact on any adjacent buildings and infrastructure.
- A singular (1) storm and (1) sanitary service connection to the sewer networks and (1) water service permitted for this development. The addition shall not be serviced independent from the existing building as the City does not want to maintain multiple connections for a single property.
- It is the responsibility of the consultant to ensure that an application to consolidate the parcels (1248 Wellington and 157 Huron) of land has taken place otherwise the proposed stormwater works will be servicing more than one parcel of land and thus does not meet the exemption set out in O.Reg. 525/98. This would mean an ECA would be required regardless of who owns the parcels.

- The condition of the existing services must be verified for reuse to ensure absence of any structural deficiencies and ensure minimum size and materiality requirements are being met. A CCTV scan and accompanying report must be submitted to the City for review to determine if they are acceptable. A comment concerning the CCTV scan and lateral condition must also be included in the servicing report, stating that the existing service laterals for the subject property are absent of any structural defects and are of size and material that adheres to City of Ottawa current Guidelines. Located existing services are to be placed on site servicing plan.

- Reference documents for information purposes :
  - Ottawa Sewer Design Guidelines (October 2012)
  - Technical Bulletin PIEDTB-2016-01
  - Technical Bulletins ISTB-2018-01, ISTB-2018-02, ISTB-2018-03, and ISTB-2021-03
  - Ottawa Design Guidelines - Water Distribution (2010)
  - Geotechnical Investigation and Reporting Guidelines for Development Applications in the City of Ottawa (2007)
  - City of Ottawa Slope Stability Guidelines for Development Applications (revised 2012)
  - City of Ottawa Environmental Noise Control Guidelines (January 2016)
  - City of Ottawa Accessibility Design Standards (2012) (City recommends development be in accordance with these standards on private property)
  - Ottawa Standard Tender Documents (latest version)
  - Ontario Provincial Standards for Roads & Public Works (2013)
  - Record drawings and utility plans are also available for purchase from the City (Contact the City's Information Centre by email at InformationCentre@ottawa.ca or by phone at (613) 580-424 x.44455).
- Please note that this is the applicant responsibility to refer to the latest applicable guidelines while preparing reports and studies.



Disclaimer:

The City of Ottawa does not guarantee the accuracy or completeness of the data and information contained on the above image(s) and does not assume any responsibility or liability with respect to any damage or loss arising from the use or interpretation of the image(s) provided. This image is for schematic purposes only.

Stormwater Management Criteria and Information:

- **Water Quantity Control:** In the absence of area specific SWM criteria please control post-development runoff from the subject site, up to and including the **100-year storm event**, to **a 5-year pre-development level.** The pre-development runoff coefficient will need to be determined **as per existing conditions** but in no case more than 0.5. [**If 0.5 applies it needs to be clearly demonstrated in the report that the pre-development runoff coefficient is greater than 0.5**]. The time of concentration (T_c) used to determine the pre-development condition should be calculated. *Tc should not be less than 10 min. since IDF curves become unrealistic at less than 10 min; T_c of 10 minutes shall be used for all post-development calculations*].
- Any storm events greater than the established **5-year allowable** release rate, up to and including the **100-year storm event**, shall be detained on-site. The SWM measures required to avoid impact on downstream sewer system will be subject to review.
- Please note that foundation drainage is to be independently connected to the storm sewer main unless being pumped with appropriate back up power, sufficient sized pump and back flow prevention. **It is recommended that the foundation drainage system be drained by a sump pump connection to the storm sewer to minimize risk of basement flooding as it will provide the best protection from the uncontrolled sewer system compared to relying on the backwater valve.**
- **Water Quality Control:** Please consult with the local conservation authority (RVCA) regarding water quality criteria prior to submission of a Site Plan Control Proposal application to establish any water quality control restrictions, criteria and measures for the site. Correspondence and clearance shall be provided in the Appendix of the report.
- Please note that as per *Technical Bulletin PIEDTB-2016-01 section 8.3.11.1 (p.12 of 14)* **there shall be no surface ponding on private parking areas during the 5-year storm rainfall event**.
- **If Underground Storage proposed:** Please note that the Modified Rational Method for storage computation in the Sewer Design Guidelines was originally intended to be used for above ground storage (i.e. parking lot) where the change in head over the orifice varied from 1.5 m to 1.2 m (assuming a 1.2 m deep CB and a max ponding depth of 0.3 m). This change in head was small and hence the release rate fluctuated little, therefore there was no need to use an average release rate.
- When underground storage is used, the release rate fluctuates from a maximum peak flow based on maximum head down to a release rate of zero. This difference is large and has a significant impact on storage requirements. **We therefore require that an average release rate equal to 50% of the peak allowable rate shall be applied to estimate the required volume. Alternatively, the consultant may choose to use a submersible pump in the design to ensure a constant release rate.**
- In the event that there is a disagreement from the designer regarding the required storage, The City will require that the designer demonstrate their rationale utilizing dynamic modelling, that will then be reviewed by City modellers in the Water Resources Group.

- Please provide information on UG storage pipe. Provide required cover over pipe and details, chart of storage values, capacity etc. How will this pipe be cleaned of sediment and debris?
- Provide information on type of underground storage system including product name and model, number of chambers, chamber configuration, confirm invert of chamber system, top of chamber system, required cover over system and details, interior bottom slope (for self-cleansing), chart of storage values, length, width and height, capacity, entry ports (maintenance) etc.
- Provide a cross section of underground chamber system showing invert and obvert/top, major and minor HWLs, top of ground, system volume provided during major and minor events. UG storage to provide actual 2- and 100-year event storage requirements.
- In regard to all proposed UG storage, ground water levels (and in particular HGW levels) will need to be reviewed to ensure that the proposed system does not become surcharged and thereby ineffective.
- Modeling can be provided to ensure capacity for both storm and sanitary sewers for the proposed development by City's Water Distribution Dept. – Modeling Group, through PM and upon request.

- Please note that the minimum orifice dia. for a plug style **ICD is 83mm and the minimum flow rate from a vortex ICD is 6 L/s** in order to reduce the likelihood of plugging.
- Post-development site grading shall match existing property line grades in order to minimize disruption to the adjacent residential properties. A **topographical plan of survey** shall be provided as part of the submission and a note provided on the plans.
- Please provide a **Pre-Development Drainage Area Plan** to define the pre-development drainage areas/patterns. **Existing drainage patterns shall be maintained and discussed as part of the proposed SWM solution**.
- **If rooftop control and storage is proposed** as part of the SWM solutions sufficient details (Cl. 8.3.8.4) shall be discussed and document in the report and on the plans. Roof drains are to be connected downstream of any incorporated ICDs within the SWM system and not to the foundation drain system. Provide a **Roof Drain Plan** as part of the submission.
- **Considering the size and the existing condition of the site, and the fact that the proposed addition and the existing building occupy most of the site area, it would be acceptable to control the roof portion only and leave the remainder of the site uncontrol given the uncontrolled portion is directed towards the right of way. This approach should be discussed in the SWM report. Also, the grading plan should clearly demonstrate that the runoff from the uncontrolled portion of the site will be directed towards the ROW.**
- If **Window wells** are proposed, they are to be indirectly connected to the footing drains. A detail of window well with indirect connection is required, as is a note at window well location speaking to indirect connection.
- There must be at least **15cm of vertical clearance** between the spill elevation and the ground elevation at the building envelope that is in proximity of the flow route or ponding area. The exception in this case would be at reverse sloped loading dock locations. At these locations, a minimum of 15cm of vertical clearance must be provided below loading dock openings. Ensure to provide discussion in report and ensure grading plan matches if applicable.

- Rear yard on grade parking to be permeable pavement. Refer to City Standard Detail Drawings SC26 (maintenance/temp parking areas), SC27 or permeable asphalt materials. No gravel or stone dust parking areas permitted.

Storm Sewer:

- A 600mm dia. CONC storm sewer (2008) is available within **Wellington Street.**
- A 1800mm dia. CONC storm sewer (1935) is available within **Huron Ave N**. (No connection is permitted)

Sanitary Sewer:

- A 250 mm dia. PVC Sanitary sewer (2008) is available within **Wellington Street.**
- A 250 mm dia. PVC Sanitary sewer (2020) is available **Huron Ave N.**
- Please provide the new Sanitary sewer discharge and we confirm if sanitary sewer main has the capacity. An analysis and demonstration that there is sufficient/adequate residual capacity to accommodate any increase in wastewater flows in the receiving and downstream wastewater system is required to be provided. Needs to be demonstrated that there is adequate capacity to support any increase in wastewater flow.
- Please apply the wastewater design flow parameters *in Technical Bulletin PIEDTB-2018-01.*
- Sanitary sewer monitoring maintenance hole is required to be installed at the property line (on the private side of the property) as per City of Ottawa Sewer-Use By-Law 2003-514 (14) *Monitoring Devices*.
- A backwater valve is required on the sanitary service for protection.

Water:

- A 305 mm dia. PVC watermain (2008) is available within **Wellington Street.**
- A 203mm dia. PVC watermain (2020) is available within **Huron Ave N**.
- Existing residential service to be blanked at the main.
- **Water Supply Redundancy:** Residential buildings with a basic day demand greater than 50m^3/day (0.57 L/s) are required to be connected to a minimum of two water services separated by an isolation valve to avoid a vulnerable service area as per the *Ottawa Design Guidelines - Water Distribution, WDG001, July 2010 Clause 4.3.1 Configuration.* The basic day demand for this site not expected to exceed 50m^3/day.
- Please **review Technical Bulletin ISTB-2018-0**, maximum fire flow hydrant capacity is provided in Section 3 Table 1 of Appendix I. A **hydrant coverage figure** shall be provided and **demonstrate there is adequate fire protection for the proposal**. Two or more public hydrants are anticipated to be required to handle fire flow.
- Boundary conditions are required to confirm that the require fire flows can be achieved as well as availability of the domestic water pressure on the City street in front of the development. Use Table 3-3 of the MOE Design Guidelines for Drinking-Water System to determine Maximum Day and Maximum Hour peaking factors for 0 to 500 persons and use Table 4.2 of the Ottawa Design Guidelines, Water Distribution for 501 to 3,000 persons. Please provide the following information to the City of Ottawa via email to request water distribution network boundary conditions for the subject site. Please note that once this information has been provided to the City of Ottawa it takes approximately 5-10 business days to receive boundary conditions.
    - Type of Development and Units
    - Site Address
    - A plan showing the proposed water service connection location.
    - **Average Daily Demand** (L/s)

  - **Maximum Daily Demand** (L/s)
  - **Peak Hour Demand** (L/s)
  - **Fire Flow** (L/min)
- *[Fire flow demand requirements shall be based on ISTB-2021-03]*
- *Note: The OBC method can be used if the fire demand for the private property is less than 9,000 L/min. If the OBC fire demand reaches 9000 L/min, then the FUS method is to be used.*
- *Exposure separation distances shall be defined on a figure to support the FUS calculation and required fore flow (RFF).*
  - **Hydrant capacity shall be assessed to demonstrate the RFF can be achieved**. Please identify which hydrants are being considered to meet the RFF on a fire hydrant coverage plan as part of the boundary conditions request.

Snow Storage:

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

Gas pressure regulating station

- A gas pressure regulating station may be required depending on HVAC needs (typically for 12+ units). Be sure to include this on the Grading, Site Servicing, SWM and Landscape plans. This is to ensure that there are no barriers for overland flow routes (SWM) or conflicts with any proposed grading or landscape features with installed structures and has nothing to do with supply and demand of any product.

Regarding Quantity Estimates:

- Please note that external Garbage and/or bicycle storage structures are to be added to QE under Landscaping as it is subject to securities.In addition, sump pumps for Sanitary and Storm laterals and/or cisterns are to be added to QE under Hard items as it is subject to securities, even though it is internal and is spoken to under SWM and Site Servicing Report and Plan.

CCTV sewer inspection

- CCTV sewer inspection required for pre and post construction conditions to ensure no damage to City Assets surrounding site.

Road Reinstatement

- Where servicing involves three or more service trenches, either a full road width or full lane width 40 mm asphalt overlay will be required, as per amended Road Activity By-Law 2003-445 and City Standard Detail Drawing R10. The amount of overlay will depend on condition of roadway and width of roadway(s).

Required Engineering Plans and Studies:

PLANS:

- Existing Conditions and Removals Plan

- Site Servicing Plan
- Grade Control and Drainage Plan
- Erosion and Sediment Control Plan
- Roof Drainage Plan (If rooftop storage proposed)
- Topographical survey

REPORTS:

- Site Servicing and Stormwater Management Report
- Geotechnical Study/Investigation
- Noise Control Study
- Phase I ESA
- Phase II ESA (Depending on recommendations of Phase I ESA)

- Please refer to the **City of Ottawa Guide to Preparing Studies and Plans [Engineering]:**
    - Specific information has been incorporated into both the Guide to Preparing Studies and Plans for a site plan. The guide outlines the requirement for a statement to be provided on the plan about where the property boundaries have been derived from.
    - Added to the general information for servicing and grading plans is a note that an **O.L.S**. should be engaged when reporting on or relating information to property boundaries or existing conditions. The importance of engaging an **O.L.S**. for development projects is emphasized.

Phase One Environmental Site Assessment:

- A Phase I ESA is required to be completed in accordance with Ontario Regulation 153/04 in support of this development proposal to determine the potential for site contamination. Depending on the Phase I recommendations a Phase II ESA may be required.
- The Phase I ESA shall provide all the required Environmental Source Information as required by O. Reg. 153/04. ERIS records are available to public at a reasonable cost and need to be included in the ESA report to comply with O.Reg. 153/04 and the Official Plan. The City will not be in a position to approve the Phase I ESA without the inclusion of the ERIS reports.
- Official Plan Section 4.8.4:
- https://ottawa.ca/en/city-hall/planning-and-development/official-plan-and-master-plans/official-plan/volume-1-official-plan/section-4-review-development-applications#4-8-protection-health-and-safety

Geotechnical Investigation:

- A Geotechnical Study/Investigation shall be prepared in support of this development proposal.
- Reducing the groundwater level in this area can lead to potential damages to surrounding structures due to excessive differential settlements of the ground. The impact of groundwater lowering on adjacent properties needs to be discussed and investigated to ensure there will be no short term and long term damages associated with lowering the groundwater in this area.
- Geotechnical Study shall be consistent with the **Geotechnical Investigation and Reporting Guidelines for Development Applications**.

- https://documents.ottawa.ca/sites/documents/files/geotech_report_en.pdf

Noise Study:

- A **Transportation Noise Assessment** is required as the subject development is located within 100m proximity of an Arterial Road
- A **Stationary Noise Assessment** is required in order to assess the noise impact of the proposed sources of stationary noise (mechanical HVAC system/equipment) of the development onto the surrounding residential area to ensure the noise levels do not exceed allowable limits specified in the City Environmental Noise Control Guidelines.
- https://documents.ottawa.ca/sites/default/files/documents/enviro_noise_guide_en.pdf

Exterior Site Lighting:

- Any proposed light fixtures (both pole-mounted and wall mounted) must be part of the approved Site Plan. All external light fixtures must meet the criteria for Full Cut-off Classification as recognized by the Illuminating Engineering Society of North America (IESNA or IES), and must result in minimal light spillage onto adjacent properties (as a guideline, 0.5 fc is normally the maximum allowable spillage). In order to satisfy these criteria, the please provide the City with a **Certification (Statement) Letter** from an acceptable professional engineer stating that the design is compliant.

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

- Please note that these comments are considered preliminary based on the information available to date and therefore maybe amended as additional details become available and presented to the City. It is the responsibility of the applicant to verify the above information. The applicant may contact me for follow-up questions related to engineering/infrastructure prior to submission of an application if necessary.
- If you have any questions or require any clarification, please let me know.

Planning (Andrew McCreight)

- Confirm GFA of building to determine standard vs complex.
    - Note: 1-13 units plus non-res, less than 1400sq.m total size of building can be via Site Plan Standard
- Encourage contacting addressingandsigns@ottawa.ca to determine the municipal addressing for the site before submitting formal application.
- Existing site context: the rear surface parking is generally for the commercial/office spaces fronting onto Wellington. There is on-street parking further down Huron.
    - Reinstate curb with access removed and improve sidewalk. Consider providing a wider sidewalk.
    - Explore including one on-street parking space with the removal of the access. Check with Transportation consultant and identify if proposed in application submission.
- There are two existing trees along Huron. Please include in the formal submission tree protection measures that will be taken.
- Consider adding landscaping and planting a new street tree in front of proposed commercial space along Huron.

- Four residential units will use this waste room. Is there a way you can design this room so that the garbage room can be accessed internally?
    - Storage access door doesn't appear to be large enough.
    - Commercial is not eligible for City collection.
    - 4 residential units likely suitable for curbside collection
- Providing sufficient bicycle parking is highly encouraged; at least one space per unit. Try to include stacked bicycle parking spaces stored internally. Could look at redesign of waste room location and bicycle as an option
- The southern façade has a blank wall condition. Could you change materiality or textures to improve visual component.
    - This could be temporary, as adjacent property might develop.
- Be mindful of if the abutting site develops to zero lot line as well as per TM zoning permissions..
- Balconies tucked at the back might be an undesirable amenity space if abutting property develops. Suggest looking for other options of outdoor amenity space.
    - Future proof unit livability - ensure units have outdoor amenity area options that are protected against potential future context, such as roof top terrace.
- This proposal would be exempt from UDRP.
- Flat roof – look at treatment of roof from urban heat island effect. Green, terrace/plants, outdoor amenity.
- Be aware that the building is on the heritage register. Encourage discussions with Heritage.
    - Rick Morris spoke with Ashley K.
    - Note: confirmed post meeting that Heritage has no concerns with the proposed addition.

Urban Design (Matthew Ippersiel)

- The general massing and design of the addition and modifications to the existing buildings are supported.
- From an urban design perspective, the proposed plan to include a patio on the corner is supported. As the landscape design progresses, consider extending the stamped concrete paving characteristic of Wellington St W. across the patio space, to have it read as an extension of the mainstreet public realm.
- Carefully consider how the health of the exiting trees on Huron Ave. will not be impacted as the space is hardscaped.
- Consider opportunities for exterior bicycle parking.
- Urban Design Staff also fully support the design direction and suggestions made by Planning staff, particularly:
    - The integration of another street tree along the Huron frontage is strongly encouraged.
    - Consider the possibility of integrating bicycle storage in the garbage room for use by the residents.
    - Minor articulation of the south façade (eg. through brick patterning or a temporary mural art piece) is encouraged to provide visual interest on the exposed blank wall, fully recognizing that it will likely only remain exposed until such a time as the neighbouring property is redeveloped.

    - The balconies on the east façade are supported, but consider that access to light will be lost should the neighbouring property be redeveloped to the property line, as is permitted. Rooftop amenity space and softscaping would be supported.
- Review by the Urban Design Review Panel is not required as a part of this application.
- An Urban Design Brief is required as a part of your submission. This may be combined with your Planning Rationale report. Please refer to the attached Urban Design Brief Terms of Reference to inform the content of the brief.

Transportation (Wally Dubyk)

- The Screening Form has indicated that the Location Trigger has been met. No further TIA reports will be required, considering that the development site proposes 3 retail units, 6 residential units and no additional parking spaces.
- Wellington Street W is designated as an Arterial road within the City's Official Plan with a ROW protection limit of 20.0 metres. The ROW protection limit and the offset distance (10.0 metres) are to be dimensioned from the existing centerline of pavement and shown on the drawings. The Certified Ontario Land Surveyor is to confirm the ROW protected limits and any portion that may fall within the private property to be conveyed to the City.
- ROW interpretation – Land for a road widening will be taken equally from both sides of a road, measured from the centreline in existence at the time of the widening if required by the City. The centreline is a line running down the middle of a road surface, equidistant from both edges of the pavement. In determining the centreline, paved shoulders, bus lay-bys, auxiliary lanes, turning lanes and other special circumstances are not included in the road surface.
- The City of Ottawa Zoning By-Law Corner Sight Triangles (Sec. 57) states that no obstruction to the vision of motor vehicle operators higher than 0.75 metres above grade. The consultant should review the sight distance to ensure that no obstructions hinder the view of the driver at the Monk Street and Fifth Avenue intersection.
- Permanent structures such as curbing, stairs, retaining walls, and underground parking foundation also bicycle parking racks are not to extend into the City's right-of-way limits.
- Please keep in mind that on street parking is not a viable option for tenants. Ensure that potential tenants are aware that there is no provision for parking.
- Bicycle parking spaces are required as per Section 111 of the Ottawa Comprehensive Zoning By-law. Bicycle parking spaces should be located in safe, secure places near main entrances and preferably protected from the weather.
- 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.

Wellington Village Community Association

Gillian Salmond

- Echoes a lot of what Planning has already commented.
    - Waste collection.
- Four residential units total.
- Two four-bedroom unit sizes?

    - They are each around 1,800 sq.ft in size. Two balconies at the second floor of the building (individual amenity areas) and a third balcony top floor in one unit.
- Losing the existing parking that is there now. None of the existing will be replaced.
- Glad to see larger, four-bedroom apartments proposed in this neighbourhood.
- What is the intent for the patio on the corner?
    - Intent is to lease the western commercial premises (restaurant) to utilize.
- Rooftop amenity would be welcome as long as it is designed properly to be sensitive to residential uses nearby. Greenery would be very welcome on roof.

Next steps:

- Follow up email with meeting minutes and list of required studies and plans.

Kyle Herold

From: Eric Lalande <eric.lalande@rvca.ca>
Sent: February 24, 2022 3:00 PM
To: Kyle Herold
Cc: Emma Bennett
Subject: RE: 210833 - Water Quality - 1252 Welling Ave, Ottawa

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Kyle,

The RVCA has no water quality requirements based on the site plan submitted. Best management practices are encouraged where possible to be integrated into the design.

Thank you,

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

From: Kyle Herold <kherold@lrl.ca>
Sent: Thursday, February 24, 2022 2:54 PM
To: Emma Bennett <emma.bennett@rvca.ca>; Eric Lalande <eric.lalande@rvca.ca>; RVCA Info <info@rvca.ca>
Subject: RE: 210833 - Water Quality - 1252 Welling Ave, Ottawa

Hi Emma & Eric,

Could one of you please comment on the status on my request for stormwater quality control requirements for 1252 Wellington (see correspondence below)?

Thank you,

Kyle Herold
Civil Engineering Services
LRL Engineering
5430 Canotek Road
Ottawa, Ontario K1J 9G2
T (613) 842-3434 or (877) 632-5664 ext 261
C (613) 915-2988
F (613) 842-4338
E kherold@lrl.ca
W www.lrl.ca

In addition, we will continue to have access to all e-mail correspondence and do our best to return all inquiries in a timely manner.

From: Kyle Herold
Sent: February 14, 2022 9:06 AM
To: 'Emma Bennett' <emma.bennett@rvca.ca>; 'Eric Lalande' <eric.lalande@rvca.ca>
Subject: RE: 210833 - Water Quality - 1252 Welling Ave, Ottawa

Good morning Emma & Eric,

Just wanted to follow-up and see if any progress was made on my request for water quality control restrictions, criteria & measures for 1252 Wellington.

Any questions, please do not hesitate to reach out.

Thank you,

Kyle Herold
Civil Engineering Services
LRL Engineering
5430 Canotek Road
Ottawa, Ontario K1J 9G2
T (613) 842-3434 or (877) 632-5664 ext 261
C (613) 915-2988
F (613) 842-4338
E kherold@lrl.ca
W www.lrl.ca

Given the current COVID-19 situation, please be aware that LRL has implemented alternative working conditions for our team. Many of us have now transitioned to working from home; however, communication and workability remains one of our top priorities.
We will continue to be reachable by cell phone or by calling LRL at 613-842-3434 which will prompt you to enter the extension of the person you are trying to reach.
In addition, we will continue to have access to all e-mail correspondence and do our best to return all inquiries in a timely manner.

From: Kyle Herold
Sent: January 26, 2022 1:12 PM
To: Emma Bennett <emma.bennett@rvca.ca>; Eric Lalande <eric.lalande@rvca.ca>
Subject: RE: 210833 - Water Quality - 1252 Welling Ave, Ottawa

Thank you Emma!

Eric,
To provide one quick clarification to my previous request;
Water and Sanitary services to the proposed building will branch from the Huron main & sewer, respectively.
However, the storm service to the proposed building will branch from the Wellington sewer.

If you have any questions, or require any further information, please do not hesitate to reach out.

Thank you,

Kyle Herold
Civil Engineering Services
LRL Engineering
5430 Canotek Road
Ottawa, Ontario K1J 9G2
T (613) 842-3434 or (877) 632-5664 ext 261
C (613) 915-2988
F (613) 842-4338
E kherold@lrl.ca
W www.lrl.ca

Given the current COVID-19 situation, please be aware that LRL has implemented alternative working conditions for our team. Many of us have now transitioned to working from home; however, communication and workability remains one of our top priorities.
We will continue to be reachable by cell phone or by calling LRL at 613-842-3434 which will prompt you to enter the extension of the person you are trying to reach.
In addition, we will continue to have access to all e-mail correspondence and do our best to return all inquiries in a timely manner.

From: Emma Bennett <emma.bennett@rvca.ca>
Sent: January 25, 2022 3:47 PM
To: Kyle Herold <kherold@lrl.ca>
Cc: Eric Lalande <eric.lalande@rvca.ca>
Subject: FW: 210833 - Water Quality - 1252 Welling Ave, Ottawa

Hi Kyle,

My apologies for my delayed response. I've attached RVCA mapping and connected you with RVCA Planner, Eric Lalande, who can assist you with your request.

Regards,

Emma Bennett, B.Sc.
Resource Specialist

emma.bennett@rvca.ca, 613-692-3571 ext. 1132

RVCA COVID-19 UPDATE: The health, safety and well-being of our clients and staff is our top priority. Our offices and facilities are closed to clients. Staff are working remotely and we do not anticipate any service disruptions. Visit www.rvca.ca/covid-19 for more.

Rideau Valley Conservation Authority
3889 Rideau Valley Drive
PO Box 599, Manotick ON K4M 1A5
T 613-692-3571 | 1-800-267-3504 **F** 613-692-0831 | www.rvca.ca

---

From: LRC Info <info@lrconline.com>
Sent: Thursday, January 13, 2022 11:30 AM
To: Emma Bennett <emma.bennett@rvca.ca>
Subject: FW: 210833 - Water Quality - 1252 Welling Ave, Ottawa

---

From: RVCA Info <info@rvca.ca>
Sent: Thursday, January 13, 2022 11:20 AM
To: LRC Info <info@lrconline.com>
Subject: FW: 210833 - Water Quality - 1252 Welling Ave, Ottawa

---

From: Kyle Herold <kherold@lrl.ca>
Sent: Thursday, January 13, 2022 10:32 AM
To: RVCA Info <info@rvca.ca>
Subject: 210833 - Water Quality - 1252 Welling Ave, Ottawa

Good morning,

We are the civil engineers working with Wellington Huron Commercial Inc on the Site Plan Application for a proposed Mixed-Use Building development located at 1248-1252 Wellington Street, Ottawa (at the intersection of Wellington & Huron).
During the pre- consultation, it was asked we reach out to you, the local conservation authority, to discuss water quality control restrictions, criteria & measures for the site.

The existing building will remain on-site. The proposed scope of work will be to add an addition to the existing building, consisting of a new ground floor commercial space, and a few residential units on second and third stories.
Due to the increase in water demand, and new water service is expected to be required for the building. The water service will be tied to the watermain along Wellington.

Is the information provided sufficient in order to begin our discussion of stormwater quality requirements?

If you have any questions, concerns, or require additional information, please do not hesitate to reach out.

Thank you,

Kyle Herold
Civil Engineering Services
LRL Engineering
5430 Canotek Road
Ottawa, Ontario K1J 9G2
T (613) 842-3434 or (877) 632-5664 ext 261
C (613) 915-2988
F (613) 842-4338
E kherold@lrl.ca
W www.lrl.ca

Given the current COVID-19 situation, please be aware that LRL has implemented alternative working conditions for our team. Many of us have now transitioned to working from home; however, communication and workability remains one of our top priorities.
We will continue to be reachable by cell phone or by calling LRL at 613-842-3434 which will prompt you to enter the extension of the person you are trying to reach.
In addition, we will continue to have access to all e-mail correspondence and do our best to return all inquiries in a timely manner.

Servicing study guidelines for development applications

4. Development Servicing Study Checklist

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

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

4.1 General Content

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

☒ Reference to geotechnical studies and recommendations concerning servicing.

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

4.2 Development Servicing Report: Water

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

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

4.3 Development Servicing Report: Wastewater

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

4.4 Development Servicing Report: Stormwater Checklist

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

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

4.5 Approval and Permit Requirements: Checklist

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

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

4.6 Conclusion Checklist

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

APPENDIX B

Water Supply Calculations

LRL File No. 210883
Project: 3-storey addition to existing mixed-use bldg
Location: 1252 Wellington St. W, Ottawa, ON.
Date: February 2, 2023
Designed: Mike Allen

Water Demand
(based on City of Ottawa Design Guidelines - Water Distribution, 2010)

Domestic Demand

Unit Type	Persons Per Unit	Number of Units	Population	
1 bedroom apartment	1.4	0.0	0.0	
2 bedroom apartment	2.1	2.0	4.2	*Assumed value of single family dwelling as equivalent to 4 bedroom apartment*
3 bedroom apartment	3.1	0.0	0.0	
Single family dwelling	3.4	2.0	6.8	
Average apartment	1.8	0.0	0.0	
		4	**11.0**	

Domestic Consumption Rates

Unit Type	Value	Units	Value	Units
Average water consumption rate	280	L/c/d		
Average Daily Demand	**3,080**	**L/d**	**0.04**	**L/s**
Maximum Daily Factor	14.6	*40.448 x 11.0* $^{-0.424}$		
Maximum Daily Demand	**45,071**	**L/d**	**0.52**	**L/s**
Peak Hour Factor	22.2	*61.820 x 11.0* $^{-0.428}$		
Maximum Hour Demand	**68,228**	**L/d**	**0.79**	**L/s**

Institutional / Commercial / Industrial Demand

Unit Type	Unit Rate		Units (ft^2)	Units (m^2)	Demand (L/d)
Commercial unit 1 (other commercial)	2.8	$L/m^2/d$	873.0	81.1	227.1
Commercial unit 2 (other commercial)	2.8	$L/m^2/d$	1168.0	108.5	303.8
Commercial unit 3 (other commercial)	2.8	$L/m^2/d$	1475.0	137.0	383.7
				326.65	**914.6**

Commercial Consumption Rates

Unit Type	Value	Units	Value	Units
Average Daily Demand	**915**	**L/d**	**0.01**	**L/s**
Maximum Daily Factor	1.5	*(Design guidelines - water distribution Table 4.2)*		
Maximum Daily Demand	**1,372**	**L/d**	**0.02**	**L/s**
Peak Hour Factor	1.8	*(Design guidelines - water distribution Table 4.2)*		
Maximum Hour Demand	**2,469**	**L/d**	**0.03**	**L/s**

Total Demand

Demand	Value	Units	Value	Units
Average Daily Demand	**3,995**	**L/d**	**0.05**	**L/s**
Maximum Daily Demand	**46,443**	**L/d**	**0.54**	**L/s**
Maximum Hourly Demand	**70,698**	**L/d**	**0.82**	**L/s**

Water Service Pipe Sizing

Q = VA	Q = Flow Rate	V = Velocity	A = Area of pipe
Assumed maximum velocity =	*1.8*	*m/s*	

Q = 0.82 L/s
Q = 0.001 m^3/s

Minimum pipe diameter (d) = $(4Q/\pi V)^{1/2}$
= 0.024 m
= 24 mm

Proposed pipe diameter (d) = **50 mm**
2.0 in

Kyle Herold

From: Shawn Richards <Shawn@bkconsulting.ca>
Sent: January 10, 2023 10:00 PM
To: Scot Morris
Cc: Kyle Herold; Rick Morris
Subject: RE: 210883 - 1248-1252 Wellington St - Request for Additional Fees

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Rick, sorry for the delay in getting this to you. See below numbers for sanitary and domestic. thanks

Third Floor:

3 piece washroom = 6 FU x 3 =	18 FU
2 piece washroom =	4 FU
Washer = 1.4FU x 2 =	2.8 FU

Second Floor:

3 piece washroom = 6 FU x 4 =	24 FU
Washer = 1.4FU x 2 =	2.8 FU
Kitchen sink = 1.4FU x 4 =	5.6 FU
Dishwasher = 1.4FU x 4 =	5.6 FU

Ground Floor:

6 direct flush Water closets =	125 FU
4 Urinals =	53 FU
Lav's = 2FU x 6 =	12 FU
Comm kitch sink = 5FU x 6 =	30 FU
Dishwasher =	8 FU
Glass washer =	6 FU

Total domestic water FU = 296.8 FU

Third Floor:

3 piece washroom = 7 FU x 3 =	21 FU
2 piece washroom =	5.5 FU
Washer = 2FU x 2 =	4 FU

Second Floor:

3 piece washroom = 7 FU x 4 =	28 FU
Washer = 2FU x 2 =	4 FU
Kitchen sink = 1.5FU x 4 =	6 FU

Ground Floor:

6 direct flush Water closets =	36 FU
4 Urinals =	24 FU
Lav's = 2FU x 6 =	12 FU
Comm kitch sink = 3FU x 6 =	18 FU
Dishwasher =	3 FU
Glass washer =	3 FU

Total sanitary FU = 164.5 FU

Shawn Richards
Partner | Mechanical
BK Consulting Inc.
3-490 Harry Walker Parkway South
Newmarket, ON L3Y 0B3
~~O: 905-773-0200 ext. #224~~
M: 647-299-5771
www.bkconsulting.ca

From: Scot Morris <scot@rendezvs.com>
Sent: January 3, 2023 8:00 PM
To: Shawn Richards <Shawn@bkconsulting.ca>
Cc: Kyle Herold <kherold@lrl.ca>; Rick Morris <rick@domicile.ca>
Subject: Re: 210883 - 1248-1252 Wellington St - Request for Additional Fees

Hi Shawn, Happy New Year to you and your family. I hope you are doing well.
Following up on our email exchange below regarding a fixture count? Based on the assumed occupancy can we not estimate the fixture count?
Thank you

On Mon, Dec 19, 2022 at 11:03 AM Scot Morris <scot@rendezvs.com> wrote:

> Thank you for this Shawn
> In terms of commercial uses, more likely than not we will have traditional mercantile uses in commercial units 1 & 3 and a restaurant use in commercial unit 2. Under this assumption can we estimate a fixture count for the OBC requirement?
> Regards
>
> On Mon, Dec 19, 2022 at 9:55 AM Shawn Richards <Shawn@bkconsulting.ca> wrote:
>
> > Hi Scot,
> >
> > Based on the building we should have a 6" sanitary and 2" DCW.

LRL File No. 210883-02
Project: 3-storey addition to existing multi-use building
Location: 1252 Wellington St. W, Ottawa, ON.
Date: February 2, 2023
Designed: Mike Allen

Fire Flow Calculations
FUS 2020

Structural Framing Material

STEP	TASK	TERM	OPTIONS	MULTIPLIER	CHOICE	VALUE	UNIT	FIRE FLOW
1	Choose frame used for building	Coefficient C related to the type of construction	Wood Frame	1.5	Wood Frame	**1.5**		
			Ordinary Construction	1				
			Non-combustible construction	0.8				
			Fire resistive construction <2 hrs	0.7				
			Fire resistive construction >2 hrs	0.6				

Floor Space Area (A)

STEP	TASK			FORMULA		VALUE	UNIT	
2	Total Area			5688.42	sq.ft. x 0.092903 =	**528.5**	m^2	
3	Obtain fire flow before reductions	Required fire flow		Fire flow = 220 x C x √A			L/min	**7586**
							L/min	**8000**

Reductions or surcharge due to factors affecting burning

STEP	TASK	TERM	OPTIONS	MULTIPLIER	CHOICE	VALUE	UNIT	FIRE FLOW
4	Choose combustibility of contents	Occupancy hazard reduction or surcharge	Non-combustible	-25%	Free burning	15%	L/min	9200
			Limited combustible	-15%				
			Combustible	0%				
			Free burning	15%				
			Rapid burning	25%				
5	Choose reduction for sprinklers	Sprinkler reduction	Full automatic sprinklers	-30%	False	0%	L/min	9200
			Water supply is standard for both the system and fire department hose lines	-10%	False	0%		
			Fully supervised system	-10%	False	0%		
6	Choose separation	Exposure distance between units	North side	0%	>30m	60%	L/min	14720
			East side	25%	0 to 3m			
			South side	25%	0 to 3m			
			West side	10%	20.1 to 30m			

Net required fire flow

STEP	TASK						UNIT	FIRE FLOW
7	Obtain fire flow, duration, and volume	Minimum required fire flow rate (rounded to nearest 1000)					L/min	**15000**
		Minimum required fire flow rate					L/s	**250**
		Required duration of the flow					hr	**3.50**

Kyle Herold

From: Thanh Do <tdo@sdsarch.ca>
Sent: December 14, 2022 9:54 AM
To: Scot Morris; Kyle Herold
Cc: Susan Smith; Rick Morris
Subject: Re: 210883 - 1248-1252 Wellington St - Request for Additional Fees

Follow Up Flag: Follow up
Flag Status: Completed

Hi Kely,

Sorry for the delay in response.

Below are the answers to your 2 questions:

1/ The building construction Coefficient: C=1.5 (Type V Wood Frame Construction)
2/ Occupancy and contents adjustment factor:
- Occupancy class: Free burning (C-4)
- Occupancy charge: +15%
- Occupancy factor (O): 1.15

Please note that we divide the entire building into 2 separate buildings, existing and new. Therefore, you have to do 2 separate calculations for determining RFF.

Please let me know if you have any questions.

Thank you.

Thanh

On Fri, Nov 25, 2022 at 2:53 PM Scot Morris <scot@rendezvs.com> wrote:

> Hi Thanh, can you respond to the request below from the city planner via our civil engineer?
> Its regarding combustibility of the building structure and components.
> Thank you
>
> ---------- Forwarded message ---------
> From: **Kyle Herold** <kherold@lrl.ca>
> Date: Fri, Nov 25, 2022 at 2:49 PM
> Subject: RE: 210883 - 1248-1252 Wellington St - Request for Additional Fees
> To: Scot Morris <scot@rendezvs.com>
> Cc: Rick Morris <rick@domicile.ca>
>
> Greatly appreciated Scot!

Could you also please circulate the following to the Architect?

Good afternoon,

Please refer to City comment below.

The city planner has asked that we provide written confirmation from the architect on the type of construction of the building, and combustibility of contents, as per FUS 2020 definitions (references included below).

At your next convenience, could you please confirm?

If you have any questions, please do not hesitate to reach out.

Thank you,

Please include email confirmation from the Architect within the Appendix regarding the building construction to confirm the building assumptions made in the FUS fire flow requirement calculations are accurate for type of construction, and occupancy type to justify the selections. Correspondence shall be provided within the Appendix of the report as supporting documentation. LRL:

Link to FUS 2020: Downloads (fireunderwriters.ca) (Water Supply for Public Fire Protection)

Quick references;

A. *Determine the type of construction.*

- Coefficient *C* in the FUS method is equivalent to coefficient *F* in the ISO method:

Correspondence between FUS and ISO construction coefficients

FUS type of construction	ISO class of construction	Coefficient *C*
Fire-resistive construction	Class 6 (fire resistive)	0.6
	Class 5 (modified fire resistive)	0.6
Non-combustible construction	Class 4 (masonry non-combustible)	0.8
	Class 3 (non-combustible)	0.8
Ordinary construction	Class 2 (joisted masonry)	1.0
Wood frame construction	Class 1 (frame)	1.5

However, the FUS definition of fire-resistive construction is more restrictive than those of ISO construction classes 5 and 6 (modified fire resistive and fire resistive). FUS requires structural members and floors in buildings of fire-resistive construction to have a fire-resistance rating of 3 hours or longer.

- With the exception of fire-resistive construction that is defined differently by FUS and ISO, practitioners can refer to the definitions of the ISO construction classes (and the supporting definitions of the types of materials and assemblies that make up the ISO construction classes) found in the current ISO guide [4] (see Annex i) to help select coefficient *C*.
- To identify the most appropriate type of construction for buildings of mixed construction, the rules included in the current ISO guide [4] can be followed (see Annex i). For a building to be assigned a given classification, the rules require ⅔ (67%) or more of the total wall area and ⅔ (67%) or more of the total floor and roof area of the building to be constructed according to the given construction class or a higher class.
- New residential developments (less than 4 storeys) are predominantly of wood frame construction ($C = 1.5$) or ordinary construction ($C = 1.0$) if exterior walls are of brick or masonry. Residential buildings with exterior walls of brick or masonry veneer and those with less than ⅔ (67%) of their exterior walls made of brick or masonry are considered wood frame construction ($C = 1.5$).

E. *Determine the increase or decrease for occupancy and apply to the value obtained in D above. Do not round off the answer.*

- The charge for occupancy class in the FUS method corresponds with the occupancy factor *O* in the ISO method (subtracting 1.00 from the ISO *O* factor values and converting to a percentage will yield the FUS charges):

Correspondence between FUS occupancy charges and ISO occupancy factors

FUS occupancy class	ISO occupancy combustibility class	Occupancy charge	Occupancy factor *O*
Non-combustible	C-1 (non-combustible)	–25%	0.75
Limited combustible	C-2 (limited combustibility)	–15%	0.85
Combustible	C-3 (combustible)	No charge	1.00
Free burning	C-4 (free burning)	+15%	1.15
Rapid burning	C-5 (rapid burning or flash burning)	+25%	1.25

- Practitioners can refer to the detailed definitions of the occupancy classes and associated lists of example occupancies from the current ISO guide [4] (reproduced in Annex ii) to select the most appropriate occupancy charge for a building.
- The rules provided in the current ISO guide [4] (see Annex ii) can be used to determine the most appropriate occupancy charge for buildings with multiple occupancies.
- For residential buildings, an occupancy charge of –15% should be used.
- For consistency, fire flows should not be rounded at this step.

Kyle Herold

Civil Engineering Services

LRL Engineering

5430 Canotek Road

Ottawa, Ontario K1J 9G2

T (613) 842-3434 or (877) 632-5664 ext 261

C (613) 915-2988

F (613) 842-4338

E kherold@lrl.ca

W www.lrl.ca

Given the current COVID-19 situation, please be aware that LRL has implemented alternative working conditions for our team.

Many of us have now transitioned to working from home; however, communication and workability remains one of our top priorities.

We will continue to be reachable by cell phone or by calling LRL at 613-842-3434 which will prompt you to enter the extension of the person you are trying to reach.

In addition, we will continue to have access to all e-mail correspondence and do our best to return all inquiries in a timely manner.

From: Scot Morris <scot@rendezvs.com>
Sent: November 25, 2022 2:17 PM
To: Kyle Herold <kherold@lrl.ca>
Cc: Rick Morris <rick@domicile.ca>
Subject: Re: 210883 - 1248-1252 Wellington St - Request for Additional Fees

Sorry Kyle see the attached

On Fri, Nov 25, 2022 at 2:15 PM Kyle Herold <kherold@lrl.ca> wrote:

> Hi Scot,
>
> I don't see the architectural plans, perhaps they didn't load properly?
>
> Could you please resubmit?
>
> Thank you,

Kyle Herold

Civil Engineering Services

LRL Engineering

5430 Canotek Road

Ottawa, Ontario K1J 9G2

T (613) 842-3434 or (877) 632-5664 ext 261

C (613) 915-2988

F (613) 842-4338

E kherold@lrl.ca

W www.lrl.ca

Given the current COVID-19 situation, please be aware that LRL has implemented alternative working conditions for our team.

Many of us have now transitioned to working from home; however, communication and workability remains one of our top priorities.

We will continue to be reachable by cell phone or by calling LRL at 613-842-3434 which will prompt you to enter the extension of the person you are trying to reach.

In addition, we will continue to have access to all e-mail correspondence and do our best to return all inquiries in a timely manner.

From: Scot Morris <scot@rendezvs.com>
Sent: November 25, 2022 2:07 PM
To: Kyle Herold <kherold@lrl.ca>
Cc: Rick Morris <rick@domicile.ca>
Subject: Re: 210883 - 1248-1252 Wellington St - Request for Additional Fees

Hi Kyle, I've attached the most recent architectural plans. Please note we haven't reviewed these yet in detail but they are based on substantial discussion between the architects and our team so I'm assuming its reasonably accurate.

I've also attached the geotechnical report that was submitted for site plan in May along with the response from Patterson to the City's initial comments.

Regards

On Fri, Nov 25, 2022 at 1:49 PM Kyle Herold <kherold@lrl.ca> wrote:

> Good afternoon Scot & Rick,

Would it be possible to send me the latest copies of the Geotech report and architectural plans for this file?

Before submitting the revised plans & report for your review, I would like to ensure what we are proposing is consistent with the other current disciplines designs.

The only outstanding item at this point; we are still waiting on the City of Ottawa for updated Boundary Conditions (i.e. adequate watermain pressure).

Spoke with the planner at the City today, they haven't started on it yet (shocker!), however, they will push to model and have the boundary conditions ready for us next week.

Thank you,

Kyle Herold

Civil Engineering Services

LRL Engineering

5430 Canotek Road

Ottawa, Ontario K1J 9G2

T (613) 842-3434 or (877) 632-5664 ext 261

C (613) 915-2988

F (613) 842-4338

E kherold@lrl.ca

W www.lrl.ca

Given the current COVID-19 situation, please be aware that LRL has implemented alternative working conditions for our team.

Many of us have now transitioned to working from home; however, communication and workability remains one of our top priorities.

We will continue to be reachable by cell phone or by calling LRL at 613-842-3434 which will prompt you to enter the extension of the person you are trying to reach.

In addition, we will continue to have access to all e-mail correspondence and do our best to return all inquiries in a timely manner.

From: Kyle Herold
Sent: November 21, 2022 1:24 PM
To: Scot Morris <scot@rendezvs.com>
Cc: Rick Morris <rick@domicile.ca>
Subject: RE: 210883 - 1248-1252 Wellington St - Request for Additional Fees

Good afternoon Scot,

Not a problem!

Expected to release revised plans and report for your review by end of week.

If you have any questions in the meantime, please do not hesitate to reach out.

Best regards,

Kyle Herold

Civil Engineering Services

LRL Engineering

LRL
ENGINEERING | INGENIERIE

5430 Canotek Road

Ottawa, Ontario K1J 9G2

T (613) 842-3434 or (877) 632-5664 ext 261

C (613) 915-2988

F (613) 842-4338

E kherold@lrl.ca

W www.lrl.ca

Given the current COVID-19 situation, please be aware that LRL has implemented alternative working conditions for our team.

Many of us have now transitioned to working from home; however, communication and workability remains one of our top priorities.

We will continue to be reachable by cell phone or by calling LRL at 613-842-3434 which will prompt you to enter the extension of the person you are trying to reach.

In addition, we will continue to have access to all e-mail correspondence and do our best to return all inquiries in a timely manner.

From: Scot Morris <scot@rendezvs.com>
Sent: November 18, 2022 8:24 PM
To: Kyle Herold <kherold@lrl.ca>
Cc: Rick Morris <rick@domicile.ca>
Subject: Re: 210883 - 1248-1252 Wellington St - Request for Additional Fees

Hi Kyle, whenever you get a chance to provide an update on the revised plans it would be greatly appreciated.

Sorry for sending this follow up on a Friday night, I'm happy to wait until Monday for a response.

Thank you

On Mon, Nov 14, 2022 at 10:10 AM Kyle Herold <kherold@lrl.ca> wrote:

> Thank you for the confirmation, Rick.
>
> We will proceed accordingly.

Kyle Herold

Civil Engineering Services

LRL Engineering

5430 Canotek Road

Ottawa, Ontario K1J 9G2

T (613) 842-3434 or (877) 632-5664 ext 261

C (613) 915-2988

F (613) 842-4338

E kherold@lrl.ca

W www.lrl.ca

Given the current COVID-19 situation, please be aware that LRL has implemented alternative working conditions for our team.

Many of us have now transitioned to working from home; however, communication and workability remains one of our top priorities.

We will continue to be reachable by cell phone or by calling LRL at 613-842-3434 which will prompt you to enter the extension of the person you are trying to reach.

In addition, we will continue to have access to all e-mail correspondence and do our best to return all inquiries in a timely manner.

