

Hazelview Investments

# ASSESSMENT OF ADEQUACY OF PUBLIC SERVICES

## Heron Gate Master Plan

November 2025

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**Heron Gate Master Plan**

November 2025

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**Our Ref:**

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# 1 Introduction

## 1.1 Purpose

The purpose of this report is to investigate and confirm the adequacy of public services for the proposed redevelopment of the subject site, referred to as the Heron Gate Master Plan. Construction is proposed to be phased over a period of 15-20 years. This report will review the availability of major municipal infrastructure including water supply, wastewater collection and disposal and management of stormwater.

This report is being prepared as a technical document in support of a re-zoning application for the subdivision and was prepared in accordance with the November 2009 "Servicing Study Guidelines for Development Applications" in the City of Ottawa.

## 1.2 Background

Hazelview Investments is proposing to redevelop a 22.8 Ha community known as Heron Gate, located at Sandalwood Drive, Baycrest Drive, and Cedarwood Drive, between Heron Road and Walkley Road, in the City of Ottawa. The existing community is an assembly of low-rise to high-rise residential buildings. A select number of existing high-density buildings are proposed to be retained, while low-rise units are planned to be removed. The proposed redevelopment master plan includes increasing residential density through a mix of medium- to high-density units as well as providing a large recreational area at the center of the community.

In 2021, DSEL prepared a Functional Servicing and Stormwater Management Report in support of the Heron Gate Master Plan. This report concluded that an earlier version of the master plan could be supported through upgrades to watermain and sanitary sewers, as well as stormwater retention measures through roof top storage, surface storage, and subsurface storage.

**Figure 1.1** – Phasing Plan, located in **Appendix A**, shows the phased development plan for the community. Development of Phase 1 and 2A is underway, located in the northeastern section of the property. Full development is planned to occur over the span of 15-20 years.

## 1.3 Subject Property

The subject property is located south of Heron Road, north of Walkley Road, west of Sandalwood Park, and east of Colliston Crescent/Finn Court residential areas. All roads are currently 20m ROW's. The site is presently improved with low- to high-rise residential buildings. Some buildings and private roads were removed between 2015-2018. The intention is to demolish existing buildings in phases over time, as full development will take place over a span of 15-20 years.

**Figure 1.2** – Concept Plan, a copy of which is in **Appendix A**, shows the property phase limits. The site is bounded by Colliston Crescent/Finn Court residential lands to the west, Heron Road to the north, residential lands and Sandalwood Park to the east and Walkley Road to the south. The current Concept Plan includes retaining some existing apartment buildings and developing a number of new high-rise and townhomes. As each phase

approaches design stage, the property will require individual Site Plan Applications. The public ROW's are to be maintained as 20m ROW's with the exception of Baycrest Drive which is to be widened from 20m to 22m for increased landscaping potential. The new 22m ROW cross section has been proposed by the Landscape Architect and is included in **Appendix A** for reference.

It should be noted that the current concept plan contains a new proposed public 20m ROW that extends between existing Sandalwood Drive and Cedarwood Drive (as shown in **Figure 1.2**). It is proposed that this new public road follow the city's current standard 20m cross-section, also included in **Appendix A**. The Draft Plan of Subdivision (included in **Appendix A**) shows that there are 'internal' blocks (Blocks 19 and 21) adjacent to the proposed road that could not be easily serviced from Baycrest Drive to the east or Cedarwood Drive to the west should these blocks have different ownership to Blocks 18 and 23. To ensure these internal blocks have direct access to city infrastructure (storm, sanitary, and water servicing), additional public sewers have been proposed in this ROW.

## 1.4 Existing Infrastructure

As stated above, the master plan for Heron Gate community includes City of Ottawa ROWs of Sandalwood Drive, Baycrest Drive, and Cedarwood Drive.

**Figure 1.3** – Existing Infrastructure, located in **Appendix A**, shows the location of all known existing sewer infrastructure. Existing storm sewers in public ROWs range from 300mm concrete pipe to 750mm concrete pipe. Public sanitary sewers are all 250mm concrete pipe. City watermain is 200mm cast iron throughout. Existing private infrastructure will be abandoned and removed as needed for new construction.

## 1.5 Pre-Consultation

A pre-consultation meeting occurred with the City of Ottawa. While there were comments related to Planning, Urban Design, Transportation, Environment, Forestry, and Parks, there were several Engineering comments centered around servicing, a possible sanitary extension and water. A copy of the meeting notes was not included in this report at the request of the City.

## 1.6 Existing Topography

The existing contours on the subject property range between 95m and 88m. The site generally drains from the northwest towards the southeast. Multiple topographical surveys of the subject lands were completed by Stantec Geomatics Ltd. **Figure 1.4** compiles these surveys and can be found in **Appendix A** of this report.

## 1.7 Geotechnical Considerations

Cambium Inc. was retained to complete a geotechnical investigation report, entitled "Geotechnical Investigation - Heron Gate Village Subdivision", 22801-001. The purpose of the report is to:

- Determine the subsoil and groundwater conditions in the subject property by means of boreholes and laboratory testing

- Provide geotechnical recommendations for the design of the proposed development including construction considerations
- Assess potential corrosivity on buried concrete elements by means of chemical testing

The report includes discussions on such topics as building design considerations, pavement designs and winter construction.

## 1.8 Watercourses and Setbacks

There are no existing or proposed watercourses inside the property limits and consequently, there will be no requirements for building setbacks from watercourses.

## 2 Water Supply

### 2.1 Existing Conditions

There are four watermain connections for the community, two connections to a 300mm Cast Iron watermain in Heron Road and two connections to a 400mm cast iron watermain in Walkley Road. There are existing 200mm cast iron watermain running throughout Heron Gate community's municipal roads, namely Baycrest Drive, Sandalwood Drive, and Cedarwood Drive. Residential lands in this community are serviced off of these public watermain. For more details regarding existing watermain, refer to **Figure 1.3 – Existing Infrastructure** in **Appendix A**.

### 2.2 Functional Servicing Study

David Schaeffer Engineering Ltd (DSEL) completed a Functional Servicing and Stormwater Management Report (FSR) in 2021 for the Timbercreek and Heron Gate Communities. The FSR features the Heron Gate Master Plan and recommended that all existing watermain in the ROWs be replaced in favour of a new upsized watermain network based on the community master plan.

The FSR bases this recommendation on Boundary Conditions received from the City of Ottawa. The provided Boundary Conditions assume a post-development population based on the master plan of 176 townhomes and 6224 apartment