From: Rick Morris <rick@domicile.ca>
Sent: November 11, 2022 10:34 PM
To: Kyle Herold <kherold@lrl.ca>; Scot Morris <scot@rendezvs.com>
Subject: RE: 210883 - 1248-1252 Wellington St - Request for Additional Fees

Kyle,

Thank you for the estimated cost of additional services. Please proceed on a time and materials basis.

Rick Morris

Managing Principal
Domicile Holdings Inc.
rick@domicile.ca |www.domicile.ca
T.613.728.0388 ext 2240|**C.613-292-7425**
1-371A Richmond Rd., Ottawa ON K2A 0E7

From: Kyle Herold <kherold@lrl.ca>
Sent: November 11, 2022 7:08 AM
To: Rick Morris <rick@domicile.ca>; Scot Morris <scot@rendezvs.com>
Subject: 210883 - 1248-1252 Wellington St - Request for Additional Fees

Good morning Rick & Scot,

In reviewing the proposal, I have noted that revisions required to civil design based on City comments were not included in the initially agreed upon scope of work. Please refer to the proposal, page 5, Exclusions 3.

As revisions based on City comments were not included in the initially agreed upon scope of work, I will need to request additional fees in order to proceed with civil revisions.

Fortunately, most comments are minor, and I don't expect it will take a considerable amount of time & effort to make the necessary revisions.

By my calculations, 2.5 to 3 days of effort should be sufficient to revise and resubmit the civil package.

I estimate that this would work out to approximately 3600.00$ in additional fees.

At your request, I can provide a breakdown of expected fees.

In most cases, we proceed with additions to the initial scope of work at a time and expense basis.

If you would prefer, I could provide an official Request for Additional Fees proposal, and we could proceed based on that.

If you have any questions or concerns, please do not hesitate to reach out.

Best regards,

Kyle Herold

Civil Engineering Services

LRL Engineering

5430 Canotek Road

Ottawa, Ontario K1J 9G2

T (613) 842-3434 or (877) 632-5664 ext 261

C (613) 915-2988

F (613) 842-4338

E kherold@lrl.ca

W www.lrl.ca

Given the current COVID-19 situation, please be aware that LRL has implemented alternative working conditions for our team.

Many of us have now transitioned to working from home; however, communication and workability remains one of our top priorities.

We will continue to be reachable by cell phone or by calling LRL at 613-842-3434 which will prompt you to enter the extension of the person you are trying to reach.

In addition, we will continue to have access to all e-mail correspondence and do our best to return all inquiries in a timely manner.

--

Scot

416-356-6220

--

Scot

416-356-6220

--

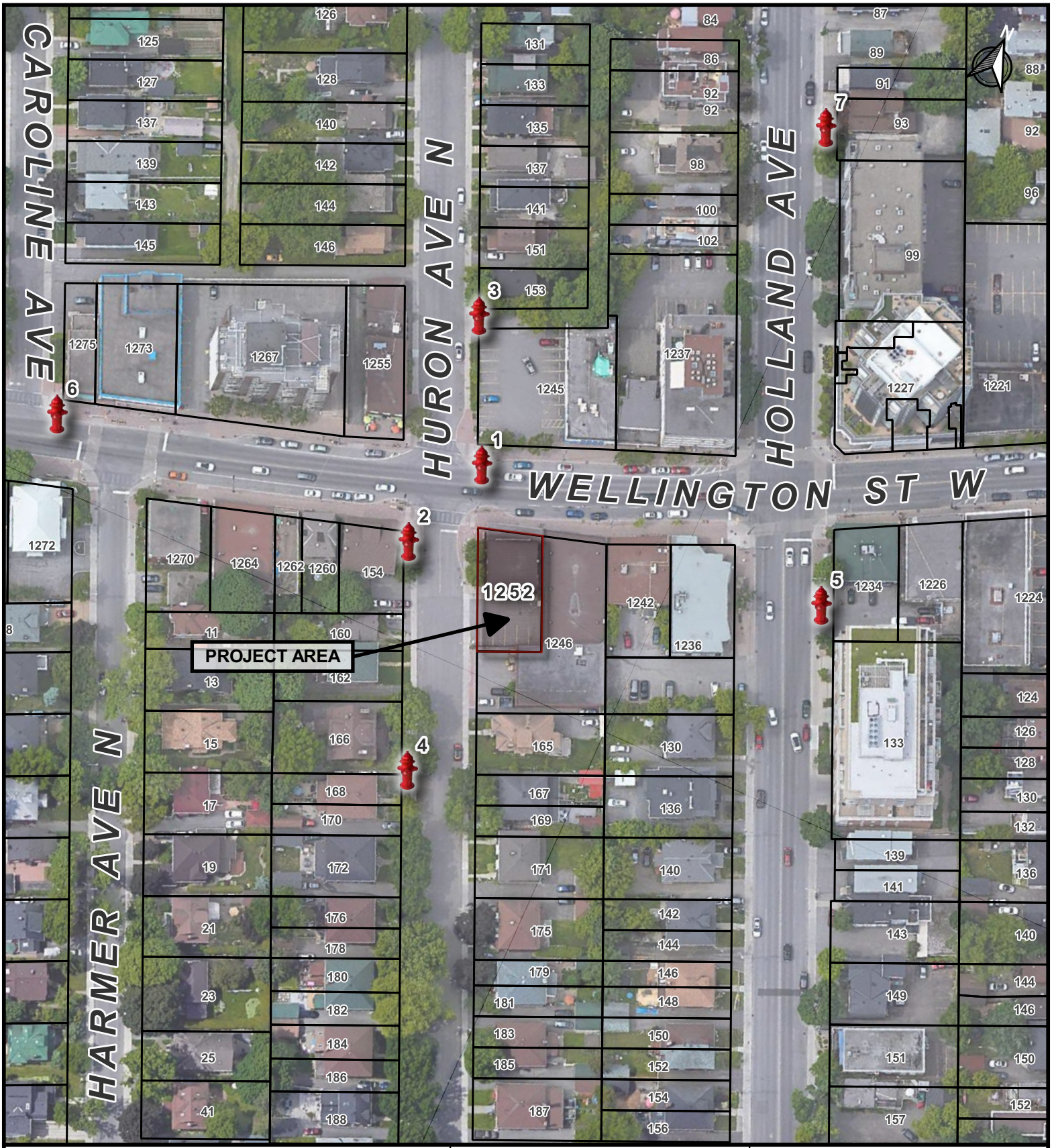
Scot

416-356-6220

--
Scot

416-356-6220

--
Thanh Do
SDS-Architect
613 722 5327



LRJ
ENGINEERING | INGÉNIERIE

5430 CANOTEK ROAD OTTAWA, ON, K1J 9G2
www.lrl.ca (613) 842-3434

CLIENT NAME
WELLINGTON HURON COMMERCIAL INC.

PROJECT NAME
PROPOSED 3 STOREY ADDITION TO EXISTING MULTI-USE BUILDING
1252 WELLINGTON ST. W, OTTAWA, ON.

DRAWING TITLE
EXISTING FIRE HYDRANT LOCATIONS

PROJECT NUMBER
210883

DATE
DEC. 31, 2021

SCALE
10 0 10 20 30 40 50 m

Pipe Pressure Losses Calculations

LRL File No. 210883
Project 3-storey addition to existing MUB
Location: 1252 Wellington St. W, Ottawa, ON.
Date February 2, 2023
Designed: Mike Allen

Piezometric Head Equation (Derived from Bernoulli's Equation)

$$h = \frac{p}{\gamma} + z$$

Where:

h = HGL (m)
p = Pressure (Pa)
γ = Specific weight (N/m3) = 9810
z = Elevation of centreline of pipe (m) = 63.1

Water Pressure on Huron Street			
HGL (m)		Pressure	
		kPa	psi
Minimum =	108.2	442.43	64.17
Maximum =	114.9	508.16	73.70
Max. Day + Fire =	106.0	420.85	61.04

Hazen Williams Equation

$$h_f = \frac{10.67 \times Q^{1.85} \times L}{C^{1.85} \times d^{4.87}}$$

Where:

h_f = Head loss over the length of pipe (m)
Q = Volumetric flow rate (m^3/s)
L = Length of pipe (m)
C = Pipe roughness coefficient
d = Pipe diameter (m)

Scenario 1: maximum daily demand

Q (L/s)	0.54
C	150
L (m.)	7.1

I.D. (mm)	50	
V (m/s)	0.27	
h_f (m)	0.01	
Head Loss (psi)	0.02	
Min. Pressure (psi)	64.15	
Max. Pressure (psi)	73.68	
Service Obv. @ Street Connection (m)	63.10	
Service Obv. @ Building Connection (m)	64.82	
Pressure Adjustment (psi)	-2.45	(due to service elevation difference from street to buildir
Adjusted Min. Pressure (psi)	61.70	(must not be less than 50psi)
Adjusted Max. Pressure (psi)	71.24	(must not be more than 80psi)

Scenario 2: maximum hourly demand

Q (L/s)	0.82	
C	150	
L (m.)	7.1	
I.D. (mm)	50	
V (m/s)	0.42	
h_f (m)	0.03	
Head Loss (psi)	0.04	
Min. Pressure (psi)	64.13	
Max. Pressure (psi)	73.66	
Service Obv. @ Street Connection (m)	63.10	
Service Obv. @ Building Connection (m)	64.82	
Pressure Adjustment (psi)	-2.45	(due to service elevation difference from street to buildir
Adjusted Min. Pressure (psi)	61.68	(must not be less than 40psi)
Adjusted Max. Pressure (psi)	71.21	(must not be more than 80psi)

City of Ottawa Boundary Conditions (Multi Hydrant Analysis)

	Quantity	Max Capacity (L/min)*	Available Fire Flow** (L/min)
Fire Hydrant(s) Within 76m	4	5678	22712
Fire Hydrant(s) Within 76m to 152m		3785	0
Fire Hydrant(s) Within 152m to 305m		2839	0
Available Combined Fire Flow (L/min)			22712
Max Day + Fire Flow Demand (L/min)			6006

*as per Table 18.5.4.3. of ISTB-2018-02

**assumed class AA hydrants

***flow provided from all hydrants within 76m is more than adaquate to accomcodate fire flow requirements, balance of hydrants within 152m and 305m not considered in design

Kyle Herold

From: Bakhit, Reza <reza.bakhit@ottawa.ca>
Sent: December 20, 2022 2:18 PM
To: Kyle Herold
Subject: RE: Proposed 3-storey addition to 1252 Wellington St. W.
Attachments: 1252 Wellington Street West REVISED December 2022.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Kyle,

The following are boundary conditions, HGL, for hydraulic analysis at 1252 Wellington Street West (zone 1W) with an assumed connection to the 203 mm watermain on Huron Avenue (see attached PDF for location).

Minimum HGL: 108.2 m

Maximum HGL: 114.9 m

Max Day + Fire Flow (250 L/s): 106.0 m

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

Disclaimer: The boundary condition information is based on current operation of the city water distribution system. The computer model simulation is based on the best information available at the time. The operation of the water distribution system can change on a regular basis, resulting in a variation in boundary conditions. The physical properties of watermains deteriorate over time, as such must be assumed in the absence of actual field test data. The variation in physical watermain properties can therefore alter the results of the computer model simulation.

Regards,

Reza Bakhit, P.Eng, C.E.T
Project Manager
Planning, Real Estate and Economic Development Department / Direction générale de la planification, des biens immobiliers et du développement économique
Development Review - Centeral Branch
City of Ottawa | Ville d'Ottawa
110 Laurier Avenue West Ottawa, ON | 110, avenue. Laurier Ouest. Ottawa (Ontario) K1P 1J1
613.580.2424 ext./poste 19346, reza.bakhit@ottawa.ca
Please note: Given the current pandemic, I will be working from home until further notice; reaching me by email is the easiest. I will be checking my voicemail, just not as frequently as I normally would be.

From: Kyle Herold <kherold@lrl.ca>
Sent: Wednesday, December 14, 2022 11:18 AM
To: Bakhit, Reza <reza.bakhit@ottawa.ca>
Subject: RE: Proposed 3-storey addition to 1252 Wellington St. W.

Kyle Herold
Civil Engineering Services
LRL Engineering
5430 Canotek Road
Ottawa, Ontario K1J 9G2
T (613) 842-3434 or (877) 632-5664 ext 261
C (613) 915-2988
F (613) 842-4338
E kherold@lrl.ca
W www.lrl.ca

Given the current COVID-19 situation, please be aware that LRL has implemented alternative working conditions for our team. Many of us have now transitioned to working from home; however, communication and workability remains one of our top priorities.
We will continue to be reachable by cell phone or by calling LRL at 613-842-3434 which will prompt you to enter the extension of the person you are trying to reach.
In addition, we will continue to have access to all e-mail correspondence and do our best to return all inquiries in a timely manner.

LRL
ENGINEERING | INGÉNIERIE

From: Bakhit, Reza <reza.bakhit@ottawa.ca>
Sent: December 14, 2022 11:14 AM
To: Kyle Herold <kherold@lrl.ca>
Subject: RE: Proposed 3-storey addition to 1252 Wellington St. W.

Hi Kyle,

I sent your request to the modeling team, and will update you as soon as we get the results.

Kind regards,

Reza Bakhit, P.Eng, C.E.T
Project Manager
Planning, Real Estate and Economic Development Department / Direction générale de la planification, des biens immobiliers et du développement économique
Development Review - Centeral Branch
City of Ottawa | Ville d'Ottawa
110 Laurier Avenue West Ottawa, ON | 110, avenue. Laurier Ouest. Ottawa (Ontario) K1P 1J1
613.580.2424 ext./poste 19346, reza.bakhit@ottawa.ca

Please note: Given the current pandemic, I will be working from home until further notice; reaching me by email is the easiest. I will be checking my voicemail, just not as frequently as I normally would be.

From: Kyle Herold <kherold@lrl.ca>
Sent: Wednesday, December 14, 2022 10:52 AM
To: Bakhit, Reza <reza.bakhit@ottawa.ca>
Subject: RE: Proposed 3-storey addition to 1252 Wellington St. W.

With recent developments/clarifications from the architect, the calculated required fire flow has changed for our proposed development; based on FUS definitions, combustibility of contents has been changed from combustible to free-burning.

Would it be possible to revise the current boundary conditions to accommodate the following parameters:
Average Total Daily Demand = 0.05L/s
Maximum Daily Demand = 0.54L/s
Maximum Hourly Demand = 0.82L/s
Required Fire Flow = 250 L/s
*only change is the RFF
**FUS design sheet included for reference

My apologies for the inconvenience.
If you have any questions, please do not hesitate to reach out.

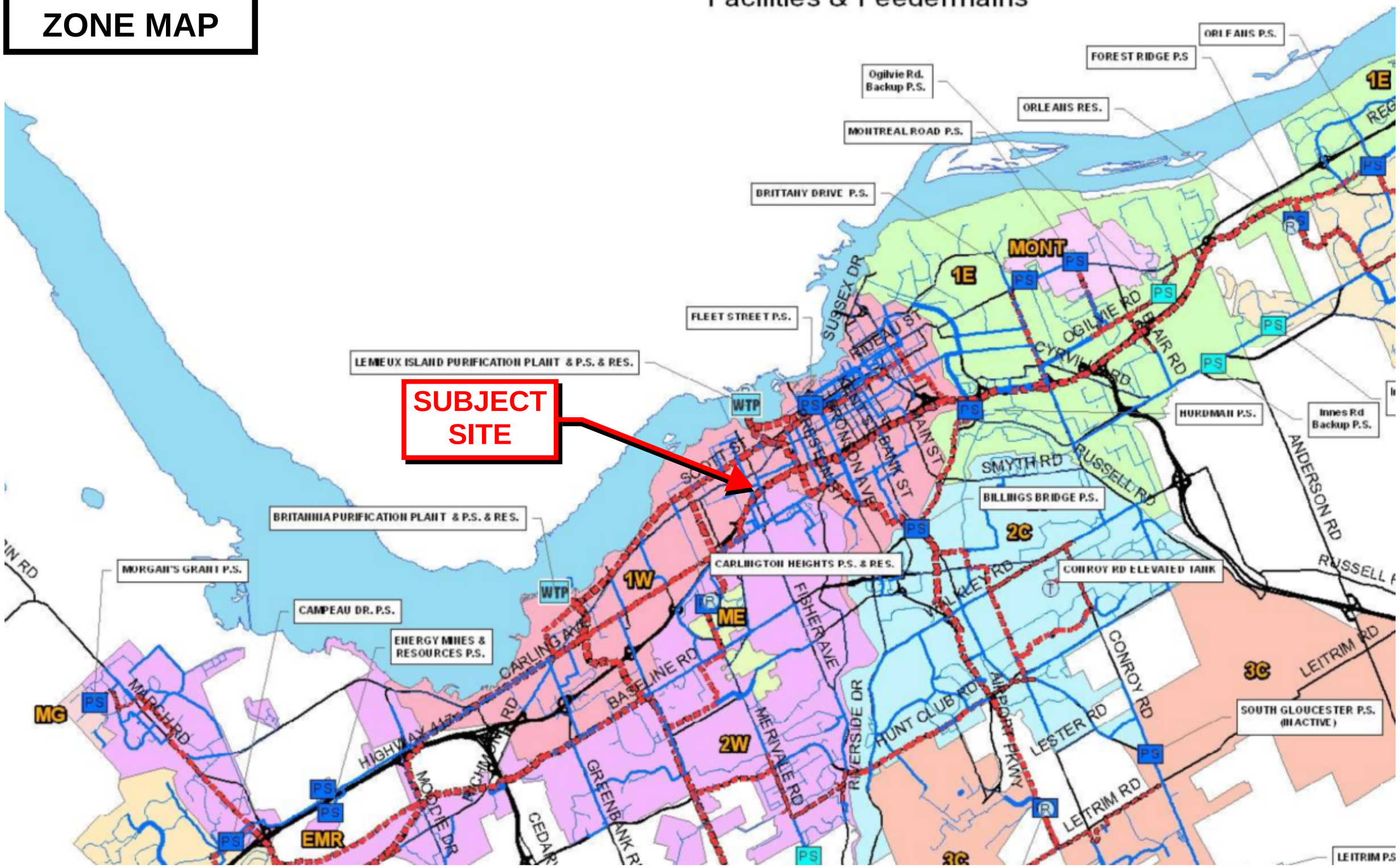
Thank you,

Kyle Herold
Civil Engineering Services
LRL Engineering
5430 Canotek Road
Ottawa, Ontario K1J 9G2
T (613) 842-3434 or (877) 632-5664 ext 261
C (613) 915-2988
F (613) 842-4338
E kherold@lrl.ca
W www.lrl.ca

LRL
ENGINEERING | INGÉNIERIE

Given the current COVID-19 situation, please be aware that LRL has implemented alternative working conditions for our team.
Many of us have now transitioned to working from home; however, communication and workability remains one of our top priorities.
We will continue to be reachable by cell phone or by calling LRL at 613-842-3434 which will prompt you to enter the extension of the person you are trying to reach.

PRESSURE ZONE MAP



APPENDIX C

Wastewater Collection Calculations

LRL File No. 210883
Project: 3-storey addition to existing multi-use building
Location: 1252 Wellington St. W, Ottawa, ON.
Date: February 2, 2023
Designed: Mike Allen
Drawing Ref.: C401

Sanitary Pipe Sizing

DESIGN GUIDELINES

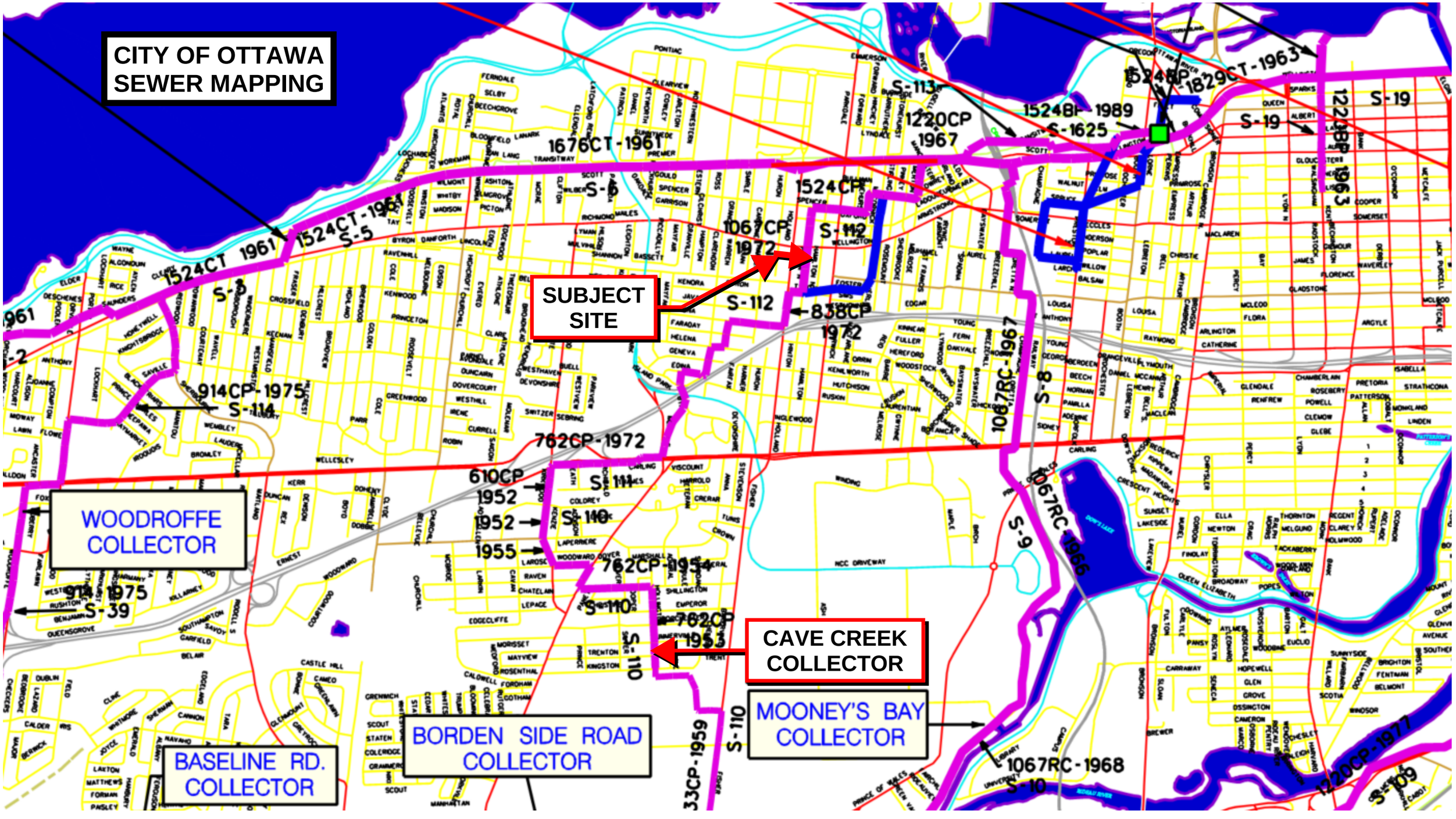
Sanitary Design Parameters		
Avg. Daily Flow	280	L/p/day
Commercial & Industrial Flow	28000	L/ha/day
Light Industrial Flow	35000	L/ha/day
Heavy Industrial Flow	5500	L/ha/day
Maximum Residential Peak Factor	4	
Industrial Peak Factor (as per Appendix 4-B)	7	
Commercial & Industrial Peak Factor	1.5	
Extraneous Flow	0.33	L/s/gross ha

Pipe Design Parameters	
Minimum velocity	Manning's "n"
0.60 m/s	0.013

Domestic Demand			
Unit Type	Persons/Unit	No.of Units	Pop.
1 bedroom apartment	1.4	0	0.0
2 bedroom apartment	2.1	2	4.2
3 bedroom apartment	3.1	0	0.0
Single family dwelling	3.4	2	6.8
		4	**11.0**

Note: Existing inverts and slopes are estimated. They are to be confirmed on site.

LOCATION			RESIDENTIAL						COMMERCIAL		INDUSTRIAL			INSTITUTIONAL		C+I+I	INFILTRATION			TOTAL	PIPE					
STREET	From	To	AREA	POP.	CUMMULATIVE AREA	CUMMULATIVE POP.	PEAK FACT.	PEAK FLOW	AREA	ACCU. AREA	AREA	ACCU. AREA	PEAK FACT.	AREA	ACCU. AREA	PEAK FLOW	TOTAL AREA	ACCU. AREA	INFILT. FLOW	TOTAL FLOW	LENGTH	DIA.	SLOPE	MAT.	CAP. (FULL)	VEL. (FULL)
			(ha)		(ha)			(L/s)	(ha)	(ha)	(ha)	(ha)		(ha)	(ha)	(L/s)	(ha)	(ha)	(L/s)	(L/s)	(m)	(mm)	(%)		(L/s)	(m/s)
Huron Ave. N.	Prop. Bldg	Mainline	0.049	11.0	0.049	11.0	4.0	0.14	0.033	0.033	0.000	0.000	7.0	0.000	0.000	0.02	0.007	0.007	0.00	0.16	8.8	150	3.00%	PVC	26.38	1.49
					0.049	11.0				0.033		0.000			0.000			0.007								


CITY OF OTTAWA
SEWER MAPPING
SUBJECT
SITE
WOODROFFE
COLLECTOR
BASELINE RD.
COLLECTOR
BORDEN SIDE ROAD
COLLECTOR
CAVE CREEK
COLLECTOR
MOONEY'S BAY
COLLECTOR
1524CT 1961
S-5
1676CT-1961
1524CP-1967
1524BP-1989
S-1625
1524BP-1829CT-1963
1220BP
1963
S-19
1067CP
1972
S-112
838CP
1972
1067RC-1967
914CP-1975
S-114
914CP-1975
S-39
762CP-1972
610CP
1952
1952
1955
762CP-1954
762CP
1953
S-110
S-111
S-108
S-9
1067RC-1966
1067RC-1968
S-10
1220CP-1977
S-109
33CP-1959

APPENDIX D

Stormwater Management Calculations

LRL Associates Ltd.

Storm Watershed Summary

LRL File No. 210883-02
Project: Proposed Addition
Location: 1252 Wellington St, Ottawa
Date: February 2, 2023
Designed: K. Herold
Drawing Ref.: C701, C702

Pre-Development Catchments (within Development Area)

Watershed	C = 0.20	C = 0.8	C = 0.90	Total Area (ha)	Combined C
EWS-01 (uncontrolled)	0.000	0.000	0.018	0.018	0.90
EWS-02 (uncontrolled)	0.002	0.000	0.000	0.002	0.20
Total	**0.002**	**0.000**	**0.000**	**0.020**	**0.83**

Post-Development Catchments (within Development Area)

Watershed	C = 0.20	C = 0.8	C = 0.90	Total Area (ha)	Combined C
WS-01 (controlled)	0.000	0.000	0.018	0.018	0.90
WS-02 (uncontrolled)	0.000	0.000	0.002	0.002	0.90
Total	**0.000**	**0.000**	**0.020**	**0.020**	**0.90**

LRL File No. 210883-02
Project: Proposed Addition
Location: 1252 Wellington St, Ottawa
Date: February 2, 2023
Designed: K. Herold
Checked: V. Johnson
Drawing Ref.: C601, C701, C702

Stormwater Management Design Sheet

STORM - 100 YEAR

Runoff Equation

Q = 2.78CIA (L/s)

C = Runoff coefficient

I = Rainfall intensity (mm/hr) = $A / (Td + C)^B$

A = Area (ha)

T_c = Time of concentration (min)

Pre-Development Catchments within Development Area

	Total Area =	**0.020**	**ha**	**∑R =**	**0.83**
		0.020	ha	R =	0.83
	Total Uncontrolled =	**0.020**	**ha**	**∑R =**	**0.83**

100 Year Allowable Release Rate (Max C=0.5, 5yr Pre-dev)

I_5 = 998.071 / (Td + 6.053)$^{0.814}$ **A = 998.071** **B = 0.814** **C = 6.053**

C =	0.50		max C=0.5 as per City Guidelines
I =	104.2	mm/hr	
Tc =	10	min	min 10mins as per City Guidelines
A =	0.020	ha	
100y Allowable Release Rate =	**2.90**	**L/s**	

Post-development Stormwater Management

					$\sum R_{2\&5}$	$\sum R_{100}$
	Total Site Area =	**0.020**	**ha**	**∑R =**	**0.90**	**1.00**
Controlled	WS-01	0.018	ha	R =	0.90	1.00
Uncontrolled	WS-02	0.002	ha	R =	0.90	1.00
	Total Controlled =	**0.020**	**ha**	**∑R =**	**0.90**	**1.00**

100 Year Post-development Stormwater Management

I_{100} = 1735.688 / (Td + 6.014)$^{0.820}$ **A = 1735.688** **B = 0.820** **C = 6.014**

Time (min)	Intensity (mm/hr)	Controlled Runoff (L/s)	Storage Volume (m^3)	Controlled Release Rate (L/s)	Uncontrolled Runoff (L/s)	Total Release Rate (L/s)
10	178.56	8.94	4.25	1.86	0.99	2.85
15	142.89	7.15	4.76	1.86	0.99	2.85
20	119.95	6.00	4.97	1.86	0.99	2.85
25	103.85	5.20	5.00	1.86	0.99	2.85
30	91.87	4.60	4.93	1.86	0.99	2.85
35	82.58	4.13	4.77	1.86	0.99	2.85
40	75.15	3.76	4.56	1.86	0.99	2.85
45	69.05	3.46	4.31	1.86	0.99	2.85
50	63.95	3.20	4.02	1.86	0.99	2.85
60	55.89	2.80	3.37	1.86	0.99	2.85
70	49.79	2.49	2.65	1.86	0.99	2.85
80	44.99	2.25	1.88	1.86	0.99	2.85
90	41.11	2.06	1.06	1.86	0.99	2.85

Summary of Roof Storage

Select water depth (h) =	0.100	m	*An Emergency overflow scupper is provided above this height.
Flow per drain=	0.93	L/s	*Watts RD-100-A-ADJ (Weir Opening = 1/2 Exposed)
No. of drain =	2		
Total flow from roof =	1.86	L/s	
Total roof area =	177	m^2	
Effective* roof area (A) =	150	m^2	*Assessment of total area of roof, not considering areas where ponding

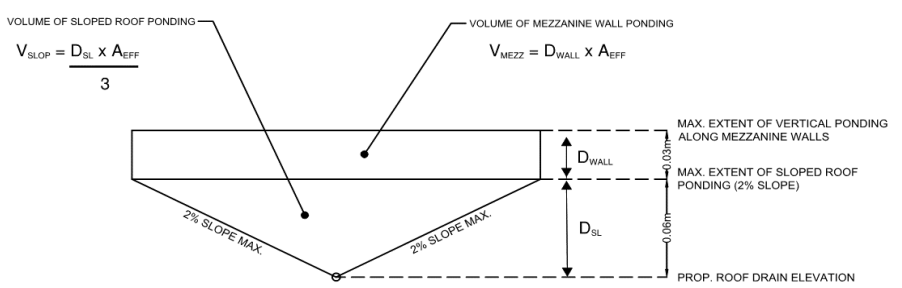
LRL File No. 210883-02
Project: Proposed Addition
Location: 1252 Wellington St, Ottawa
Date: February 2, 2023
Designed: K. Herold
Checked: V. Johnson
Drawing Ref.: C601, C701, C702

Stormwater Management Design Sheet

Available (provided) roof storage (V) = 5.00 m^3 wouldn't occur (assumed 15%)

For the given controlled release rate, the required roof storage = available roof storage, thus OK

Available Roof Storage Calculation:



$$V = \left(\frac{D_{Sl} * A_{Eff}}{3}\right) + (D_{Wall} * A_{Eff})$$

Where:

V = available (provided) rooftop storage (m^3)
D_{Sl} = slope ponding depth up to mezzanine walls (m)
D_{Wall} = water ponding depth along mezzanine walls (m)
A_{Eff} = effective roof area (m^2)

*the previous calcualtions only takes into consideration the volume of sloped roof ponding

Onsite Stormwater Retention

Total Storage Required =	5.00	m^3
Roof Storage Provided =	5.46	m^3
Total Storage Provided =	5.46	m^3

*sum or req'd storage volumes for roof and WS-04

LRL File No. 210883-02
Project: Proposed Addition
Location: 1252 Wellington St, Ottawa
Date: February 2, 2023
Designed: K. Herold
Checked: V. Johnson
Drawing Ref.: C601, C701, C702

Stormwater Management Design Sheet

STORM - 5 YEAR

Runoff Equation

Q = 2.78CIA (L/s)

C = Runoff coefficient

I = Rainfall intensity (mm/hr) = $A / (Td + C)^B$

A = Area (ha)

T_c = Time of concentration (min)

Pre-Development Catchments within Development Area

	Total Area =	**0.020**	**ha**	**∑R =**	**0.83**
		0.020	ha	R =	0.83
	Total Uncontrolled =	**0.020**	**ha**	**∑R =**	**0.83**

5 Year Allowable Release Rate (Max C=0.5, 5yr Pre-dev)

I5 = 998.071 / (Td + 6.053)$^{0.814}$ **A = 998.071** **B = 0.814** **C = 6.053**

C =	0.50		max C=0.5 as per City Guidelines
I =	104.2	mm/hr	
Tc =	10	min	min 10mins as per City Guidelines
A =	0.020	ha	
100y Allowable Release Rate =	**2.90**	**L/s**	

Post-development Stormwater Management

					$\sum R_{2\&5}$	$\sum R_{100}$
	Total Site Area =	**0.020**	**ha**	**∑R =**	**0.90**	**1.00**
Controlled	WS-01	0.018	ha	R =	0.90	1.00
Uncontrolled	WS-02	0.002	ha	R =	0.90	1.00
	Total Controlled =	**0.020**	**ha**	**∑R =**	**0.90**	**1.00**

5 Year Post-development Stormwater Management

I_5 = 998.071 / (Td + 6.053)$^{0.814}$ **A = 998.071** **B = 0.814** **C = 6.053**

Time (min)	Intensity (mm/hr)	Controlled Runoff (L/s)	Storage Volume (m^3)	Controlled Release Rate (L/s)	Uncontrolled Runoff (L/s)	Total Release Rate (L/s)
10	104.19	5.21	2.22	1.52	0.58	2.10
15	83.56	4.18	2.40	1.52	0.58	2.10
20	70.25	3.52	2.39	1.52	0.58	2.10
25	60.90	3.05	2.29	1.52	0.58	2.10
30	53.93	2.70	2.12	1.52	0.58	2.10
35	48.52	2.43	1.91	1.52	0.58	2.10
40	44.18	2.21	1.66	1.52	0.58	2.10
45	40.63	2.03	1.39	1.52	0.58	2.10
50	37.65	1.88	1.09	1.52	0.58	2.10
60	32.94	1.65	0.46	1.52	0.58	2.10
70	29.37	1.47	0.00	1.52	0.58	2.10
80	26.56	1.33	0.00	1.52	0.58	2.10
90	24.29	1.22	0.00	1.52	0.58	2.10

Summary of Roof Storage

Select water depth (h) =	0.076	m	*An Emergency overflow scupper is provided above this height.
Flow per drain=	0.76	L/s	*Watts RD-100-A-ADJ (Weir Opening = 1/2 Exposed)
No. of drain =	2		
Total flow from roof =	1.52	L/s	
Total roof area =	111	m^2	
Effective* roof area (A) =	95	m^2	*Assessment of total area of roof, not considering areas where ponding

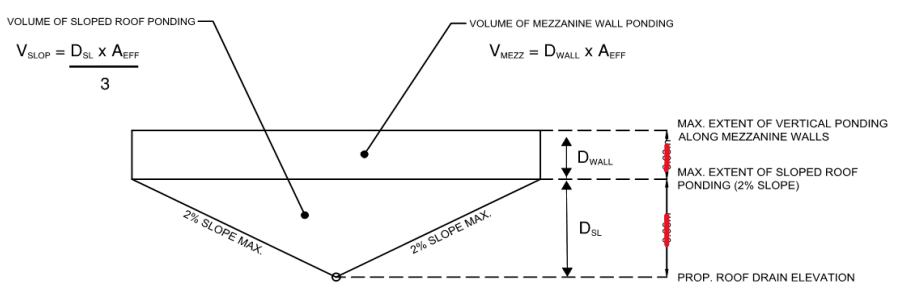
LRL File No. 210883-02
Project: Proposed Addition
Location: 1252 Wellington St, Ottawa
Date: February 2, 2023
Designed: K. Herold
Checked: V. Johnson
Drawing Ref.: C601, C701, C702

Stormwater Management Design Sheet

Available (provided) roof storage (V) = 2.40 m^3 wouldn't occur (assumed 15%)

For the given controlled release rate, the required roof storage = available roof storage, thus OK

Available Roof Storage Calculation:



$$V = \left(\frac{D_{Sl} * A_{Eff}}{3}\right) + (D_{Wall} * A_{Eff})$$

Where:

V = available (provided) rooftop storage (m^3)
D_{Sl} = slope ponding depth up to mezzanine walls (m)
D_{Wall} = water ponding depth along mezzanine walls (m)
A_{Eff} = effective roof area (m^2)

*the previous calcualtions only takes into consideration the volume of sloped roof ponding

Onsite Stormwater Retention

Total Storage Required =	2.40	m^3
Roof Storage Provided =	2.43	m^3
Total Storage Provided =	2.43	m^3

*sum or req'd storage volumes for roof and WS-04

LRL Associates Ltd.
Storm Design Sheet

LRL File No. 210883-01
Project: Proposed Addition
Location: 1252 Wellington
Date: February 2, 2023
Designed: K. Herold
Drawing Ref.: C401

Rational Method Q = 2.78CIA

Q = Peak flow in litres per second (L/s)
A = Drainage area in hectares (ha)
C = Runoff coefficient
I = Rainfall intensity (mm/hr)

Storm Design Parameters

IDF curve: Ottawa Macdonald-Cartier International Airport
Storm event: 5 Years
Intensity equation: $I_5 = 998.071 / (Tc + 6.053)^{0.814}$ (mm/hr)

Runoff coefficient (C)
Grass = 0.2
Gravel = 0.8
Asphalt / rooftop = 0.9

Pipe Design Parameters
Minimum velocity = 0.80 m/s
Manning's "n" = 0.013

Pipe Storage
Length of Pipe x
(Area prop pipe - Area reqd pipe)

LOCATION			AREA (ha)			FLOW						STORM SEWER								MANHOLE							AVAILABLE STORAGE			
WATERSHED / STREET	From MH	To MH	C = 0.20	C = 0.80	C = 0.90	Indiv. 2.78AC	Accum. 2.78AC	Time of Conc. (min.)	Rainfall Intensity (mm/hr)	Peak Flow Q (L/s)	Controlled Flow Q_{CONT} (L/s)	Req'd Pipe Diameter (mm)	Prop'd Pipe Diameter (mm)	Type	Slope (%)	Length (m)	Capacity Full Q_{FULL} (L/s)	Velocity Full (m/s)	Time of Flow (min)	Ratio Q/Q_{FULL}	Up Invert (m)	Down Invert (m)	T/G Up Stream (m)	T/G Down Stream	Up Depth obv (m)	Down Depth obv (m)	Up Depth inv (m)	Pipe Storage (m^3)	CB/MH Size (m)	Water Depth (m)	CB/MH Storage (m^3)
STM Outlet																														
Ex + Prop Bldg	Roof Drains	CBMH-01	0.000	0.000	0.263	0.04	N/A	10.00	104.19	4.17		100	N/A	PVC	1.00%	8.0	5.17	0.66	0.20	0.81										

Cut/Fill Report

Generated: 2022-02-24 12:13:02

By user: KHerold

Drawing: W:\FILES 2021\210883\06 CivilDesign\02 Drawings\07 FinalProductionDrawings\W:\FILES 2021\210883\06 CivilDesign\02 Drawings\07 FinalProductionDrawings\210883_SiteDesign.dwg

Volume Summary

Name	Type	Cut Factor	Fill Factor	2d Area (hectares)	Cut (Cu. M.)	Fill (Cu. M.)	Net (Cu. M.)
VOL ROOF N	full	1.00	1.00	0.01	0.00	2.72	2.72<Fill>
VOL ROOF S	full	1.00	1.00	0.01	0.00	2.74	2.74<Fill>

Totals

	2d Area (hectares)	Cut (Cu. M.)	Fill (Cu. M.)	Net (Cu. M.)
Total	0.02	0.00	5.46	5.46<Fill>

* Value adjusted by cut or fill factor other than 1.0

APPENDIX E

Civil Engineering Drawings

PROPOSED ADDITION TO MULTI-USE BUILDING
1252 WELLINGTON ST., OTTAWA, ON.

REVISION 01

KEY PLAN

DRAWING INDEX	
DRAWING NAME	**DRAWING NUMBER**
TITLE PAGE	C000
GENERAL NOTES	C001
SEDIMENT AND EROSION CONTROL PLAN	C101
DEMOLITION PLAN	C102
GRADING AND DRAINAGE PLAN	C301
SERVICING PLAN	C401
STORMWATER MANAGEMENT PLAN	C601
PRE-DEVELOPMENT WATERSHED PLAN	C701
POST-DEVELOPMENT WATERSHED PLAN	C702
CONSTRUCTION DETAIL PLAN	C901

LRL
ENGINEERING | INGÉNIERIE
5430 Canotek Road | Ottawa, ON, K1J 9G2
www.lrl.ca | (613) 842-3434

PROPOSED ADDITION TO MULTI-USE BUILDING
1252 WELLINGTON ST., OTTAWA, ON.
REV.01 - ISSUED FOR APPROVAL - FEBRUARY 2023
LRL PROJECT no: 210883

LICENSED PROFESSIONAL ENGINEER
V. JOHNSON
100510576
02-02-2023
PROVINCE OF ONTARIO

NOT AUTHENTIC UNLESS SIGNED AND DATED

D07-12-22-0081

#18779

GENERAL NOTES

1. ALL WORKS MATERIALS SHALL CONFIRM TO THE LAST REVISION OF THE STANDARDS AND SPECIFICATIONS FOR THE CITY OF OTTAWA, ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS), WHERE APPLICABLE. LOCAL UTILITY STANDARDS AND MINISTRY OF TRANSPORTATION STANDARDS WILL APPLY WHERE REQUIRED.
2. THE CONTRACTORS SHALL BE RESPONSIBLE FOR LOCATING AND CONFIRMING THE LOCATION OF ALL EXISTING UTILITIES WITHIN THE SITE AND ADJACENT WORK AREAS. THE CONTRACTORS SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF ANY SERVICES OR UTILITIES DISTURBED DURING CONSTRUCTION , TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION.
3. ALL DIMENSIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION, ANY DISCREPANCIES SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER. LOST TIME DUE TO FAILURE OF THE CONTRACTORS TO CONFIRM UTILITY LOCATIONS AND NOTIFY ENGINEER OF POSSIBLE CONFLICTS PRIOR TO CONSTRUCTION WILL BE AT CONTRACTORS EXPENSE.
4. ANY AREA BEYOND THE LIMIT OF THE SITE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION AT THE CONTRACTOR'S EXPENSE.
   RELOCATING OF EXISTING SERVICES AND/OR UTILITIES SHALL BE AS SHOWN ON THE DRAWINGS OR DETECTED BY THE ENGINEER AT THE EXPENSE OF DEVELOPERS.
5. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE 'OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS'. THE GENERAL CONTRACTORS SHALL BE DEEMED TO BE THE 'CONTRACTOR' AS DEFINED IN THE ACT.
6. ALL THE CONSTRUCTION SIGNAGE MUST CONFIRM TO THE MINISTRY OF TRANSPORTATION OF ONTARIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES PER LATEST AMENDMENT.
7. THE CONTRACTOR IS ADVISED THAT WORKS BY OTHERS MAY BE ONGOING DURING THE PERIOD OF THE CONTRACT. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES TO PREVENT CONFLICTS.
8. ALL DIMENSIONS ARE IN METRES UNLESS SPECIFIED OTHERWISE.
9. THERE WILL BE NO SUBSTITUTION OF MATERIALS UNLESS PRIOR WRITTEN APPROVAL IS RECEIVED FROM THE ENGINEER.
10. ALL CONSTRUCTION SHALL BE CARRIED OUT IN ACCORDANCE WITH THE RECOMMENDATIONS MADE IN THE GEOTECHNICAL REPORT.
11. FOR DETAILS RELATING TO STORMWATER MANAGEMENT AND ROOF DRAINAGE REFER TO THE SITE SERVICING AND STORMWATER MANAGEMENT REPORT.
12. ALL SEWERS CONSTRUCTED WITH GRADES LESS THAN 1.0% SHALL BE INSTALLED USING LASER ALIGNMENT AND CHECKED WITH LEVEL INSTRUMENT PRIOR TO BACKFILLING.
13. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED AND TO BEAR THE COST OF THE SAME.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADDITIONAL BEDDING, OR ADDITIONAL STRENGTH PIPE IF THE MAXIMUM TRENCH WIDTH AS SPECIFIED BY OPSD IS EXCEEDED.
15. ALL PIPE/CULVERT SECTION SIZES REFER TO INSIDE DIMENSIONS.
16. SHOULD DEEPLY BURIED ARCHAEOLOGICAL REMAINS BE FOUND ON THE PROPERTY DURING CONSTRUCTION ACTIVITIES, THE HERITAGE OPERATIONS UNIT OF THE ONTARIO MINISTRY OF CULTURE MUST BE NOTIFIED IMMEDIATELY.
17. ALL NECESSARY CLEARING AND GRUBBING SHALL BE COMPLETED BY THE CONTRACTOR. REVIEW WITH CONTRACT ADMINISTRATOR AND THE CITY OF OTTAWA PRIOR TO ANY TREE CUTTING/REMOVAL.
18. DRAWINGS SHALL BE READ ON CONJUNCTION WITH ARCHITECTURAL SITE PLAN.
19. THE CONTRACTOR SHALL PROVIDE THE PROJECT ENGINEER ONE SET OF AS CONSTRUCTED SITE SERVICING AND GRADING DRAWINGS.
20. BENCHMARKS: IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THAT THE SITE BENCHMARK(S) HAS NOT BEEN ALTERED OR DISTURBED AND THAT ITS RELATIVE ELEVATION AND DESCRIPTION AGREES WITH THE INFORMATION DEPICTED ON THIS PLAN.

EROSION AND SEDIMENT CONTROL NOTES

GENERAL

THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES, TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE, DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.

THE CONTRACTOR ACKNOWLEDGES THAT SURFACE EROSION AND SEDIMENT RUNOFF RESULTING FROM THEIR CONSTRUCTION OPERATIONS HAS POTENTIAL TO CAUSE A DETRIMENTAL IMPACT TO ANY DOWNSTREAM WATERCOURSE OR SEWER, AND THAT ALL CONSTRUCTION OPERATIONS THAT MAY IMPACT UPON WATER QUALITY SHALL BE CARRIED OUT IN MANNER THAT STRICTLY MEETS THE REQUIREMENT OF ALL APPLICABLE LEGISLATION AND REGULATIONS.

AS SUCH, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CARRYING OUT THEIR OPERATIONS, AND SUPPLYING AND INSTALLING ANY APPROPRIATE CONTROL MEASURES, SO AS TO PREVENT SEDIMENT LADEN RUNOFF ENTERING ANY SEWER OR WATERCOURSE WITHIN OR DOWNSTREAM OF THE WORKING AREA.

THE CONTRACTOR ACKNOWLEDGES THAT NO ONE MEASURE IS LIKELY TO BE 100% EFFECTIVELY FOR EROSION PROTECTION AND CONTROLLING SEDIMENT RUNOFF AND DISCHARGES FROM THE SITE. THEREFORE, WHERE NECESSARY THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL MEASURES ARRANGED IN SUCH MANNER AS TO MITIGATE SEDIMENT RELEASE FROM THE CONSTRUCTION OPERATIONS AND ACHIEVE SPECIFIC MAXIMUM PERMITTED CRITERIA WHERE APPLICABLE. SUGGESTED ON-SITE MEASURES MAY INCLUDE, BUT SHALL NOT BE LIMITED TO, THE FOLLOWING METHODS: SEDIMENT PONDS, FILTER BAGS, PUMP FILTERS, SETTLING TANKS, SILT FENCE, STRAW BALES, FILTER CLOTHS, CATCH BASIN FILTERS, CHECK DAMS AND/OR OTHER RECOGNIZED TECHNOLOGIES AND METHOD AVAILABLE AT THE TIME OF CONSTRUCTION. SPECIFIC MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH REQUIREMENTS OF OPSS 577 WHERE APPROPRIATE, OR IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

WHERE, IN THE OPINION OF THE CONTRACT ADMINISTRATOR OR REGULATORY AGENCY, THE INSTALLED CONTROL MEASURES FAIL TO PERFORM ADEQUATELY, THE CONTRACTOR SHALL SUPPLY AND INSTALL ADDITIONAL OR ALTERNATIVE MEASURES AS DIRECTED BY THE CONTRACT ADMINISTRATOR OR REGULATORY AGENCY, AS SUCH, THE CONTRACTOR SHALL HAVE ADDITIONAL CONTROL MATERIALS ON SITE AT ALL TIME WHICH ARE EASILY ACCESSIBLE AND MAY BE IMPLEMENTED BY HIM AT THE MOMENT'S NOTICE.

PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL SUBMIT TO THE CONTRACT ADMINISTRATOR SIX COPIES OF A DETAILED EROSION AND SEDIMENT CONTROL PLAN (ESCP). THE ESCP WILL CONSIST OF WRITTEN DESCRIPTION AND DETAILED DRAWINGS INDICATING THE ON-SITE ACTIVITIES AND MEASURES TO BE USED TO CONTROL EROSION AND SEDIMENT MOVEMENT FOR EACH STEP OF THE WORK.

CONTRACTOR'S RESPONSIBILITIES

THE CONTRACTOR SHALL ENSURE THAT ALL WORKERS, INCLUDING SUB-CONTRACTOR, IN THE WORKING ARE ARE AWARE OF THE IMPORTANCE OF THE EROSION AND SEDIMENT CONTROL MEASURES AND INFORMED OF THE CONSEQUENCES OF THE FAILURE TO COMPLY WITH THE REQUIREMENTS OF ALL REGULATORY AGENCIES.

THE CONTRACTOR SHALL PERIODICALLY, AND WHEN REQUESTED BY THE CONTRACT ADMINISTRATOR, CLEAN OUT ACCUMULATED SEDIMENT DEPOSITS AS REQUIRED AT THE SEDIMENT CONTROL DEVICES, INCLUDING THOSE DEPOSITS THAT MAY ORIGINATE FROM OUTSIDE THE CONSTRUCTION AREA. ACCUMULATED SEDIMENT SHALL BE REMOVED IN SUCH A MANNER THAT PREVENTS THE DEPOSITION OF THIS MATERIAL INTO THE SEWER WATERCOURSE AND AVOIDS DAMAGE TO CONTROL MEASURES. THE SEDIMENT SHALL BE REMOVED FROM THE SITE AT THE CONTRACTOR'S EXPENSE AND MANAGED IN COMPLIANCE WITH REQUIREMENTS FRO EXCESS EARTH MATERIAL, AS SPECIFIED ELSEWHERE IN THE CONTRACT.

THE CONTRACTOR SHALL IMMEDIATELY REPORT TO THE CONTRACT ADMINISTRATOR ANY ACCIDENTAL DISCHARGES OF SEDIMENT MATERIAL INTO EITHER THE WATERCOURSE OR THE STORM SEWER SYSTEM. FAILURE TO REPORT WILL BE CONSTITUTE A BRACH OF THIS SPECIFICATION AND THE CONTRACTOR MAY ALSO BE SUBJECT TO THE PENALTIES IMPOSED BY THE APPLICABLE REGULATORY AGENCY. APPROPRIATE RESPONSE MEASURES, INCLUDING ANY REPAIRS TO EXISTING CONTROL MEASURES OR THE IMPLEMENTATION OF ADDITIONAL CONTROL MEASURES, SHALL BE CARRIED OUT BY THE CONTRACTOR WITHOUT DELAY.

THE SEDIMENT CONTROL MEASURES SHALL ONLY BE REMOVED WHEN, IN THE OPINION OF THE CONTRACT ADMINISTRATOR, THE MEASURE OR MEASURES, IS NO LONGER REQUIRED. NO CONTROL MEASURE MAY BE PERMANENTLY REMOVED WITHOUT PRIOR AUTHORIZATION FROM THE CONTRACT ADMINISTRATOR. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED IN A MANNER THAT AVOIDS THE ENTRY OF ANY EQUIPMENT, OTHER THAN HAND-HELD EQUIPMENT, INTO ANY WATERCOURSE, AND PREVENTS THE RELEASE OF ANY SEDIMENT OR DEBRIS INTO ANY SEWER OR WATERCOURSE WITHIN OR DOWNSTREAM OF THE WORKING AREA. ALL ACCUMULATED SEDIMENT SHALL BE REMOVED FROM THE WORKING AREA AT THE CONTRACTOR'S EXPENSE AND MANAGED IN COMPLIANCE WITH THE REQUIREMENTS FOR EXCESS EARTH MATERIAL

WHERE, IN THE OPINION OF EITHER THE CONTRACT ADMINISTRATOR OR A REGULATORY AGENCY, ANY OF THE TERMS SPECIFIED HEREIN HAVE NOT BEEN COMPLIED WITH OR PERFORMED IN A SUITABLE MANNER, OR TAT ALL, THE CONTRACTOR ADMINISTRATOR OR A REGULATORY AGENCY HAS THE RIGHT TO IMMEDIATELY WITHDRAW ITS PERMISSION TO CONTINUE THE WORK BUT MAY RENEW ITS PERMISSION UPON BEING SATISFIED THAT THE DEFAULTS OR DEFICIENCIES IN THE PERFORMANCE OF THIS SPECIFICATION BY THE CONTRACTOR HAVE BEEN REMEDIED.

SPILL CONTROL NOTES

1. ALL CONSTRUCTION EQUIPMENT SHALL BE RE-FUELED, MAINTAINED, AND STORED NO LESS THAN 30 METRES FROM WATERCOURSE, STEAMS, CREEKS, WOODLOTS, AND ANY ENVIRONMENTALLY SENSITIVE AREAS, OR AS OTHERWISE SPECIFIED.
2. THE CONTRACTOR MUST IMPLEMENT ALL NECESSARY MEASURES IN ORDER TO PREVENT LEAKS, DISCHARGES OR SPILLS OF POLLUTANTS, DELETERIOUS MATERIALS, OR OTHER SUCH MATERIALS OR SUBSTANCES WHICH WOULD OR COULD CAUSE AN ADVERSE IMPACT TO THE NATURAL ENVIRONMENT.
3. IN THE EVENT OF A LEAK, DISCHARGE OR SPILL OF POLLUTANT, DELETERIOUS MATERIAL OR OTHER SUCH MATERIAL OR SUBSTANCE WHICH WOULD OR COULD CAUSE AN ADVERSE IMPACT TO THE NATURAL ENVIRONMENT, THE CONTRACTOR SHALL:
   - 3.1. IMMEDIATELY NOTIFY APPROPRIATE FEDERAL, PROVINCIAL, AND LOCAL GOVERNMENT MINISTRIES, DEPARTMENTS, AGENCIES, AND AUTHORITIES OF THE INCIDENT IN ACCORDANCE WITH ALL CURRENT LAWS, LEGISLATION, ACTS, BY-LAWS, PERMITS, APPROVALS, ETC.
   - 3.2. TAKE IMMEDIATE MEASURES TO CONTAIN THE MATERIAL OR SUBSTANCE, AND TO TAKE SUCH MEASURES TO MITIGATE AGAINST ADVERSE IMPACTS TO THE NATURAL ENVIRONMENT.
   - 3.3. RESTORE THE AFFECTED AREA TO THE ORIGINAL CONDITION OR BETTER TO THE SATISFACTION OF THE AUTHORITIES HAVING JURISDICTION.

SITE GRADING NOTES

1. PRIOR TO THE COMMENCEMENT OF THE SITE GRADING WORKS, ALL SILTATION CONTROL DEVICES SHALL BE INSTALLED AND OPERATIONAL PER EROSION CONTROL PLAN.
2. ALL GRANULAR AND PAVEMENT FOR ROADS/PARKING AREAS SHALL BE CONSTRUCTED IN ACCORDANCE WITH GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
3. ALL TOPSOIL AND ORGANIC MATERIAL SHALL BE STRIPPED WITHIN THE ROAD AND PARKING AREAS ALLOWANCE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
4. CONCRETE CURB SHALL BE IN ACCORDANCE WITH THE CITY OF OTTAWA STD. SC1.1 PROVISION SHALL BE MADE OR CURB DEPRESSIONS AS INDICATED ON ARCHITECTURAL SITE PLAN. CONCRETE SIDEWALK SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD SC1.4. ALL CURBS, CONCRETE ISLANDS, AND SIDEWALKS SHOWN O THIS DRAWING ARE TO BR PRICED IN SITE WORKS PORTION OF THE CONTRACT.
5. PAVEMENT REINSTATEMENT FOR SERVICE AND UTILITY CUTS SHALL BE IN ACCORDANCE WITH THE CITY OF OTTAWA STD. R10 AND OPSD 509.010 AND OPSS 310.
6. GRANULAR 'A' SHALL BE PLACED TO A MINIMUM THICKNESS OF 30MM AROUND ALL STRUCTURES WITHIN THE PAVEMENT AREA.
7. SUB-EXCAVATE SOFT AREAS AND FILL WITH GRANULAR 'B' COMPACTED IN MAXIMUM 30MM LIFTS.
8. ALL WORK ON THE MUNICIPAL RIGHT OF WAY AND EASEMENTS TO BE INSPECTED BY THE MUNICIPALITY PRIOR BACKFILLING.
9. CONTRACTOR TO OBTAIN A ROAD OCCUPANCY PERMIT 48 HOURS PRIOR TO COMMENCING ANY WORK WITHIN THE MUNICIPAL ROAD ALLOWANCE, IF REQUIRED BY THE MUNICIPALITY.
10. ALL PAVEMENT MARKING FEATURES AND SITE SIGNAGE SHALL BE PLACED PER ARCHITECTURAL SITE PLAN. LINE PAINTING AND DIRECTIONAL SYMBOLS SHALL BE APPLIED WITH A MINIMUM OF TWO COATS OF ORGANIC SOLVENT PAINT.
11. REFER TO ARCHITECTURAL SITE PLAN FOR DIMENSIONS AND SITE DETAILS.
12. STEP JOINTS ARE TO BE USED WHERE PROPOSED ASPHALT MEETS EXISTING ASPHALT. ALL JOINTS MUST BE SEALED.
13. WHERE APPLICABLE THE CONTRACTOR IS TO SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION. SHOP DRAWINGS MUST BE SITE SPECIFIC, SIGNED AND SEALED BY A LICENSED STRUCTURAL ENGINEER. THE CONTRACTOR WILL ALSO BE REQUIRED TO SUPPLY AND GEOTECHNICAL CERTIFICATION OF THE AS-CONSTRUCTED RETAINING WALL TO THE ENGINEER PRIOR TO FINAL ACCEPTANCE.

ROADWORK SPECIFICATIONS

14. ROADWORK TO BE COMPLETED IN ACCORDANCE WITH GEOTECHNICAL REPORT PREPARED BY PATERSON GROUP, DATED JAN 17, 2022.
15. SUB-EXCAVATE SOFT AREAS AND FILL WITH GRANULAR 'A', TYPE II COMPACTED IN MAXIMUM 300MM LIFTS.
16. ALL GRANULAR FOR ROADS SHALL BE COMPACTED TO MINIMUM OF 100% STANDARD PROCTOR DENSITY MAXIMUM DRY DENSITY (SPMDD).
17. ALL EDGES OF DISTURBED PAVEMENT SHALL BE SAW CUT TO FORM A CLEAN STRAIGHT LINE PRIOR TO PLACING NEW PAVEMENT. PAVEMENT REINSTATEMENT SHALL BE WITH STEP JOINTS OF 50mm WIDTH MINIMUM.

SANITARY, FOUNDATION DRAIN, STORM SEWER AND WATERMAIN NOTES

GENERAL

1. LASER ALIGNMENT CONTROL TO BE UTILIZED ON ALL SEWER INSTALLATIONS.
2. CLAY SEALS TO BE INSTALLED AS PER CITY STANDARD DRAWING S8. THE SEALS SHOULD BE AT LEAST 1.5M LONG (IN THE TRENCH DIRECTION) AND SHOULD EXTEND FROM TRENCH WALL TO TRENCH WALL. THE SEALS SHOULD EXTEND FROM THE FROST LINE AND FULLY PENETRATE THE BEDDING, SUB-BEDDING, AND COVER MATERIAL. THE BARRIERS SHOULD CONSIST OF RELATIVELY DRY AND COMPATIBLE BROWN SILTY CLAY PLACED IN MAXIMUM 225MM LIFTS AND COMPACTED TO A MINIMUM OF 95% SPMDD. THE CLAY SEALS SHOULD BE PLACED AT THE SITE BOUNDARIES AND AT 60M INTERVALS IN THE SERVICE TRENCHES.
3. SERVICES TO BUILDING TO BE TERMINATED 1.0M FROM THE OUTSIDE FACE OF BUILDING UNLESS OTHERWISE NOTED.
4. ALL MAINTENANCE STRUCTURE AND CATCH BASIN EXCAVATIONS TO BE BACKFILLED WITH GRANULAR MATERIAL COMPACTED TO 98% STANDARD PROCTOR DENSITY. A MINIMUM OF 300MM AROUND STRUCTURES.
5. "MODULOC" OR APPROVED PRE-CAST MAINTENANCE STRUCTURE AND CATCH BASIN ADJUSTERS TO BE USED IN LIEU OF BRICKING. PARGE ADJUSTING UNITS ON THE OUTSIDE ONLY.
6. SAFETY PLATFORMS SHALL BE PER OPSD 404.02.
7. DROP STRUCTURES SHALL BE IN ACCORDANCE WITH OPSD 1003.01, IF APPLICABLE.
8. THE CONTRACTOR IS TO PROVIDE CCTV CAMERA INSPECTIONS OF ALL SEWERS, INCLUDING PICTORIAL REPORT, ONE (1) CD COPY AND TWO (2) VIDEO RECORDING IN A FORMAT ACCEPTABLE TO ENGINEER. ALL SEWER ARE TO BE FLUSHED PRIOR TO CAMERA INSPECTION. ASPHALT WEAR COURSE SHALL NOT BE PLACED UNTIL THE VIDEO INSPECTION OF SEWERS AND NECESSARY REPAIRS HAVE BEEN COMPLETED TO THE SATISFACTION OF THE ENGINEER.
9. CONTRACTOR SHALL PERFORM LEAKAGE TESTING, IN THE PRESENCE OF THE CONSULTANT, FOR SANITARY SEWERS IN ACCORDANCE WITH OPSS 407. CONTRACTOR SHALL PERFORM VIDEO INSPECTION OF ALL SEWERS. A COPY OF THE VIDEO AND INSPECTION REPORT SHALL BE SUBMITTED TO THE CONSULTANT FOR REVIEW AND APPROVAL PRIOR TO PLACEMENT OF WEAR COURSE ASPHALT.

SANITARY

10. ALL SANITARY SEWER INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE CITY OF OTTAWA AND THE ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD). AND SPECIFICATIONS (OPSS).
11. ALL SANITARY GRAVITY SEWER SHALL BE PVC SDR 35, IPEX 'RING-TITE' (OR APPROVED EQUIVALENT) PER CSA STANDARD B182.2 OR LATEST AMENDMENT, UNLESS SPECIFIED OTHERWISE.
12. EXISTING MAINTENANCE STRUCTURES TO BE RE-BENCHED WHERE A NEW CONNECTION IS MADE.
13. SANITARY GRAVITY SEWER TRENCH AND BEDDING SHALL BE PER CITY OF OTTAWA STD. S6 AND S7 CLASS 'B' BEDDING, UNLESS SPECIFIED OTHERWISE.
14. SANITARY MAINTENANCE STRUCTURE FRAME AND COVERS SHALL BE PER CITY OF OTTAWA STD. S24 AND S25.
15. SANITARY MAINTENANCE STRUCTURES SHALL BE BENCHED PER OPSD 701.021.
16. 100MM THICK HIGH-DENSITY GRADE 'A' POLYSTYRENE INSULATION TO BE INSTALLED IN ACCORDANCE WITH CITY STD W22 WHERE INDICATED ON DRAWING SSP-1.

STORM

17. ALL REINFORCED CONCRETE STORM SEWER PIPE SHALL BE IN ACCORDANCE WITH CSA A257.2, OR LATEST AMENDMENT. ALL NON-REINFORCED CONCRETE STORM SEWER PIPE SHALL BE IN ACCORDANCE WITH CSA A257.1, OR LATEST AMENDMENT. PIPE SHALL BE JOINED WITH STD. RUBBER GASKETS AS PER CSA A257.3, OR LATEST AMENDMENT.
18. ALL STORM SEWER TRENCH AND BEDDING SHALL BE IN ACCORDANCE WITH THE CITY OF OTTAWA STD. S6 AND S7 CLASS 'B' UNLESS OTHERWISE SPECIFIED. BEDDING AND COVER MATERIAL SHALL BE SPECIFIED BY PROJECT GEOTECHNICAL ENGINEER.
19. ALL PVC STORM SEWERS ARE TO BE SDR 35 APPROVED PER C.S.A. B182.2 OR LATEST AMENDMENT, UNLESS OTHERWISE SPECIFIED.
20. CATCH BASIN SHALL BE IN ACCORDANCE WITH OPSD 705.010.
21. CATCH BASIN LEADS SHALL BE IN 200MM DIA. AT 1% SLOPE (MIN) UNLESS SPECIFIED OTHERWISE.
22. ALL CATCH BASINS SHALL HAVE 600MM SUMPS, UNLESS SPECIFIED OTHERWISE.
23. ALL CATCH BASIN LEAD INVERTS TO BE 1.5M BELOW FINISHED GRADE UNLESS SPECIFIED OTHERWISE.
24. THE STORM SEWER CLASSES HAVE BEEN DESIGNED BASED ON BEDDING CONDITIONS SPECIFIED ABOVE. WHERE THE SPECIFIED TRENCH WIDTH IS EXCEEDED , THE CONTRACTOR IS REQUIRED TO PROVIDE AND SHALL BE RESPONSIBLE FOR EXTRA TEMPORARY AND/OR PERMANENT REPAIRS MADE NECESSARY BY THE WIDENED TRENCH.
25. ALL ROAD AND PARKING LOT CATCH BASINS TO BE INSTALLED WITH ORTHOGONALLY PLACED SUBDRAINS IN ACCORDANCE WITH DETAIL. PERFORATED SUBDRAIN FOR ROAD AND PARKING LOT CATCH BASIN SHALL BE INSTALLED PER CITY STD R1 UNLESS OTHERWISE NOTED.
26. PERFORATED SUBDRAIN FOR REAR YARD AND LANDSCAPING APPLICATIONS SHALL BE INSTALLED PER CITY STD S29, S30 AND S31, WHERE APPLICABLE.
27. RIP-RAP TREATMENT SEWER AND CULVERT OUTLETS PER OPSD 810.010.
28. ALL STORM SEWER/ CULVERTS TO BE INSTALLED WITH FROST TREATMENT PER OPSD 803.031 WHERE APPLICABLE.
29. ALL STORM MANHOLES WITH PIPE LESS THAN 900MM IN DIAMETER SHALL BE CONSTRUCTED WITH A 300MM SUMP AS PER SDG, CLAUSE 6.2.6.

WATERMAIN

30. ALL WATERMAIN INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE CITY OF OTTAWA AND THE ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS).
31. ALL PVC WATERMAINS SHALL BE AWWA C-900 CLASS 150, SDR 18 OR APPROVED EQUIVALENT.
32. ALL WATER SERVICES LESS THAN OR EQUAL TO 50MM IN DIAMETER TO BE TYPE 'K' COPPER.
33. WATERMAIN TRENCH AND BEDDING SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STANDARD W17. UNLESS SPECIFIED OTHERWISE. BEDDING AND COVER MATERIAL SHALL BE SPECIFIED BY THE PROJECT GEOTECHNICAL ENGINEER.
34. ALL PVC WATERMAINS, SHALL BE INSTALLED WITH A 10 GAUGE STRANDED COPPER TWU OR RWU TRACER WIRE IN ACCORDANCE WITH CITY OF OTTAWA STD. W.36.
35. CATHODIC PROTECTION IS REQUIRED ON ALL METALLIC FITTINGS PER CITY OF OTTAWA STD.25.5 AND W25.6.
36. VALVE BOXES SHALL BE INSTALLED PER CITY OF OTTAWA STD W24.
37. WATERMAIN IN FILL AREAS TO BE INSTALLED WITH RESTRAINED JOINTS PER CITY OF OTTAWA STD.25.5 AND W25.6.
38. THRUST BLOCKING OF WATERMAINS TO BE INSTALLED PER CITY OF OTTAWA STD. W25.3 AND W25.4.
39. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY CAPS, PLUGS, BLOW-OFFS, AND NOZZLES REQUIRED FOR TESTING AND DISINFECTION OF THE WATERMAIN.
40. WATERMAIN CROSSING OVER AND BELOW SEWERS SHALL BE IN ACCORDANCE WITH THE CITY OF OTTAWA STD. W25,2 AND W25, RESPECTIVELY.
41. WATER SERVICES ARE TO BE INSULATED PER CITY STD. W23 WHERE SEPARATION BETWEEN SERVICES AND MAINTENANCE HOLES ARE LESS THAN 2.4M.
42. THE MINIMUM VERTICAL CLEARANCE BETWEEN WATERMAIN AND SEWER/UTILITY IS 0.5M PER MOE GUIDELINES. FOR CROSSING UNDER SEWERS, ADEQUATE STRUCTURAL SUPPORT FOR THE SEWER IS REQUIRED TO PREVENT EXCESSIVE DEFLECTION OF JOINTS AND SETTLING. THE LENGTH OF WATER PIPE SHALL BE CENTERED AT THE POINT OF CROSSING TO ENSURE THAT THE JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE SEWER.
43. ALL WATERMAINS SHALL HAVE A MINIMUM COVER OR 2.4M, OTHERWISE THERMAL INSULATION IS REQUIRED AS PER STD DWG W22.
44. GENERAL WATER PLANT TO UTILITY CLEARANCE AS PER STD DWG R20.
45. FIRE HYDRANT INSTALLATION AS PER STD DWG W19, ALL BOTTOM OF HYDRANT FLANGE ELEVATIONS TO BE INSTALLED 0.10M ABOVE PROPOSED FINISHED GRADE AT HYDRANT; FIRE HYDRANT LOCATION AS PER STD DWG W18.
46. BUILDING SERVICE TO BE CAPPED 1.0M OFF THE FACE OF THE BUILDING UNLESS OTHERWISE NOTED AND MUST BE RESTRAINED A MINIMUM OF 12M BACK FROM STUB.
47. ALL WATERMAINS SHALL BE HYDROSTATICALLY TESTED IN ACCORDANCE WITH THE CITY OF OTTAWA AND ONTARIO GUIDELINES UNLESS OTHERWISE DIRECTED. PROVISIONS FOR FLUSHING WATER LINE PRIOR TO TESTING, ETC. MUST BE PROVIDED.
48. ALL WATERMAINS SHALL BE BACTERIOLOGICALLY TESTED IN ACCORDANCE WITH THE CITY OF OTTAWA AND ONTARIO GUIDELINES. ALL CHLORINATED WATER TO BE DISCHARGED AND PRETREATED TO ACCEPTABLE LEVELS PRIOR TO DISCHARGE. ALL DISCHARGED WATER MUST BE CONTROLLED AND TREATED SO AS NOT TO ADVERSELY EFFECT ENVIRONMENT. IT IS RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL MUNICIPAL AND/OR PROVINCIAL REQUIREMENTS ARE FOLLOWED.
49. ALL WATERMAIN STUBS SHALL BE TERMINATED WITH A PLUG AND 50MM BLOW OFF UNLESS OTHERWISE NOTED.

No.	REVISIONS	BY	DATE
02	RE-ISSUED FOR SITE PLAN APPROVAL	K.H.	02 FEB 2023
01	ISSUED FOR SITE PLAN APPROVAL	K.H.	16 MAR 2022

LICENSED PROFESSIONAL ENGINEER
V. JOHNSON
100510576
02-02-2023
PROVINCE OF ONTARIO

NOT AUTHENTIC UNLESS SIGNED AND DATED

LRL
ENGINEERING | INGÉNIERIE
5430 Canotek Road | Ottawa, ON, K1J 9G2
www.lrl.ca | (613) 842-3434

CLIENT
WELLINGTON HURON COMMERCIAL INC.

DESIGNED BY:	DRAWN BY:	APPROVED BY:
K.H.	M.A.	V.J.

PROJECT
PROPOSED ADDITION TO
MIXED USE BUILDING
1252 WELLINGTON ST., OTTAWA, ON.

DRAWING TITLE
GENERAL NOTES

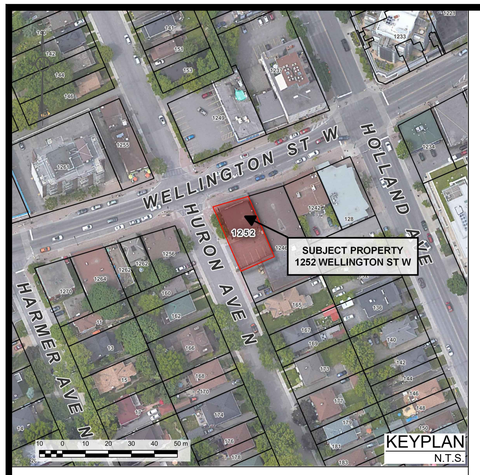
PROJECT NO.
210883

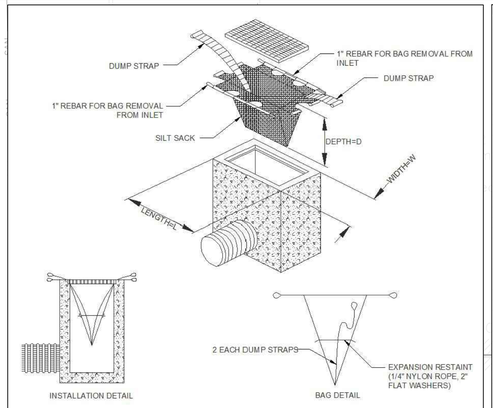
DATE
JANUARY 2022

C001

D07-12-22-0081

#18779





INLET SEDIMENT CONTROL DEVICE
N.T.S.

EROSION AND SEDIMENT CONTROL MEASURES:

** CONTRACTOR IS RESPONSIBLE FOR ALL INSTALLATION, MONITORING, REPAIR AND REMOVAL OF ALL EROSION AND SEDIMENT CONTROL FEATURES **

** THE SEDIMENT AND EROSION CONTROL MEASURES MAY BE MODIFIED IN THE FIELD AT THE DISCRETION OF THE CITY OF OTTAWA SITE INSPECTOR OR CONSERVATION AUTHORITY**

1. PRIOR TO START OF CONSTRUCTION:

- PRIOR TO THE REMOVAL OF ANY VEGETATIVE COVER, MOVING OF SOIL AND CONSTRUCTION:
- INSTALL SILT FENCE IMMEDIATELY DOWNSTREAM FROM AREAS TO BE DISTURBED (SEE PLAN FOR LOCATION).
- INSTALL GEOSOCK INSERTS WITH AN OVERFLOW IN ALL THE DOWNSTREAM CATCHBASINS AND MANHOLES
- INSTALL SILTSACK FILTERS IN ALL CONCRETE CATCH BASINS STRUCTURES
- INSPECT MEASURES IMMEDIATELY AFTER INSTALLATION.

2. DURING CONSTRUCTION:

- MINIMIZE THE EXTENT OF DISTURBED AREAS AND THE DURATION OF EXPOSURE.
- PROTECT DISTURBED AREAS FROM RUNOFF.
- PROVIDE TEMPORARY COVER SUCH AS SEEDING OR MULCHING IF DISTURBED AREA WILL NOT BE REHABILITATED WITHIN 30 DAYS.
- INSPECT SILT FENCES, FILTER CLOTHS AND CATCH BASIN SUMPS WEEKLY AND AFTER EVERY MAJOR STORM EVENT. CLEAN AND REPAIR WHEN NECESSARY.
- PLAN TO BE REVIEWED AND REVISED AS REQUIRED DURING CONSTRUCTION
- EROSION CONTROL FENCING TO BE ALSO INSTALLED AROUND THE BASE OF ALL STOCKPILES.
- DO NOT LOCATE TOPSOIL PILES AND EXCAVATION MATERIAL CLOSER THAN 2.5m FROM ANY PAVED SURFACE, OR ONE WHICH IS TO BE PAVED BEFORE THE PILE IS REMOVED. ALL TOPSOIL PILES ARE TO BE SEEDED IF THEY ARE TO REMAIN ON SITE LONG ENOUGH FOR SEEDS TO GROW (LONGER THAN 30 DAYS).
- CONTROL WIND-BLOWN DUST OFF SITE TO ACCEPTABLE LEVELS BY SEEDING TOPSOIL PILES AND OTHER AREAS TEMPORARILY (PROVIDE WATERING AS REQUIRED).
- ALL EROSION CONTROL STRUCTURE TO REMAIN IN PLACE UNTIL ALL DISTURBED GROUND SURFACES HAVE BEEN STABILIZED EITHER BY PAVING OR RESTORATION OF VEGETATIVE GROUND COVER.
- NO ALTERNATE METHODS OF EROSION PROTECTION SHALL BE PERMITTED UNLESS APPROVED BY THIS CONSULTING ENGINEER AND THE CITY DEPARTMENT OF PUBLIC WORKS.
- CONTRACTOR RESPONSIBLE FOR CITY ROADWAY AND SIDEWALK TO BE CLEANED OF ALL SEDIMENT FROM VEHICULAR TRACKING ETC. AT THE END OF EACH WORK DAY.
- PROVIDE GRAVEL ENTRANCE WHEREVER EQUIPMENT LEAVES THE SITE TO PREVENT MUD TRACKING ONTO PAVED SURFACES. GRAVEL BED SHALL BE A MINIMUM OF 15m LONG, 4M WIDE AND 0.3m DEEP AND SHALL CONSIST OF COARSE (50mm CRUSHERT-RUN LIMESTONE) MATERIAL. MAINTAIN GRAVEL ENTRANCE IN CLEAN CONDITION.
- DURING WET CONDITIONS, TIRES OF ALL VEHICLES/EQUIPMENT LEAVING THE SITE ARE TO BE SCRAPED.
- ANY MUD/MATERIAL TRACKED ONTO THE ROAD SHALL BE REMOVED IMMEDIATELY BY HAND OR RUBBER TIRE LOADER.
- TAKE ALL NECESSARY STEPS TO PREVENT BUILDING MATERIAL, CONSTRUCTION DEBRIS OR WASTE BEING SPILLED OR TRACKED ONTO ABUTTING PROPERTIES OR PUBLIC STREETS DURING CONSTRUCTION AND PROCEED IMMEDIATELY TO CLEAN UP ANY AREAS SO AFFECTED.

3. AFTER CONSTRUCTION:

- PROVIDE PERMANENT COVER CONSISTING OF TOPSOIL AND SEED TO DISTURBED AREAS.
- REMOVE STRAW BALE FLOW CHECK DAMS, SILT FENCES AND FILTER CLOTHS ON CATCH BASINS AND MANHOLE COVERS AFTER DISTURBED AREAS HAVE BEEN REHABILITATED AND STABILIZED.
- INSPECT AND CLEAN CATCH BASIN SUMPS AND STORM SEWERS.CB SUMP TO BE PERIODICALLY CLEANED TO ENSURE ACCUMULATED SEDIMENTS DO NOT INTERFERE WITH STORMWATER CONVEYANCE OR CONTRIBUTE TO INCREASED BUILD-UP OF CONTAMINANTS (HEAVY METALS, NUTRIENTS, TOTAL SUSPENDED SOLIDS, PCB'S, PAH'S, ETC) IN THE SUMP, THAT MAY ENTER THE SEWER SYSTEM.

MUD MAT - CONSTRUCTION ACCESS
NTS

ITEM	EXISTING	PROPOSED
PROPERTY LINE		
CURB		
DEPRESSED CURB		
FENCELINE		
DOOR ENTRANCE		
STORMSEWER	STM	STM
STORM MANHOLE	STMMH	STMMH
STORM CATCH BASIN		
SANITARY SEWER	SAN	SAN
SANITARY MANHOLE	SANMH	SANMH
WATERMAIN	WTR	WTR
VALVE		
FIRE HYDRANT		
BENDS		
CURB STOP		
CAP OR PLUG		
REDUCER		
SLEEVE OR COUPLING		
UTILITY POLE		
UTILITY POLE w/GUY		
GAS LINE	GAS	GAS
PIPE INSULATION		
GRASS AREA		
CONCRETE FEATURES		
ASPHALT (HEAVY DUTY)		
PAVING STONES		
ELEVATION	+0.00	+0.00
BOT. OF CURB/ASPH ELEVATION		+0.00 TC
TOP OF CURB ELEVATION		+0.00 BC
STORM WATERSHED		EWS-XX (UNCONTROLLED) 00.00 0.00 — WATERSHED NAME; RUNOFF COEFFICIENT; AREA IN HECTARES
100yr HIGH WATER LVL (PLAN)		
OVERLAND MJR FLOW ROUTE		
STORM WATERSHED EXTENT		
VEGETATION (TREES/SHRUBS)		
TREELINE		

USE AND INTERPRETATION OF DRAWINGS

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION ARE PART OF THE CONTRACT DOCUMENTS AND DESCRIBE USE AND INTENT OF THE DRAWING. THE CONTRACT DOCUMENTS INCLUDE NOT ONLY THE DRAWINGS, BUT ALSO THE OWNER-CONTRACTOR AGREEMENTS, CONDITIONS OF THE CONTRACT, THE SPECIFICATIONS, ADDENDA, AND MODIFICATIONS ISSUED AFTER EXECUTION OF THE CONTRACT. THESE CONTRACT DOCUMENTS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ANY ONE SHALL BE BINDING AS IF REQUIRED BY ALL. WORK NOT COMPLETELY DELINEATED HEREON SHALL BE CONSTRUCTED OF THE SAME MATERIALS AND DETAILED SIMILARLY AS WORK SHOWN MORE COMPLETELY ELSEWHERE IN THE CONTRACT DOCUMENTS.

BY USE OF THE DRAWINGS FOR CONSTRUCTION OF THE PROJECT, THE OWNER CONFIRMS THAT HE HAS REVIEWED AND APPROVED THE DRAWINGS. THE CONTRACTOR CONFIRMS THAT HE HAS VISITED THE SITE, FAMILIARIZED HIMSELF WITH THE LOCAL CONDITIONS, VERIFIED FIELD DIMENSIONS AND CORRELATED HIS OBSERVATIONS WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

AS INSTRUMENTS OF SERVICE, ALL DRAWINGS, SPECIFICATIONS, CADD FILES OR OTHER ELECTRONIC MEDIA AND COPIED THERE OF FURNISHED BY THE ENGINEER ARE HIS PROPERTY. THEY ARE TO BE USED ONLY FOR THIS PROJECT AND ARE NOT TO BE USED ON ANY OTHER PROJECT, INCLUDING REPEATS OF THE PROJECT. CHANGES TO THE DRAWINGS MAY ONLY BE MADE BY THE ENGINEER.

UNLESS THE REVISION TITLE IS "ISSUED FOR CONSTRUCTION", THESE DRAWINGS SHALL BE CONSIDERED PRELIMINARY AND SHALL NOT BE USED AS A CONSTRUCTION DOCUMENT.

THESE DRAWINGS ILLUSTRATES THE WORK TO BE DONE. THE ENGINEER IS NOT RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES USED TO DO THE WORK, OR THE SAFETY ASPECTS OF CONSTRUCTION, AND NOTHING ON THESE DRAWINGS EXPRESSED OR IMPLIED CHANGES THIS CONDITION. CONTRACTOR SHALL DETERMINE ALL CONDITIONS AT THE SITE AND SHALL BE RESPONSIBLE FOR KNOWING HOW THEY AFFECT THE WORK. SUBMITTAL OF A BID TO PERFORM THIS WORK IS ACKNOWLEDGEMENT OF THE RESPONSIBILITIES, AND THAT THEY HAVE BEEN FULLY CONSIDERED IN PLANNING OF THE WORK, AND THE BID PRICE. NO CLAIMS FOR EXTRA CHANGES DUE TO THESE CONDITIONS WILL BE FORTHCOMING.

UNAUTHORIZED CHANGES:

IN THE EVENT THE CLIENT, THE CLIENT'S CONTRACTORS OR SUBCONTRACTORS, OR ANYONE FOR WHOM THE CLIENT IS LEGALLY LIABLE MAKES OR PERMITS TO BE MADE ANY CHANGES TO ANY REPORTS, PLANS, SPECIFICATIONS OR OTHER CONSTRUCTION DOCUMENTS PREPARED BY LRL ASSOCIATES LTD. (LRL) WITHOUT OBTAINING LRL'S PRIOR WRITTEN CONSENT, THE CLIENT SHALL ASSUME FULL RESPONSIBILITY FOR THE RESULTS OF SUCH CHANGES, THEREFORE THE CLIENT AGREES TO WAIVE ANY CLAIM AGAINST LRL AND TO RELEASE LRL FROM ANY LIABILITY ARISING DIRECTLY OR INDIRECTLY FROM SUCH UNAUTHORIZED CHANGES.

IN ADDITION, THE CLIENT AGREES, TO THE FULLEST EXTENT PERMITTED BY LAW, TO INDEMNIFY AND HOLD HARMLESS LRL FROM ANY DAMAGES, LIABILITIES OR COST, INCLUDING REASONABLE ATTORNEY'S FEES AND COST OF DEFENSE, ARISING FROM SUCH CHANGES.

IN ADDITION, THE CLIENT AGREES TO INCLUDE IN ANY CONTRACTS FOR CONSTRUCTION APPROPRIATE LANGUAGE THAT PROHIBITS THE CONTRACTOR OR ANY SUBCONTRACTORS OF ANY TIER FROM MAKING ANY CHANGES OR MODIFICATIONS TO LRL'S CONSTRUCTION DOCUMENTS WITHOUT THE PRIOR WRITTEN APPROVAL OF LRL AND THAT FURTHER REQUIRES THE CONTRACTOR TO INDEMNIFY BOTH LRL AND THE CLIENT FROM ANY LIABILITY OR COST ARISING FROM SUCH CHANGES MADE WITHOUT SUCH PROPER AUTHORIZATION.

GENERAL NOTES:

EXISTING SERVICES AND UTILITIES SHOWN ON THESE DRAWINGS ARE TAKEN FROM THE BEST AVAILABE RECORDS, BUT MAY NOT BE COMPLETE OR TO DATE. CONTRACTOR SHALL VERIFY IN FIELD FOR LOCATION AND ELEVATION OF PIPES AND CHECK WITH THE UTILITY COMPANIES BEFORE DIGGING OR PERFORMING WORK.

CONTRACTOR IS ADVISED TO COLLECT INFORMATION ON SOIL CONDITIONS BEFORE START OF CONSTRUCTION.

THE ENGINEER WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS AND THE DESIGN INTENT THEY CONVEY, OR FOR PROBLEMS WHICH ARISE FROM OTHERS' FAILURE TO OBTAIN AND/OR FOLLOW THE ENGINEER'S GUIDANCE WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES AMBIGUITIES OR CONFLICTS WHICH ARE ALLEGED.

CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE WORK COMMENCES. DO NOT SCALE DRAWINGS.

2m 0.5 0 2 4m
SCALE: 1:100

No.	REVISIONS	BY	DATE
02	RE-ISSUED FOR SITE PLAN APPROVAL	K.H.	02 FEB 2023
01	ISSUED FOR SITE PLAN APPROVAL	K.H.	16 MAR 2022

LICENSED PROFESSIONAL ENGINEER
V. JOHNSON
100510576
02-02-2023
PROVINCE OF ONTARIO

NOT AUTHENTIC UNLESS SIGNED AND DATED

LRL
ENGINEERING | INGÉNIERIE
5430 Canotek Road I Ottawa, ON, K1J 9G2
www.lrl.ca I (613) 842-3434

CLIENT
WELLINGTON HURON COMMERCIAL INC.

DESIGNED BY:	DRAWN BY:	APPROVED BY:
K.H.	M.A.	V.J.

PROJECT
PROPOSED ADDITION TO MIXED USE BUILDING
1252 WELLINGTON ST., OTTAWA, ON.

DRAWING TITLE
EROSION AND SEDIMENT CONTROL PLAN

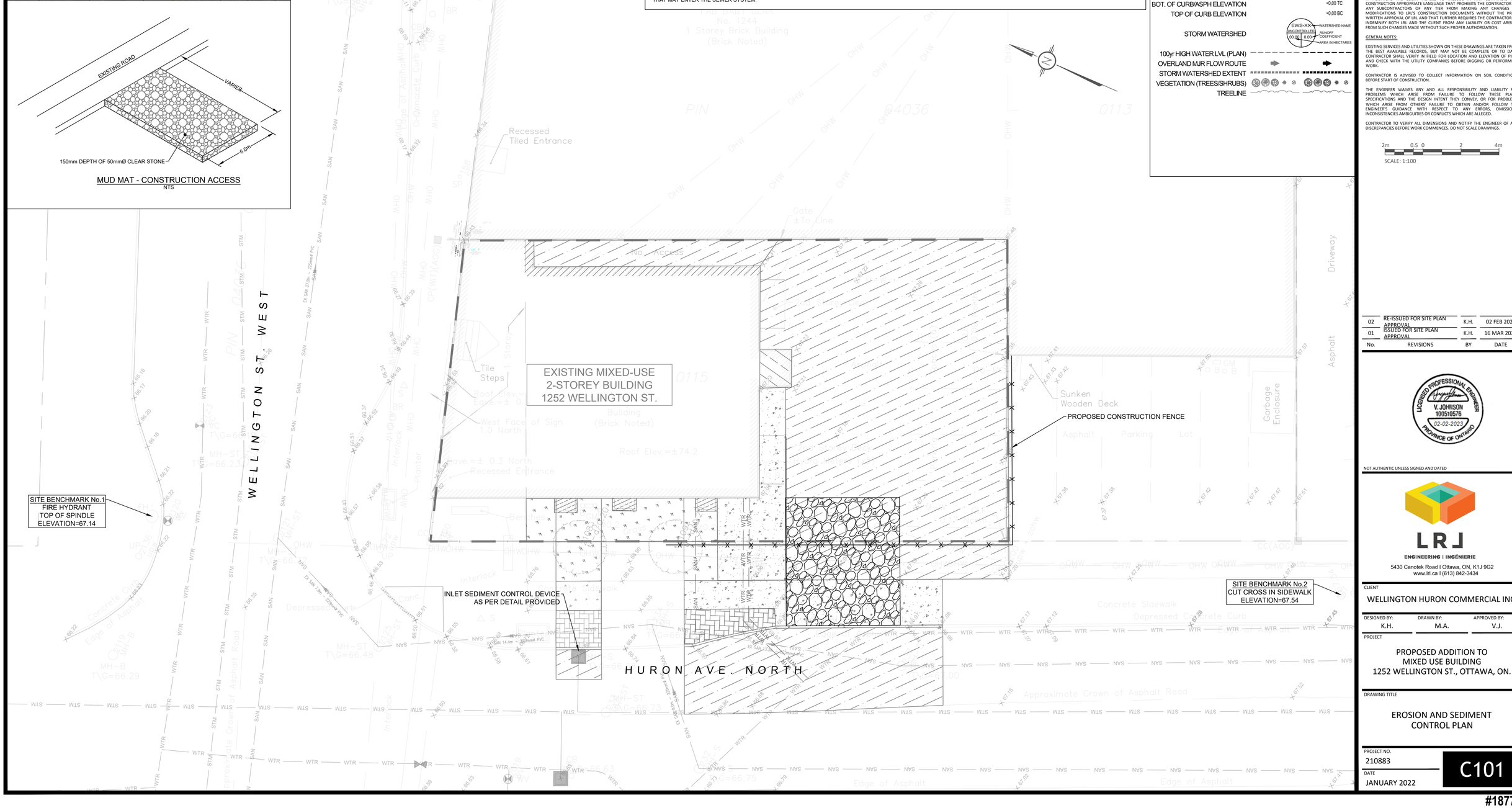
PROJECT NO.
210883

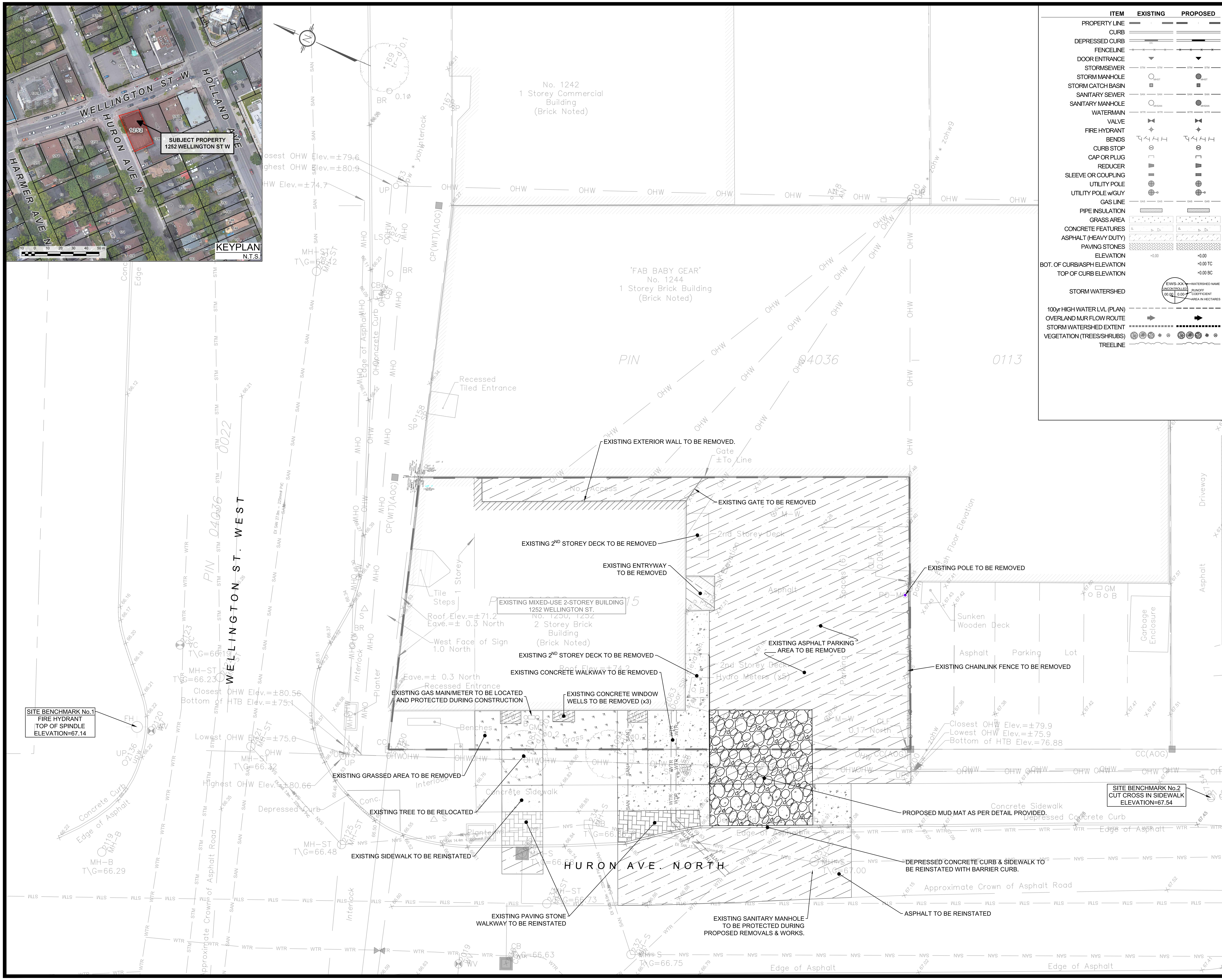
DATE
JANUARY 2022

C101

D07-12-22-0081

#18779





USE AND INTERPRETATION OF DRAWINGS

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION ARE PART OF THE CONTRACT DOCUMENTS AND DESCRIBE USE AND INTENT OF THE DRAWING. THE CONTRACT DOCUMENTS INCLUDE NOT ONLY THE DRAWINGS, BUT ALSO THE OWNER-CONTRACTOR AGREEMENTS, CONDITIONS OF THE CONTRACT, THE SPECIFICATIONS, ADDENDA, AND MODIFICATIONS ISSUED AFTER EXECUTION OF THE CONTRACT. THESE CONTRACT DOCUMENTS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ANY ONE SHALL BE BINDING AS IF REQUIRED BY ALL. WORK NOT COMPLETELY DELINEATED HEREON SHALL BE CONSTRUCTED OF THE SAME MATERIALS AND DETAILED SIMILARLY AS WORK SHOWN MORE COMPLETELY ELSEWHERE IN THE CONTRACT DOCUMENTS.

BY USE OF THE DRAWINGS FOR CONSTRUCTION OF THE PROJECT, THE OWNER CONFIRMS THAT HE HAS REVIEWED AND APPROVED THE DRAWINGS. THE CONTRACTOR CONFIRMS THAT HE HAS VISITED THE SITE, FAMILIARIZED HIMSELF WITH THE LOCAL CONDITIONS, VERIFIED FIELD DIMENSIONS AND CORRELATED HIS OBSERVATIONS WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

AS INSTRUMENTS OF SERVICE, ALL DRAWINGS, SPECIFICATIONS, CADD FILES OR OTHER ELECTRONIC MEDIA AND COPIED THERE OF FURNISHED BY THE ENGINEER ARE HIS PROPERTY. THEY ARE TO BE USED ONLY FOR THIS PROJECT AND ARE NOT TO BE USED ON ANY OTHER PROJECT, INCLUDING REPEATS OF THE PROJECT. CHANGES TO THE DRAWINGS MAY ONLY BE MADE BY THE ENGINEER.

UNLESS THE REVISION TITLE IS "ISSUED FOR CONSTRUCTION", THESE DRAWINGS SHALL BE CONSIDERED PRELIMINARY AND SHALL NOT BE USED AS A CONSTRUCTION DOCUMENT.

THESE DRAWINGS ILLUSTRATES THE WORK TO BE DONE. THE ENGINEER IS NOT RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES USED TO DO THE WORK, OR THE SAFETY ASPECTS OF CONSTRUCTION, AND NOTHING ON THESE DRAWINGS EXPRESSED OR IMPLIED CHANGES THIS CONDITION. CONTRACTOR SHALL DETERMINE ALL CONDITIONS AT THE SITE AND SHALL BE RESPONSIBLE FOR KNOWING HOW THEY AFFECT THE WORK. SUBMITTAL OF A BID TO PERFORM THIS WORK IS ACKNOWLEDGEMENT OF THE RESPONSIBILITIES, AND THAT THEY HAVE BEEN FULLY CONSIDERED IN PLANNING OF THE WORK, AND THE BID PRICE. NO CLAIMS FOR EXTRA CHARGES DUE TO THESE CONDITIONS WILL BE FORTHCOMING.

UNAUTHORIZED CHANGES:

IN THE EVENT THE CLIENT, THE CLIENT'S CONTRACTORS OR SUBCONTRACTORS, OR ANYONE FOR WHOM THE CLIENT IS LEGALLY LIABLE MAKES OR PERMITS TO BE MADE ANY CHANGES TO ANY REPORTS, PLANS, SPECIFICATIONS OR OTHER CONSTRUCTION DOCUMENTS PREPARED BY LRL ASSOCIATES LTD. (LRL) WITHOUT OBTAINING LRL'S PRIOR WRITTEN CONSENT, THE CLIENT SHALL ASSUME FULL RESPONSIBILITY FOR THE RESULTS OF SUCH CHANGES. THEREFORE THE CLIENT AGREES TO WAIVE ANY CLAIM AGAINST LRL AND TO RELEASE LRL FROM ANY LIABILITY ARISING DIRECTLY OR INDIRECTLY FROM SUCH UNAUTHORIZED CHANGES.

IN ADDITION, THE CLIENT AGREES, TO THE FULLEST EXTENT PERMITTED BY LAW, TO INDEMNIFY AND HOLD HARMLESS LRL FROM ANY DAMAGES, LIABILITIES OR COST, INCLUDING REASONABLE ATTORNEY'S FEES AND COST OF DEFENSE, ARISING FROM SUCH CHANGES.

IN ADDITION, THE CLIENT AGREES TO INCLUDE IN ANY CONTRACTS FOR CONSTRUCTION APPROPRIATE LANGUAGE THAT PROHIBITS THE CONTRACTOR OR ANY SUBCONTRACTORS OF ANY TIER FROM MAKING ANY CHANGES OR MODIFICATIONS TO LRL'S CONSTRUCTION DOCUMENTS WITHOUT THE PRIOR WRITTEN APPROVAL OF LRL AND THAT FURTHER REQUIRES THE CONTRACTOR TO INDEMNIFY BOTH LRL AND THE CLIENT FROM ANY LIABILITY OR COST ARISING FROM SUCH CHANGES MADE WITHOUT SUCH PROPER AUTHORIZATION.

GENERAL NOTES:

EXISTING SERVICES AND UTILITIES SHOWN ON THESE DRAWINGS ARE TAKEN FROM THE BEST AVAILABLE RECORDS, BUT MAY NOT BE COMPLETE OR TO DATE. CONTRACTOR SHALL VERIFY IN FIELD FOR LOCATION AND ELEVATION OF PIPES AND CHECK WITH THE UTILITY COMPANIES BEFORE DIGGING OR PERFORMING WORK.

CONTRACTOR IS ADVISED TO COLLECT INFORMATION ON SOIL CONDITIONS BEFORE START OF CONSTRUCTION.

THE ENGINEER WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS AND THE DESIGN INTENT THEY CONVEY, OR FOR PROBLEMS WHICH ARISE FROM OTHERS' FAILURE TO OBTAIN AND/OR FOLLOW THE ENGINEER'S GUIDANCE WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES AMBIGUITIES OR CONFLICTS WHICH ARE ALLEGED.

CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE WORK COMMENCES. DO NOT SCALE DRAWINGS.

2m 0.5 0 2 4m

SCALE: 1:100

No.	REVISIONS	BY	DATE
02	RE-ISSUED FOR SITE PLAN APPROVAL	K.H.	02 FEB 2023
01	ISSUED FOR SITE PLAN APPROVAL	K.H.	16 MAR 2022

LICENSED PROFESSIONAL ENGINEER
V. JOHNSON
100510576
02-02-2023
PROVINCE OF ONTARIO

NOT AUTHENTIC UNLESS SIGNED AND DATED

LRL
ENGINEERING | INGÉNIERIE
5430 Canotek Road | Ottawa, ON, K1J 9G2
www.lrl.ca | (613) 842-3434

CLIENT
WELLINGTON HURON COMMERCIAL INC.

DESIGNED BY:	DRAWN BY:	APPROVED BY:
K.H.	M.A.	V.J.

PROJECT
PROPOSED ADDITION TO
MIXED USE BUILDING
1252 WELLINGTON ST., OTTAWA, ON.

DRAWING TITLE
EXISTING CONDITIONS AND
DEMOLITION PLAN

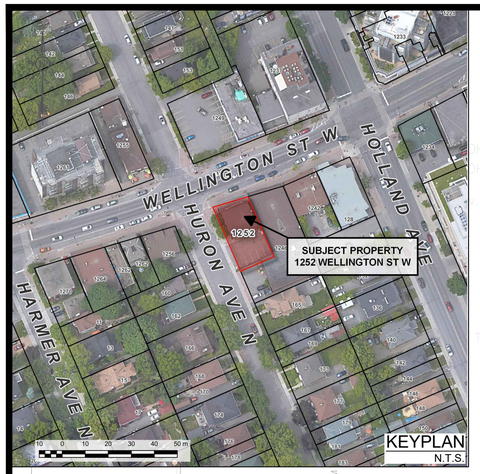
PROJECT NO.
210883

DATE
JANUARY 2022

C102

D07-12-22-0081

#18779



PAVEMENT STRUCTURE

COURSE	MATERIAL	THICKNESS (mm) TRUCK ROUTE (HEAVY TRAFFIC)
SURFACE	HL.3 A/C (PG 58-34)	40
BINDER	HL.8 A/C (PG 58-34)	50
BASECOURSE	OPSS GRANULAR "A"	150
SUBBASE	OPSS GRANULAR "B" TYPE II	450

NOTE:
IN PREPARATION FOR PAVEMENT CONSTRUCTION AT THIS SITE, ANY SURFICIAL OR NEAR SURFACE/SUBGRADE LEVEL TOPSOIL AND ANY SOFT, WET OR DELETERIOUS MATERIALS SHOULD BE REMOVED FROM THE PROPOSED PAVED AREAS. THE EXPOSED SUBGRADE SHOULD BE INSPECTED AND APPROVED BY GEOTECHNICAL PERSONNEL AND ANY SOFT AREAS EVIDENT SHOULD BE SUBEXCAVATED AND REPLACED WITH SUITABLE EARTH BORROW APPROVED BY THE GEOTECHNICAL ENGINEER. THE SUBGRADE SHOULD BE SHAPED AND CROWNED TO PROMOTE DRAINAGE OF THE SITE DRAINAGE STRUCTURES. FOLLOWING APPROVAL OF THE PREPARATION OF THE SUBGRADE, THE PAVEMENT GRANULARS MAY BE PLACED.

PAVEMENT STRUCTURE AS PER RECOMMENDATION FROM THE GEOTECHNICAL INVESTIGATION REPORT PREPARED BY PATERSON GROUP DATED JANUARY 17, 2022

ITEM	EXISTING	PROPOSED
PROPERTY LINE		
CURB		
DEPRESSED CURB		
FENCELINE		
DOOR ENTRANCE		
STORMSEWER	STM	STM
STORM MANHOLE	STMMH	STMMH
STORM CATCH BASIN		
SANITARY SEWER	SAN	SAN
SANITARY MANHOLE	SANMH	SANMH
WATERMAIN	WTR	WTR
VALVE		
FIRE HYDRANT		
BENDS		
CURB STOP		
CAP OR PLUG		
REDUCER		
SLEEVE OR COUPLING		
UTILITY POLE		
UTILITY POLE w/GUY		
GAS LINE	GAS	GAS
PIPE INSULATION		
GRASS AREA		
CONCRETE FEATURES		
ASPHALT (HEAVY DUTY)		
PAVING STONES		
ELEVATION	×0.00	×0.00
BOT. OF CURB/ASPH ELEVATION		×0.00 TC
TOP OF CURB ELEVATION		×0.00 BC
STORM WATERSHED		EWS-XX (UNCONTROLLED) 00.00 0.00 — WATERSHED NAME, RUNOFF COEFFICIENT, AREA IN HECTARES
100yr HIGH WATER LVL (PLAN)		
OVERLAND MJR FLOW ROUTE		
STORM WATERSHED EXTENT		
VEGETATION (TREES/SHRUBS)		
TREELINE		

WITH REFERENCE TO THE TOPOGRAPHICAL SURVEY PREPARED BY ANNIS, O'SULLIVAN & VOLLEBEKK, JOB: 21693-21 DOMICILE LT7 RP127960 T D1, DATED JUNE 11TH 2021

Bearings are astronomic, derived from the easterly limit of Huron Avenue North, having a bearing of N22°58'42"W as shown on Registered Plan 127960.

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.

USE AND INTERPRETATION OF DRAWINGS

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION ARE PART OF THE CONTRACT DOCUMENTS AND DESCRIBE USE AND INTENT OF THE DRAWING. THE CONTRACT DOCUMENTS INCLUDE NOT ONLY THE DRAWINGS, BUT ALSO THE OWNER-CONTRACTOR AGREEMENTS, CONDITIONS OF THE CONTRACT, THE SPECIFICATIONS, ADDENDA, AND MODIFICATIONS ISSUED AFTER EXECUTION OF THE CONTRACT. THESE CONTRACT DOCUMENTS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ANY ONE SHALL BE BINDING AS IF REQUIRED BY ALL. WORK NOT COMPLETELY DELINEATED HEREON SHALL BE CONSTRUCTED OF THE SAME MATERIALS AND DETAILED SIMILARLY AS WORK SHOWN MORE COMPLETELY ELSEWHERE IN THE CONTRACT DOCUMENTS.

BY USE OF THE DRAWINGS FOR CONSTRUCTION OF THE PROJECT, THE OWNER CONFIRMS THAT HE HAS REVIEWED AND APPROVED THE DRAWINGS. THE CONTRACTOR CONFIRMS THAT HE HAS VISITED THE SITE, FAMILIARIZED HIMSELF WITH THE LOCAL CONDITIONS, VERIFIED FIELD DIMENSIONS AND CORRELATED HIS OBSERVATIONS WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

AS INSTRUMENTS OF SERVICE, ALL DRAWINGS, SPECIFICATIONS, CADD FILES OR OTHER ELECTRONIC MEDIA AND COPIED THERE OF FURNISHED BY THE ENGINEER ARE HIS PROPERTY. THEY ARE TO BE USED ONLY FOR THIS PROJECT AND ARE NOT TO BE USED ON ANY OTHER PROJECT, INCLUDING REPEATS OF THE PROJECT. CHANGES TO THE DRAWINGS MAY ONLY BE MADE BY THE ENGINEER.

UNLESS THE REVISION TITLE IS "ISSUED FOR CONSTRUCTION", THESE DRAWINGS SHALL BE CONSIDERED PRELIMINARY AND SHALL NOT BE USED AS A CONSTRUCTION DOCUMENT.

THESE DRAWINGS ILLUSTRATES THE WORK TO BE DONE. THE ENGINEER IS NOT RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES USED TO DO THE WORK, OR THE SAFETY ASPECTS OF CONSTRUCTION, AND NOTHING ON THESE DRAWINGS EXPRESSED OR IMPLIED CHANGES THIS CONDITION. CONTRACTOR SHALL DETERMINE ALL CONDITIONS AT THE SITE AND SHALL BE RESPONSIBLE FOR KNOWING HOW THEY AFFECT THE WORK. SUBMITTAL OF A BID TO PERFORM THIS WORK IS ACKNOWLEDGEMENT OF THE RESPONSIBILITIES, AND THAT THEY HAVE BEEN FULLY CONSIDERED IN PLANNING OF THE WORK, AND THE BID PRICE. NO CLAIMS FOR EXTRA CHARGES DUE TO THESE CONDITIONS WILL BE FORTHCOMING.

UNAUTHORIZED CHANGES:

IN THE EVENT THE CLIENT, THE CLIENT'S CONTRACTORS OR SUBCONTRACTORS, OR ANYONE FOR WHOM THE CLIENT IS LEGALLY LIABLE MAKES OR PERMITS TO BE MADE ANY CHANGES TO ANY REPORTS, PLANS, SPECIFICATIONS OR OTHER CONSTRUCTION DOCUMENTS PREPARED BY LRL ASSOCIATES LTD. (LRL) WITHOUT OBTAINING LRL'S PRIOR WRITTEN CONSENT, THE CLIENT SHALL ASSUME FULL RESPONSIBILITY FOR THE RESULTS OF SUCH CHANGES, THEREFORE THE CLIENT AGREES TO WAIVE ANY CLAIM AGAINST LRL AND TO RELEASE LRL FROM ANY LIABILITY ARISING DIRECTLY OR INDIRECTLY FROM SUCH UNAUTHORIZED CHANGES.

IN ADDITION, THE CLIENT AGREES, TO THE FULLEST EXTENT PERMITTED BY LAW, TO INDEMNIFY AND HOLD HARMLESS LRL FROM ANY DAMAGES, LIABILITIES OR COST, INCLUDING REASONABLE ATTORNEY'S FEES AND COST OF DEFENSE, ARISING FROM SUCH CHANGES.

IN ADDITION, THE CLIENT AGREES TO INCLUDE IN ANY CONTRACTS FOR CONSTRUCTION APPROPRIATE LANGUAGE THAT PROHIBITS THE CONTRACTOR OR ANY SUBCONTRACTORS OF ANY TIER FROM MAKING ANY CHANGES OR MODIFICATIONS TO LRL'S CONSTRUCTION DOCUMENTS WITHOUT THE PRIOR WRITTEN APPROVAL OF LRL AND THAT FURTHER REQUIRES THE CONTRACTOR TO INDEMNIFY BOTH LRL AND THE CLIENT FROM ANY LIABILITY OR COST ARISING FROM SUCH CHANGES MADE WITHOUT SUCH PROPER AUTHORIZATION.

GENERAL NOTES:

EXISTING SERVICES AND UTILITIES SHOWN ON THESE DRAWINGS ARE TAKEN FROM THE BEST AVAILABLE RECORDS, BUT MAY NOT BE COMPLETE OR TO DATE. CONTRACTOR SHALL VERIFY IN FIELD FOR LOCATION AND ELEVATION OF PIPES AND CHECK WITH THE UTILITY COMPANIES BEFORE DIGGING OR PERFORMING WORK.

CONTRACTOR IS ADVISED TO COLLECT INFORMATION ON SOIL CONDITIONS BEFORE START OF CONSTRUCTION.

THE ENGINEER WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS AND THE DESIGN INTENT THEY CONVEY, OR FOR PROBLEMS WHICH ARISE FROM OTHERS' FAILURE TO OBTAIN AND/OR FOLLOW THE ENGINEER'S GUIDANCE WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES AMBIGUITIES OR CONFLICTS WHICH ARE ALLEGED.

CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE WORK COMMENCES. DO NOT SCALE DRAWINGS.

2m 0.5 0 2 4m
SCALE: 1:100

No.	REVISIONS	BY	DATE
02	RE-ISSUED FOR SITE PLAN APPROVAL	K.H.	02 FEB 2023
01	ISSUED FOR SITE PLAN APPROVAL	K.H.	16 MAR 2022

LICENSED PROFESSIONAL ENGINEER V. JOHNSON 100510576 02-02-2023 PROVINCE OF ONTARIO

NOT AUTHENTIC UNLESS SIGNED AND DATED

LRL
ENGINEERING | INGÉNIERIE
5430 Canotek Road I Ottawa, ON, K1J 9G2
www.lrl.ca I (613) 842-3434

CLIENT
WELLINGTON HURON COMMERCIAL INC.

DESIGNED BY:	DRAWN BY:	APPROVED BY:
K.H.	M.A.	V.J.

PROJECT
PROPOSED ADDITION TO MIXED USE BUILDING
1252 WELLINGTON ST., OTTAWA, ON.

DRAWING TITLE
GRADING AND DRAINAGE PLAN

PROJECT NO.
210883
DATE
JANUARY 2022

C301

D07-12-22-0081

#18779

SITE BENCHMARK No.1
FIRE HYDRANT
TOP OF SPINDLE
ELEVATION=67.14

SITE BENCHMARK No.2
CUT CROSS IN SIDEWALK
ELEVATION=67.54

PROPERTY LINE

EXISTING MIXED-USE 2-STOREY BUILDING
1252 WELLINGTON ST.

PROPOSED 3-STOREY ADDITION TO EXISTING MULTI-USE BUILDING
TOF = 67.40
FFE = 67.25
USF = 64.51

PROPOSED CONCRETE STEPS ±380mm (2 STEPS)

PROPOSED CONCRETE STEPS ±570mm (3 STEPS)

PROPOSED ROOF SCUPPER LOCATION AND ELEVATION TO BE CONFIRMED BY ARCHITECTURAL AND MECHNICAL ENGINEERING PLANS. BOTTOM OF SCUPPER TO BE MIN 0.10m ABOVE ROOF DRAIN.

PROPOSED INTERLOCK

EXISTING TREE TO BE RELOCATED AS PER LANDSCAPE PLAN

CONTRACTOR TO REINSTATE GRASS WITH 100mm TOPSOIL & SOD

CONTRACTOR TO REINSTATE CONCRETE SIDEWALK AND PAVING STONE WALKWAY TO EXISTING CONDITION

EXISTING DEPRESSED CURB TO BE REINSTATED WITH PROPOSED BARRIER CURB (AS PER CITY OF OTTAWA DETAIL SC1.1).
EXISTING CONCRETE SIDEWALK TO BE REINSTATED TO MEET CITY REQUIREMENTS. NEW SIDEWALK TO BE RE-GRADED, AS PROPOSED, TO MEET PROPOSED CONCRETE SIDEWALK TOP OF CURB ELEVATION, WHILE MAINTAINING SLOPE TOWARDS HURON AVE.
ASPHALT AT BASE OF PROPOSED CURB TO BE REINSTATED, AS REQUIRED.
CONTRACTOR TO ENSURE NO LOW SPOTS ARE CREATED AND POSITIVE DRAINAGE IS MAINTAINED TO DOWNSTREAM CATCH BASIN.

SANITARY MANHOLE
MHSA54879
T/G = 66.32
S INV = 62.76
W INV = 62.79
E INV = 62.74

SANITARY MANHOLE
MHSA76816
T/G = 66.86
N INV = 62.88
S INV = 63.29
W INV = 63.00

SANITARY MANHOLE
MHSA54878
T/G = 66.48
S INV = 62.85
N INV = 62.81

CATCH BASIN CB IN166655
T/G = 66.68
E INV = 65.80
(TO BE REPLACED WITH CBMH)

ASPHALT REINSTATEMENT SHALL MATCH EXISTING GRANULAR AND ASPHALT THICKNESS WHILE MAINTAINING A MINIMUM OF:
40mm OF HL3
50mm OF HL8
150mm OF GRANULAR "A"
450mm OF GRANULAR "B"
CONTRACTOR TO COMPLETE ROAD CUT AS PER CITY OF OTTAWA DETAIL R10.

CATCH BASIN
CB IN166656
T/G = 66.63
E INV = 65.79

DOWNSTREAM STM MH
MHST37526
T/G = 66.73
N INV = 59.65
S INV = 59.66

SANITARY MANHOLE
MHSA76814
T/G = 66.75
E INV = 63.07
S INV = 63.38

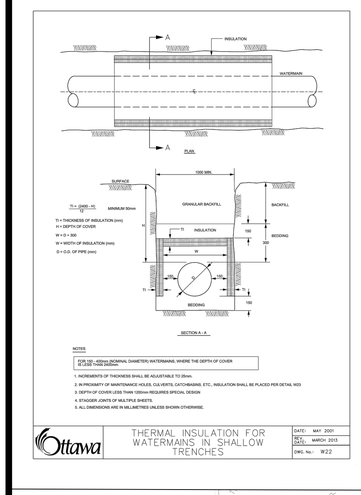
DOWNSTREAM SAN MH
MHSA76817
T/G = 67.00
S INV = 63.43
N INV = 63.42

LIMIT OF ASPHALT REINSTATEMENT (MIN 0.5m KEY REQUIRED)

ASPHALT REINSTATEMENT SHALL MATCH EXISTING GRANULAR AND ASPHALT THICKNESS WHILE MAINTAINING A MINIMUM OF:
40mm OF HL3
50mm OF HL8
150mm OF GRANULAR "A"
450mm OF GRANULAR "B"
CONTRACTOR TO COMPLETE ROAD CUT AS PER CITY OF OTTAWA DETAIL R10.
ASPHALT REINSTATEMENT TO BE AS PER PRE-DEVELOPMENT CONDITIONS OR GREATER.
CONTRACTOR TO ENSURE TIE-IN ELEVATIONS ARE CONSISTENT WITH PRE-DEVELOPMENT ELEVATIONS, AND GRADING IS CONTINUOUS FOR ENTIRE REINSTATED ASPHALT SURFACE

WELLINGTON ST. WEST

HURON AVE. NOR



PIPE CROSSING TABLE (±)						
CROSSING ID	PROP. 100mm SAN OBVERT	PROP. 100mm STM INVERT	EXIST. 152mm WM INVERT	EXIST. 225mm SAN SWR OBVERT	GROUND ELEVATION	SEPARATION (m)
X1	63.73		±64.53		66.96	0.85
X2		65.85		±63.14	66.82	1.16

WATERMAIN SERVICE SCHEDULE			
DESCRIPTION	CHAINAGE	INVERT ELEV	FINISHED GRADE
CONNECTION TO EXISTING	0+000.0	64.62	67.22
PROPOSED CURB STOP	0+002.6	64.62	67.17
PROPOSED BUILDING	0+007.4	64.62	66.97
ADDITIONAL NOTES: IF 2.4m COVER REQUIREMENT CANNOT BE MET, INSULATION WILL BE REQUIRED			

ITEM	EXISTING	PROPOSED
PROPERTY LINE		
CURB		
DEPRESSED CURB		
FENCELINE		
DOOR ENTRANCE		
STORMSEWER	STM	STM
STORM MANHOLE	STMMH	STMMH
STORM CATCH BASIN		
SANITARY SEWER	SAN	SAN
SANITARY MANHOLE	SANMH	SANMH
WATERMAIN	WTR	WTR
VALVE		
FIRE HYDRANT		
BENDS		
CURB STOP		
CAP OR PLUG		
REDUCER		
SLEEVE OR COUPLING		
UTILITY POLE		
UTILITY POLE w/GUY		
GAS LINE	GAS	GAS
PIPE INSULATION		
GRASS AREA		
CONCRETE FEATURES		
ASPHALT (HEAVY DUTY)		
PAVING STONES		
ELEVATION	±0.00	±0.00
BOT. OF CURB/ASPH ELEVATION		±0.00 TC
TOP OF CURB ELEVATION		±0.00 BC
STORM WATERSHED		EWS-XX (UNCONTROLLED) 00.00 0.00 — WATERSHED NAME, RUNOFF COEFFICIENT, AREA IN HECTARES
100yr HIGH WATER LVL (PLAN)		
OVERLAND MJR FLOW ROUTE		
STORM WATERSHED EXTENT		
VEGETATION (TREES/SHRUBS)		
TREELINE		

WELLINGTON ST. WEST

HURON AVE. NORTH

EXISTING MIXED-USE 2-STOREY BUILDING
1252 WELLINGTON ST.
USF = 64.18

PROPOSED 3-STOREY ADDITION TO EXISTING MULTI-USE BUILDING
TOF = 67.40
FFE = 67.22
USF = 64.48

EXISTING BUILDING FOUNDATION DRAIN TO REMAIN. PROPOSED NEW ADDITION FOUNDATION DRAIN TO OUTLET TO EXISTING BUILDING SUMP PIT / PUMP. FOUNDATION DRAIN AS PER ARCHITECTURAL PLANS.

EXISTING AND PROPOSED ROOF DRAINAGE TO BE TIED TO PROPOSED ROOF DRAIN OUTLET. REFER TO MECHANICAL PLANS FOR GREATER DETAIL.

PROPOSED 100mmØ (SUMP PUMP) OUTLET.

PROPOSED 100mmØ STORM SERVICE (ROOF DRAIN) OUTLET.
GROUND ELEV @ BUILDING = 66.85
INVERT @ BUILDING = 65.91
C/W INSUALTION AS PER DETAIL W22

PROPOSED 100mmØ SANITARY SERVICE CONNECTION
GROUND ELEV @ BUILDING = 67.22
INVERT @ BUILDING = 63.91

PROPOSED 50mmØ WATER SERVICE CONNECTION
GROUND ELEV @ BUILDING = 67.22
WTR INV TO BE MIN. 2.4m BELOW GROUND ELEV.

PROPOSED 100mm WATER VALVE & VALVE BOX

PROPOSED 8.0m OF 100mmØ (SUMP PUMP) FORCEMAIN C/W BACKWATER VALVE AS PER CoO DETAIL S14

PROPOSED 8.0m OF 100mmØ PVC DR-28 (ROOF DRAIN) STORM SERVICE AT 1.0%

SANITARY MANHOLE
MHSA54879
T/G = 66.32
S INV = 62.76
W INV = 62.79
E INV = 62.74

PROPOSED PIPE CROSSING X2.
EXISTING SANITARY OBVERT = ±63.14
PROPOSED STORM SERVICE INVERT = 65.85
REFER TO CITY OF OTTAWA DETAIL S11.1 FOR SANITARY AND WATER CROSSING.

SANITARY MANHOLE
MHSA54878
T/G = 66.48
S INV = 62.85
N INV = 62.81

EXISTING CB-01 (CBIN166655) TO BE REPLACED WITH CBMH-01 AS PER OPSD 701.010 & OTTAWA DETAIL S28.1
T/G = 66.68EX
W INV = 65.83
E INV = 65.80
W INV TO BE CONFIRMED PRIOR TO START OF WORKS. CONTRACTOR TO ENSURE EXISTING BRANCH IS SLOPED TO PROVIDE PROPER STORMWATER CONVEYANCE TO STORM SEWER.

EXISTING STORM LATERAL TO BE RECONNECTED TO PROPOSED CBMH-01

CATCH BASIN
CB IN166656
T/G = 66.63
E INV = 65.79

DOWNSTREAM STM MH
MHST37526
T/G = 66.73
N INV = 59.65
S INV = 59.66

SANITARY MANHOLE
MHSA76816
T/G = 66.86
N INV = 62.88
S INV = 63.29
W INV = 63.00

SANITARY MANHOLE
MHSA76814
T/G = 66.75
E INV = 63.07
S INV = 63.38

DOWNSTREAM SAN MH
MHSA76817
T/G = 67.00
S INV = 63.43
N INV = 63.42

CONTRACTOR TO LOCATE EXISTING SERVICES PRIOR TO CONSTRUCTION. EXISTING SEWER SERVICE ARE TO BE REMOVED AND PLUGGED AT THE MAINLINE SEWERS AS PER CITY OF OTTAWA DETAIL S11.4 AND WATER SERVICES TO BE BLANKED AT MAIN.

PROPOSED SANITARY MONITORING MAINTENANCE HOLE
T/G = 67.21
EAST INV. = 63.89
WEST INV. = 63.74

PROPOSED 7.1m OF 50mmØ PVC DR-18 WATER SERVICE W/ 75mm THICK INSULATION AS PER DETAIL W22

PROPOSED 8.8m OF 150mmØ PVC SDR-28 SANITARY SERVICE AT 3.0% C/W BACKFLOW VALVE AS PER CITY OF OTTAWA DETAIL S14.1

PROPOSED PIPE CROSSING X1.
EXISTING WATERMAIN INVERT = ±64.53
PROPOSED SANITARY SERVICE OBVERT = 63.73
REFER TO CITY OF OTTAWA DETAIL S11.1 FOR SANITARY AND WATER CROSSING.

PROPOSED SANITARY CONNECTION
TOP OF GRADE = 67.01
EXISTING 250mmØ SANITARY OBVERT = 63.68
PROPOSED 150mmØ SANITARY INVERT = 63.53
(OBVERT TO OBVERT CONNECTION)
SANITARY SERVICE CONNECTION AS PER CITY DETAIL S11

PROPOSED WATER CONNECTION
TOP OF GRADE = 66.97
EXISTING 203mmØ WATER INV. = 64.53
PROPOSED 100mmØ WATER INV. = 64.62
WATER SERVICE CONNECTION AS PER CITY OF OTTAWA DETAIL W26

UPSTREAM SAN MH
MHSA76816
APPROX. 74.0m FROM SOUTH P/L
N INV = 64.05

UPSTREAM STM MH
MHST37525
APPROX. 150.0m FROM S P/L
T/G = 66.88
N INV = 63.85

USE AND INTERPRETATION OF DRAWINGS

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION ARE PART OF THE CONTRACT DOCUMENTS AND DESCRIBE USE AND INTENT OF THE DRAWING. THE CONTRACT DOCUMENTS INCLUDE NOT ONLY THE DRAWINGS, BUT ALSO THE OWNER-CONTRACTOR AGREEMENTS, CONDITIONS OF THE CONTRACT, THE SPECIFICATIONS, ADDENDA, AND MODIFICATIONS ISSUED AFTER EXECUTION OF THE CONTRACT. THESE CONTRACT DOCUMENTS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ANY ONE SHALL BE BINDING AS IF REQUIRED BY ALL. WORK NOT COMPLETELY DELINEATED HEREON SHALL BE CONSTRUCTED OF THE SAME MATERIALS AND DETAILED SIMILARLY AS WORK SHOWN MORE COMPLETELY ELSEWHERE IN THE CONTRACT DOCUMENTS.

BY USE OF THE DRAWINGS FOR CONSTRUCTION OF THE PROJECT, THE OWNER CONFIRMS THAT HE HAS REVIEWED AND APPROVED THE DRAWINGS. THE CONTRACTOR CONFIRMS THAT HE HAS VISITED THE SITE, FAMILIARIZED HIMSELF WITH THE LOCAL CONDITIONS, VERIFIED FIELD DIMENSIONS AND CORRELATED HIS OBSERVATIONS WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

AS INSTRUMENTS OF SERVICE, ALL DRAWINGS, SPECIFICATIONS, CADD FILES OR OTHER ELECTRONIC MEDIA AND COPIED THERE OF FURNISHED BY THE ENGINEER ARE HIS PROPERTY. THEY ARE TO BE USED ONLY FOR THIS PROJECT AND ARE NOT TO BE USED ON ANY OTHER PROJECT, INCLUDING REPEATS OF THE PROJECT. CHANGES TO THE DRAWINGS MAY ONLY BE MADE BY THE ENGINEER.

UNLESS THE REVISION TITLE IS "ISSUED FOR CONSTRUCTION", THESE DRAWINGS SHALL BE CONSIDERED PRELIMINARY AND SHALL NOT BE USED AS A CONSTRUCTION DOCUMENT.

THESE DRAWINGS ILLUSTRATES THE WORK TO BE DONE. THE ENGINEER IS NOT RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES USED TO DO THE WORK, OR THE SAFETY ASPECTS OF CONSTRUCTION, AND NOTHING ON THESE DRAWINGS EXPRESSED OR IMPLIED CHANGES THIS CONDITION. CONTRACTOR SHALL DETERMINE ALL CONDITIONS AT THE SITE AND SHALL BE RESPONSIBLE FOR KNOWING HOW THEY AFFECT THE WORK. SUBMITTAL OF A BID TO PERFORM THIS WORK IS ACKNOWLEDGEMENT OF THE RESPONSIBILITIES, AND THAT THEY HAVE BEEN FULLY CONSIDERED IN PLANNING OF THE WORK, AND THE BID PRICE. NO CLAIMS FOR EXTRA CHANGES DUE TO THESE CONDITIONS WILL BE FORTHCOMING.

UNAUTHORIZED CHANGES:

IN THE EVENT THE CLIENT, THE CLIENT'S CONTRACTORS OR SUBCONTRACTORS, OR ANYONE FOR WHOM THE CLIENT IS LEGALLY LIABLE MAKES OR PERMITS TO BE MADE ANY CHANGES TO ANY REPORTS, PLANS, SPECIFICATIONS OR OTHER CONSTRUCTION DOCUMENTS PREPARED BY LRL ASSOCIATES LTD. (LRL) WITHOUT OBTAINING LRL'S PRIOR WRITTEN CONSENT, THE CLIENT SHALL ASSUME FULL RESPONSIBILITY FOR THE RESULTS OF SUCH CHANGES. THEREFORE THE CLIENT AGREES TO WAIVE ANY CLAIM AGAINST LRL AND TO RELEASE LRL FROM ANY LIABILITY ARISING DIRECTLY OR INDIRECTLY FROM SUCH UNAUTHORIZED CHANGES.

IN ADDITION, THE CLIENT AGREES, TO THE FULLEST EXTENT PERMITTED BY LAW, TO INDEMNIFY AND HOLD HARMLESS LRL FROM ANY DAMAGES, LIABILITIES OR COST, INCLUDING REASONABLE ATTORNEY'S FEES AND COST OF DEFENSE, ARISING FROM SUCH CHANGES.

IN ADDITION, THE CLIENT AGREES TO INCLUDE IN ANY CONTRACTS FOR CONSTRUCTION APPROPRIATE LANGUAGE THAT PROHIBITS THE CONTRACTOR OR ANY SUBCONTRACTORS OF ANY TIER FROM MAKING ANY CHANGES OR MODIFICATIONS TO LRL'S CONSTRUCTION DOCUMENTS WITHOUT THE PRIOR WRITTEN APPROVAL OF LRL AND THAT FURTHER REQUIRES THE CONTRACTOR TO INDEMNIFY BOTH LRL AND THE CLIENT FROM ANY LIABILITY OR COST ARISING FROM SUCH CHANGES MADE WITHOUT SUCH PROPER AUTHORIZATION.

GENERAL NOTES:

EXISTING SERVICES AND UTILITIES SHOWN ON THESE DRAWINGS ARE TAKEN FROM THE BEST AVAILABE RECORDS, BUT MAY NOT BE COMPLETE OR TO DATE. CONTRACTOR SHALL VERIFY IN FIELD FOR LOCATION AND ELEVATION OF PIPES AND CHECK WITH THE UTILITY COMPANIES BEFORE DIGGING OR PERFORMING WORK.

CONTRACTOR IS ADVISED TO COLLECT INFORMATION ON SOIL CONDITIONS BEFORE START OF CONSTRUCTION.

THE ENGINEER WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS AND THE DESIGN INTENT THEY CONVEY, OR FOR PROBLEMS WHICH ARISE FROM OTHERS' FAILURE TO OBTAIN AND/OR FOLLOW THE ENGINEER'S GUIDANCE WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES AMBIGUITIES OR CONFLICTS WHICH ARE ALLEGED.

CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE WORK COMMENCES. DO NOT SCALE DRAWINGS.

2m 0.5 0 2 4m
SCALE: 1:100

No.	REVISIONS	BY	DATE
02	RE-ISSUED FOR SITE PLAN APPROVAL	K.H.	02 FEB 2023
01	ISSUED FOR SITE PLAN APPROVAL	K.H.	16 MAR 2022

LICENSED PROFESSIONAL ENGINEER
V. JOHNSON
100510576
02-02-2023
PROVINCE OF ONTARIO

NOT AUTHENTIC UNLESS SIGNED AND DATED

LRL
ENGINEERING | INGÉNIERIE
5430 Canotek Road I Ottawa, ON, K1J 9G2
www.lrl.ca I (613) 842-3434

CLIENT
WELLINGTON HURON COMMERCIAL INC.

DESIGNED BY:	DRAWN BY:	APPROVED BY:
K.H.	M.A.	V.J.

PROJECT
PROPOSED ADDITION TO MIXED USE BUILDING
1252 WELLINGTON ST., OTTAWA, ON.

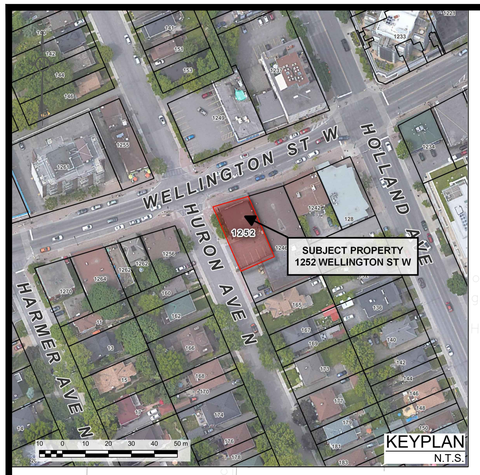
DRAWING TITLE
SERVICING PLAN

PROJECT NO.
210883
DATE
JANUARY 2022

C401

D07-12-22-0081

#18779



ITEM	EXISTING	PROPOSED
PROPERTY LINE		
CURB		
DEPRESSED CURB		
FENCELINE		
DOOR ENTRANCE		
STORMSEWER	STM	STM
STORM MANHOLE	MH01	MH01
STORM CATCH BASIN		
SANITARY SEWER	SAN	SAN
SANITARY MANHOLE	MH04	MH04
WATERMAIN	WTR	WTR
VALVE		
FIRE HYDRANT		
BENDS		
CURB STOP		
CAP OR PLUG		
REDUCER		
SLEEVE OR COUPLING		
UTILITY POLE		
UTILITY POLE w/GUY		
GAS LINE	GAS	GAS
PIPE INSULATION		
GRASS AREA		
CONCRETE FEATURES		
ASPHALT (HEAVY DUTY)		
PAVING STONES		
ELEVATION	+0.00	+0.00
BOT. OF CURB/ASPH ELEVATION		+0.00 TC
TOP OF CURB ELEVATION		+0.00 BC
STORM WATERSHED	EWS-XX (UNCONTROLLED) 00.00 0.00	WATERSHED NAME; RUNOFF COEFFICIENT; AREA IN HECTARES
100yr HIGH WATER LVL (PLAN)		
OVERLAND MJR FLOW ROUTE		
STORM WATERSHED EXTENT		
VEGETATION (TREES/SHRUBS)		
TREELINE		

PROPOSED 100-YEAR PONDING EXTENTS
TOTAL PROPOSED ROOFTOP STORAGE = 5.46m³
MAX PONDING DEPTH = 0.100m
NUMBER OF ROOF DRAINS = 2
FLOW PER DRAIN = 0.93 L/s
TOTAL FLOW = 1.86 L/s

PROPOSED 5-YEAR PONDING EXTENTS.
TOTAL PROPOSED ROOFTOP STORAGE = 2.43m³
MAX PONDING DEPTH = 0.076m
NUMBER OF ROOF DRAINS = 2
FLOW PER DRAIN = 0.76 L/s
TOTAL FLOW = 1.52 L/s

PROPOSED WATTS RD-100-A-ADJ (WEIR OPENING = ¼ EXPOSED) ROOF DRAINS OR APPROVED EQUIVALENT.
FLOW PER DRAIN = 0.76 L/s
TOTAL NUMBER OF ROOF DRAINS = 2
TOTAL FLOW = 1.52 L/s
HWL = 0.10m (FROM TOP OF DRAIN)

PROPOSED ROOF SCUPPER LOCATIONS AND ELEVATIONS TO BE CONFIRMED BY ARCHITECTURAL AND MECHNICAL ENGINEERING PLANS. BOTTOM OF SCUPPER TO BE MIN 0.10m ABOVE ROOF DRAIN.

EXISTING MIXED-USE 2-STOREY BUILDING
1252 WELLINGTON ST.

PROPOSED 3-STOREY ADDITION TO EXISTING MULTI-USE BUILDING

EXISTING BUILDING FOUNDATION DRAIN TO REMAIN. PROPOSED NEW ADDITION FOUNDATION DRAIN TO OUTLET TO EXISTING BUILDING SUMP PIT / PUMP. FOUNDATION DRAIN AS PER ARCHITECTURAL PLANS.

WELLINGTON ST. WEST

HURON AVE. NORTH

No Access

Recessed Tiled Entrance

Gate ±To Line

Sunken Wooden Deck

Garbage Enclosure

Driveway

Asphalt

Approximate Crown of Asphalt Road

Edge of Asphalt

Concrete Sidewalk

Depressed Concrete Curb

No. 1242
1 Storey Commercial Building
(Brick Noted)

"FAB BABY GEAR"
No. 1244
1 Storey Brick Building
(Brick Noted)

PIN 04036 0113

USE AND INTERPRETATION OF DRAWINGS

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION ARE PART OF THE CONTRACT DOCUMENTS AND DESCRIBE USE AND INTENT OF THE DRAWING. THE CONTRACT DOCUMENTS INCLUDE NOT ONLY THE DRAWINGS, BUT ALSO THE OWNER-CONTRACTOR AGREEMENTS, CONDITIONS OF THE CONTRACT, THE SPECIFICATIONS, ADDENDA, AND MODIFICATIONS ISSUED AFTER EXECUTION OF THE CONTRACT. THESE CONTRACT DOCUMENTS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ANY ONE SHALL BE BINDING AS IF REQUIRED BY ALL. WORK NOT COMPLETELY DELINEATED HEREON SHALL BE CONSTRUCTED OF THE SAME MATERIALS AND DETAILED SIMILARLY AS WORK SHOWN MORE COMPLETELY ELSEWHERE IN THE CONTRACT DOCUMENTS.

BY USE OF THE DRAWINGS FOR CONSTRUCTION OF THE PROJECT, THE OWNER CONFIRMS THAT HE HAS REVIEWED AND APPROVED THE DRAWINGS. THE CONTRACTOR CONFIRMS THAT HE HAS VISITED THE SITE, FAMILIARIZED HIMSELF WITH THE LOCAL CONDITIONS, VERIFIED FIELD DIMENSIONS AND CORRELATED HIS OBSERVATIONS WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

AS INSTRUMENTS OF SERVICE, ALL DRAWINGS, SPECIFICATIONS, CADD FILES OR OTHER ELECTRONIC MEDIA AND COPIED THERE OF FURNISHED BY THE ENGINEER ARE HIS PROPERTY. THEY ARE TO BE USED ONLY FOR THIS PROJECT AND ARE NOT TO BE USED ON ANY OTHER PROJECT, INCLUDING REPEATS OF THE PROJECT. CHANGES TO THE DRAWINGS MAY ONLY BE MADE BY THE ENGINEER.

UNLESS THE REVISION TITLE IS "ISSUED FOR CONSTRUCTION", THESE DRAWINGS SHALL BE CONSIDERED PRELIMINARY AND SHALL NOT BE USED AS A CONSTRUCTION DOCUMENT.

THESE DRAWINGS ILLUSTRATES THE WORK TO BE DONE. THE ENGINEER IS NOT RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES USED TO DO THE WORK, OR THE SAFETY ASPECTS OF CONSTRUCTION, AND NOTHING ON THESE DRAWINGS EXPRESSED OR IMPLIED CHANGES THIS CONDITION. CONTRACTOR SHALL DETERMINE ALL CONDITIONS AT THE SITE AND SHALL BE RESPONSIBLE FOR KNOWING HOW THEY AFFECT THE WORK. SUBMITTAL OF A BID TO PERFORM THIS WORK IS ACKNOWLEDGEMENT OF THE RESPONSIBILITIES, AND THAT THEY HAVE BEEN FULLY CONSIDERED IN PLANNING OF THE WORK, AND THE BID PRICE. NO CLAIMS FOR EXTRA CHANGES DUE TO THESE CONDITIONS WILL BE FORTHCOMING.

UNAUTHORIZED CHANGES:

IN THE EVENT THE CLIENT, THE CLIENT'S CONTRACTORS OR SUBCONTRACTORS, OR ANYONE FOR WHOM THE CLIENT IS LEGALLY LIABLE MAKES OR PERMITS TO BE MADE ANY CHANGES TO ANY REPORTS, PLANS, SPECIFICATIONS OR OTHER CONSTRUCTION DOCUMENTS PREPARED BY LRL ASSOCIATES LTD. (LRL) WITHOUT OBTAINING LRL'S PRIOR WRITTEN CONSENT, THE CLIENT SHALL ASSUME FULL RESPONSIBILITY FOR THE RESULTS OF SUCH CHANGES, THEREFORE THE CLIENT AGREES TO WAIVE ANY CLAIM AGAINST LRL AND TO RELEASE LRL FROM ANY LIABILITY ARISING DIRECTLY OR INDIRECTLY FROM SUCH UNAUTHORIZED CHANGES.

IN ADDITION, THE CLIENT AGREES, TO THE FULLEST EXTENT PERMITTED BY LAW, TO INDEMNIFY AND HOLD HARMLESS LRL FROM ANY DAMAGES, LIABILITIES OR COST, INCLUDING REASONABLE ATTORNEY'S FEES AND COST OF DEFENSE, ARISING FROM SUCH CHANGES.

IN ADDITION, THE CLIENT AGREES TO INCLUDE IN ANY CONTRACTS FOR CONSTRUCTION APPROPRIATE LANGUAGE THAT PROHIBITS THE CONTRACTOR OR ANY SUBCONTRACTORS OF ANY TIER FROM MAKING ANY CHANGES OR MODIFICATIONS TO LRL'S CONSTRUCTION DOCUMENTS WITHOUT THE PRIOR WRITTEN APPROVAL OF LRL AND THAT FURTHER REQUIRES THE CONTRACTOR TO INDEMNIFY BOTH LRL AND THE CLIENT FROM ANY LIABILITY OR COST ARISING FROM SUCH CHANGES MADE WITHOUT SUCH PROPER AUTHORIZATION.

GENERAL NOTES:

EXISTING SERVICES AND UTILITIES SHOWN ON THESE DRAWINGS ARE TAKEN FROM THE BEST AVAILABE RECORDS, BUT MAY NOT BE COMPLETE OR TO DATE. CONTRACTOR SHALL VERIFY IN FIELD FOR LOCATION AND ELEVATION OF PIPES AND CHECK WITH THE UTILITY COMPANIES BEFORE DIGGING OR PERFORMING WORK.

CONTRACTOR IS ADVISED TO COLLECT INFORMATION ON SOIL CONDITIONS BEFORE START OF CONSTRUCTION.

THE ENGINEER WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS AND THE DESIGN INTENT THEY CONVEY, OR FOR PROBLEMS WHICH ARISE FROM OTHERS' FAILURE TO OBTAIN AND/OR FOLLOW THE ENGINEER'S GUIDANCE WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES AMBIGUITIES OR CONFLICTS WHICH ARE ALLEGED.

CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE WORK COMMENCES. DO NOT SCALE DRAWINGS.

2m 0.5 0 2 4m

SCALE: 1:100

No.	REVISIONS	BY	DATE
02	RE-ISSUED FOR SITE PLAN APPROVAL	K.H.	02 FEB 2023
01	ISSUED FOR SITE PLAN APPROVAL	K.H.	16 MAR 2022

LICENSED PROFESSIONAL ENGINEER
V. JOHNSON
100510576
02-02-2023
PROVINCE OF ONTARIO

NOT AUTHENTIC UNLESS SIGNED AND DATED

LRJ
ENGINEERING | INGÉNIERIE
5430 Canotek Road I Ottawa, ON, K1J 9G2
www.lrl.ca I (613) 842-3434

CLIENT
WELLINGTON HURON COMMERCIAL INC.

DESIGNED BY:	DRAWN BY:	APPROVED BY:
K.H.	M.A.	V.J.

PROJECT
PROPOSED ADDITION TO MIXED USE BUILDING
1252 WELLINGTON ST., OTTAWA, ON.

DRAWING TITLE
STORMWATER MANAGEMENT PLAN

PROJECT NO.
210883

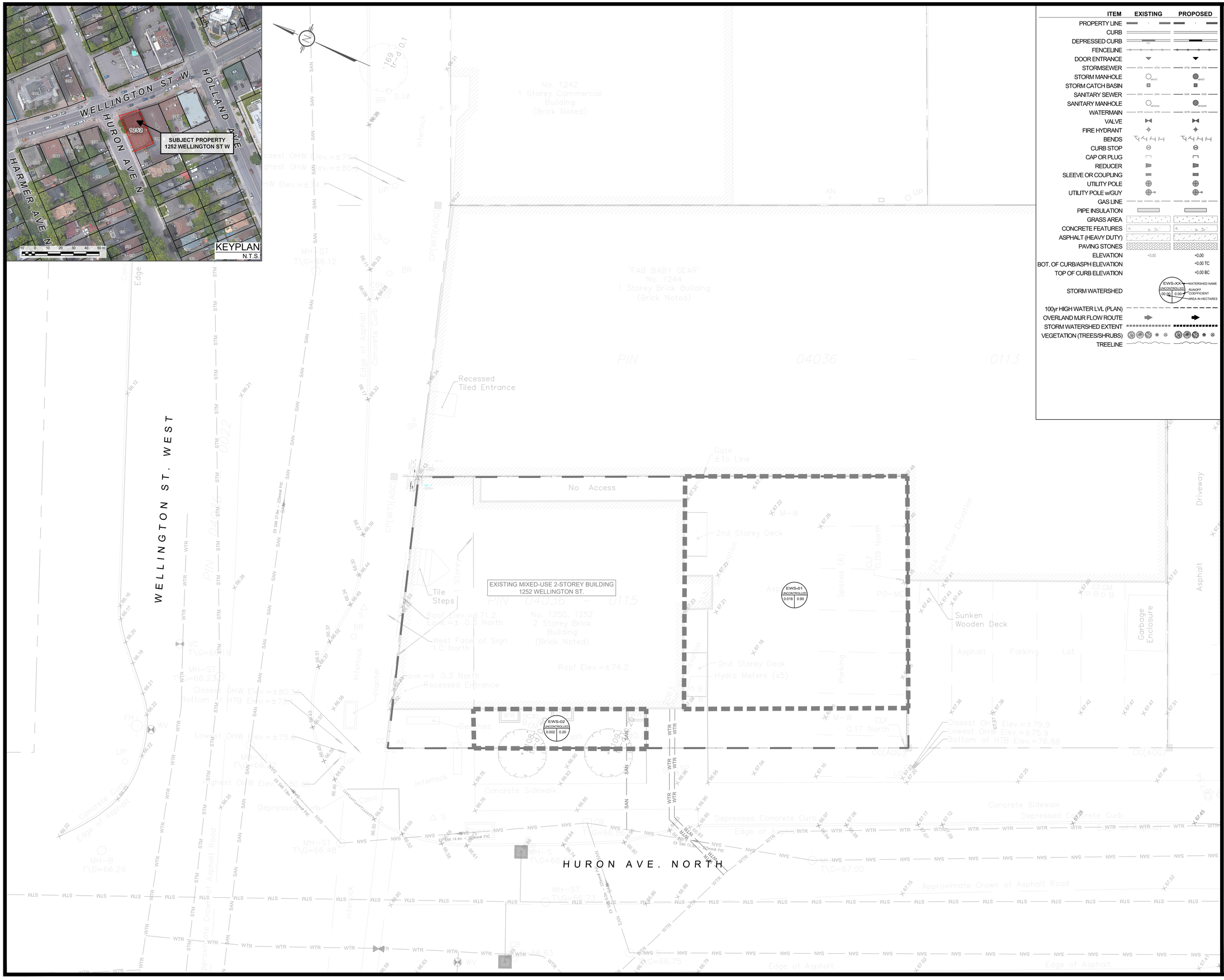
DATE
JANUARY 2022

C601

D07-12-22-0081

#18779

ITEM	EXISTING	PROPOSED
PROPERTY LINE		
CURB		
DEPRESSED CURB		
FENCELINE		
DOOR ENTRANCE		
STORMSEWER	STM	STM
STORM MANHOLE	STMMH	STMMH
STORM CATCH BASIN		
SANITARY SEWER	SAN	SAN
SANITARY MANHOLE	SANMH	SANMH
WATERMAIN	WTR	WTR
VALVE		
FIRE HYDRANT		
BENDS		
CURB STOP		
CAP OR PLUG		
REDUCER		
SLEEVE OR COUPLING		
UTILITY POLE		
UTILITY POLE w/GUY		
GAS LINE	GAS	GAS
PIPE INSULATION		
GRASS AREA		
CONCRETE FEATURES		
ASPHALT (HEAVY DUTY)		
PAVING STONES		
ELEVATION	+0.00	+0.00
BOT. OF CURB/ASPH ELEVATION		+0.00 TC
TOP OF CURB ELEVATION		+0.00 BC
STORM WATERSHED		EWS-XX (UNCONTROLLED) 00.00 0.00 — WATERSHED NAME, RUNOFF COEFFICIENT, AREA IN HECTARES
100yr HIGH WATER LVL (PLAN)		
OVERLAND MJR FLOW ROUTE		
STORM WATERSHED EXTENT		
VEGETATION (TREES/SHRUBS)		
TREELINE		



USE AND INTERPRETATION OF DRAWINGS

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION ARE PART OF THE CONTRACT DOCUMENTS AND DESCRIBE USE AND INTENT OF THE DRAWING. THE CONTRACT DOCUMENTS INCLUDE NOT ONLY THE DRAWINGS, BUT ALSO THE OWNER-CONTRACTOR AGREEMENTS, CONDITIONS OF THE CONTRACT, THE SPECIFICATIONS, ADDENDA, AND MODIFICATIONS ISSUED AFTER EXECUTION OF THE CONTRACT. THESE CONTRACT DOCUMENTS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ANY ONE SHALL BE BINDING AS IF REQUIRED BY ALL. WORK NOT COMPLETELY DELINEATED HEREON SHALL BE CONSTRUCTED OF THE SAME MATERIALS AND DETAILED SIMILARLY AS WORK SHOWN MORE COMPLETELY ELSEWHERE IN THE CONTRACT DOCUMENTS.

BY USE OF THE DRAWINGS FOR CONSTRUCTION OF THE PROJECT, THE OWNER CONFIRMS THAT HE HAS REVIEWED AND APPROVED THE DRAWINGS. THE CONTRACTOR CONFIRMS THAT HE HAS VISITED THE SITE, FAMILIARIZED HIMSELF WITH THE LOCAL CONDITIONS, VERIFIED FIELD DIMENSIONS AND CORRELATED HIS OBSERVATIONS WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

AS INSTRUMENTS OF SERVICE, ALL DRAWINGS, SPECIFICATIONS, CADD FILES OR OTHER ELECTRONIC MEDIA AND COPIED THERE OF FURNISHED BY THE ENGINEER ARE HIS PROPERTY. THEY ARE TO BE USED ONLY FOR THIS PROJECT AND ARE NOT TO BE USED ON ANY OTHER PROJECT, INCLUDING REPEATS OF THE PROJECT. CHANGES TO THE DRAWINGS MAY ONLY BE MADE BY THE ENGINEER.

UNLESS THE REVISION TITLE IS "ISSUED FOR CONSTRUCTION", THESE DRAWINGS SHALL BE CONSIDERED PRELIMINARY AND SHALL NOT BE USED AS A CONSTRUCTION DOCUMENT.

THESE DRAWINGS ILLUSTRATES THE WORK TO BE DONE. THE ENGINEER IS NOT RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES USED TO DO THE WORK, OR THE SAFETY ASPECTS OF CONSTRUCTION, AND NOTHING ON THESE DRAWINGS EXPRESSED OR IMPLIED CHANGES THIS CONDITION. CONTRACTOR SHALL DETERMINE ALL CONDITIONS AT THE SITE AND SHALL BE RESPONSIBLE FOR KNOWING HOW THEY AFFECT THE WORK. SUBMITTAL OF A BID TO PERFORM THIS WORK IS ACKNOWLEDGEMENT OF THE RESPONSIBILITIES, AND THAT THEY HAVE BEEN FULLY CONSIDERED IN PLANNING OF THE WORK, AND THE BID PRICE. NO CLAIMS FOR EXTRA CHANGES DUE TO THESE CONDITIONS WILL BE FORTHCOMING.

UNAUTHORIZED CHANGES:

IN THE EVENT THE CLIENT, THE CLIENT'S CONTRACTORS OR SUBCONTRACTORS, OR ANYONE FOR WHOM THE CLIENT IS LEGALLY LIABLE MAKES OR PERMITS TO BE MADE ANY CHANGES TO ANY REPORTS, PLANS, SPECIFICATIONS OR OTHER CONSTRUCTION DOCUMENTS PREPARED BY LRL ASSOCIATES LTD. (LRL) WITHOUT OBTAINING LRL'S PRIOR WRITTEN CONSENT, THE CLIENT SHALL ASSUME FULL RESPONSIBILITY FOR THE RESULTS OF SUCH CHANGES, THEREFORE THE CLIENT AGREES TO WAIVE ANY CLAIM AGAINST LRL AND TO RELEASE LRL FROM ANY LIABILITY ARISING DIRECTLY OR INDIRECTLY FROM SUCH UNAUTHORIZED CHANGES.

IN ADDITION, THE CLIENT AGREES, TO THE FULLEST EXTENT PERMITTED BY LAW, TO INDEMNIFY AND HOLD HARMLESS LRL FROM ANY DAMAGES, LIABILITIES OR COST, INCLUDING REASONABLE ATTORNEY'S FEES AND COST OF DEFENSE, ARISING FROM SUCH CHANGES.

IN ADDITION, THE CLIENT AGREES TO INCLUDE IN ANY CONTRACTS FOR CONSTRUCTION APPROPRIATE LANGUAGE THAT PROHIBITS THE CONTRACTOR OR ANY SUBCONTRACTORS OF ANY TIER FROM MAKING ANY CHANGES OR MODIFICATIONS TO LRL'S CONSTRUCTION DOCUMENTS WITHOUT THE PRIOR WRITTEN APPROVAL OF LRL AND THAT FURTHER REQUIRES THE CONTRACTOR TO INDEMNIFY BOTH LRL AND THE CLIENT FROM ANY LIABILITY OR COST ARISING FROM SUCH CHANGES MADE WITHOUT SUCH PROPER AUTHORIZATION.

GENERAL NOTES:

EXISTING SERVICES AND UTILITIES SHOWN ON THESE DRAWINGS ARE TAKEN FROM THE BEST AVAILABE RECORDS, BUT MAY NOT BE COMPLETE OR TO DATE. CONTRACTOR SHALL VERIFY IN FIELD FOR LOCATION AND ELEVATION OF PIPES AND CHECK WITH THE UTILITY COMPANIES BEFORE DIGGING OR PERFORMING WORK.

CONTRACTOR IS ADVISED TO COLLECT INFORMATION ON SOIL CONDITIONS BEFORE START OF CONSTRUCTION.

THE ENGINEER WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS AND THE DESIGN INTENT THEY CONVEY, OR FOR PROBLEMS WHICH ARISE FROM OTHERS' FAILURE TO OBTAIN AND/OR FOLLOW THE ENGINEER'S GUIDANCE WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES AMBIGUITIES OR CONFLICTS WHICH ARE ALLEGED.

CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE WORK COMMENCES. DO NOT SCALE DRAWINGS.

2m 0.5 0 2 4m

SCALE: 1:100

No.	REVISIONS	BY	DATE
02	RE-ISSUED FOR SITE PLAN APPROVAL	K.H.	02 FEB 2023
01	ISSUED FOR SITE PLAN APPROVAL	K.H.	16 MAR 2022

LICENSED PROFESSIONAL ENGINEER
V. JOHNSON
100510576
02-02-2023
PROVINCE OF ONTARIO

NOT AUTHENTIC UNLESS SIGNED AND DATED

LRJ
ENGINEERING | INGÉNIERIE
5430 Canotek Road I Ottawa, ON, K1J 9G2
www.lrl.ca I (613) 842-3434

CLIENT
WELLINGTON HURON COMMERCIAL INC.

DESIGNED BY:	DRAWN BY:	APPROVED BY:
K.H.	M.A.	V.J.

PROJECT
PROPOSED ADDITION TO MIXED USE BUILDING
1252 WELLINGTON ST., OTTAWA, ON.

DRAWING TITLE
PRE-DEVELOPMENT WATERSHED PLAN

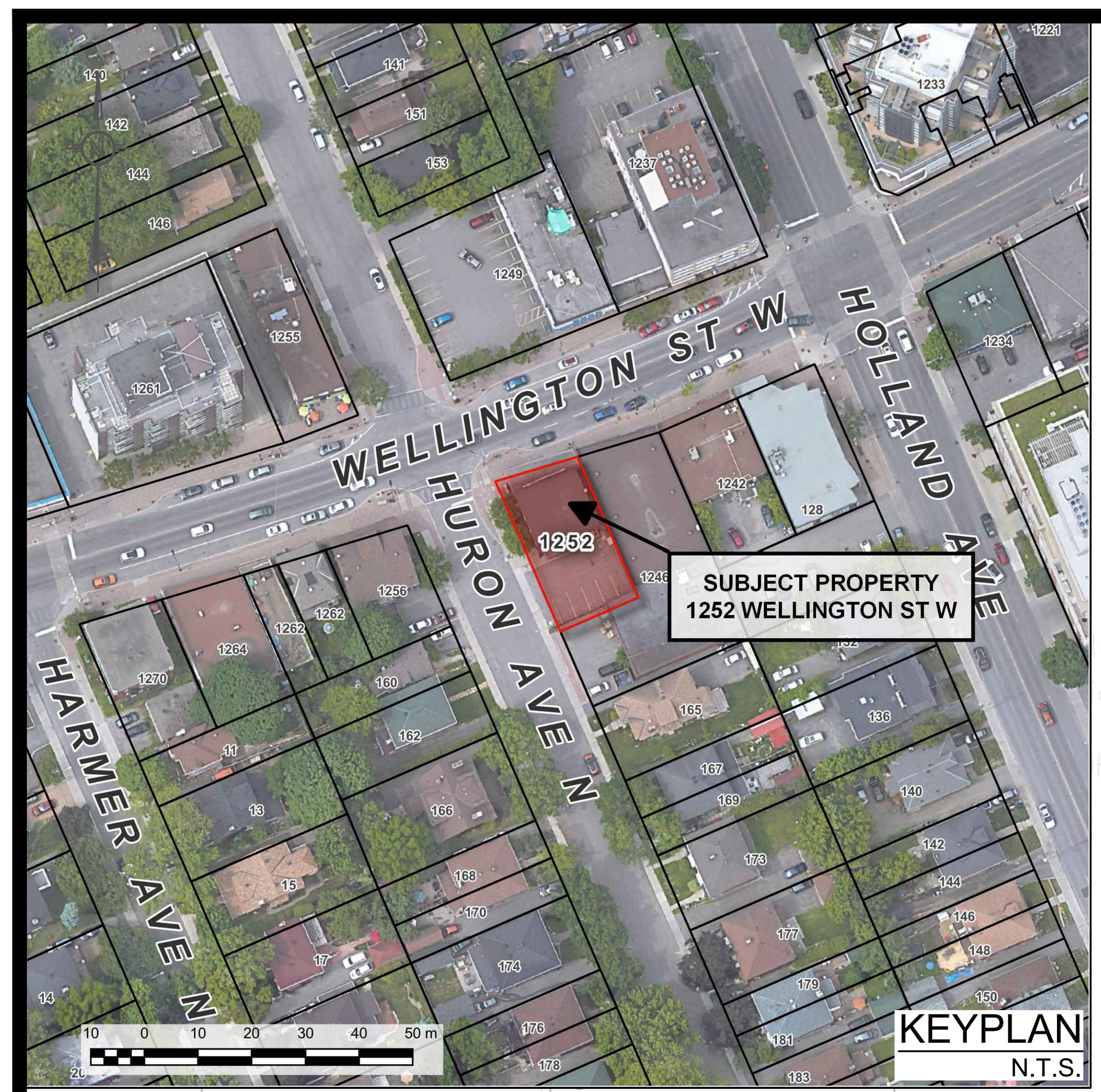
PROJECT NO.
210883

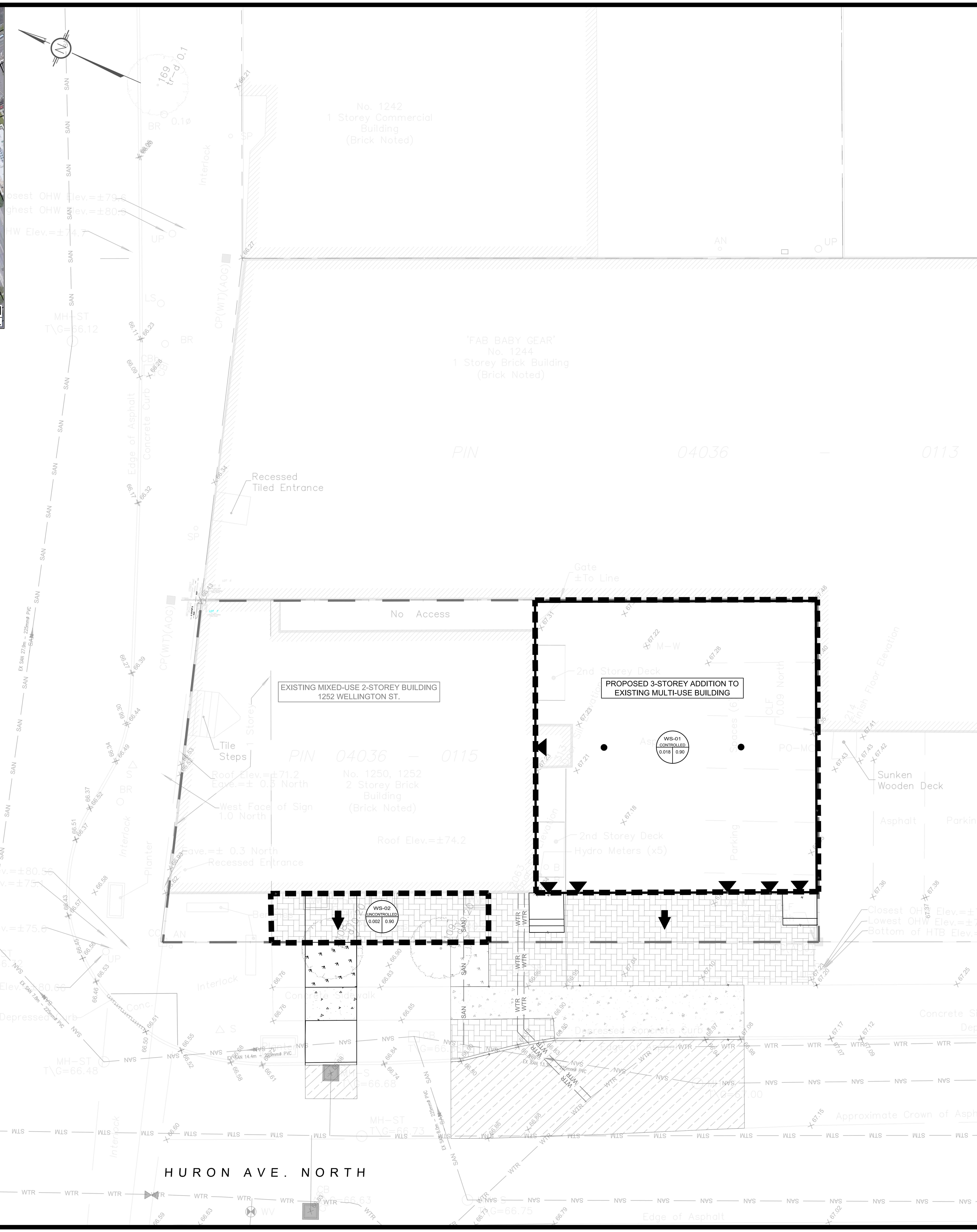
DATE
JANUARY 2022

C701

D07-12-22-0081

#18779





ITEM	EXISTING	PROPOSED
PROPERTY LINE		
CURB		
DEPRESSED CURB	DC	
FENCELINE		
DOOR ENTRANCE		
STORMSEWER	STM	STM
STORM MANHOLE	MHST	MHST
STORM CATCH BASIN		
SANITARY SEWER	SAN	SAN
SANITARY MANHOLE	MHSAN	MHSAN
WATERMAIN	WTR	WTR
VALVE		
FIRE HYDRANT		
BENDS		
CURB STOP		
CAP OR PLUG		
REDUCER		
SLEEVE OR COUPLING		
UTILITY POLE		
UTILITY POLE w/GUY		
GAS LINE	GAS	GAS
PIPE INSULATION		
GRASS AREA		
CONCRETE FEATURES		
ASPHALT (HEAVY DUTY)		
PAVING STONES		
ELEVATION	×0.00	×0.00
BOT. OF CURB/ASPH ELEVATION		×0.00 TC
TOP OF CURB ELEVATION		×0.00 BC
STORM WATERSHED		EWS-XX (WATERSHED NAME), UNCONTROLLED, 00.00 (AREA IN HECTARES), 0.00 (RUNOFF COEFFICIENT)
100yr HIGH WATER LVL (PLAN)		
OVERLAND MJR FLOW ROUTE		
STORM WATERSHED EXTENT		
VEGETATION (TREES/SHRUBS)		
TREELINE		

USE AND INTERPRETATION OF DRAWINGS

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION ARE PART OF THE CONTRACT DOCUMENTS AND DESCRIBE USE AND INTENT OF THE DRAWING. THE CONTRACT DOCUMENTS INCLUDE NOT ONLY THE DRAWINGS, BUT ALSO THE OWNER-CONTRACTOR AGREEMENTS, CONDITIONS OF THE CONTRACT, THE SPECIFICATIONS, ADDENDA, AND MODIFICATIONS ISSUED AFTER EXECUTION OF THE CONTRACT. THESE CONTRACT DOCUMENTS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ANY ONE SHALL BE BINDING AS IF REQUIRED BY ALL. WORK NOT COMPLETELY DELINEATED HEREON SHALL BE CONSTRUCTED OF THE SAME MATERIALS AND DETAILED SIMILARLY AS WORK SHOWN MORE COMPLETELY ELSEWHERE IN THE CONTRACT DOCUMENTS.

BY USE OF THE DRAWINGS FOR CONSTRUCTION OF THE PROJECT, THE OWNER CONFIRMS THAT HE HAS REVIEWED AND APPROVED THE DRAWINGS. THE CONTRACTOR CONFIRMS THAT HE HAS VISITED THE SITE, FAMILIARIZED HIMSELF WITH THE LOCAL CONDITIONS, VERIFIED FIELD DIMENSIONS AND CORRELATED HIS OBSERVATIONS WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

AS INSTRUMENTS OF SERVICE, ALL DRAWINGS, SPECIFICATIONS, CADD FILES OR OTHER ELECTRONIC MEDIA AND COPIED THERE OF FURNISHED BY THE ENGINEER ARE HIS PROPERTY. THEY ARE TO BE USED ONLY FOR THIS PROJECT AND ARE NOT TO BE USED ON ANY OTHER PROJECT, INCLUDING REPEATS OF THE PROJECT. CHANGES TO THE DRAWINGS MAY ONLY BE MADE BY THE ENGINEER.

UNLESS THE REVISION TITLE IS "ISSUED FOR CONSTRUCTION", THESE DRAWINGS SHALL BE CONSIDERED PRELIMINARY AND SHALL NOT BE USED AS A CONSTRUCTION DOCUMENT.

THESE DRAWINGS ILLUSTRATES THE WORK TO BE DONE. THE ENGINEER IS NOT RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES USED TO DO THE WORK, OR THE SAFETY ASPECTS OF CONSTRUCTION, AND NOTHING ON THESE DRAWINGS EXPRESSED OR IMPLIED CHANGES THIS CONDITION. CONTRACTOR SHALL DETERMINE ALL CONDITIONS AT THE SITE AND SHALL BE RESPONSIBLE FOR KNOWING HOW THEY AFFECT THE WORK. SUBMITTAL OF A BID TO PERFORM THIS WORK IS ACKNOWLEDGEMENT OF THE RESPONSIBILITIES, AND THAT THEY HAVE BEEN FULLY CONSIDERED IN PLANNING OF THE WORK, AND THE BID PRICE. NO CLAIMS FOR EXTRA CHARGES DUE TO THESE CONDITIONS WILL BE FORTHCOMING.

UNAUTHORIZED CHANGES:

IN THE EVENT THE CLIENT, THE CLIENT'S CONTRACTORS OR SUBCONTRACTORS, OR ANYONE FOR WHOM THE CLIENT IS LEGALLY LIABLE MAKES OR PERMITS TO BE MADE ANY CHANGES TO ANY REPORTS, PLANS, SPECIFICATIONS OR OTHER CONSTRUCTION DOCUMENTS PREPARED BY LRL ASSOCIATES LTD. (LRL) WITHOUT OBTAINING LRL'S PRIOR WRITTEN CONSENT, THE CLIENT SHALL ASSUME FULL RESPONSIBILITY FOR THE RESULTS OF SUCH CHANGES. THEREFORE THE CLIENT AGREES TO WAIVE ANY CLAIM AGAINST LRL AND TO RELEASE LRL FROM ANY LIABILITY ARISING DIRECTLY OR INDIRECTLY FROM SUCH UNAUTHORIZED CHANGES.

IN ADDITION, THE CLIENT AGREES, TO THE FULLEST EXTENT PERMITTED BY LAW, TO INDEMNIFY AND HOLD HARMLESS LRL FROM ANY DAMAGES, LIABILITIES OR COST, INCLUDING REASONABLE ATTORNEY'S FEES AND COST OF DEFENSE, ARISING FROM SUCH CHANGES.

IN ADDITION, THE CLIENT AGREES TO INCLUDE IN ANY CONTRACTS FOR CONSTRUCTION APPROPRIATE LANGUAGE THAT PROHIBITS THE CONTRACTOR OR ANY SUBCONTRACTORS OF ANY TIER FROM MAKING ANY CHANGES OR MODIFICATIONS TO LRL'S CONSTRUCTION DOCUMENTS WITHOUT THE PRIOR WRITTEN APPROVAL OF LRL AND THAT FURTHER REQUIRES THE CONTRACTOR TO INDEMNIFY BOTH LRL AND THE CLIENT FROM ANY LIABILITY OR COST ARISING FROM SUCH CHANGES MADE WITHOUT SUCH PROPER AUTHORIZATION.

GENERAL NOTES:

EXISTING SERVICES AND UTILITIES SHOWN ON THESE DRAWINGS ARE TAKEN FROM THE BEST AVAILABLE RECORDS, BUT MAY NOT BE COMPLETE OR TO DATE. CONTRACTOR SHALL VERIFY IN FIELD FOR LOCATION AND ELEVATION OF PIPES AND CHECK WITH THE UTILITY COMPANIES BEFORE DIGGING OR PERFORMING WORK.

CONTRACTOR IS ADVISED TO COLLECT INFORMATION ON SOIL CONDITIONS BEFORE START OF CONSTRUCTION.

THE ENGINEER WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS AND THE DESIGN INTENT THEY CONVEY, OR FOR PROBLEMS WHICH ARISE FROM OTHERS' FAILURE TO OBTAIN AND/OR FOLLOW THE ENGINEER'S GUIDANCE WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES AMBIGUITIES OR CONFLICTS WHICH ARE ALLEGED.

CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE WORK COMMENCES. DO NOT SCALE DRAWINGS.

2m 0.5 0 2 4m

SCALE: 1:100

No.	REVISIONS	BY	DATE
02	RE-ISSUED FOR SITE PLAN APPROVAL	K.H.	02 FEB 2023
01	ISSUED FOR SITE PLAN APPROVAL	K.H.	16 MAR 2022

LICENSED PROFESSIONAL ENGINEER
V. JOHNSON
100510576
02-02-2023
PROVINCE OF ONTARIO

NOT AUTHENTIC UNLESS SIGNED AND DATED

LRL
ENGINEERING | INGÉNIERIE
5430 Canotek Road | Ottawa, ON, K1J 9G2
www.lrl.ca | (613) 842-3434

CLIENT
WELLINGTON HURON COMMERCIAL INC.

DESIGNED BY:	DRAWN BY:	APPROVED BY:
K.H.	M.A.	V.J.

PROJECT
PROPOSED ADDITION TO
MIXED USE BUILDING
1252 WELLINGTON ST., OTTAWA, ON.

DRAWING TITLE
POST-DEVELOPMENT
WATERSHED PLAN

PROJECT NO.
210883

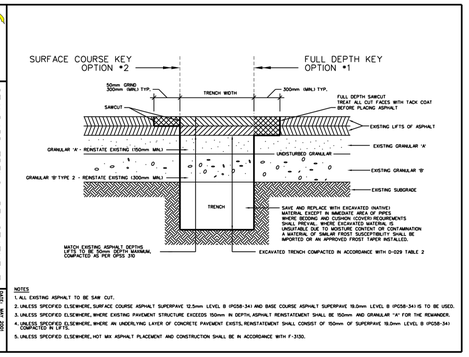
DATE
JANUARY 2022

C702

D07-12-22-0081

#18779

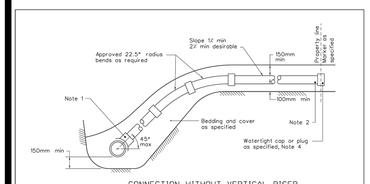
STANDARD TRENCH REINSTATEMENT IN PAVED SURFACE



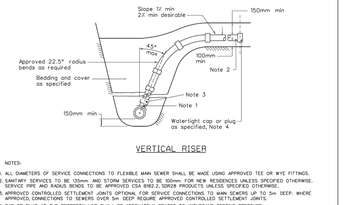
NOTES

1. ALL EXISTING ASPHALT TO BE SAW CUT.
2. UNLESS SPECIFIED ELSEWHERE, SURFACE COURSE ASPHALT SUPERPAVE 12.5mm LEVEL B (PCSB-341) AND BASE COURSE ASPHALT SUPERPAVE 19.0mm LEVEL B (PCSB-341) IS TO BE USED.
3. UNLESS SPECIFIED ELSEWHERE, WHERE EXISTING PAVEMENT STRUCTURE EXCEEDS 150mm IN DEPTH, ASPHALT REINSTATEMENT SHALL BE 150mm AND GRANULAR 'A' FOR THE REMAINDER.
4. UNLESS SPECIFIED ELSEWHERE, WHERE AN UNDERLYING LAYER OF CONCRETE PAVEMENT EXISTS, REINSTATEMENT SHALL CONSIST OF 150mm OF SUPERPAVE 19.0mm LEVEL B (PCSB-341) COMPACTED IN LIFTS.
5. UNLESS SPECIFIED ELSEWHERE, HOT MIX ASPHALT PLACEMENT AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH F-3130.

DATE:	MAY 2007
REV. DATE:	MARCH 2010
DWG No.:	S10.1



CONNECTION WITHOUT VERTICAL RISER

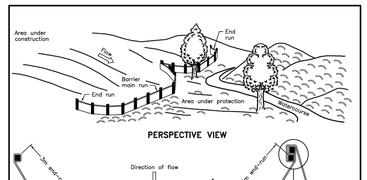


VERTICAL RISER

NOTES:

1. ALL DIAMETERS OF SERVICE CONNECTIONS TO FLEXIBLE MAIN SEWER SHALL BE MADE USING APPROVED TEE OR WYE FITTINGS.
2. SANITARY SERVICES TO BE 150mm AND STORM SERVICES TO BE 100mm FOR NEW RESIDENCES UNLESS SPECIFIED OTHERWISE. SERVICE PIPE AND RADIUS BENDS TO BE APPROVED CSA B182.2, SDR28 PRODUCTS UNLESS SPECIFIED OTHERWISE.
3. APPROVED CONTROLLED SETTLEMENT JOINTS OPTIONAL FOR SERVICE CONNECTIONS TO MAIN SEWERS UP TO 5m DEEP. WHERE APPROVED, CONNECTIONS TO SEWERS OVER 5m DEEP REQUIRE APPROVED CONTROLLED SETTLEMENT JOINTS.
4. CAP OR PLUG AT THE PROPERTY LINE SHALL BE ADEQUATELY BRACED TO WITHSTAND TESTING PRESSURE.
5. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SHOWN.

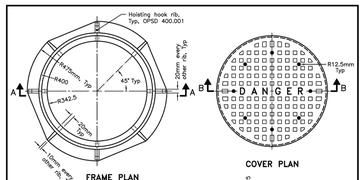
SEWER SERVICE CONNECTIONS FOR FLEXIBLE MAIN SEWER PIPE (MODIFIED OPSD-1006.020)	DATE:	MARCH 2006
	REV. DATE:	MARCH 2010
	DWG. No.:	S11.1



SECTION A–A

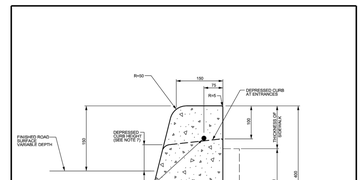
NOTE:
A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2015	Rev 2
LIGHT–DUTY SILT FENCE BARRIER		
	OPSD 219.110	



NOTE:
1 As an option, frame may be completely round.
A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2018	Rev 4
CAST IRON, CIRCULAR FRAME WITH CIRCULAR 745mm COVER FOR MAINTENANCE HOLES		
	OPSD 401.020	



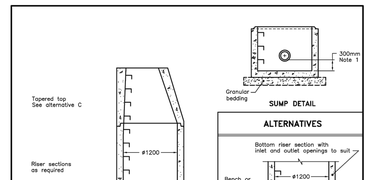
CONCRETE BARRIER CURB

NOTES:

1. THE FULL CURB DEPTH SHALL BE CARRIED THROUGH THE DEPRESSED ACCESS CROSSING.
2. A CONCRETE SUPPORT IS REQUIRED WHEN BUILT ADJACENT TO THE SIDEWALK.
3. IF AN EXTRUSION CURBING MACHINE IS USED, THE EXPANSION BITUMINOUS MATERIAL AND THE #15 DOWELS ARE TO BE PLACED AT THE END OF THE EXTRUSION.
4. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.
5. DUMMY JOINTS SHALL BE 20mm DEEP, FRONT, BACK AND TOP OF SECTION AT 2m SPACING.
6. FOR DEPRESSED CURB AT ENTRANCES USE 250.
7. DEPRESSED CURB HEIGHT - FOR PEDESTRIAN CURB RAMPS 0 TO 5 mm AND FOR PRIVATE ENTRANCES 0 TO 20mm.

N.T.S.

CONCRETE BARRIER CURB FOR GRANULAR BASE PAVEMENT (MODIFIED OPSD-600.110)	DATE:	JANUARY 2003
	REV. DATE:	MARCH 2014
	DWG. No.:	SC1.1

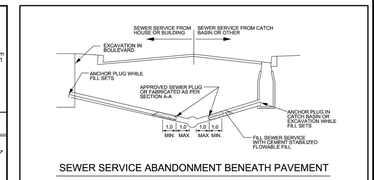


NOTES:

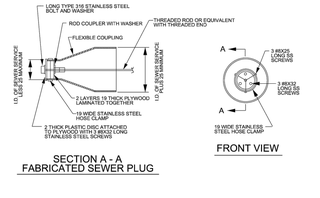
1 The sump is measured from the lowest invert.
A Granular backfill shall be placed to a minimum thickness of 300mm all around the maintenance hole.
B Precast concrete components shall be according to OPSD 701.030, 701.031, or 701.032.
C Structure exceeding 5.0m in depth shall include safety platform according to OPSD 404.020.
D Pipe support according to OPSD 708.020.
E For benching and pipe opening details, see OPSD 701.021.
F For adjustment unit and frame installation, see OPSD 704.010.
G All dimensions are nominal.
H All dimensions are in millimetres unless otherwise shown.

N.T.S.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2014	Rev 5
PRECAST CONCRETE MAINTENANCE HOLE 1200mm DIAMETER		
	OPSD 701.010	



SEWER SERVICE ABANDONMENT BENEATH PAVEMENT



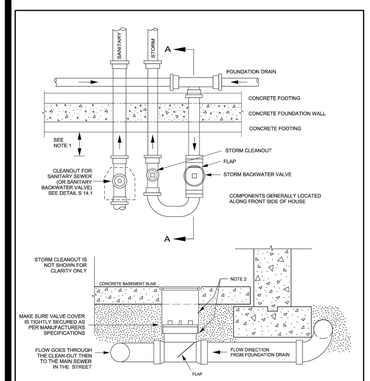
SECTION A - A
FABRICATED SEWER PLUG

N.T.S.

NOTES:

1. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE SHOWN.

SEWER SERVICE ABANDONMENT BENEATH PAVEMENT	DATE:	MARCH 2011
	REV. DATE:	
	DWG. No.:	S11.4



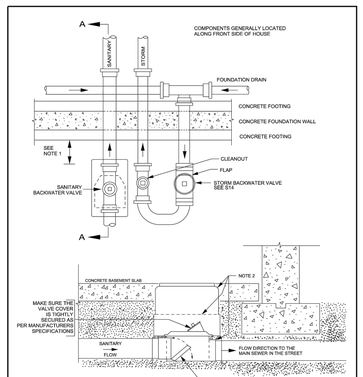
STORM BACKWATER VALVE

NOTES:

1. BACKWATER VALVE, CLEAN-OUTS AND ANY OTHER FITTINGS MUST BE INSTALLED A MINIMUM OF 300mm INSIDE OF THE BASEMENT FOOTING. THIS IS TO ENSURE THERE IS SUFFICIENT ROOM TO REPLACE THESE COMPONENTS IN THE FUTURE WITHOUT HAVING TO DAMAGE THE FOOTING/WALL DURING THE PROCESS
2. JOINTS BETWEEN THE SLEEVE AND THE BACKWATER VALVE AND THE FLOOR SHALL BE WATERTIGHT.

N.T.S.

FOUNDATION DRAIN BACKWATER VALVE INSTALLATION	DATE:	DEC. 2002
	REV. DATE:	MARCH 2011
	DWG. No.:	S14



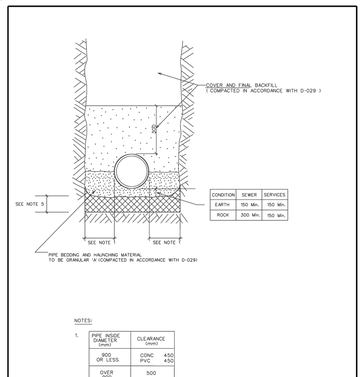
SANITARY BACKWATER VALVE

NOTES:

1. BACKWATER VALVE, CLEAN-OUTS AND ANY OTHER FITTINGS MUST BE INSTALLED A MINIMUM OF 300mm INSIDE OF THE BASEMENT FOOTING. THIS IS TO ENSURE THERE IS SUFFICIENT ROOM TO REPLACE THESE COMPONENTS IN THE FUTURE WITHOUT HAVING TO DAMAGE THE FOOTING/WALL DURING THE PROCESS
2. JOINTS BETWEEN THE ACCESS BOX SECTIONS AND THE ACCESS BOX AND THE BACKWATER VALVE AND THE FLOOR SLAB SHALL BE SEALED.

N.T.S.

SANITARY BACKWATER VALVE INSTALLATION TYPE 1	DATE:	MARCH 2012
	REV. DATE:	MARCH 2011
	DWG. No.:	S14.1



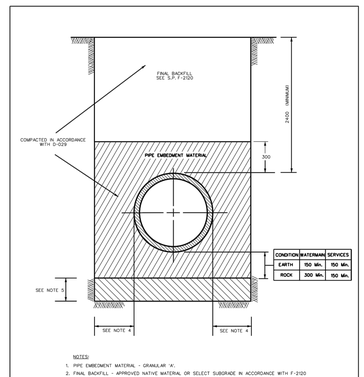
NOTES:

1.

PIPE INSIDE DIAMETER (mm)	CLEARANCE (mm)	
450 OR LESS	CONC	450
	PVC	450
OVER 900	500	

2. FINAL BACKFILL - APPROVED NATIVE MATERIAL OR SELECT SUBGRADE IN ACCORDANCE WITH F-2120.
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.
4. INITIAL BACKFILL MATERIAL - CONCRETE PIPE - SAND, GRANULAR 'A' PVC PIPE - GRANULAR 'A'
5. WHEN APPROVED BY THE CONTRACT ADMINISTRATOR, POOR SOILS SHALL BE EXCAVATED TO CREATE A FOUNDATION THAT SHALL BE FILLED TO THE BOTTOM OF THE BEDDING WITH GRANULAR 'B'.

SINGLE TRENCH (SEWER & SEWER SERVICES)	DATE:	MAY 2001
	REV. DATE:	MARCH 2016
	DWG. No.:	S6



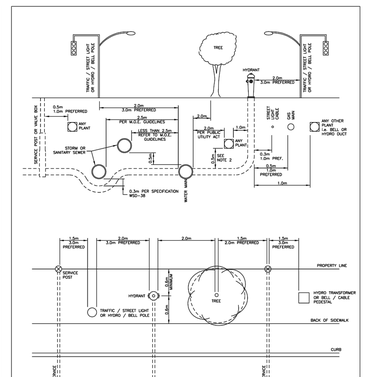
NOTES:

1. PIPE EMBEDMENT MATERIAL - GRANULAR 'A'.
2. FINAL BACKFILL - APPROVED NATIVE MATERIAL OR SELECT SUBGRADE IN ACCORDANCE WITH F-2120
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.
4.

PIPE OUTSIDE DIA. (mm)	CLEARANCE (mm)
900 or LESS	450
OVER 900	500

5. WHEN APPROVED BY THE CONTRACT ADMINISTRATOR, POOR SOILS SHALL BE EXCAVATED TO CREATE A FOUNDATION THAT SHALL BE FILLED TO THE BEDDING WITH GRANULAR 'B'.

STANDARD TRENCH DETAIL	DATE:	MAY 2001
	REV. DATE:	MARCH 2014
	DWG. No.:	W17



NOTES:

1. DIMENSIONS ILLUSTRATED ARE MINIMUM ACCEPTABLE CLEARANCES UNLESS OTHERWISE NOTED.
2. 0.5m VERTICAL SEPARATION IS REQUIRED BETWEEN WATERMAINS AND OTHER UTILITY INSTALLATIONS TO ALLOW TOP PROPER BEDDING OF THE WATERMAIN AND SUFFICIENT CLEARANCE TO CONDUCT REPAIRS.

GENERAL WATER PLANT TO UTILITY CLEARANCE	DATE:	MARCH 2009
	REV. DATE:	
	DWG. No.:	R20

ITEM	SYMBOL	HORIZONTAL CLEARANCE TO WATER PLANT MINIMUM	HORIZONTAL CLEARANCE TO WATER PLANT PREFERRED	FOUNDATION DIMENSIONS (mm)
1	MANHOLE PROP. EXIST.	2m		1060 DIA. 1500 DEPTH
2	HANDHOLE	2m		710x508x900
3	CONTROLLER FOUNDATION	2m	3m	1000x1000x1200
4	"170" CONTROLLER FOUNDATION	2m		709x1115x1220
5	MAST ARM FOUNDATION	2m	3m	1200x1200x1500
6	TUBULAR FOUNDATION	2m	3m	1000x1000x1500
7	OVERHEAD SIGN FOUNDATION	2m	3m	SIGNS / SIGNALS; FOUNDATION SIZE VARIES WITH SPAN AND SIGNALS; 1# STORMER AT DAYBERG 1700x800x3700
8	JOINT USE POLE	2m	3m	1500x1500x1800

TRAFFIC STRUCTURE CLEARANCES TO WATER PLANT	DATE:	MARCH 2009
	REV. DATE:	
	DWG. No.:	R22

No.	REVISIONS	BY	DATE
02	RE-ISSUED FOR SITE PLAN APPROVAL	K.H.	02 FEB 2023
01	ISSUED FOR SITE PLAN APPROVAL	K.H.	16 MAR 2022

LICENSED PROFESSIONAL ENGINEER V. JOHNSON 100510576 02-02-2023 PROVINCE OF ONTARIO

NOT AUTHENTIC UNLESS SIGNED AND DATED

LRJ
ENGINEERING | INGÉNIERIE
5430 Canotek Road | Ottawa, ON, K1J 9G2
www.lrl.ca | (613) 842-3434

CLIENT

WELLINGTON HURON COMMERCIAL INC.

DESIGNED BY:	DRAWN BY:	APPROVED BY:
K.H.	M.A.	V.J.

PROJECT

PROPOSED ADDITION TO MIXED USE BUILDING
1252 WELLINGTON ST., OTTAWA, ON.

DRAWING TITLE

CONSTRUCTION DETAIL PLAN

PROJECT NO.
210883

DATE
JANUARY 2022

C901

D07-12-22-0081

#18779

USE AND INTERPRETATION OF DRAWINGS

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION ARE PART OF THE CONTRACT DOCUMENTS AND DESCRIBE USE AND INTENT OF THE DRAWING. THE CONTRACT DOCUMENTS INCLUDE NOT ONLY THE DRAWINGS, BUT ALSO THE OWNER-CONTRACTOR AGREEMENTS, CONDITIONS OF THE CONTRACT, THE SPECIFICATIONS, ADDENDA, AND MODIFICATIONS ISSUED AFTER EXECUTION OF THE CONTRACT. THESE CONTRACT DOCUMENTS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ANY ONE SHALL BE BINDING AS IF REQUIRED BY ALL. WORK NOT COMPLETELY DELINEATED HEREON SHALL BE CONSTRUCTED OF THE SAME MATERIALS AND DETAILED SIMILARLY AS WORK SHOWN MORE COMPLETELY ELSEWHERE IN THE CONTRACT DOCUMENTS.

BY USE OF THE DRAWINGS FOR CONSTRUCTION OF THE PROJECT, THE OWNER CONFIRMS THAT HE HAS REVIEWED AND APPROVED THE DRAWINGS. THE CONTRACTOR CONFIRMS THAT HE HAS VISITED THE SITE, FAMILIARIZED HIMSELF WITH THE LOCAL CONDITIONS, VERIFIED FIELD DIMENSIONS AND CORRELATED HIS OBSERVATIONS WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

AS INSTRUMENTS OF SERVICE, ALL DRAWINGS, SPECIFICATIONS, CADD FILES OR OTHER ELECTRONIC MEDIA AND COPIED THERE OF FURNISHED BY THE ENGINEER ARE HIS PROPERTY. THEY ARE TO BE USED ONLY FOR THIS PROJECT AND ARE NOT TO BE USED ON ANY OTHER PROJECT, INCLUDING REPEATS OF THE PROJECT. CHANGES TO THE DRAWINGS MAY ONLY BE MADE BY THE ENGINEER.

UNLESS THE REVISION TITLE IS "ISSUED FOR CONSTRUCTION", THESE DRAWINGS SHALL BE CONSIDERED PRELIMINARY AND SHALL NOT BE USED AS A CONSTRUCTION DOCUMENT.

THESE DRAWINGS ILLUSTRATES THE WORK TO BE DONE. THE ENGINEER IS NOT RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES USED TO DO THE WORK, OR THE SAFETY ASPECTS OF CONSTRUCTION, AND NOTHING ON THESE DRAWINGS EXPRESSED OR IMPLIED CHANGES THIS CONDITION. CONTRACTOR SHALL DETERMINE ALL CONDITIONS AT THE SITE AND SHALL BE RESPONSIBLE FOR KNOWING HOW THEY AFFECT THE WORK. SUBMITTAL OF A BID TO PERFORM THIS WORK IS ACKNOWLEDGEMENT OF THE RESPONSIBILITIES, AND THAT THEY HAVE BEEN FULLY CONSIDERED IN PLANNING OF THE WORK, AND THE BID PRICE. NO CLAIMS FOR EXTRA CHANGES DUE TO THESE CONDITIONS WILL BE FORTHCOMING.

UNAUTHORIZED CHANGES:

IN THE EVENT THE CLIENT, THE CLIENT'S CONTRACTORS OR SUBCONTRACTORS, OR ANYONE FOR WHOM THE CLIENT IS LEGALLY LIABLE MAKES OR PERMITS TO BE MADE ANY CHANGES TO ANY REPORTS, PLANS, SPECIFICATIONS OR OTHER CONSTRUCTION DOCUMENTS PREPARED BY LRL ASSOCIATES LTD. (LRL) WITHOUT OBTAINING LRL'S PRIOR WRITTEN CONSENT, THE CLIENT SHALL ASSUME FULL RESPONSIBILITY FOR THE RESULTS OF SUCH CHANGES, THEREFORE THE CLIENT AGREES TO WAIVE ANY CLAIM AGAINST LRL AND TO RELEASE LRL FROM ANY LIABILITY ARISING DIRECTLY OR INDIRECTLY FROM SUCH UNAUTHORIZED CHANGES.

IN ADDITION, THE CLIENT AGREES, TO THE FULLEST EXTENT PERMITTED BY LAW, TO INDEMNIFY AND HOLD HARMLESS LRL FROM ANY DAMAGES, LIABILITIES OR COST, INCLUDING REASONABLE ATTORNEY'S FEES AND COST OF DEFENSE, ARISING FROM SUCH CHANGES.

IN ADDITION, THE CLIENT AGREES TO INCLUDE IN ANY CONTRACTS FOR CONSTRUCTION APPROPRIATE LANGUAGE THAT PROHIBITS THE CONTRACTOR OR ANY SUBCONTRACTORS OF ANY TIER FROM MAKING ANY CHANGES OR MODIFICATIONS TO LRL'S CONSTRUCTION DOCUMENTS WITHOUT THE PRIOR WRITTEN APPROVAL OF LRL AND THAT FURTHER REQUIRES THE CONTRACTOR TO INDEMNIFY BOTH LRL AND THE CLIENT FROM ANY LIABILITY OR COST ARISING FROM SUCH CHANGES MADE WITHOUT SUCH PROPER AUTHORIZATION.

GENERAL NOTES:

EXISTING SERVICES AND UTILITIES SHOWN ON THESE DRAWINGS ARE TAKEN FROM THE BEST AVAILABLE RECORDS, BUT MAY NOT BE COMPLETE OR TO DATE. CONTRACTOR SHALL VERIFY IN FIELD FOR LOCATION AND ELEVATION OF PIPES AND CHECK WITH THE UTILITY COMPANIES BEFORE DIGGING OR PERFORMING WORK.

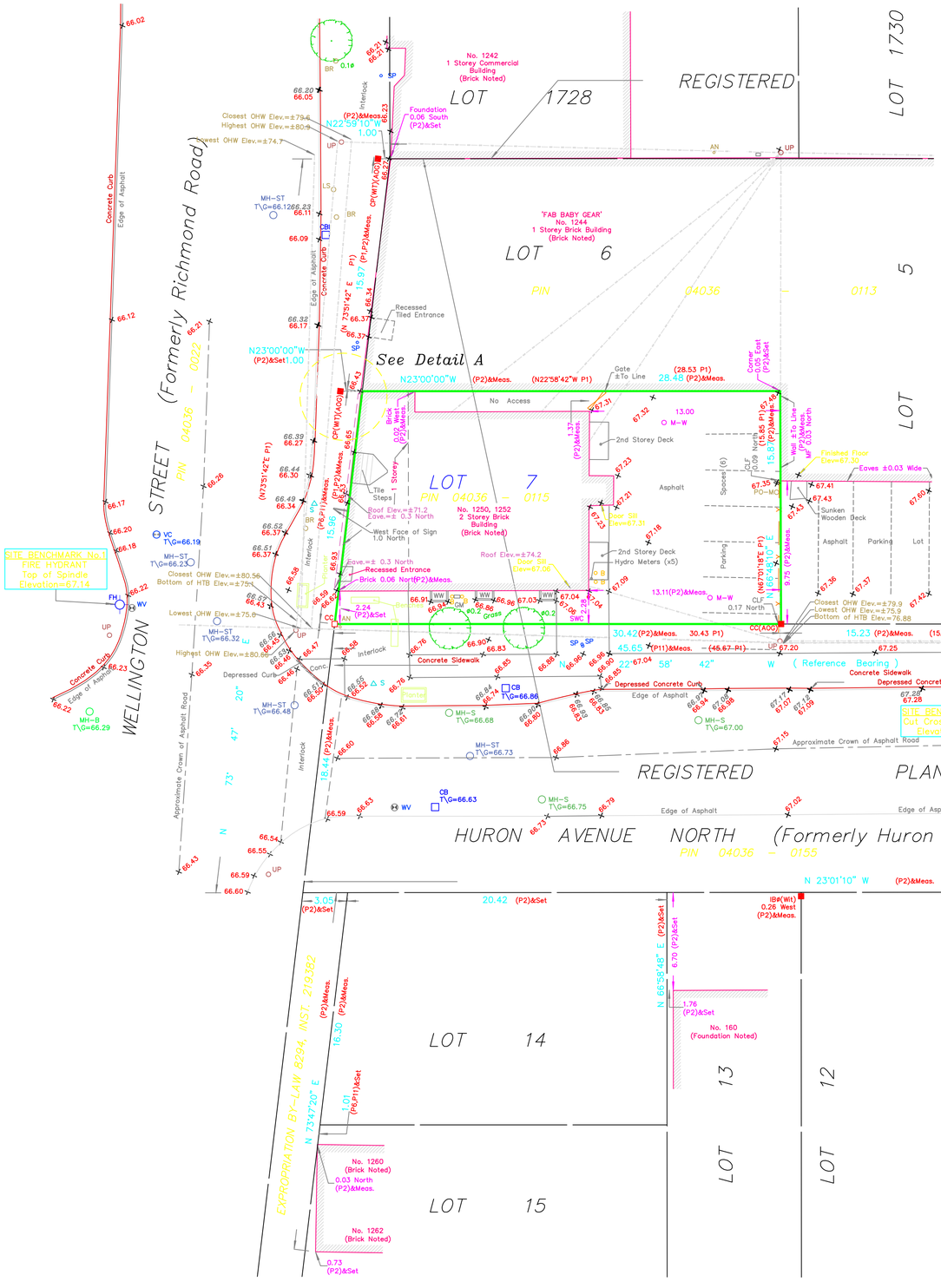
CONTRACTOR IS ADVISED TO COLLECT INFORMATION ON SOIL CONDITIONS BEFORE START OF CONSTRUCTION.

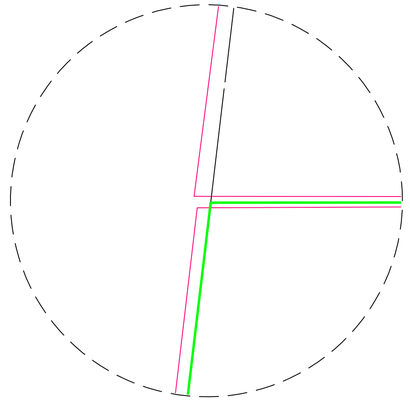
THE ENGINEER WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS AND THE DESIGN INTENT THEY CONVEY, OR FOR PROBLEMS WHICH ARISE FROM OTHERS' FAILURE TO OBTAIN AND/OR FOLLOW THE ENGINEER'S GUIDANCE WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES AMBIGUITIES OR CONFLICTS WHICH ARE ALLEGED.

CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE WORK COMMENCES. DO NOT SCALE DRAWINGS.

DRAWINGS/FIGURES

Proposed Site Plan
Legal Survey
As-builts





DETAIL A
Scale 1:20

TOPOGRAPHIC PLAN OF SURVEY OF

LOT 7
REGISTERED PLAN 127960
CITY OF OTTAWA

Surveyed by Annis, O'Sullivan, Vollebekk Ltd.

Scale 1 : 200

8.0 6.0 4.0 2.0 0 4 8 Metres

Metric

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

Surveyor's Certificate

I CERTIFY THAT :

1. This survey and plan are correct and in accordance with the Surveys Act, the Surveyors Act and the regulations made under them.
2. The survey was completed on the 11th day of June, 2021.

Date

V. Andrew Shelp
Ontario Land Surveyor

Notes & Legend

—□— Denotes		Survey Monument Planted
—■—	"	Survey Monument Found
SIB	"	Standard Iron Bar
SSIB	"	Short Standard Iron Bar
IB	"	Iron Bar
CP	"	Concrete Pin
CC	"	Cut Cross
(Prop)	"	Proportioned
(WIT)	"	Witness
(AOG)	"	Annis, O'Sullivan, Vollebekk Ltd.
Meas.	"	Measured
(P1)	"	Registered Plan 127960
(P2)	"	(AOG) Plan dated August 3, 2021
(P3)	"	(647) Plan dated August 14, 1956
○ MH–ST	"	Maintenance Hole (Storm Sewer)
○ MH–S	"	Maintenance Hole (Sanitary)
□ CB	"	Catch Basin
□ CBI	"	Catch Basin Inlet
GM	"	Gas Meter
○ B	"	Bollard
△ S	"	Sign
CLF	"	Chain Link Fence (Centreline Noted)
—▭—	"	Gate
○ PO–M	"	Metal Pole
T/G	"	Top of Grate
BF	"	Board Fence
Ø	"	Diameter
FH	"	Fire Hydrant
UP	"	Utility Pole
○ AN	"	Anchor
○ LS	"	Light Standard
○ BR	"	Bike Rack
○ SP	"	Water Stand Post
+65.00	"	Location of Elevations
+65.00	"	Top of Concrete Curb Elevation
MF	"	Metal Flashing
C/L	"	Centreline
	"	Property Line
—OHW—	"	Overhead Wires
	"	Deciduous Tree
VC	"	Valve Chamber (Watermain)
WV	"	Water Valve
HTB	"	Hydro Transformer Bolt
Conc.	"	Concrete
SWC	"	Concrete Sidewalk
○ M–W	"	Monitoring Well
WW	"	Window Well
HTB	"	Hydro Transformer Bolt

ASSOCIATION OF ONTARIO LAND SURVEYORS
PLAN SUBMISSION FORM
V-13710
THIS PLAN IS NOT VALID UNLESS IT IS AN EMBOSSED ORIGINAL COPY ISSUED BY THE SURVEYOR
In accordance with Regulation 1026, Section 29 (3).

Bearings are astronomic, derived from the easterly limit of Huron Avenue North, having a bearing of N22°58'42"W as shown on Registered Plan 127960.

ELEVATION NOTES

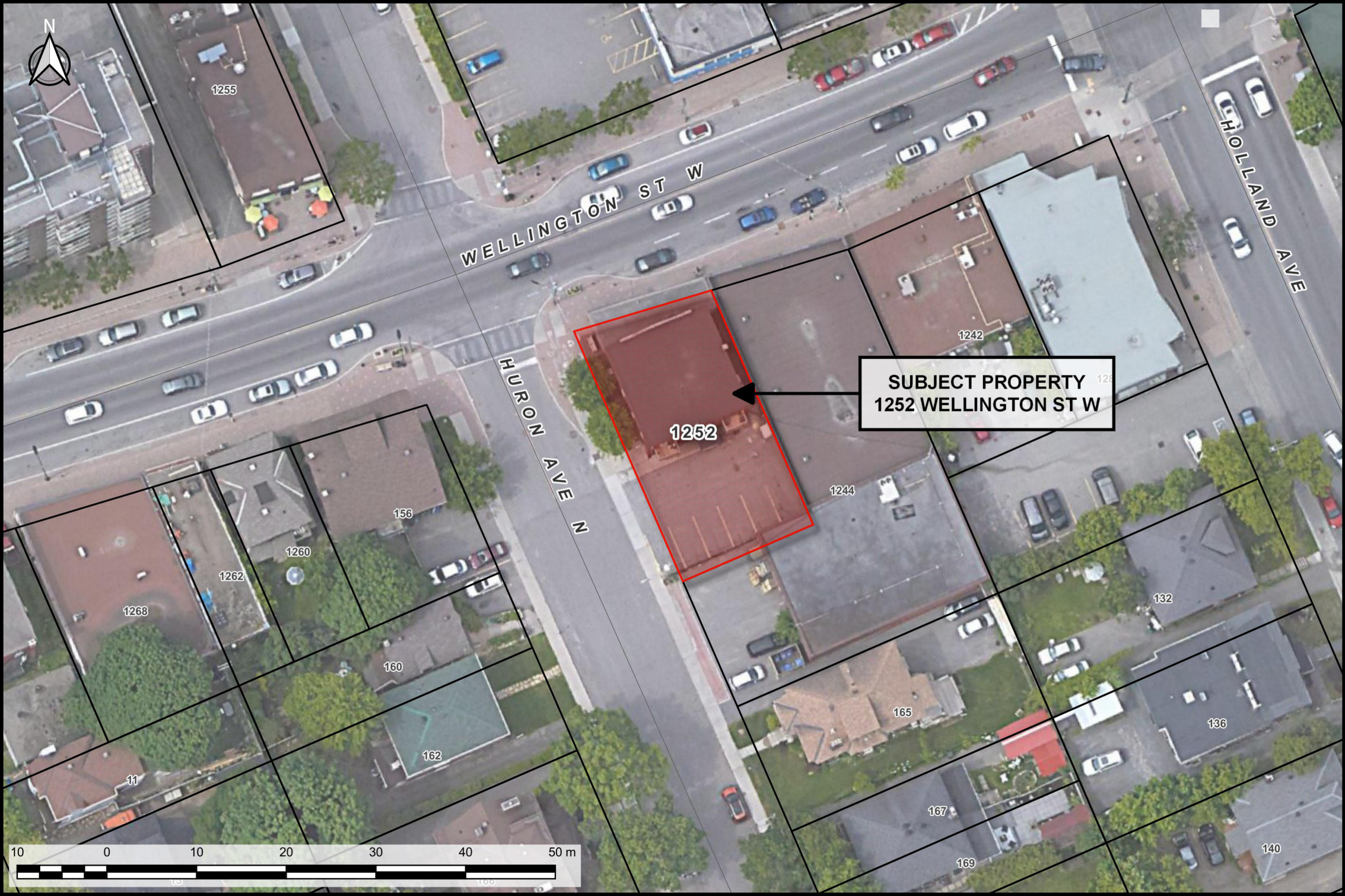
1. Elevations shown are geodetic and are referred to the CGVD28 geodetic datum.
2. It is the responsibility of the user of this information to verify that the job benchmark has not been altered or disturbed and that it's relative elevation and description agrees with the information shown on this drawing.

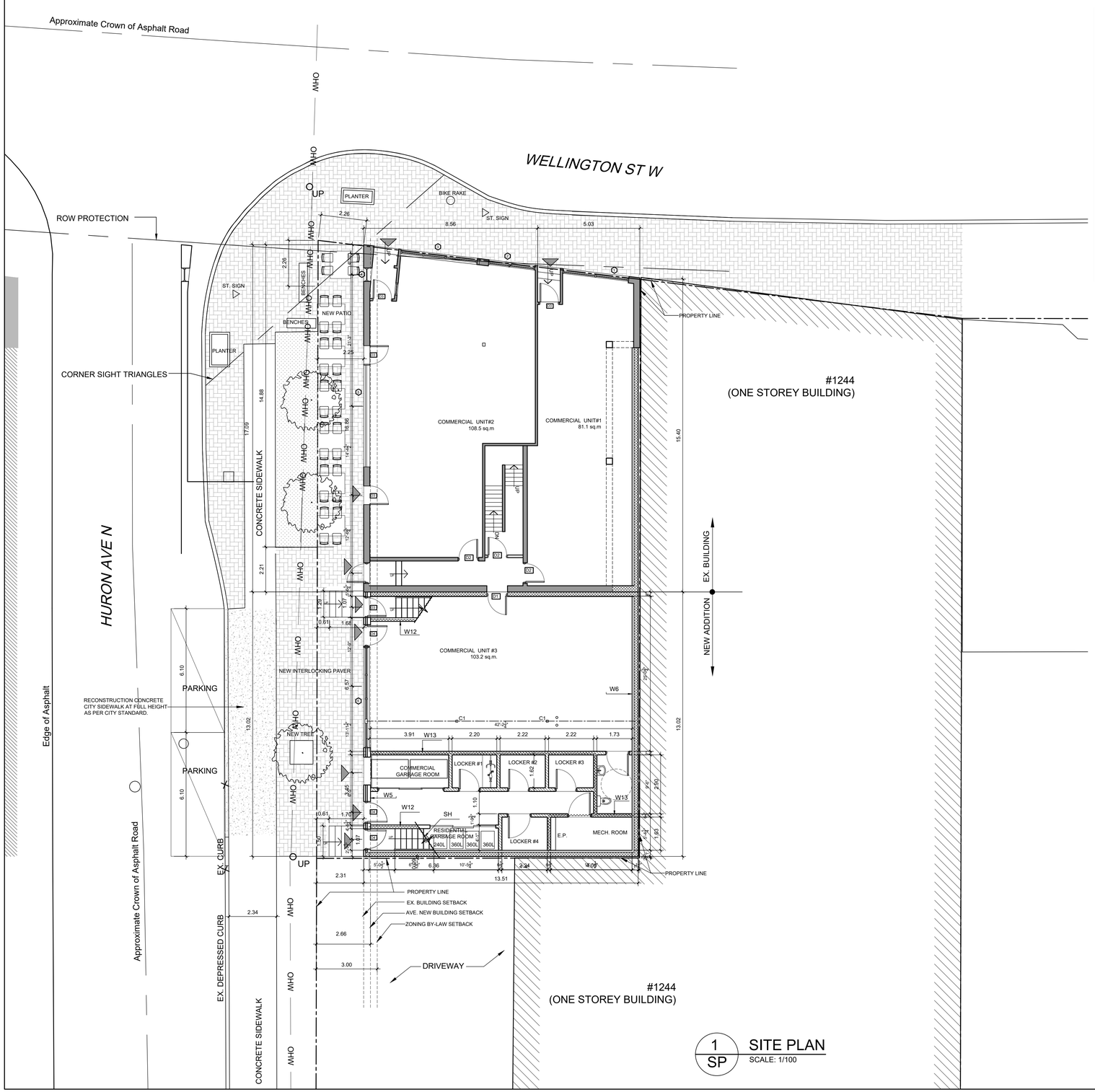
UTILITY NOTES

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.

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
Ontario Land Surveyors

Job No. 21693–21 Domicile Lt7 RP127960 T D1 ns


N
WELLINGTON ST W
HURON AVE N
HOLLAND AVE
SUBJECT PROPERTY
1252 WELLINGTON ST W
1252
1255
1242
1244
1268
1262
1260
156
160
162
11
165
132
136
167
169
140
10 0 10 20 30 40 50 m



1 SP SITE PLAN
SCALE: 1/100

PROPERTY DESCRIPTION:

Legal Description: Lot 7- Registered plan 127960 City of Ottawa
Base on survey prepared by Surveyed by Annis, O'Sullivan, Vollebekk Ltd.

DEVELOPMENT DATA:

Site Zoning Designation: TM11
Site area: 467.191 m²
Frontage as per survey: 15.97 m.
Depth as per survey: 29.45 m.
Site Plan Control Approval for: three storey addition mixed use building
Existing floor area : 349.3 m²
New floor addition area : 527.8 m²
New building footprint: 396.13 m² (85% lot coverage)

ZONING INFORMATION		
TM11		
PRINCIPAL DWELLING TYPE	REQUIRED FOR MIXED USE BUILDING	PROPOSED 3 STOREY
MINIMUM LOT WIDTH	NO	15.97 m
MINIMUM LOT AREA	NO	467.191 m²
MAXIMUM BUILDING HEIGHT	20m	8.96 m
FRONT YARD SETBACK	MAXIMUM: 3 M	0 m
CORNER SIDE YARD SETBACK	2.66m (AVE. OF EX. BUILDING & 3m)	2.31m (MATCH EXISTING) (ZBA. REQUIRED)
REAR YARD SETBACK	0	0.09
INTERIOR SIDE YARD SETBACK	MAX. 3m	0
ACTIVE ENTRANCES	MIN. ONE ACTIVE ENTRANCE PER EACH RESIDENTIAL OR NON-RESIDENTIAL USE ON GROUND FLR.	RESIDENTIAL: NOT REQUIRED AS RESIDENTIAL USE NOT ON GROUND FLOOR NON-RESIDENTIAL: ONE ENTRANCE/UNIT
Parking Rate Area Y of Schedule 1A (Section 101, Table 101)		
Motor Vehicle	0	0
Min. Bicycle Parking (0.5/unit)	Residential: 0.5/unit = 1space (for new 2 unit only) Commercial: 1/250 m² = 1 space	2

LEGEND:

- ENTRANCE
- PROPERTY LINE
- SETBACK LINE
- EXISTING BUILDING
- NEW BUILDING ADDITION
- LANDSCAPE AREA
- RIVER ROCK
- INTERLOCK WALKWAY

0 1 2 3 4 5 6 7 8 9 10 12
0.5

PROJECT NORTH
TRUE NORTH

CLIENT:

WELLINGTON HURON
COMMERCIAL INC.

371A RICHMOND RD. SUITE 1,
OTTAWA, ONTARIO
K2A 0B7

LRL ENGINEERING
5430 CANOTEK ROAD
OTTAWA, ONTARIO K1J 9G2
T (613) 842-3434

FOTENN PLANNING + DESIGN
396 Cooper Street, Suite 300
Ottawa, ON K2P 2H7

SURVEYOR
ANNIS, O'SULLIVAN,
VOLLEBEKK Ltd.
14 Concourse Gate, Suite 500
Nepean, Ont. K2E 7S6
Phone: (613) 727-0850
Fax: (613) 727-1079

SUSAN D. SMITH ARCHITECT
941 Merivale
Ottawa, Ontario
K1Z 6A1
613-722-5327
s.smith@sdsarch.ca

NOTES:
1. All dimensions are to be checked on site. Discrepancies or ambiguities should be reported prior to work on site or ordering of materials.
2. All work to be in accordance with the Ontario Building Code, latest edition.
3. All interior dimensions are to face of gypsum board

No.	REVISION	DATE
2	ISSUED FOR REVIEW	OCT. 11/22
1	ISSUED FOR SITE PLAN CONTROL	APR. 11/22
0	ISSUED FOR REVIEW	OCT. 22/21

PROPOSED ADDITION
MIXED USE BUILDING
1248-1252 Wellington W

SITE PLAN

DRAWN BY: TD & S.C.

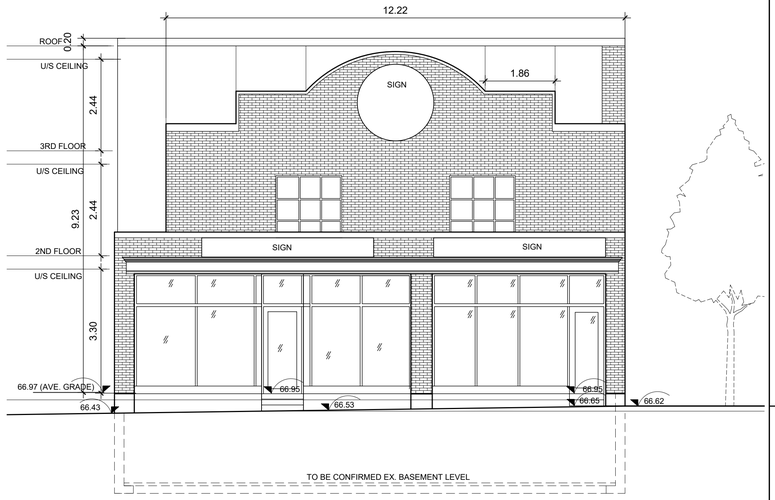
CHECKED: SDS.

DATE: SEP/2021

SCALE:
AS NOTED

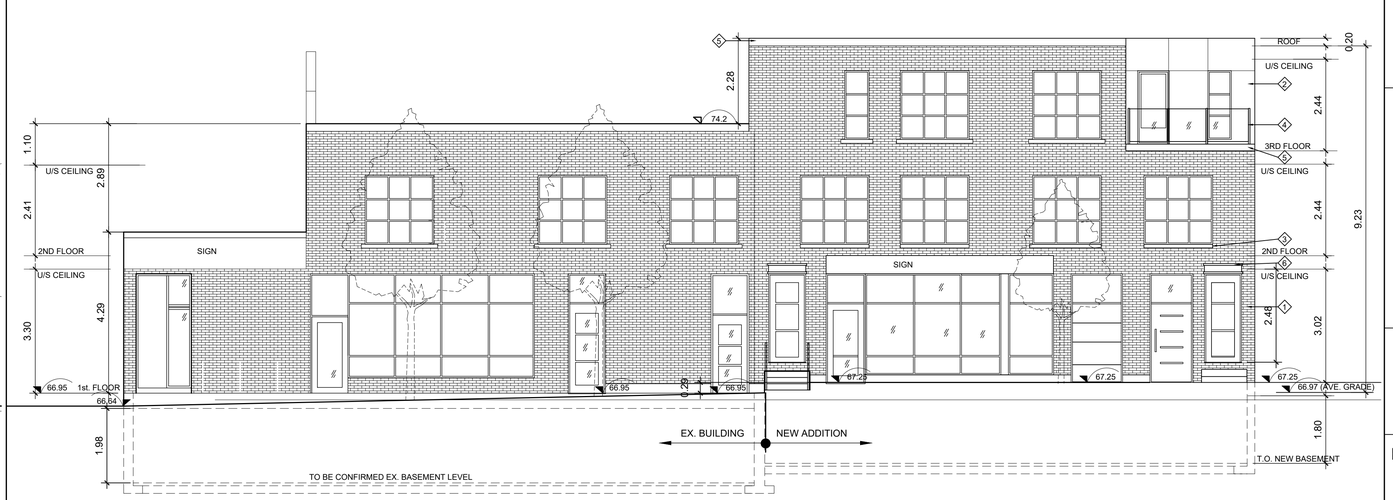
SP

D07-12-22-0081



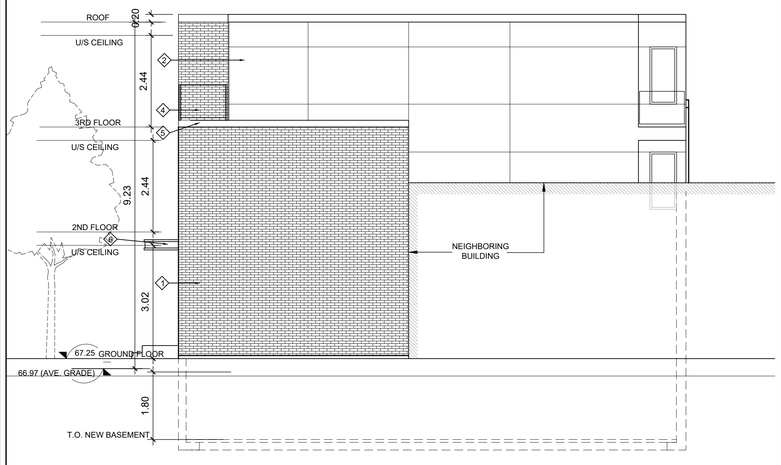
1 EL NORTH ELEVATION

SCALE: 1/75



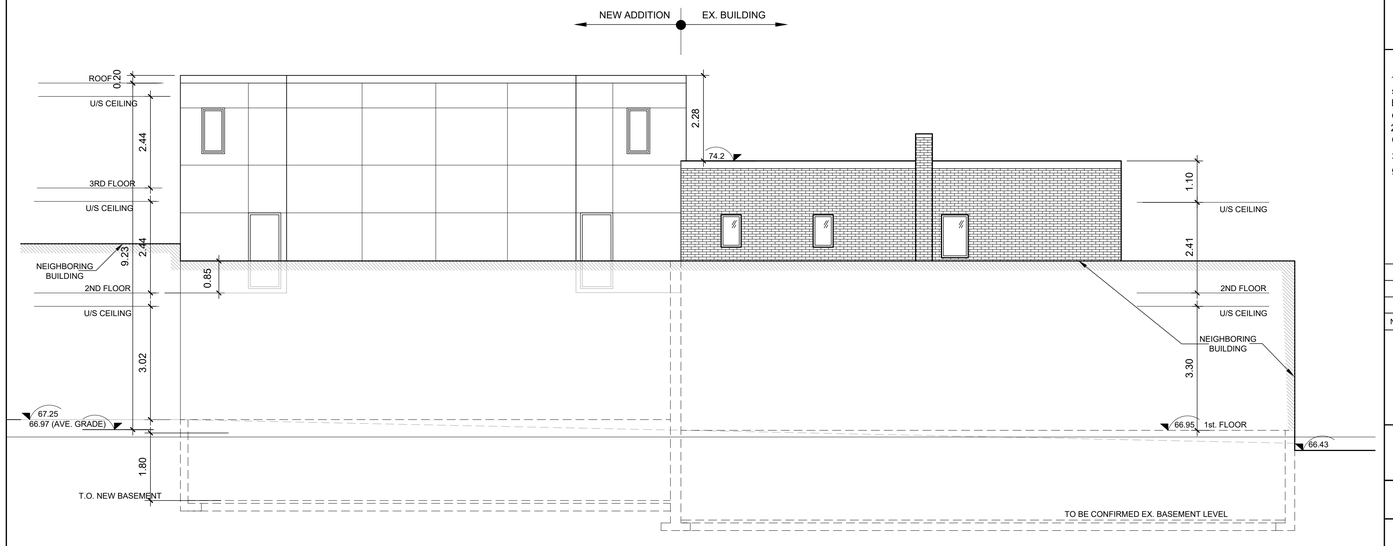
2 EL WEST ELEVATION

SCALE: 1/75



3 EL SOUTH ELEVATION

SCALE: 1/75



4 EL EAST ELEVATION

SCALE: 1/75

CLIENT:

WELLINGTON HURON
COMMERCIAL INC.

371A RICHMOND RD. SUITE 1,
OTTAWA, ONTARIO
K2A 0B7

LEGEND:	
1	RED BRICK (MATCH EXISTING)
2	ALUMINUM PANEL
3	BRICK SILL
4	GLASS HANDRAIL
5	METAL FLASHING
6	FRONT CANOPY

LRL ENGINEERING
5430 CANOTEK ROAD
OTTAWA, ONTARIO K1J 9G2
T (613) 842-3434

FOTENN PLANNING + DESIGN
396 Cooper Street, Suite 300
Ottawa, ON K2P 2H7

SURVEYOR
ANNIS, O'SULLIVAN,
VOLLEBEKK Ltd.
14 Concourse Gate, Suite 500
Nepean, Ont. K2E 7S6
Phone: (613) 727-0850
Fax: (613) 727-1079

SUSAN D. SMITH ARCHITECT
941 Merivale
Ottawa, Ontario
K1Z 6A1
613-722-5327
s.smith@sdsarch.ca

NOTES:
1. All dimensions are to be checked on site. Discrepancies or ambiguities should be reported prior to work on site or ordering of materials.
2. All work to be in accordance with the Ontario Building Code, latest edition.
3. All interior dimensions are to face of gypsum board

No.	REVISION	DATE
2	ISSUED FOR REVIEW	OCT. 11/22
1	ISSUED FOR SITE PLAN CONTROL	APR. 11/22
0	ISSUED FOR REVIEW	OCT. 22/21

PROPOSED ADDITION
MIXED USE BUILDING
1248-1252 Wellington W

ELEVATIONS

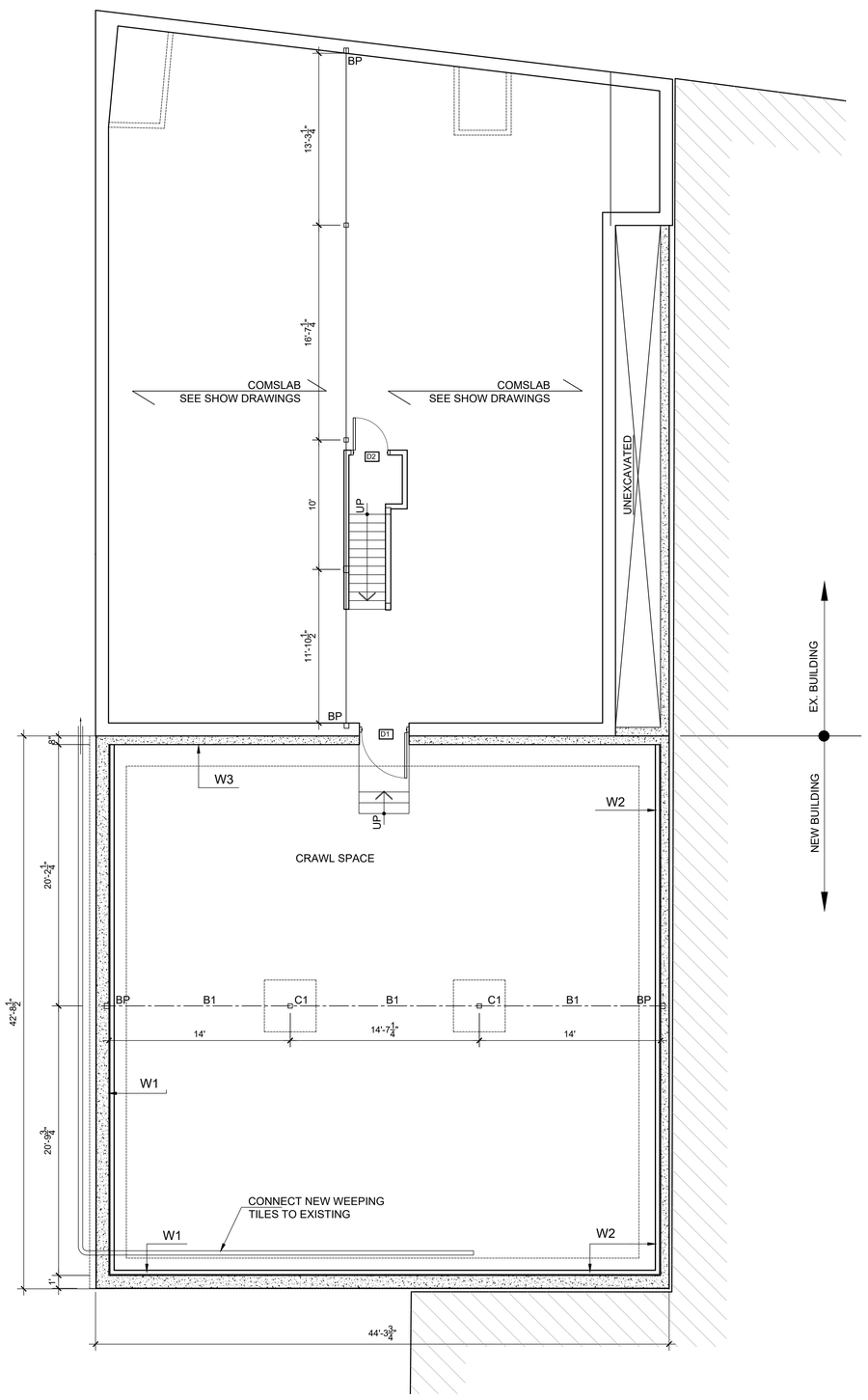
DRAWN BY: TD & S.C.

CHECKED: SDS.

DATE: SEP/2021

SCALE:
AS NOTED

EL



1 / A1 CRAWL SPACE PLAN

SCALE: 3/16"=1'-0"

GENERAL NOTES:

THESE NOTES FORM PART OF, AND ARE TO BE READ TOGETHER WITH ALL THE ATTACHED DRAWINGS ARCH. STRUCT. AND M&E.

WORK PERFORMANCE:

- CONTRACTOR TO PERFORM ALL WORK IN COMPLIANCE WITH THE *ONTARIO BUILDING CODE* (O.B.C.) LATEST 2012 EDITION AND ALL APPLICABLE CODES AND REGULATIONS.
- ALL MATERIAL AND EQUIPMENT ARE TO BE APPLIED AND INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS AND IN CONFORMANCE WITH THE O.B.C.
- ALL WORK SHALL BE EQUAL IN ALL RESPECTS TO GOOD BUILDING PRACTICE.
- PROJECT MANAGER IS TO COORDINATE WORK WITH CONTRACTOR, SOIL, GRADING, ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL TRADES.
- THE DESIGNER/REVIEWER SHALL NOT BE RESPONSIBLE FOR ANY VARIATION FROM THESE DRAWINGS AND SPECIFICATIONS, OR ADJUSTMENTS ARISING FROM ENCOUNTERED SITE CONDITIONS OR RESULTING FROM CLIENT MODIFICATIONS; THESE WILL BE THE SOLE RESPONSIBILITY OF THE OWNER AND CONTRACTOR.
- CONTRACTOR IS TO COORDINATE WORK WITH UTILITY SERVICES AND LOCAL AUTHORITIES HAVING JURISDICTION.
- THIS STRUCTURE SHALL BE ADEQUATELY BRACED FOR WIND LOADS UNTIL THE ROOF, WALLS AND FLOOR HAVE BEEN PERMANENTLY ATTACHED TOGETHER.
- CONTRACTOR IS TO PROTECT ANY ADJACENT STRUCTURE OR BUILDING AFFECTED BY THIS PROJECT AND TO PROVIDE ADEQUATE SUPPORT AND INSULATION AS REQUIRED.

DRAWINGS:

- ARCHITECTURAL DRAWING ARE TO BE READ IN CONJUNCTION WITH STRUCTURAL DRAWINGS FOR LOCATION SIZE AND SPECS OF POST, LINTELS AND BEAMS
- DRAWINGS SHALL NOT BE SCALED.
- PROJECT MANAGER AND SUB-TRADES MUST VERIFY ALL DIMENSIONS, DETAILS AND SITE CONDITIONS BEFORE PROCEEDING WITH THE WORK.
- ANY DISCREPANCY ON DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGNER PRIOR TO COMMENCING WITH THE WORK.
- RESPECT ALL REQUIREMENTS DETAILED IN ANNEX DOCUMENTS, SPECIFICATIONS, MANUALS, ETC.)
- NOTES AND DIMENSIONS HAVE PRIORITY OVER DRAWINGS. CERTAIN NOTES ARE SUBJECT TO ADJUSTMENTS ACCORDING TO MATERIALS AND/OR METHODS CHOSEN BY THE CONTRACTOR UPON APPROVAL OF PROJECT MANAGER.
- DIMENSIONS OF WINDOWS DESCRIBED ON PLANS MAY HAVE MINOR VARIANCES ACCORDING TO CHOSEN MANUFACTURER, ENSURE THEY ARE PREVIOUSLY CHECKED AND APPROVED BY PROJECT MANAGERS FOR COMPLIANCE WITH O.B.C.

NOTES:

MISCELLANEOUS CONCRETE: (See also structural)

1. AS PER STRUCTURAL ENGINEER DRAWINGS AND SPECIFICATIONS
2. CONCRETE SHALL BE READY-MIX USING NORMAL (TYPE 10) PORTLAND ALL CONCRETE SHALL HAVE 28 DAYS COMPRESSIVE STRENGTH OF 25 MPa.
3. ALL CONCRETE EXPOSED TO EXTERIOR SHALL HAVE A COMPRESSIVE STRENGTH OF 32 MPa. AND CONTAIN 8% ENTRAINED AIR
4. USE VIBRATOR FOR PLACEMENT OF CONCRETE, DO NOT PLACE CONCRETE IN RAIN.
5. PLYWOOD WORK SHALL CONFORM TO CSA STANDARD 0121 AND CARRY THE COFI EXTERIOR STAMP. NO INSERT PATCHES ON CONCRETE FACE.
6. EXPOSED CONCRETE SHALL BE FREE FROM HONEYCOMBING, VOIDS, LOSS OF FINES, VISIBLE FLOW LINES, COLD JOINTS, CHIPS AND SPALLS.
7. REMOVE FINS AND PATCH DEFECTS AND TIE HOLES.
8. SIDEWALKS: 4" THICK 32MPA. CONCRETE SLAB C/W 8% AIR ENTRAINED OVER COMPACTED GRANULAR FILL.

FOUNDATION:

(AS PER STRUCTURAL DRAWINGS)

1. ALL FOOTING SHALL BEAR ON NATIVE UNDISTURBED SOIL OR ENGINEERED FILL COMPACTED TO 98% STANDARD PROCTOR DRY DENSITY.
2. PROVIDE P. ENG. SOILS REPORT TO CONFIRM SOILS BEARING CAPACITY IS SUFFICIENT FOR THE DESIGN LOADS SPECIFIED BY ENGINEER. (PROJECT MANAGER TO CONFIRM SOIL BEARING CAPACITY WITH SOIL ENGINEER).
3. BASE OF FOOTINGS TO BE PLACED BELOW FROST LINE ON NATIVE UNDISTURBED SOIL HAVING A MINIMUM BEARING CAPACITY OF 75 KPA.
4. DEPTH OF FOOTINGS AS PER ENGINEER DRAWINGS AND SPECS.
5. FOOTINGS PADS TO BE PREMIXED POURED CONCRETE SIZED AS PER ENGINEER SPECIFICATION.
6. STRIP FOOTING TO BE POURED PREMIXED CONCRETE SIZED AS PER ENGINEER SPECIFICATION.
7. PIERS CONCRETE & REBAR AS PER ENGINEER SPECIFICATION
8. FOUNDATION WALL SHALL NOT BE BACKFILLED UNTIL CONCRETE HAS REACHED ITS SPECIFIED 28 DAYS STRENGTH OR UNTIL ADEQUATE BRACING APPROVED BY STRUCTURAL ENGINEER
9. PERIMETER DRAIN INSIDE AND OUTSIDE FOUNDATION (4" Ø. WEEPING TILE C/W FILTER CLOTH) SHALL BE INSTALLED AS PER SUBSECTION 9.14.3., AND BE APPROVED BY LOCAL AUTHORITY. CONNECT TO SUMP PIT

FRAMING:

(TO CONFORM TO PART 4 OF THE O.B.C. AND CSA 086-01)
(REFER TO STRUCTURAL DRAWINGS FOR LUMBER GRADE)

1. SILL PLATES IN CONTACT WITH CONCORDE AND/ OR LESS THAN 6" ABOVE FINISHED GRADE SHALL BE PRESSURED TREATED WOOD AND BE IN ACCORDANCE WITH SUBSECTION 9.23.7 , BE LEVEL AND SET IN FULL BED OF MORTAR UNLESS THE TOP OF FOUNDATION WALL IS FLAT AND THE GAP BETWEEN PLATE AND CONCRETE IS SEALED.
2. MOISTURE BARRIER SHALL BE PROVIDED IN ALL AREAS WHERE WOOD IS IN CONTACT WITH CONCRETE OR UNIT MASONRY LOCATED BELOW GRADE (9.23.2.3.).
3. FACE OF EXTERIOR WALL SHEATHING TO BE FLUSH WITH FACE OF FOUNDATION WALL.
4. SEE STRUCTURAL DRAWINGS FOR SHEAR WALL REQUIREMENTS
5. SEE STRUCTURAL DRAWINGS FOR ROOF AND FLOOR DIAPHRAGM REQUIREMENTS
6. JOIST TO BE OJ-TRYFORCE SYSTEM, LAYOUT AND SPACING AS PER JOIST SUPPLIER. COORDINATED PLACEMENT TO ACCOMMODATE HEATING & VENTILATION, PLUMBING, ETC.
7. JOIST SUPPLIER TO PROVIDE SHOP DRAWINGS TO ENGINEER FOR REVIEW AND COORDINATION. DRAWINGS TO BE STAMPED BY STRUCTURAL ENGINEER REGISTERED IN THE PROVINCE OF ONTARIO. DESIGN LOADS AS PER ENGINEER SPECIFICATIONS
8. INSTALL ALL MEMBERS TRUE TO LINE LEVELS AND ELEVATIONS, SPACE UNIFORMLY.
9. CONSTRUCT CONTINUOUS MEMBERS FROM PIECES OF THE LONGEST PRACTICAL LENGTH.
10. INSTALL SPANNING MEMBERS WITH CROWN EDGE UP, AS APPLICABLE INSTALL DOUBLE JOIST OR BLOCKING UNDER PARTITION WALLS.
11. INSTALL SOLID BLOCKING UNDER POSTS AND COLUMNS.
12. INSTALL SUB FLOORING ADHESIVE UNDER PANELS INSTALLED ON WOOD JOIST. PLACE CONTINUOUS ADHESIVE BEAD SIZED IN ACCORDANCE WITH MANUFACTURER INSTRUCTIONS, SINGLE-BEAD ON EACH JOIST AND DOUBLE-BEAD ON JOIST WHERE TWO PANEL EDGES BUTT.
13. FASTEN PANELS WITH SCREWS SPACED 6" O.C. ALONG EDGES AND 12" O.C. ON INTERMEDIATE SUPPORTS.
14. SPANS AND SIZES OF WOOD LINTELS SHALL CONFORM TO 9.23.12.3. (TABLES A-12 TO A-16). OR AS PER ENGINEER SPECIFICATIONS.
15. INSTALL STUD WALL REINFORCEMENT IN THE MAIN BATHROOM FOR FUTURE INSTALLATION OF GRAB BAR AS PER 9.5.2.3.
16. INSTALLATION OF AIR BARRIER TO BE CONTINUOUS AS PER 9.25.3.
17. PROVIDE EXHAUST FAN TO BATHROOMS AND EXTEND DUCT TO OUTSIDE OF BUILDING.
18. FINISHED FLOORING IN BATHROOMS, KITCHEN, LAUNDRY ROOMS, AREAS AND ENTRANCES SHALL BE WATER RESISTANT (9.30.1.2).
19. INSTALL CERAMIC TILE AS PER 9.30.6.3., USING SCHLUTER DITR SYSTEM
20. INSTALL GEORGIAN PACIFIC DENSE-SHIELD BOARD PANELS AT SHOWER STALLS AND BATHROOM WET AREAS - FIRERATED WHERE ASSEMBLY IS RATED.
21. LINTELS:
22. ALL LINTELS AS PER STRUCTURAL DRAWINGS AND SUPPORTED BY WOOD POSTS AS PER STRUCTURAL ENGINEER SPECIFICATIONS.
23. ** PROVIDE SOLID BLOCKING TO SUPPORT POINT LOADS COMING FROM ABOVE

FLOOR JOIST SYSTEMS:

REFER TO MANUFACTURER ENGINEERING DESIGN DOCUMENTATION INCLUDING FOR STEEL BEAMS, LVL AND STRONG BACKS

ROOFING:

DO ROOFING WORK IN ACCORDANCE WITH APPLICABLE STANDARD IN CANADIAN ROOFING CONTRACTORS (CRCA) ROOFING SPECIFICATION MANUAL.

1. ALL ROOFING SHALL BE INSTALLED BY MECHANICS SKILLED IN THIS TRADE. THE ROOFING MEMBRANE IS TO BE INSTALLED IN STRICT ACCORDANCE WITH THE ROOFING MANUFACTURER'S INSTRUCTIONS AND CRCA.
2. EMPLOY QUALIFIED TRADESMAN AND SUBTRADES AS AND WHEN REQUIRED. ROOFING CONTRACTORS AND SUB-CONTRACTORS MUST ALSO BE REGISTERED WITH SOPREMA'S "PAQ" + S, AND PROVIDE THE CONSULTANT WITH A SOPREMA CERTIFICATE TO THIS EFFECT BEFORE BEGINNING ANY ROOFING WORK. ONLY QUALIFIED, CERTIFIED INSTALLERS EMPLOYED BY A COMPANY WITH THE APPROPRIATE EQUIPMENT MAY EXECUTE THE ROOFING WORK.

FLASHING:

(TO CONFORM TO SUBSECTION 9.20.13. OF THE O.B.C.)

1. INSTALL FLASHING AT ALL HORIZONTAL CHANGES OF MATERIAL.
2. FLASHING SHALL BE INSTALLED BEHIND SHEATHING MEMBRANE (9.20.13.6.(3)).

STAIRS:

(TO CONFORM TO SECTION 9.8. OF THE O.B.C.)

1. STAIR WIDTH TO CONFORM TO ARTICLE 9.8.2.1. AS PER DESIGN DIMENSIONS
2. STAIRS, STEPS AND RISE DIMENSIONS TO BE IN ACCORDANCE WITH SUBSECTION 9.8.4.
3. MAXIMUM RISE 7 7/8" (200MM)
4. MINIMUM RUN 8 1/4" (210MM)
5. MINIMUM TREAD 9 1/4" (235MM)
6. MAXIMUM NOSING 1" (25MM)
4. MINIMUM HEADROOM 6'- 9" (1.95M) AS PER 9.8.2.2.
5. PROVIDE HANDRAILS TO STAIRS IN ACCORDANCE WITH SUBSECTION 9.8.7. AND AS DIRECTED BY DESIGN DRAWINGS.

GUARDS AND RAILINGS:

1. GUARDS AND HANDRAILS TO BE 36"(910MM) ABOVE STAIRS AND AT 42" (1070MM) AT LANDINGS AS PER 3.4.6
2. PROVIDE GUARDS IN ACCORDANCE WITH SUBSECTION 9.8.8.
3. ALL EXTERIOR GUARD MUST BE A MINIMUM HEIGHT OF 3'-6" (900MM) IF THE WALKING SURFACE IS LESS THAN 5'-11" (1800MM) ABOVE THE ADJACENT GRADE, OTHERWISE THE HEIGHT MUST BE A MINIMUM OF 42" (1070MM).
4. GUARDS SHALL CONFORM TO THE LOADING CRITERIA IN PART 4 OF THE O.B.C., BE CONSTRUCTED AS SET OUT IN ARTICLE 9.8.8.2. OF THE O.B.C. - SEE ALSO PART 3 REQUIREMENTS
5. MAXIMUM PICKET SPACING 4" (100MM) ON CENTER.
6. HEIGHT FOR GUARDS:
7. INTERIOR GUARDS 2'-11" (900MM) MIN.
8. EXTERIOR GUARDS 3'-6" (1070MM) MIN.
9. WHERE DISTANCE FROM WALKING SURFACES TO FINISH GRADE IS MORE THAN 24" (600MM), MINIMUM HEIGHT OF GUARD SHALL BE 36" (900MM).
10. WHERE DISTANCE IS 71" (1800MM) OR MORE, 42" (1070MM) HIGH RAILINGS ARE REQUIRED.
11. GUARDS REQUIRED ON DECKS AND OTHER WALKING SURFACES THAT ARE MORE THAN 23 5/8" (600MM) ABOVE GRADE SHALL CONFORM TO THE LOADING CRITERIA IN **PART 4** OF THE O.B.C. REG. 350/06 OR BE CONSTRUCTED AS SET OUT IN THE O.B.C. REG. 350/06
12. **MANUFACTURED WOOD OR METAL GUARD, RAILS AND HAND RAILS SHALL BE DESIGNED IN ACCORDANCE WITH THE LOAD PROVIDED IN SECTION 4.1.10.1 AND 3.4.6.4.(9) OF THE ONTARIO BUILDING CODE, AND MUST BE CERTIFIED BY THE MANUFACTURER'S PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO.**
13. SHOP DRAWING FOR METAL GUARDS, MUST BE CERTIFIED FOR DESIGN AND INSTALLATION CONFORMING TO O.B.C. 4.1.5.15. AND 9.8.8.

DOORS & WINDOWS:

(TO CONFORM TO SECTION 9.6. & 9.7. OF THE O.B.C.)
SET TOP OF PATIO DOOR & WINDOW AT 85" ABOVE FLR SHEATHING

1. All windows to comply with article 3.3.4.8 OBC. All windows to have a control SASH to restrict opening to a maximum of 4"
2. PROVISIONS FOR RESISTANCE FORCED ENTRY SHALL BE PROVIDED IN CONFORMANCE TO O.B.C. 9.6.8. AND 9.7.6.
3. WINDOWS AND SLIDING GLASS DOORS SHALL CONFORM TO CAN/CSA A440-2 O.B.C. 12.3.1.3.
4. THERMAL RESISTANCE OF WINDOWS SHALL BE AS PER O.B.C. 12.3.2.6.
5. THERMAL RESISTANCE OF DOORS SHALL BE AS PER O.B.C. 12.3.2.7.
6. CURTAIN WALL: Contractor to design and fabricate curtain wall in accordance with Latest edition of Ontario Building Code , and prepare and submit detailed shop drawings stamped by a structural engineer registered in the province of Ontario

MASONRY VENEER: CULTURE STONE SYSTEM (SEE MANUFACTURER SPECIFICATIONS.)

FOUNDATION WALL ASSEMBLY:

(C/W DRAINAGE AS PER 9.14.2.1. O.B.C.)

1. REFER ALSO TO DESIGN DOCUMENT CONSTRUCTION DETAILS
2. PLATON OR MS DELTA MS DRAINAGE LAYER INSTALLED AS PER MANUFACTURER SPECIFICATIONS TO TOP OF FOOTING.
3. WATER PROOFING MEMBRANE.
4. 8" / 10" POURED CONCRETE WALL REINFORCED AS PER STRUCTURAL ENGINEER SPECIFICATIONS.
5. DRAPE TYVEC AIR BARRIER FULL HEIGHTFROM TOP OF FOUNDATION PLATES AGAINST CONCRETE AS A CONTACT BARRIER AND TURN OUT ONTO FLOOR UNDER STUD PLATES.
6. 2x4 STUDS @ 16" O.C.SET 1" CLEAR OF CONCRETE FOUNDATION CONTINUOUS TO FLOOR.
7. R-24 BATT INSULATION FROM FLOOR JOISTS TO SLAB.
8. POLY. VAPOUR BARRIER (CGSB 51.34) SEALED TO REDUCE AIR CIRCULATION (O.B.C. 9.25.4.2).

CURTAIN WALL NOTE:

CONTRACTOR TO DESIGN AND FABRICATE CURTAIN WALL IN ACCORDANCE WITH LATEST EDITION OF ONTARIO BUILDING CODE , AND PREPARE AND SUBMIT DETAILED SHOP DRAWINGS STAMPED BY A STRUCTURAL ENGINEER REGISTERED IN THE PROVINCE OF ONTARIO .

EXTERIOR CONCRETE WALKING SURFACES:

1. TO BE CONCRETE WITH 32 MPA. COMPRESSIVE STRENGTH AT @ 28 ***DAYS C/W 7% AIR ENTRAINMENT RATIO.***

SPRAYED FOAM INSULATION:

FOAM INSULATION TO BE CLOSED CELL *"POLARFOAM PF-7300-0 SOYA"* APPLIED AS PER MANUFACTURER SPECIFICATIONS AND BY A CERTIFIED APPLICATOR.

FOAM TO COMFORM TO **CAN/ULS-S705.1-01** AND **CCMC 13244-L**

APPLIANCES & CABINETS:

1. STYLE, COLOUR AND MODEL OF CABINETS TO BE SELECTED BY OWNER
2. CABINET MANUFACTURE TO PROVIDE DESIGN, AND BUILD & INSTALL AFTER OWNER'S APPROVAL.
3. CABINET MANUFACTURER TO TAKE SITE AND DIMENSIONS PRIOR TO COMMENCE MANUFACTURING.

FINISHES:

ALL INTERIOR AND EXTERIOR FINISHES SHALL BE SPECIFIED BY OWNER. ANY FINISHING NOTED ON PLANS SHALL BE CONFIRMED BY OWNER.

ALL EXTERIOR DOORS TO BE METAL INSULATED AND EQUIPPED WITH WEATHER STRIPPING.

INSTALL PRE FINISHED FLASHING AT ALL HORIZONTAL CHANGES OF EXTERIOR FINISHES.

INSTALL CAULKING AROUND ALL EXTERIOR OPENINGS WITH FOAM BAKER ROD WHERE MORE THAN 1/4" IN WIDTH.

WALLS TO BE FINISHED WITH 1 COAT OF PRIMER AND 2 COATS OF PAINT.

PAINT TYPE AND COLOUR TO BE SELECTED BY OWNER.

FIRE PROTECTION:

PROVIDE 1Hr. OR 2Hrs. FIRE RATED PROTECTION TO ALL STRUCTURAL BEAMS AND POST AS DRAWING NOTES.

ACOUSTIC TREATMENTS & SEALANTS:

1. STUD WALLS FLOORS CEILINGS MECHANICAL CHASE AND LIKE ASSEMBLIES TO BE ACOUSTICALLY CAULKED TO LIMIT SOUND PATH AS FURTHER DIRECTED BY ACOUSTICAL CONSULTANT
2. ELECTRICAL BOXES AND LIKE DEVICES TO BE LOCATED AND AS SPECIFIED FURTHER BY ACOUSTICAL CONSULTANT

New building

OBC 2012 DATA MATRIX - PART 3 & PART 11			OBC REFERENCE
1	Project Description	3 STOREY ADDITION (SEPARATE BUILDING)	3.1.2.6
2	Building area	Existing : 205.04 m² New addition : 191 m²	1.4.1.2 3.1.10
3	Gross floor area	521.5 m²	
4	Major Occupancies	E (ground floor) restaurant less than 30pp 2 apartment units on floors above: 8 bedroom=16pp	3.1.2.1
5	Number of Storeys	3 storey	
6	Height of Building	approx. 29'	1.4.1.2
7	Number of Street/Access Routes	1	3.2.4.1
8	Building Classification	new separate building	3.2.2.47 3.2.2.59
9	Sprinkler system	no	3.2.9
10	Standpipe Required	no	3.2.9
11	Fire Alarm	no	3.2.4.1
12	Water Service/Supply is Adequate	Yes	
13	Actual Construction	Combustible	
14	Mezzanine Area	no	3.2.1.1.(3)–(8)
15	Occupant load based on design	Max. 30 Customers & 2 Staff (full time employ.) 8 bedroom=16pp	3.1.17.1
16	Barrier–free Design	yes (main floor only, not for residential units)	3.8
17 18			3.7.4.3.D
19	Required Fire Resistance Rating	Horizontal Assemblies FRR (Hours) Floors 45 min. (combustible) HIGH RAILINGS ARE REQUIRED. Roofs 45 min. (combustible), FRR of Supporting Members Floors 45 min. (combustible) Roofs 45min. (combustible),	3.2.2.47 (residential; C) 3.2.2.59 (E)
20	Spatial separation		3.2.3 TABLE 3.2.3.1. B&C

Wall		Area of Wall EBF (SQ.M.)	Lim.Dist. (M)	Permitted % of Openings	Proposed % of Openings	FRR.	Wall construc.	cladding
WEST		114.87 m²	STREET	100	52.9m²(46%)	45min	Combustible	Non–comb.
EAST	1st FLR	46.50 m²	0	0	0%	2HRS	Non–comb.	Non–comb.
	2nd 3rd FLR	69.80 m²	1.5	7	4.8m²(6.8%)	1HR	Non–comb.	Non–comb.
SOUTH		122.5 m²	2.5 m	10	2.1m²(2%)	2HRS	Combustible	Non–comb.
NORTH		122.5 m²	2.5 m	10	2.1m²(2%)	2HRS	Combustible	Non–comb.

	Sound Separation	Minimum STC required between units = 50, 55 between	5.9.1.2. 3.3.4.6

Existing building

OBC 2012 DATA MATRIX - PART 3 & PART 11			OBC REFERENCE
1	Project Description	EXISTING BUILDING	
2	Building Area (sq.m.)	328.1 sq.m	1.4.1.2
3	Major Occupancies	A2 & C	3.1.2.1.(1), 3.2.2.8
4	Number of Storeys	Two	3.2.1.1 & 1.1.3.2
5	Height of Building	approx. 6.5m	1.4.1.2
6	Number of Street/Access Routes	two	3.2.2.10 & 3.2.5.5
7	Building Classification	combustible or noncombustible	PART 11, see below
8	Sprinkler System	no	3.2.9
9	Standpipe Required	no	3.2.9
10	Fire Alarm	no	3.2.4
11	Water Service/Supply is Adequate	yes	
12	Actual Construction	combustible	
13	Mezzanine Area	no	3.2.1.1.(4)(a)
14	Occupant load based on design	150 (max.)	3.1.17
15	Barrier–free Design	yes, main floor only	3.8
17	Plumbing: existing		3.7.4.3(16)
18	Major Occupancies change of use :No		
19	Construction Index	5	11.2.1.1.A
20	Hazard Index (A2)	4	11.2.1.1.C & I
21	Basic Renovation	no	11.3.1.1. , 11.3.3.1
22	Plumbing and sewage to be reviewed by Mechanical Engineer		11.3.4. & .5
23	Compensating Construction to comply with: See part 11		11.4.3.3, 11.4.3.4.A
24	PART 11 ANALYSIS FOR EXISTING a. access to exit widths to 3.3.1 – complies b. exit widths to 3.4.3 – complies c. exit signs to 3.4.5 – see Elect. d. light to 3.2.7 – see Elect. e. fire alarm to 3.2.4.1 – no f. smoke alarm – see Elect. g. travel distance and number of exits: Travel distance less than 30m with 2 exits per floor provided		3.4.3.2(7) & TABLE 11.5.1.1.C44 3.4.2.1(2&3) 3.3.1.12,
25	Required Fire Resistance Rating	Horizontal Assemblies FRR (Hours) Floors 45 min. (combustible) Roofs 45 min. (combustible), FRR of Supporting Members Floors 45 min. (combustible) Roofs 45min. (combustible),	3.2.2.47 (residential; C) 3.2.2.25 (restaurant; A2)
26	Required Fire Separation	Between occupancies A2 & C 1HR FRR Reduce to 45min. FRR.	3.1.3.1 11.4.3.4(B)
27	Spatial separation		3.2.3.7 & table 3.2.3.1B

CLIENT:

WELLINGTON HURON
COMMERCIAL INC.

371A RICHMOND RD. SUITE 1,
OTTAWA, ONTARIO
K2A 0B7

SUSAN D. SMITH ARCHITECT
941 Merivale
Ottawa, Ontario
K1Z 6A1
613-722-5327
s.smith@sdsarch.ca

NOTES:
1. All dimensions are to be checked on site. Discrepancies or ambiguities should be reported prior to work on site or ordering of materials.
2. All work to be in accordance with the Ontario Building Code, latest edition.
3. All interior dimensions are to face of gypsum board

No.	REVISION	DATE
2	ISSUED FOR REVIEW	OCT. 11/22
1	ISSUED FOR SITE PLAN CONTROL	APR. 11/22
0	ISSUED FOR REVIEW	OCT. 22/21

PROPOSED ADDITION
MIXED USE BUILDING
1248-1252 Wellington W

CRAWL SPACE PLAN

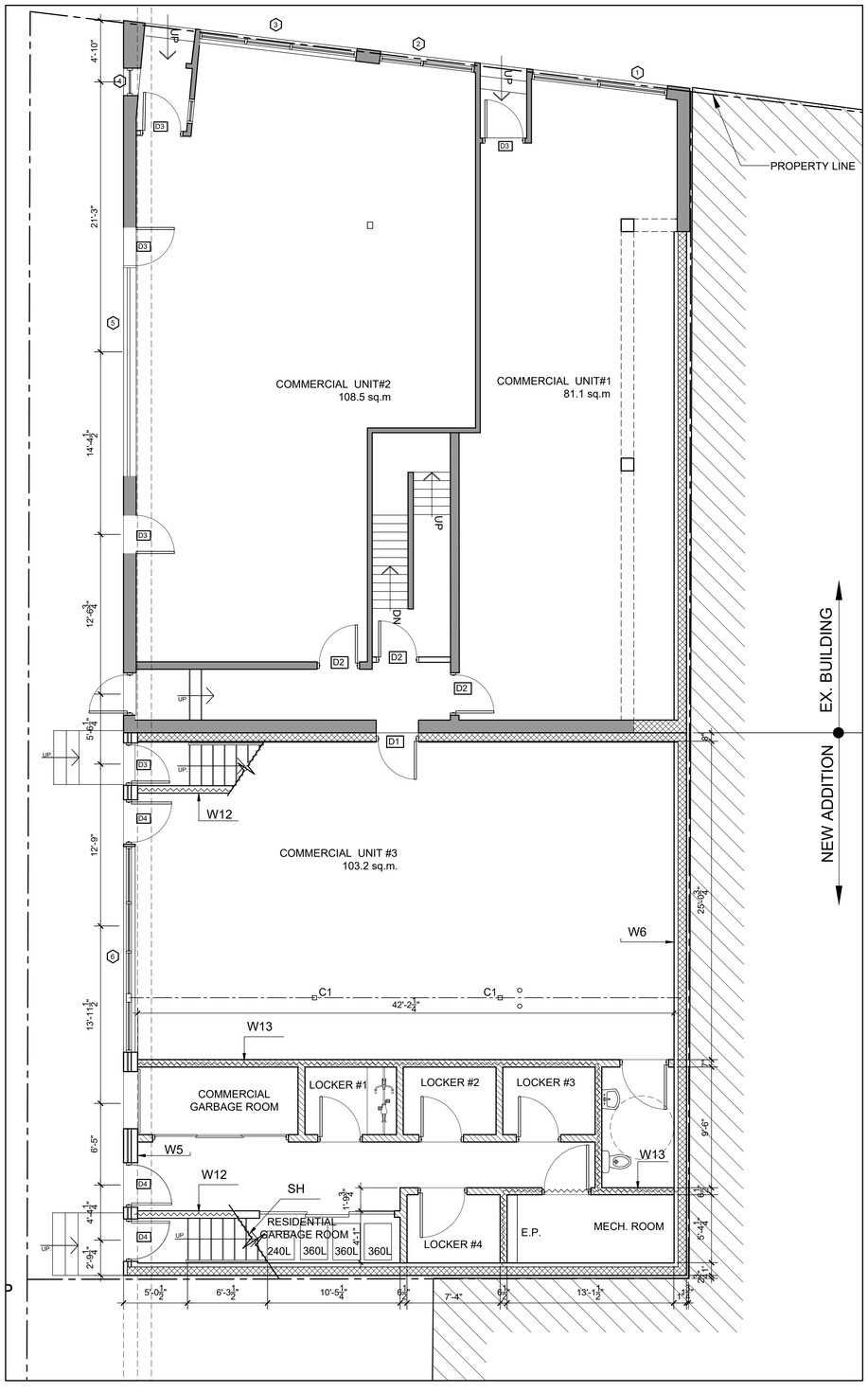
DRAWN BY: TD & S.C.

CHECKED: SDS.

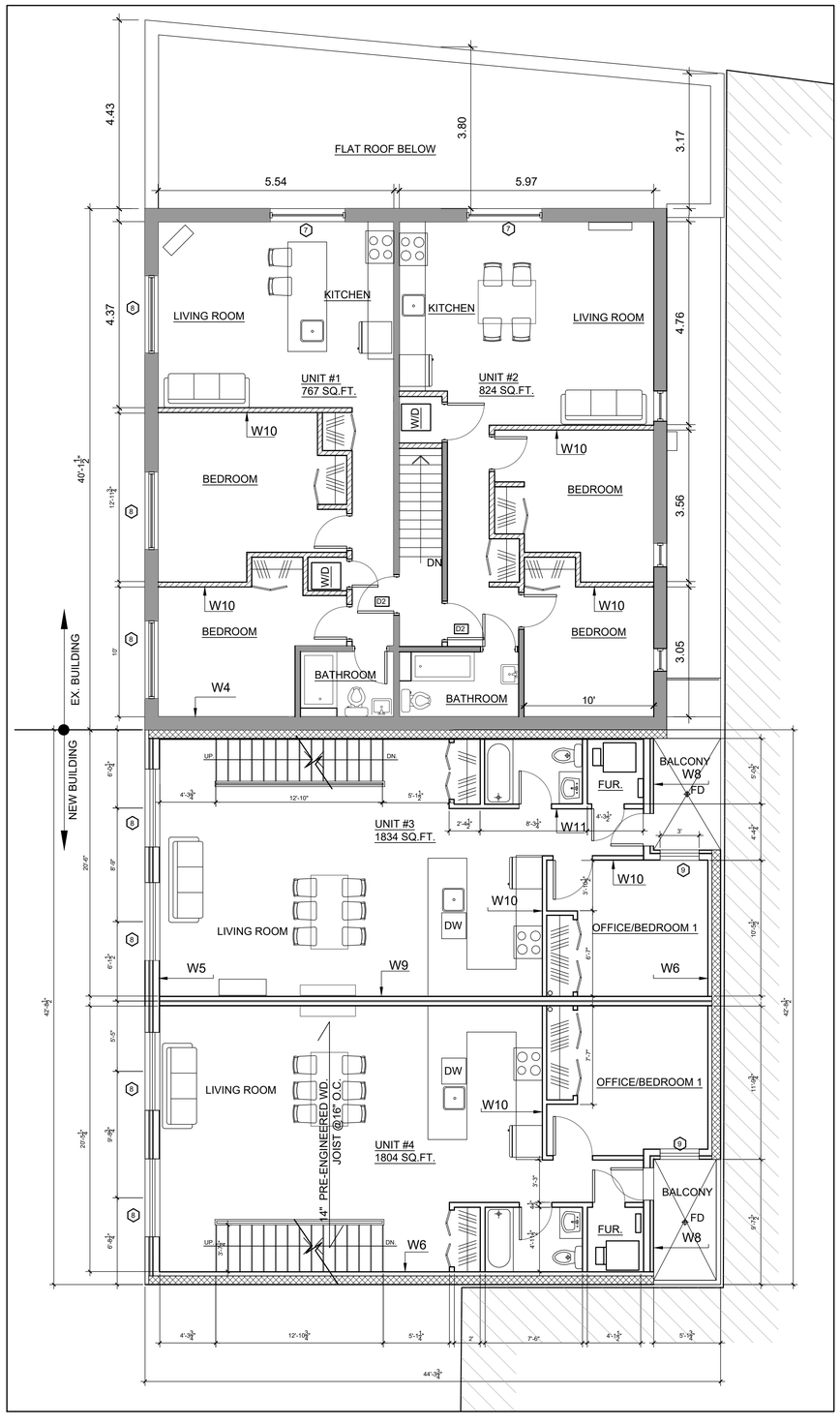
DATE: SEP/2021

SCALE:
AS NOTED

A1



1 / A2 GROUND FLOOR PLAN
SCALE: 3/16"=1'-0"



2 / A2 SECOND FLOOR PLAN
SCALE: 3/16"=1'-0"

W1 FOUNDATION WALL WITH R20

- CEMENT PARGING ABOVE GRADE/PLATON SYSTEM' DRAINAGE SHEET & BITUMINOUS DAMPROOFING LAYER BELOW GRADE
- CAST-IN-PLACE CONCRETE (SEE STRUCTURAL DWGS. FOR DETAILS)
- 1" AIR SPACE
- 2"x4" WOOD STUDS @ 16" O.C. FILL W/ R20 SPRAY FOAM INSULATION
- 1/2" GYPSUM BOARD

W2 FOUNDATION WALL WITH R20

- CAST-IN-PLACE CONCRETE (SEE STRUCTURAL DWGS. FOR DETAILS)
- 1" AIR SPACE
- 2"x4" WOOD STUDS @ 16" O.C. FILL W/ R20 SPRAY FOAM INSULATION
- 1/2" GYPSUM BOARD

W3 FOUNDATION WALL MIN. 2HR. FRR AS PER SB-2

EXISTING CONC. FOUNDATION WALL
NEW 8" CAST-IN-PLACE CONCRETE (SEE STRUCTURAL DWGS. FOR DETAILS)

W4 FIREWALL
MIN. 2HRS FRR - OBC SB-2

EX. PLASTER W/ WD. LATH
EX. 2x4 WD. STUDS @ 16"c/c
EX. WD SHEATHING
AIR SPACE
EX. 3.5" BRICK
NEW 8" THICK CONCRETE BLOCK (2HR. FRR)

W5 EXTERIOR WALL

5/8" TYPE X GWB
VAPOUR BARRIER
2x6 WD. STUDS @ 16"c/c
BATT INSULATION B/W STUDS
7/16 OSB SHEATHING
2.5" ROXUL INSULATION
AIR BARRIER
1" AIR SPACE & 3.5" BRICK OR HARDIE BOARD SIDING

W6 EXTERIOR WALL, 2HR. FRR

1/2" GWB
2x4 WD. STUDS @ 16"c/c
R20 CLOSED CELL SPRAY FOAM INSULATION 7/16
1" AIR SPACE
8" THICK CONCRETE BLOCK
(HARDIE BOARD WHERE EXPOSED WALL ON OUTSIDE)

W7 FIREWALL

1/2" GWB
1x3 WD. STRAPPING
8" THICK CONCRETE BLOCK
BLUESKIN
4" Z-GIRT W/ ROXUL INSULATION (R20ci)
1/2" HARDIE BOARD

W8 EXTERIOR WALL: 1HR FRR

5/8" TYPE X GWB
VAPOUR BARRIER
3 5/8" STEEL STUDS W/ ROXUL INSULATION (R12)
1/4" DENGLASS GOLD
2" Z-GIRT W/ ROXUL INSULATION (R10ci)
AIR BARRIER
1/2" HARDIE BOARD

W9 TYPICAL DEMISING WALL
1 HR. FRR/STC 60 TO OBC SB-3-W15e

2 LAYERS OF 1/2" TYPE X GWB
2x4 WD. STUDS @ 16"c/c
ROXUL INSULATION B/W STUDS
1" AIR SPACE
2x4 WD. STUDS @ 16" C/C WITHOUT ISULATIONS
2 LAYERS OF 1/2" TYPE X GWB

W10 TYPICAL INTERIOR WALL:

-1/2" GYPSUM BOARD
-2"x4" WOOD STUDS @ 16" o.c.
-1/2" GYPSUM BOARD
-(5/8" TYPE X G.B ON BOTH SIDE OF STUDS FOR LOAD BEARING WALLS)

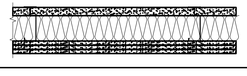
W11 TYPICAL BATHROOM WALL:
1/2" GYPSUM BOARD
2"x4" WOOD STUDS @ 16" o.c.
FILL WITH BATT INSULATION
1/2" MOISTURE-RESISTANT GYP. BD.
(BATHROOM SIDE)

W12 INT. SOUND RES. STC 50+ & 45 MIN. FRR. WALL:
AS PER W4b OF O.B.C. SB-3
-5/8" 'TYPE X' GYPSUM BOARD
-2"x4" WOOD STUDS @ 16" o.c.
-FILL WITH BATT INSULATION
-HORIZONTAL RESILIENT METAL CHANNELS @ 16' o.c.
-2 LAYERS OF 5/8" 'TYPE X'

W13 1HR. FRR. SB2-2.3.4
-5/8" TYPE X GYPSUM BOARD (40 MIN)
-2x4" WOOD STUD @16" o.c (20MIN)
-5/8" TYPE X GYPSUM BOARD

SH HORIZONTAL SHAFT WALL 2HR FRR. TEST NUMBER: OBMEC #89-1-118 (CGC SYSTEM)

1" SHEETROCK LINER PANELS
3" USG C-H STUD SPANNING HOR., 25 GA. @24"O.C.
1" GYPSUM LINER PANELS SET INTO ACOUSTICAL SEALANT
3 LAYERS OF 1/2" SHEETROCK FIRECODE C



R1 2% SLOPE ROOF CONST'N: 1HR FRR OBC SB2-2.3.12

-2 PLY MOD BITUMEN ROOF MEMBRANE
-PROTECTION BOARD TO MANUFACTURER'S RECOMMENDATION
(Install protection board by embedding into beads of adhesive 20mm wide on 300mm centres over the polyisocyanurate foam insulation. Lay out in rows in the same direction as the polyisocyanurate foam insulation by with joints staggered at least 456mm in both direction, stagger joints in alternative rows 610mm from each other. Do not install more insulation than can be completely roofed in the same day).
-POSI SLOPE R-35ci MINIMUM
-3/4" EXT. GRADE T&G PLYWD
-WD JOISTS AS PER MANUFACTURER
-FILL WITH BATT INSULATION
-VAPOUR BARRIER
-1x3 WOOD STRAPPING @12 o.c
-2 LAYERS 5/8" TYPE "X" GYPSUM BOARD. (60 MINS)

F1 CONCRETE SLAB-BELOW-GRADE

4" CAST-IN-PLACE CONCRETE SLAB. SEE STRUCTURAL FOR REINFORCEMENT. SMOOTH TROWEL FINISH
6 mil. POLY. VAPOUR BARRIER
6" CRUSHED STONE BASE COMPACTED TO 95% PROCTOR DENSITY

F2 FLOOR (ABOVE CRAWL SPACE).

Laminate or ceramic tiles floor
1/4" Elastomeric underlay such as Kinetics ISOLayment QT or equivalent
3/8" T&G plywood sheathing
14" OJ-Triforce joist system as per manufacturer

F3 1HR FRR. FLOOR. (STC 55 SIMILAR TO nrc tlf-97-053a IIC 50+est.)

Laminate or ceramic tiles floor
1/4" Elastomeric underlay such as Kinetics ISOLayment QT or equivalent
3/8" T&G plywood sheathing
14" OJ-Triforce joist system as per manufacturer
12" Acoustic Batt Insulation
1/2" Resilient channel @ 24" o.c.
2-ply 5/8" type "X" gypsum board 60min.

F4 TYPICAL FLOOR (WITHIN UNIT):

-VINYL FLOORING
-3/4" T&G OSB SUBFLOOR, GLUED & SCREWED PER MANUFACTURER'S INSTRUCTIONS
-FLOOR JOISTS AS PER SHOP DRAWINGS,
-1"x3" WOOD STRAPPING
-1/2" GYPSUM BOARD

CLIENT: WELLINGTON HURON COMMERCIAL INC.

371A RICHMOND RD. SUITE 1,
OTTAWA, ONTARIO
K2A 0B7

SUSAN D. SMITH ARCHITECT
941 Merivale
Ottawa, Ontario
K1Z 6A1
613-722-5327
s.smith@sdsarch.ca

NOTES:
1. All dimensions are to be checked on site. Discrepancies or ambiguities should be reported prior to work on site or ordering of materials.
2. All work to be in accordance with the Ontario Building Code, latest edition.
3. All interior dimensions are to face of gypsum board

No.	REVISION	DATE
2	ISSUED FOR REVIEW	OCT. 11/22
1	ISSUED FOR SITE PLAN CONTROL	APR. 11/22
0	ISSUED FOR REVIEW	OCT. 22/21

PROPOSED ADDITION
MIXED USE BUILDING
1248-1252 Wellington W

FLOOR PLANS

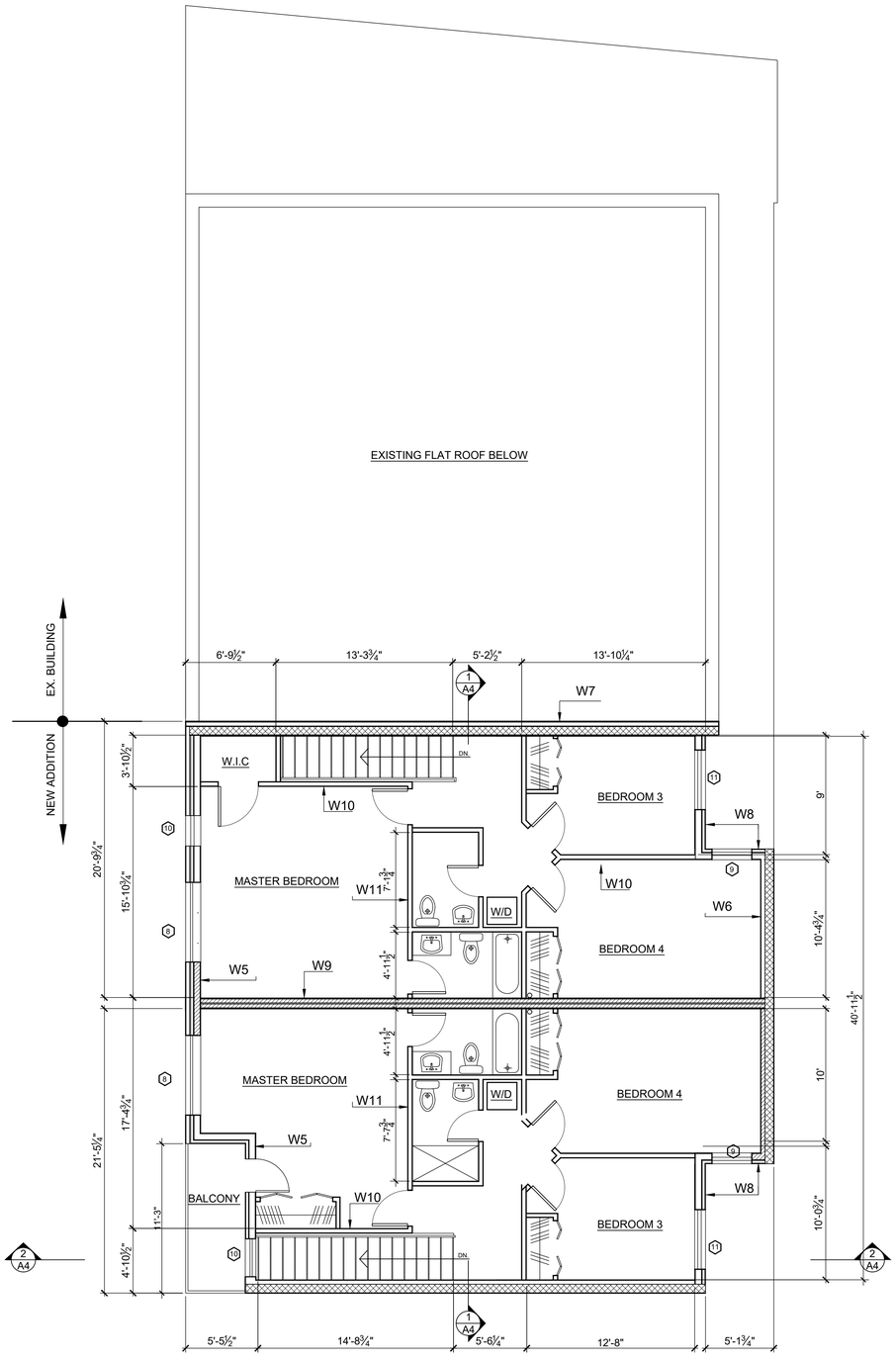
DRAWN BY: TD & S.C.

CHECKED: SDS.

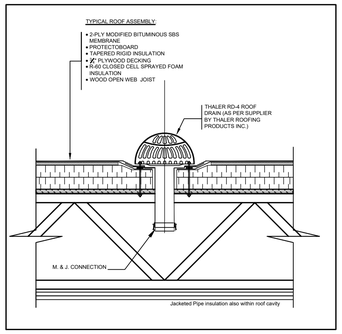
DATE: SEP/2021

SCALE: AS NOTED

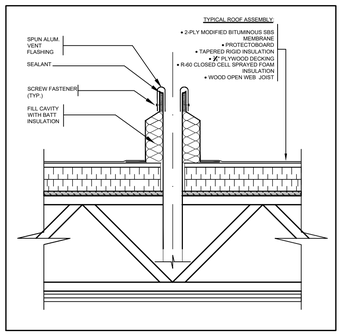
A2



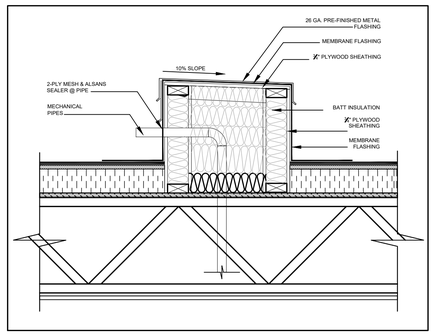
1 / A3 SECOND FLOOR PLAN
SCALE: 3/16"=1'-0"



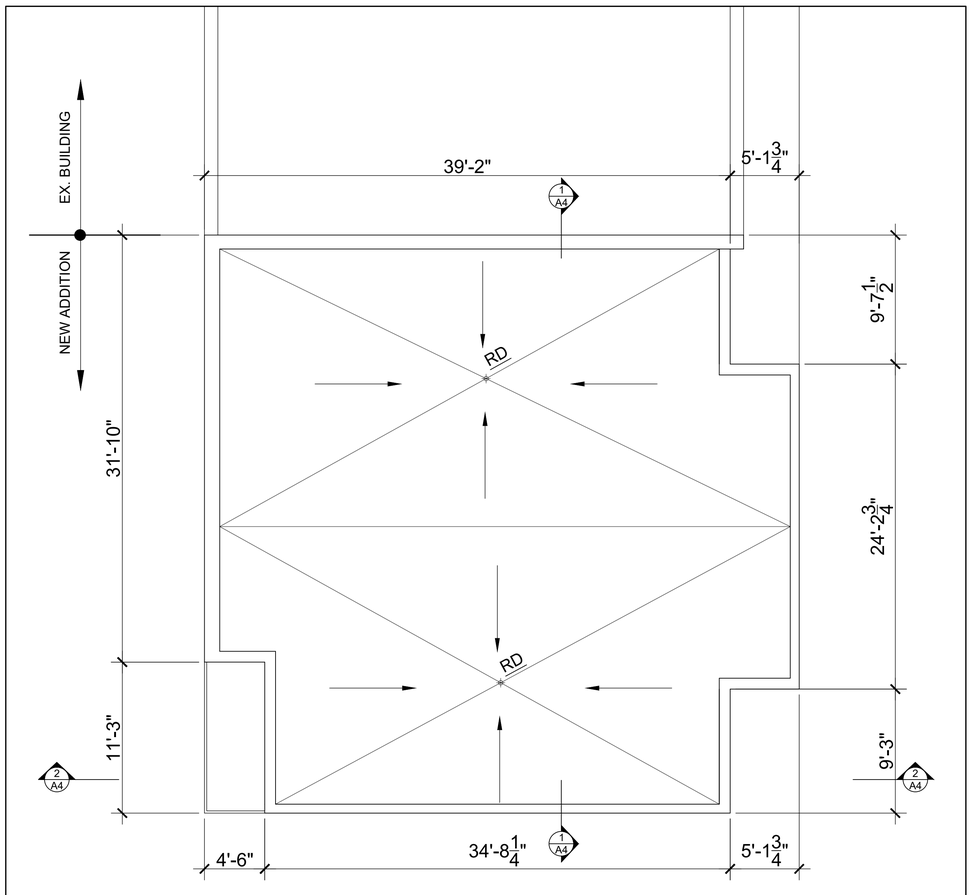
3 / A3 ROOF DRAIN DETAIL
SCALE: 1"=1'-0"



4 / A3 PLUMPING VENT DETAIL
SCALE: 1"=1'-0"



5 / A3 ROOF DRAIN DETAIL
SCALE: 1"=1'-0"



2 / A3 ROOF PLAN
SCALE: 3/16"=1'-0"

CLIENT:

WELLINGTON HURON
COMMERCIAL INC.

371A RICHMOND RD. SUITE 1,
OTTAWA, ONTARIO
K2A 0B7

LRL ENGINEERING
5430 CANOTEK ROAD
OTTAWA, ONTARIO K1J 9G2
T (613) 842-3434

FOTENN PLANNING + DESIGN
396 Cooper Street, Suite 300
Ottawa, ON K2P 2H7

SURVEYOR
ANNIS, O'SULLIVAN,
VOLLEBEKK Ltd.
14 Concourse Gate, Suite 500
Nepean, Ont. K2E 7S6
Phone: (613) 727-0850
Fax: (613) 727-1079

SUSAN D. SMITH ARCHITECT
941 Merivale
Ottawa, Ontario
K1Z 6A1
613-722-5327
s.smith@sdsarch.ca

NOTES:
1. All dimensions are to be checked on site. Discrepancies or ambiguities should be reported prior to work on site or ordering of materials.
2. All work to be in accordance with the Ontario Building Code, latest edition.
3. All interior dimensions are to face of gypsum board

No.	REVISION	DATE
2	ISSUED FOR REVIEW	OCT. 11/22
1	ISSUED FOR SITE PLAN CONTROL	APR. 11/22
0	ISSUED FOR REVIEW	OCT. 22/21

PROPOSED ADDITION
MIXED USE BUILDING
1248-1252 Wellington W

PLANS

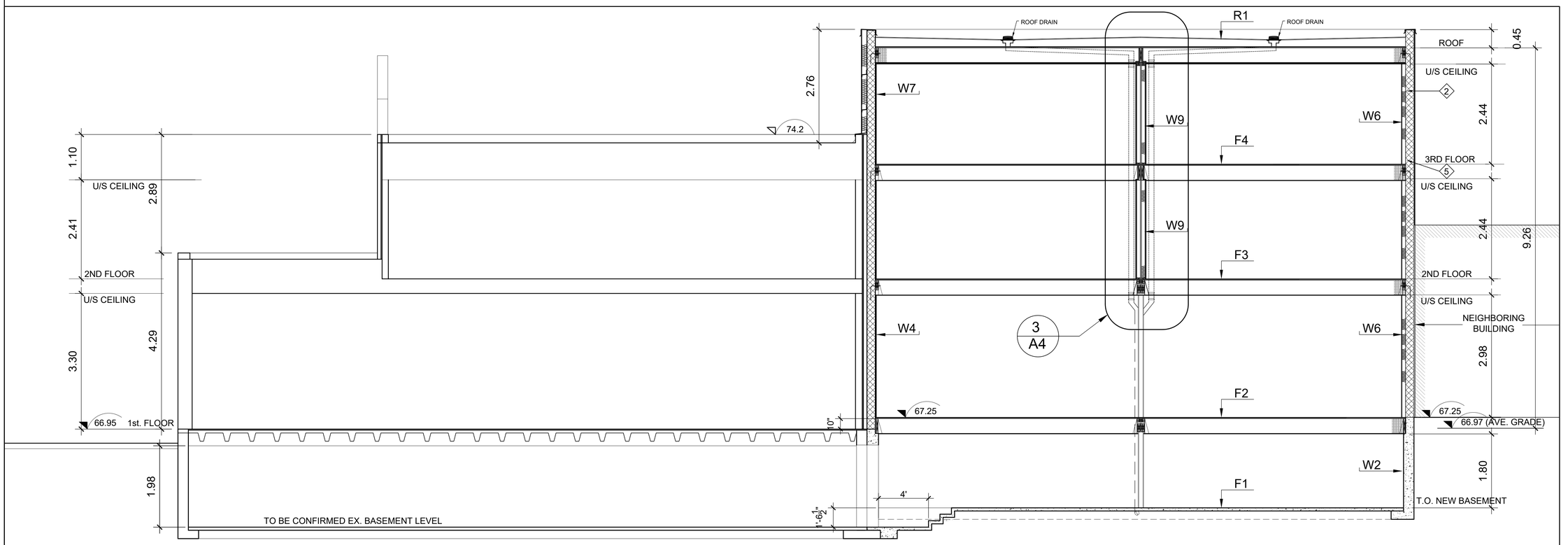
DRAWN BY: TD & S.C.

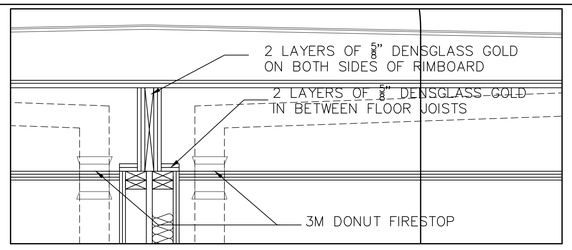
CHECKED: SDS.

DATE: SEP/2021

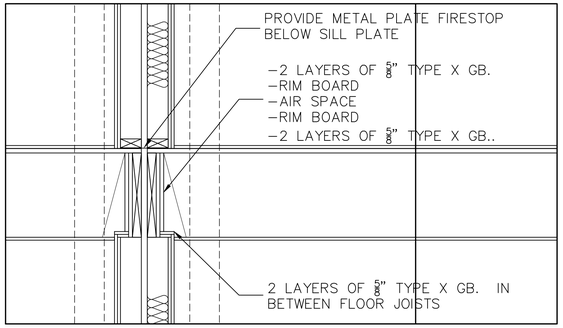
SCALE:
AS NOTED

A3

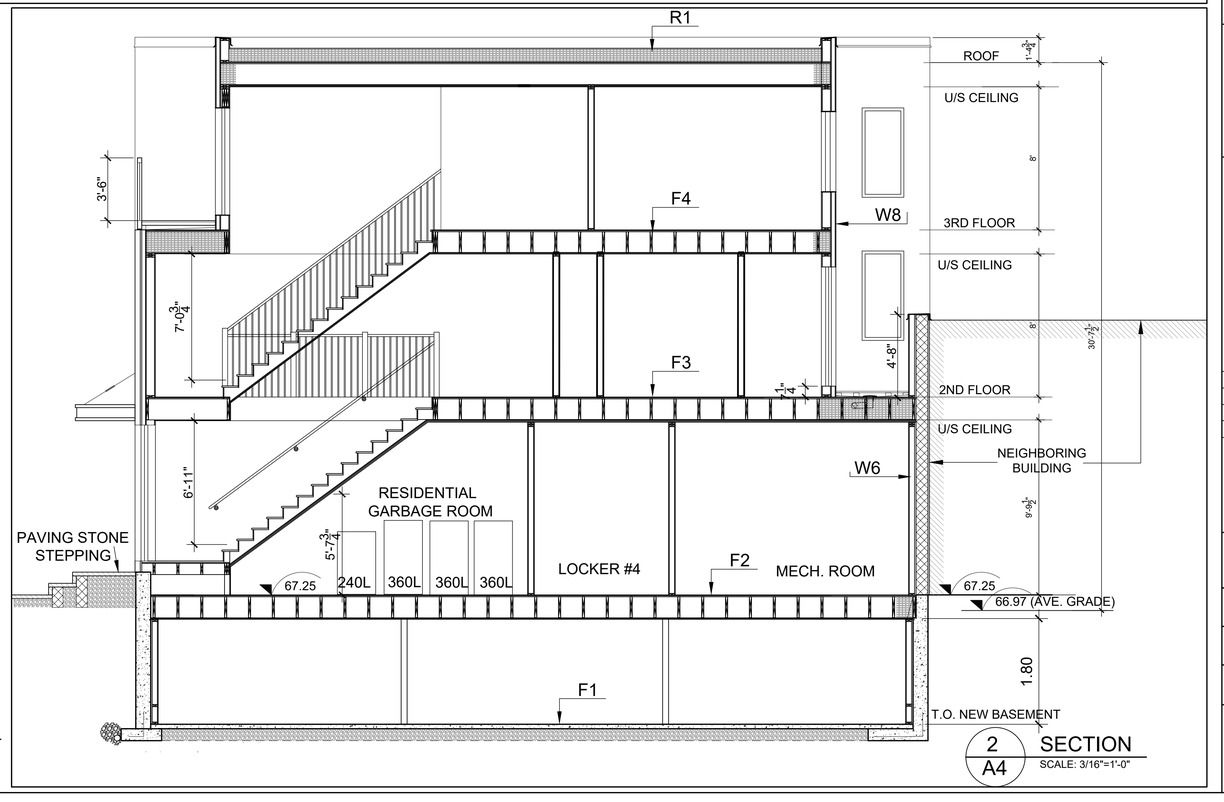




1 / A4 SECTION
SCALE: 3/16"=1'-0"



3 / A4 DEMISING SECTION DETAIL
SCALE: 3/16"=1'-0"



2 / A4 SECTION
SCALE: 3/16"=1'-0"

CLIENT:

WELLINGTON HURON COMMERCIAL INC.

371A RICHMOND RD. SUITE 1,
OTTAWA, ONTARIO
K2A 0B7

LRL ENGINEERING
5430 CANOTEK ROAD
OTTAWA, ONTARIO K1J 9G2
T (613) 842-3434

FOTENN PLANNING + DESIGN
396 Cooper Street, Suite 300
Ottawa, ON K2P 2H7

SURVEYOR
ANNIS, O'SULLIVAN, VOLLEBEKK Ltd.
14 Concourse Gate, Suite 500
Nepean, Ont. K2E 7S6
Phone: (613) 727-0850
Fax: (613) 727-1079

SUSAN D. SMITH ARCHITECT
941 Merivale
Ottawa, Ontario
K1Z 6A1
613-722-5327
s.smith@sdsarch.ca

NOTES:
1. All dimensions are to be checked on site. Discrepancies or ambiguities should be reported prior to work on site or ordering of materials.
2. All work to be in accordance with the Ontario Building Code, latest edition.
3. All interior dimensions are to face of gypsum board

No.	REVISION	DATE
2	ISSUED FOR REVIEW	OCT. 11/22
1	ISSUED FOR SITE PLAN CONTROL	APR. 11/22
0	ISSUED FOR REVIEW	OCT. 22/21

PROPOSED ADDITION
MIXED USE BUILDING
1248-1252 Wellington W

SECTIONS

DRAWN BY: TD & S.C.

CHECKED: SDS.

DATE: SEP/2021

SCALE: AS NOTED

A4

AS BUILT
FEBRUARY 26, 2010

Delcan

NO.	REVISIONS	BY	DATE
	ISSUED FOR CONSTRUCTION	RRG	04/21/08
1	SITE INSTRUCTION No. 3	RRG	06/04/08
2	SITE INSTRUCTION No. 9	MJD	07/09/08
3	SITE INSTRUCTION No. 11	MJD	07/11/08
4	AS BUILT	TVI	02/26/10

NOTE:
The location of the utilities is approximate only, the exact location should be determined by consulting the municipal authorities and utility companies concerned.
The contractor shall prove the location of utilities and shall be responsible for adequate protection from damage

WELLINGTON STREET WEST RECONSTRUCTION

WESTERN AVENUE TO PARKDALE AVENUE

GRADING AND DRAINAGE 5
STA. 10+510 TO STA. 10+645

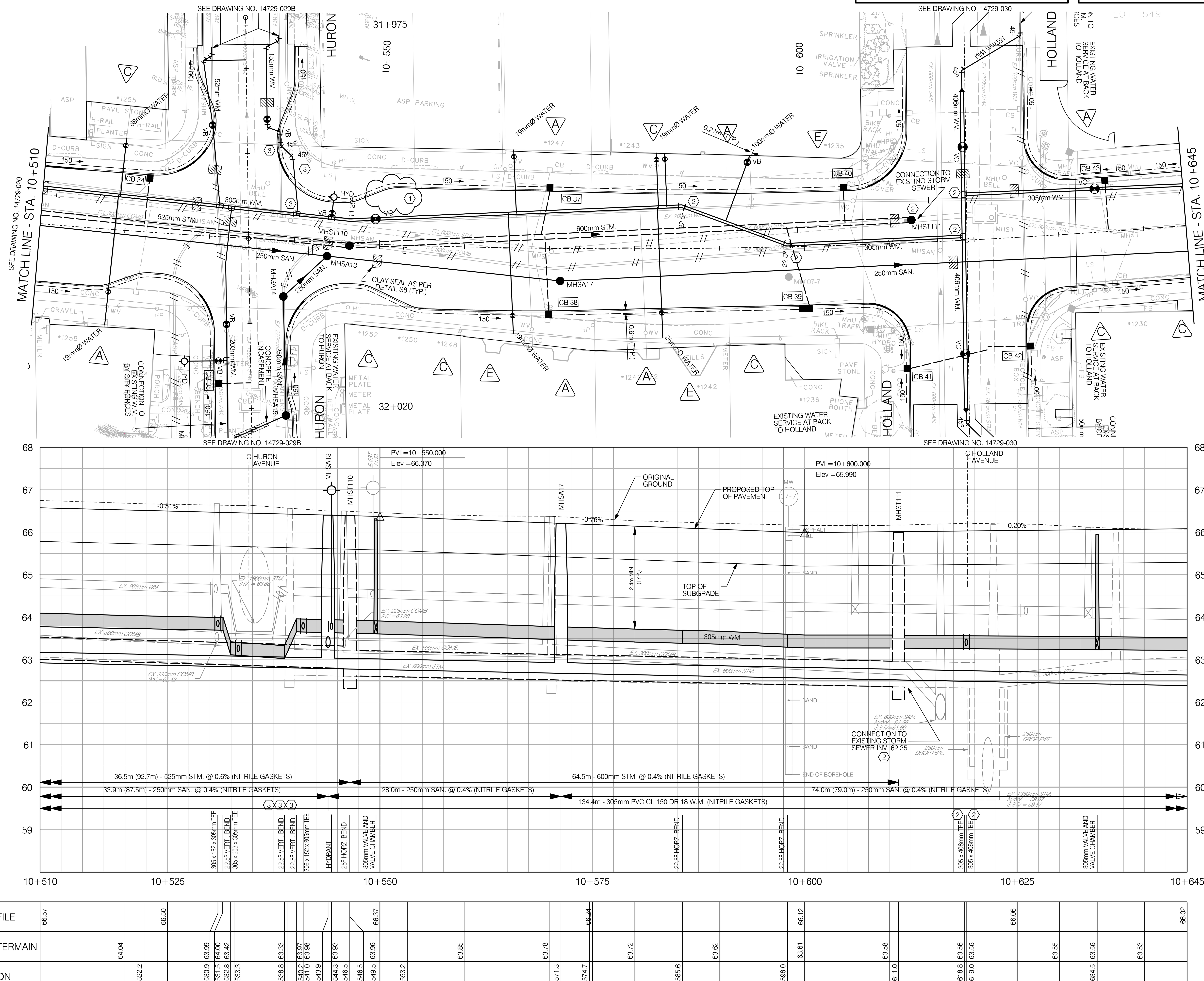
W. R. NEWELL, P.ENG.
Director Infrastructure Services

B. MASON, P.ENG.
Manager Construction Services (West)

Dwn: RRG / MJD | Chkd: | Des: MJD | Chkd:

Ottawa

CONTRACT NO. ISB07-5177
DWG. NO. 14729-021
SHEET 21 OF
Date: FEBRUARY 2008
Scale: HORIZONTAL 0m 2.5 5 10
VERTICAL 0m 1 2



STORM MAINTENANCE HOLES, CATCH BASIN, OUTLET STRUCTURE, HEADWALLS & DITCH INLETS

	No.	STATION	OFFSET (m)*	TYPE OF STRUCTURE STD. No.	FRAME & GRATE STD. No.**	ELEVATION TOP OF GRATE	ELEVATION LOW INVERT
	WELLINGTON STREET						
2	MHST110	10+546.50	0.28 LT.	701.010	SLF/S24	66.39	62.59
2	MHST111	10+611.0	2.67 LT.	701.010	SLF/S24	65.99	62.35
	CB34	10+522.50	6.75 LT.	705.010A	S22/S23	66.31	64.93
	CB35	SEE DRAWING # 029B					
	CB36	SEE DRAWING # 029B					
	CB37	10+570.00	6.72 LT.	705.010A	S22/S23	66.12	64.74
	CB38	10+570.00	7.35 RT.	705.010A	S22/S23	66.13	64.75
	CB39	10+600.00	6.90 RT.	705.020A	S22/S23	65.92	64.54
	CB40	10+604.83	6.40 LT.	705.010A	S22/S23	65.95	64.57
	CB41	SEE DRAWING # 030					
	CB42	SEE DRAWING # 030					
	CB43	SEE DRAWING # 030					

* OFFSETS FOR ALL CATCH BASINS ARE TO THE FACE OF CURB AND ELEVATIONS ARE THE FINISHED GUTTER GRADE AT THE GRATE. REFER TO STD. DWG. S22 FOR DETAIL OF LOCAL DEPRESSION OF ASPHALT IN FRONT OF THE GRATE FOR CURB INLET CATCH BASINS. OFFSETS FOR CIRCULAR MAINTENANCE HOLES ARE TO THE CENTER OF THE BASE SECTION.

** SLF DENOTES SELF LEVELING FRAME

STORM SEWER & CATCH BASIN LEAD DATA

	LOCATION No. TO No.	DIA. SIZE (mm)	CLASS OF PIPE	LENGTH (m)	INVERT ELEVATION UPSTREAM	INVERT ELEVATION DOWNSTREAM
2	MHST110 TO MHST111	600	100-D	64.50	62.59	62.36
	CB34 TO MAIN	200	SDR35	3.9	64.93	
	CB37 TO MAIN	200	SDR35	7.4	64.74	
	CB38 TO MAIN	200	SDR35	7.5	64.75	
	CB39 TO MAIN	200	SDR35	9.6	64.54	
	CB40 TO MAIN	200	SDR35	4.5	64.57	

SANITARY MANHOLES DATA

No.	STATION	OFFSET (m)	TYPE OF STRUCTURE STD. No.	FRAME & GRATE STD. No.**	ELEVATION TOP OF GRATE	ELEVATION LOW INVERT
MHSA13	10+544.00	1.62 RT.	701.010	SLF/S24	66.40	62.76
MHSA17	10+572.00	3.82 RT.	701.010	SLF/S24	66.15	62.66
MHSA14	SEE DRAWING # 029B					
MHSA15	SEE DRAWING # 029B					
MHSA16	SEE DRAWING # 029B					

** SLF DENOTES SELF LEVELING FRAME

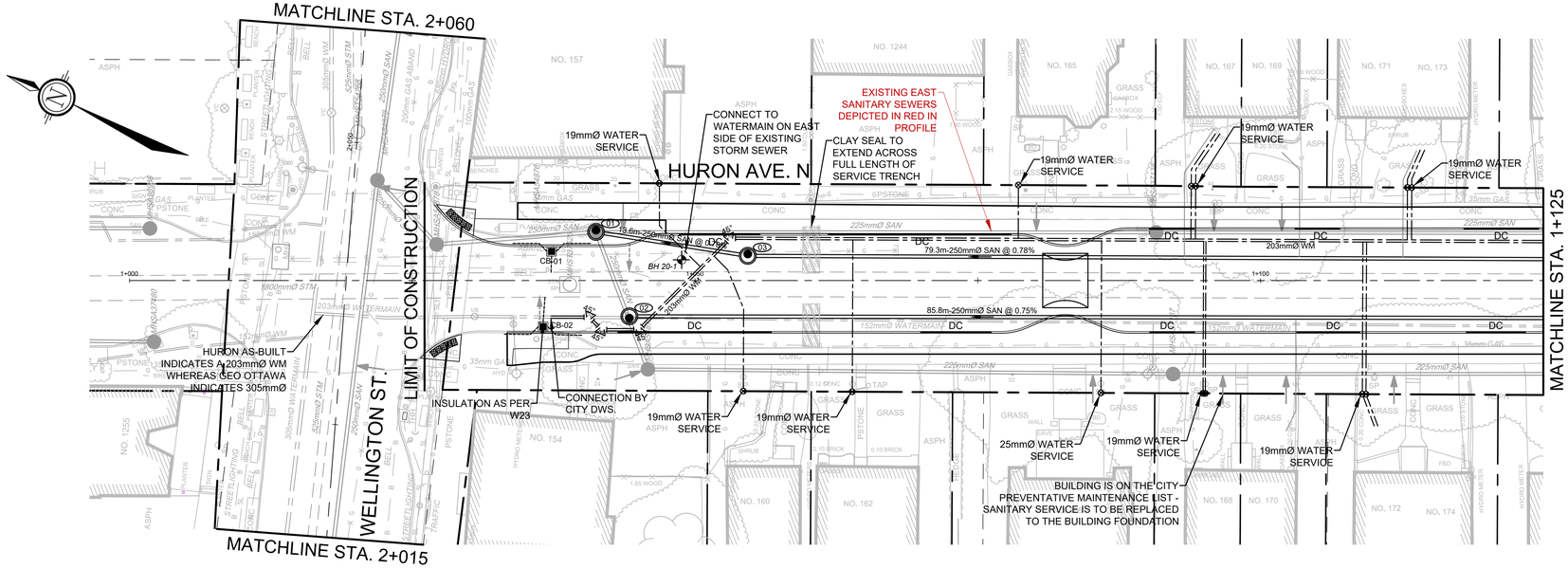
SANITARY SEWER DATA

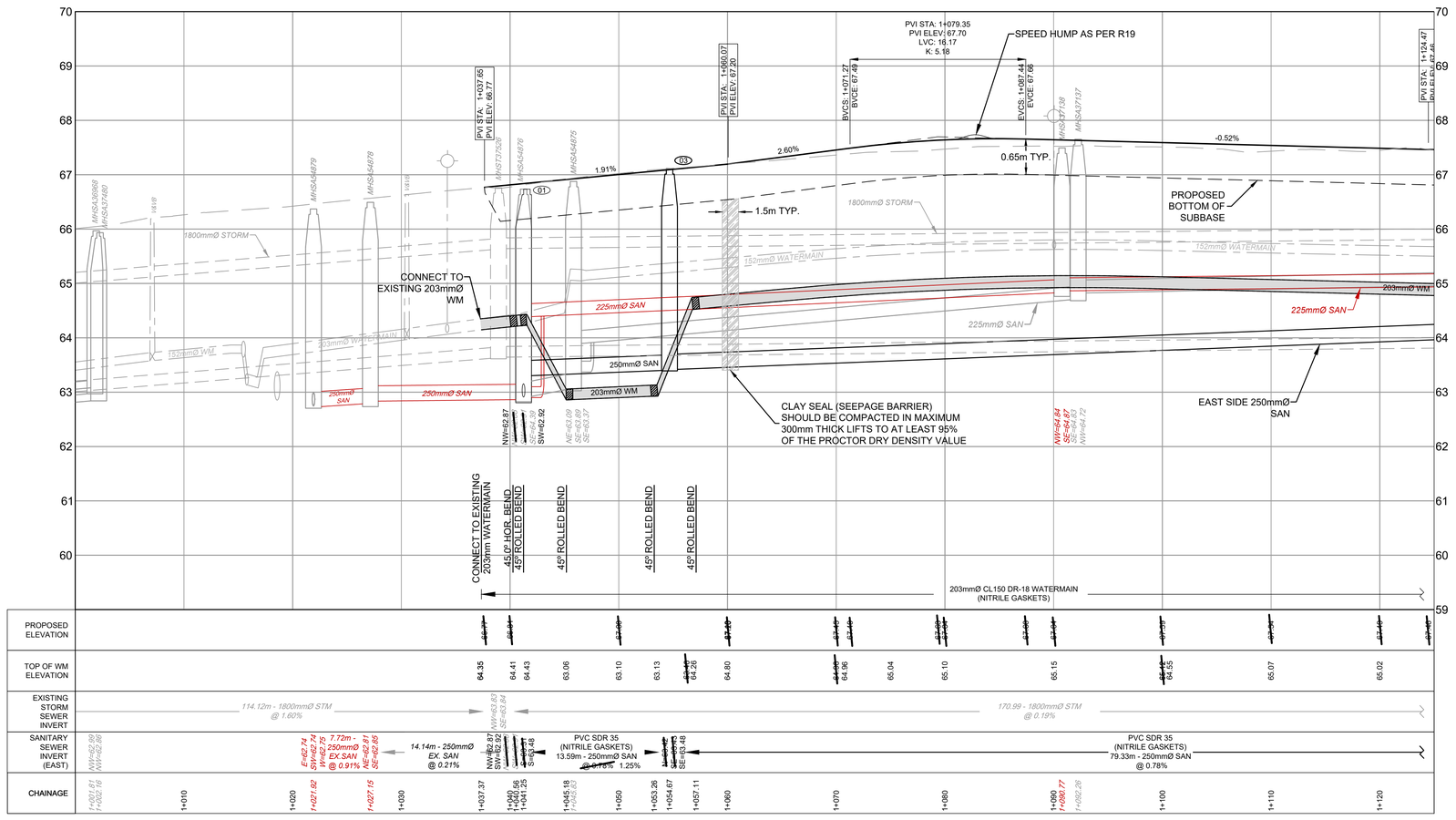
LOCATION No. TO No.	DIA. SIZE (mm)	CLASS OF PIPE	LENGTH (m)	INVERT ELEVATION UPSTREAM	INVERT ELEVATION DOWNSTREAM
MHSA13 TO MHSA17	250	SDR 35	28.0	62.76	62.68
MHSA17 TO MHSA18	250	SDR 35	79.0	62.66	62.34
MHSA13 TO MHSA14	SEE DRAWING # 029B				
MHSA14 TO MHSA15	SEE DRAWING # 029B				
MHSA15 TO MHSA16	SEE DRAWING # 029B				

WATERMAIN TABLE

	STATION	OFFSET (m)	TYPE OF FITTING	TOP OF WM. ELEVATION
	WELLINGTON STREET			
	10+530.9	3.66 LT.	305x152x305mm TEE	63.99
	10+531.5	3.64 LT.	305mm - 22.5º VERT. BEND	64.00
	10+532.8	3.54 LT.	305mm - 22.5º VERT. BEND	63.42
	10+533.3	3.52 LT.	305x203x305mm TEE	63.37
3	10+538.8	3.22 LT.	305mm - 22.5º VERT. BEND	63.33
3	10+540.2	3.19 LT.	305mm - 22.5º VERT. BEND	63.97
3	10+544.0	3.12 LT.	305x152x305mm TEE	63.98
	10+544.3	2.87 LT.	305x152x305mm HYDRANT TEE	63.93
	10+544.4	5.35 LT.	HYDRANT	
	10+546.5	2.72 LT.	305mm - 11.25º HORZ. BEND	63.92
	10+549.5	2.96 LT.	305mm VALVE AND VALVE CHAMBER	63.96
2	10+585.6	4.98 LT.	305mm - 22.5º HORZ. BEND	63.71
2	10+598.0	0.25 LT.	305mm - 22.5º HORZ. BEND	63.61
2	10+618.8	0.46 LT.	406x305x406mm TEE	63.66
	10+619.0	5.40 LT.	406x305x406mm TEE	63.56
	10+634.5	5.15 LT.	305mm VALVE AND VALVE CHAMBER	63.56

H:\ISO\TO3028\TOB\DWGS\Wellington St\08 As-Built\06_GD_005.dgn 03/03/2010 3:32:07 PM





EXPEDITED INTEGRATED RECONSTRUCTION OF HURON AVE.

EAST SIDE SANITARY PLAN AND PROFILE

HURON AVENUE NORTH - 1+000 TO 1+125

CARINA DUCLOS, P.Eng.
Acting Director, Infrastructure Services

KYLE CARSON, P.Eng.
Sr. Engineer, Infrastructure Projects

NOVATECH
Engineers, Planners & Landscape Architects

Suite 200, 240 Michael Cowpland Drive
Kanata, Ontario, Canada
K2M 1P6
Telephone (613) 254-9643
Facsimile (613) 254-5867
Email: novatech@novatech-eng.com

Ottawa

Contract No.	Dwg. No.
CP000474	08

Sheet 08 of 22

Asset No.

Asset Group

Des.	Chk'd.
NTQ/KCL	NTQ
Dwn.	Chk'd.
AJG	NTQ
Utility Circ. No.	Index No.
Const. Inspector	

Scale: 1:250

0 2 4 6 8 10

NOTE: The location of utilities is approximate only, the exact location should be determined by consulting the municipal authorities and utility companies concerned. The contractor shall prove the location of utilities and shall be responsible for adequate protection from damage.

REVISIONS

No.	Description	By	Date (dd/mm/yy)
5.	ISSUED FOR 50% DETAILED DESIGN SUBMISSION	NTQ	05/05/20
6.	ISSUED FOR 100% DETAILED DESIGN SUBMISSION	NTQ	05/06/20
7.	ISSUED FOR TENDER	NTQ	30/06/20
8.	ISSUED FOR CONSTRUCTION	NTQ	14/08/20
9.	AS-BUILT	NTQ	01/09/21

AS-BUILT

NOTES:

1. EXISTING SEWER SERVICE LOCATIONS INCLUDED ON PLANS REPRESENT LOCATIONS IDENTIFIED IN MAINLINE CCTV REPORTING COMPLETED BY OTHERS. THESE SERVICE LOCATIONS ARE FOR INFORMATION ONLY. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING WHICH SERVICES ARE ACTIVE AND NEED TO BE MAINTAINED AND REPLACED TO THE PROPERTY LINE. SERVICES FOUND BY THE CONTRACTOR TO NOT BE ACTIVE ARE TO BE REMOVED OR ABANDONED TO THE SATISFACTION OF THE CONTRACT ADMINISTRATOR/INSPECTION STAFF.
2. DRINKING WATER SERVICE INFORMATION IS BASED ON LOCATES AND SIZING AS REPORTED BY CITY DWS STAFF. ANY CLARIFICATION ON LOCATION, SIZE ETC. WILL NEED TO BE CO-ORDINATED WITH CITY DWS STAFF.
3. MANHOLE FRAME AND COVER ORIENTATION AND LADDER PLACEMENT IS TO MATCH THAT WHICH IS PROVIDED ON THE PLANS.

LEGEND:

- PROPOSED SANITARY SEWER
- PROPOSED SANITARY SEWER SERVICE CONNECTION
- PROPOSED SANITARY MAINTENANCE HOLE (101)
- EXISTING LARGE DIAMETER STORM SEWER
- EXISTING STORM MAINTENANCE HOLE (MHST54268)
- PROPOSED LOCAL WATERMAIN
- PROPOSED WATER SERVICE
- PROPOSED CATCH BASIN LEAD
- PROPOSED CATCH BASIN

SANITARY SEWER DATA

MAINTENANCE HOLE		DIA (mm)	LENGTH (m)	MATERIAL	INVERT ELEVATIONS	
FROM	TO				UP STR.	DOWN STR.
3	1	250	13.59	PVC SDR-35	~~63.42~~ 63.48	~~63.31~~ 63.33
5	3	250	79.33	PVC SDR-35	~~64.05~~ 64.01	~~63.43~~ 63.48

SANITARY MAINTENANCE HOLE DATA

NO.	STATION	OFFSET	COVER	STRUCTURE	ELEVATION	
					T/GRATE	LOW/INV
1	1+041.25	4.29 L	S24	OPSD 701.010	66.93	~~62.88~~ 62.87
3	1+054.67	2.18 L	S24	OPSD 701.010	67.02	~~63.42~~ 63.48

MAINTENANCE HOLE NOTES:
1) OFFSETS ARE FROM CONTROL LINE TO CENTRE OF STRUCTURE
2) STATIONS AND T/GRATE ELEVATIONS ARE FROM THE CENTRE OF STRUCTURE

CATCH BASIN CONNECTION DATA

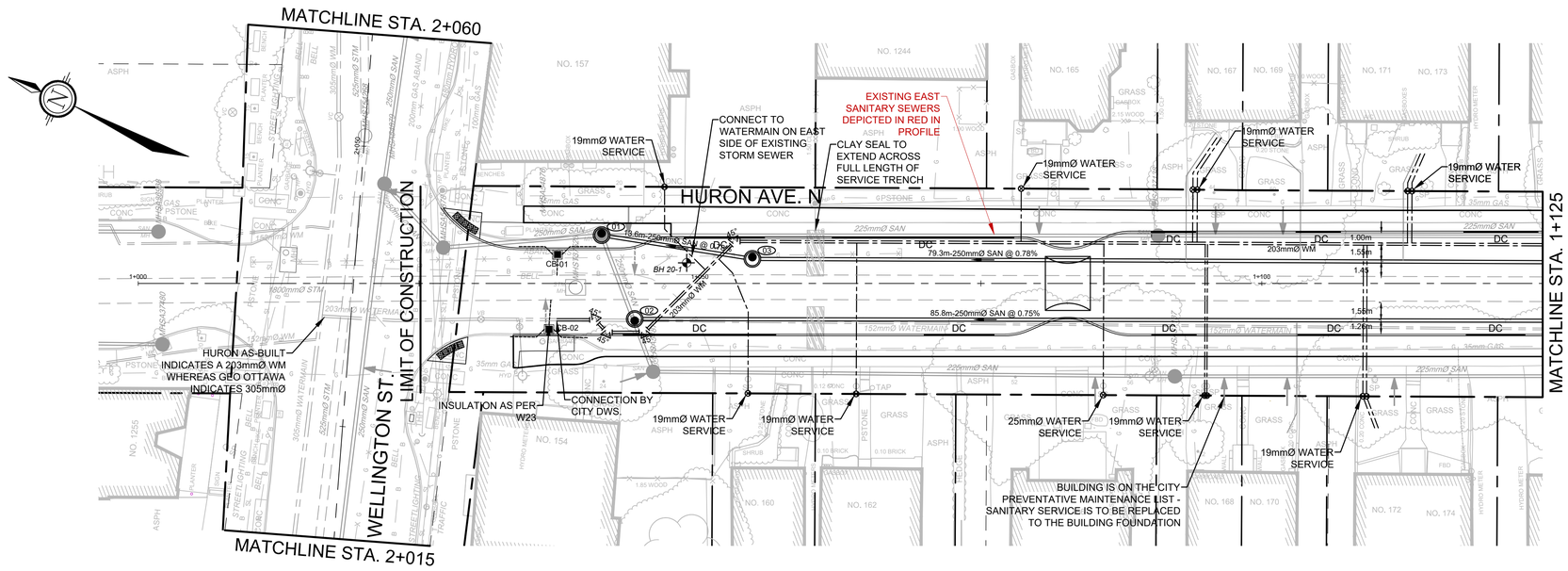
LOCATION	DIA (mm)	TYPE	LENGTH (m)	ELEVATION	
				UP STREAM	DOWN STREAM
SICB-01-PIPE	200	PVC SDR-35	*2.5	65.80	65.67
SICB-02-PIPE	200	PVC SDR-35	*3.4	65.79	65.64

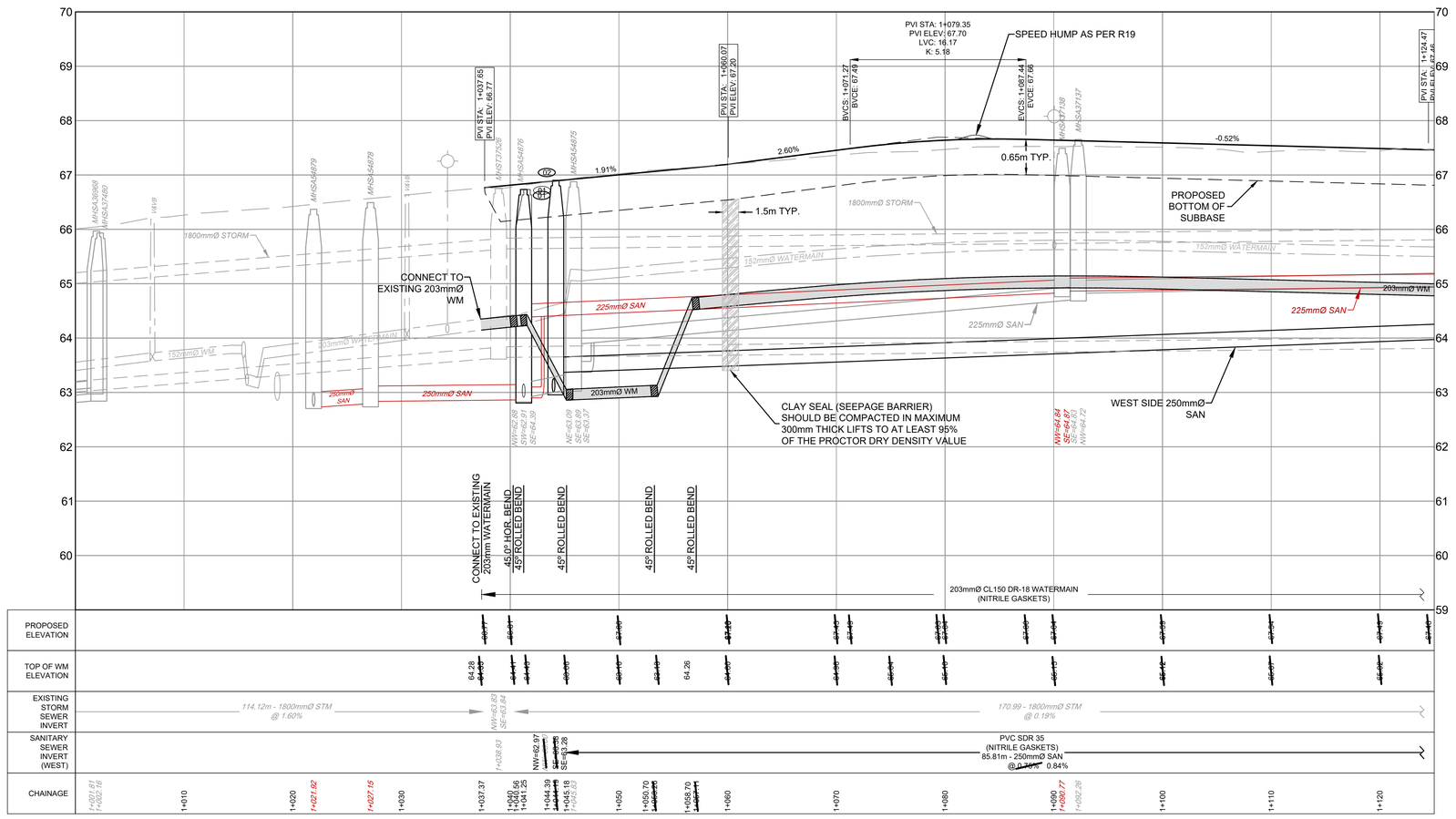
** DOWNSTREAM ELEVATIONS SHOWN ARE AT THE OBVERT OF THE STORM SEWER
* MIN. GRADE 1% FOR ALL STORM SEWER CONNECTIONS
* PIPE LENGTHS ARE FROM CENTRE OF STRUCTURE TO CENTRE OF STORM SEWER.

CATCH BASIN DATA

NO.	STATION	OFFSET	COVER	STRUCTURE	ELEVATION	
					GUTTER	LOW/INV
SICB-01	1+037.32	*2.58L	S19	OPSD 705.010	66.70	65.80
SICB-02	1+036.57	*4.08R	S19	OPSD 705.010	66.69	65.79

* OFFSETS ARE FROM CONTROL LINE TO CENTRE OF STRUCTURE.





EXPEDITED INTEGRATED RECONSTRUCTION OF HURON AVE.

WEST SIDE SANITARY PLAN AND PROFILE

HURON AVENUE NORTH - 1+000 TO 1+125

CARINA DUCLOS, P.Eng.
Acting Director, Infrastructure Services

KYLE CARSON, P.Eng.
Sr. Engineer, Infrastructure Projects

NOVATECH
Engineers, Planners & Landscape Architects

Suite 200, 240 Michael Cowpland Drive
Kanata, Ontario, Canada
K2M 1P6
Telephone (613) 254-9643
Facsimile (613) 254-5867
Email: novatech@novatech-eng.com

Ottawa

Contract No.	Dwg. No.
CP000474	10

Sheet 10 of 22

Asset No.

Asset Group

Des.	Chk'd.
NTQ/KCL	NTQ
Dwn.	Chk'd.
AJG	NTQ

Utility Circ. No. | Index No.

Const. Inspector

Scale: 1:250 (0 2 4 6 8 10)

NOTE: The location of utilities is approximate only, the exact location should be determined by consulting the municipal authorities and utility companies concerned. The contractor shall prove the location of utilities and shall be responsible for adequate protection from damage.

REVISIONS

No.	Description	By	Date (dd/mm/yy)
5.	ISSUED FOR 50% DETAILED DESIGN SUBMISSION	NTQ	05/05/20
6.	ISSUED FOR 100% DETAILED DESIGN SUBMISSION	NTQ	05/06/20
7.	ISSUED FOR TENDER	NTQ	30/06/20
8.	ISSUED FOR CONSTRUCTION	NTQ	14/08/20
9.	AS-BUILT	NTQ	01/09/21

AS-BUILT

NOTES:

1. EXISTING SEWER SERVICE LOCATIONS INCLUDED ON PLANS REPRESENT LOCATIONS IDENTIFIED IN MAINLINE CCTV REPORTING COMPLETED BY OTHERS. THESE SERVICE LOCATIONS ARE FOR INFORMATION ONLY. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING WHICH SERVICES ARE ACTIVE AND NEED TO BE MAINTAINED AND REPLACED TO THE PROPERTY LINE. SERVICES FOUND BY THE CONTRACTOR TO NOT BE ACTIVE ARE TO BE REMOVED OR ABANDONED TO THE SATISFACTION OF THE CONTRACT ADMINISTRATOR/INSPECTION STAFF.
2. DRINKING WATER SERVICE INFORMATION IS BASED ON LOCATES AND SIZING AS REPORTED BY CITY DWS STAFF. ANY CLARIFICATION ON LOCATION, SIZE ETC. WILL NEED TO BE CO-ORDINATED WITH CITY DWS STAFF.
3. MANHOLE FRAME AND COVER ORIENTATION AND LADDER PLACEMENT IS TO MATCH THAT WHICH IS PROVIDED ON THE PLANS.

LEGEND:

- PROPOSED SANITARY SEWER
- PROPOSED SANITARY SEWER SERVICE CONNECTION
- PROPOSED SANITARY MAINTENANCE HOLE (101)
- EXISTING LARGE DIAMETER STORM SEWER
- EXISTING STORM MAINTENANCE HOLE (MH/ST54268)
- PROPOSED LOCAL WATERMAIN
- PROPOSED WATER SERVICE
- PROPOSED CATCH BASIN LEAD
- PROPOSED CATCH BASIN

SANITARY SEWER DATA

MAINTENANCE HOLE		DIA (mm)	LENGTH (m)	MATERIAL	INVERT ELEVATIONS	
FROM	TO				UP STR.	DOWN STR.
2	1	*250*	*7.76*	*PVC SDR-35*	*63.00*	*62.91*
4	2	250	86.01	PVC SDR-35	~~64.03~~ 64.00	~~63.38~~ 63.28

SANITARY MAINTENANCE HOLE DATA

NO.	STATION	OFFSET	COVER	STRUCTURE	ELEVATION	
					T/GRATE	LOW/INV
1	1+041.25	4.29 L	S24	OPSD 701.010	66.93	~~62.88~~ 62.92
2	1+044.20	3.52 R	S24	OPSD 701.010	66.82	~~62.80~~ 62.87

MAINTENANCE HOLE NOTES:
1) OFFSETS ARE FROM CONTROL LINE TO CENTRE OF STRUCTURE
2) STATIONS AND T/GRATE ELEVATIONS ARE FROM THE CENTRE OF STRUCTURE

CATCH BASIN CONNECTION DATA

LOCATION	DIA (mm)	TYPE	LENGTH (m)	ELEVATION	
				UP STREAM	DOWN STREAM
SICB-01-PIPE	200	PVC SDR-35	*2.5	65.80	65.67
SICB-02-PIPE	200	PVC SDR-35	*3.4	65.79	65.64

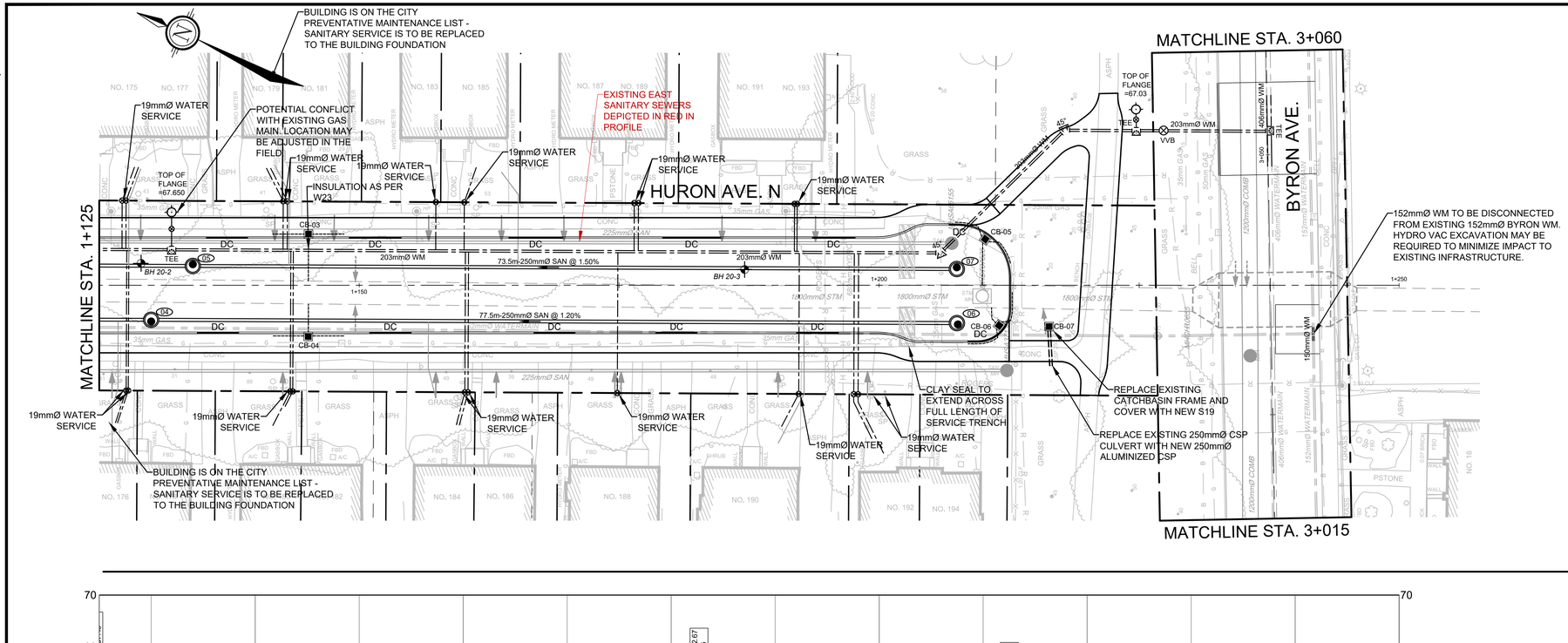
** DOWNSTREAM ELEVATIONS SHOWN ARE AT THE OBVERT OF THE STORM SEWER
* MIN. GRADE 1% FOR ALL STORM SEWER CONNECTIONS
* PIPE LENGTHS ARE FROM CENTRE OF STRUCTURE TO CENTRE OF STORM SEWER.

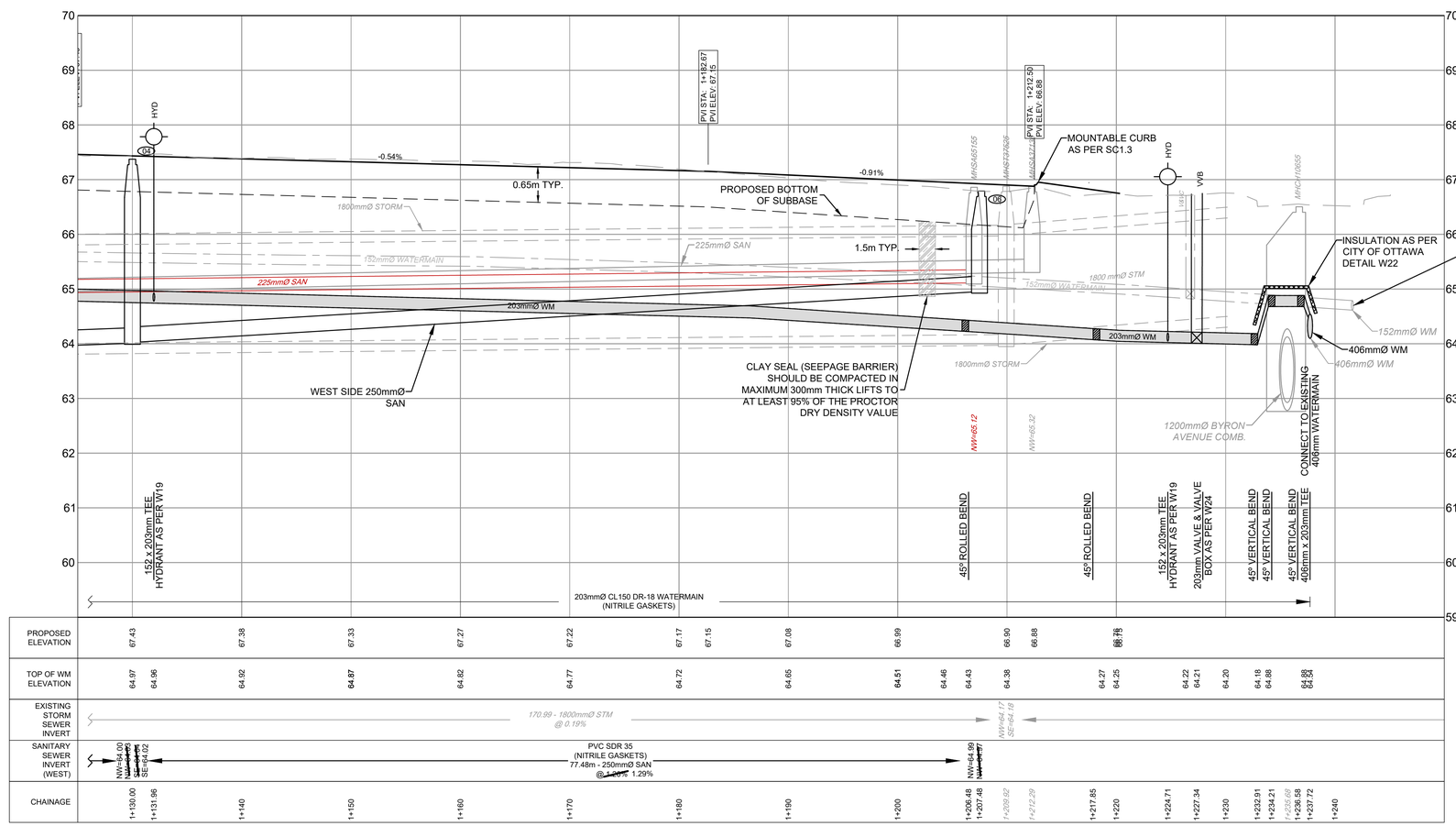
CATCH BASIN DATA

NO.	STATION	OFFSET	COVER	STRUCTURE	ELEVATION	
					GUTTER	LOW/INV
SICB-01	1+037.32	*2.58L	S19	OPSD 705.010	66.70	65.80
SICB-02	1+036.57	*4.08R	S19	OPSD 705.010	66.69	65.79

* OFFSETS ARE FROM CONTROL LINE TO CENTRE OF STRUCTURE.

TITLE FRAME: 790mm x 534mm City of Ottawa 2008





EXPEDITED INTEGRATED RECONSTRUCTION OF HURON AVE.

WEST SIDE SANITARY PLAN AND PROFILE

HURON AVENUE NORTH - 1+125 TO 1+250

CARINA DUCLOS, P.Eng.
Acting Director, Infrastructure Services

KYLE CARSON, P.Eng.
Sr. Engineer, Infrastructure Projects

NOVATECH
Engineers, Planners & Landscape Architects
Suite 200, 240 Michael Cowpland Drive
Kanata, Ontario, Canada K2M 1P6
Telephone (613) 254-9643
Facsimile (613) 254-5867
Email: novatech@novatech-eng.com

Ottawa

Contract No.	Dwg. No.
CP000474	11

Sheet 11 of 22

Asset No.

Asset Group

Des.	Chk'd.
NTQ/KCL	NTQ
Dwn.	Chk'd.
AJG	NTQ
Utility Circ. No.	Index No.
Const. Inspector	

Scale: 1:250

0 2 4 6 8 10

NOTE: The location of utilities is approximate only, the exact location should be determined by consulting the municipal authorities and utility companies concerned. The contractor shall prove the location of utilities and shall be responsible for adequate protection from damage.

REVISIONS

No.	Description	By	Date (dd/mm/yy)
5.	ISSUED FOR 50% DETAILED DESIGN SUBMISSION	NTQ	05/05/20
6.	ISSUED FOR 100% DETAILED DESIGN SUBMISSION	NTQ	05/06/20
7.	ISSUED FOR TENDER	NTQ	30/06/20
8.	ISSUED FOR CONSTRUCTION	NTQ	14/08/20
9.	AS-BUILT	NTQ	01/09/21

AS-BUILT

NOTES:

1. EXISTING SEWER SERVICE LOCATIONS INCLUDED ON PLANS REPRESENT LOCATIONS IDENTIFIED IN MAINLINE CCTV REPORTING COMPLETED BY OTHERS. THESE SERVICE LOCATIONS ARE FOR INFORMATION ONLY. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING WHICH SERVICES ARE ACTIVE AND NEED TO BE MAINTAINED AND REPLACED TO THE PROPERTY LINE. SERVICES FOUND BY THE CONTRACTOR TO NOT BE ACTIVE ARE TO BE REMOVED OR ABANDONED TO THE SATISFACTION OF THE CONTRACT ADMINISTRATOR/INSPECTION STAFF.
2. DRINKING WATER SERVICE INFORMATION IS BASED ON LOCATES AND SIZING AS REPORTED BY CITY DWS STAFF. ANY CLARIFICATION ON LOCATION, SIZE ETC. WILL NEED TO BE CO-ORDINATED WITH CITY DWS STAFF.
3. MANHOLE FRAME AND COVER ORIENTATION AND LADDER PLACEMENT IS TO MATCH THAT WHICH IS PROVIDED ON THE PLANS.

LEGEND:

PROPOSED SANITARY SEWER

PROPOSED SANITARY SEWER SERVICE CONNECTION

PROPOSED SANITARY MAINTENANCE HOLE

EXISTING LARGE DIAMETER STORM SEWER

EXISTING STORM MAINTENANCE HOLE

PROPOSED LOCAL WATERMAIN

PROPOSED WATER SERVICE

PROPOSED CATCH BASIN LEAD

PROPOSED CATCH BASIN

SANITARY SEWER DATA

MAINTENANCE HOLE FROM	MAINTENANCE HOLE TO	DIA (mm)	LENGTH (m)	MATERIAL	INVERT ELEVATIONS UP STR.	INVERT ELEVATIONS DOWN STR.
4	2	250	86.01	PVC SDR-35	~~64.03~~ 64.00	~~63.38~~ 63.28
6	4	250	77.48	PVC SDR-35	~~64.97~~ 64.99	~~64.84~~ 64.02

SANITARY MAINTENANCE HOLE DATA

NO.	STATION	OFFSET	COVER	STRUCTURE	ELEVATION T/GRATE	ELEVATION LOW/INV
4	1+130	3.32 R	S24	OPSD 701.010	67.33	~~64.03~~ 64.00
6	1+207.48	3.64 R	S24	OPSD 701.012	66.89	~~64.97~~ 64.99

MAINTENANCE HOLE NOTES:
1) OFFSETS ARE FROM CONTROL LINE TO CENTRE OF STRUCTURE
2) STATIONS AND T/GRATE ELEVATIONS ARE FROM THE CENTRE OF STRUCTURE

CATCH BASIN CONNECTION DATA

LOCATION	DIA (mm)	TYPE	LENGTH (m)	ELEVATION UP STREAM	ELEVATION DOWN STREAM
CICB-03-PIPE	200	PVC SDR-35	*5.3	66.16	**66.04
CICB-04-PIPE	200	PVC SDR-35	*3.8	66.12	**66.04
SICB-05-PIPE	200	PVC SDR-35	*5.2	65.95	65.65
SICB-06-PIPE	200	PVC SDR-35	*2.7	66.03	65.93
SICB-07-PIPE	*Existing*	*Existing*	*Existing*	-	-

** DOWNSTREAM ELEVATIONS SHOWN ARE AT THE OBVERT OF THE STORM SEWER
* MIN. GRADE 1% FOR ALL STORM SEWER CONNECTIONS
* PIPE LENGTHS ARE FROM CENTRE OF STRUCTURE TO CENTRE OF STORM SEWER.

CATCH BASIN DATA

NO.	STATION	OFFSET	COVER	STRUCTURE	ELEVATION GUTTER	ELEVATION LOW/INV
CICB-03	1+145.12	*4.92L	S22/23	OPSD 705.010	67.26	66.16
CICB-04	1+145.11	*4.90R	S22/23	OPSD 705.010	67.22	66.12
SICB-05	1+210.20	*4.44L	S19	OPSD 705.010	66.81	65.95
SICB-06	1+211.54	*3.87R	S19	OPSD 705.010	66.83	65.83
SICB-07	1+216.35	*4.09R	S19	*Existing*	66.37	-

* OFFSETS ARE FROM CONTROL LINE TO CENTRE OF STRUCTURE.

M:\2020\120006\CAD\Asbuilts\120005_PipeNetwork.dwg, PP(01)\West, Oct 14, 2021 - 1:45pm, mmcoy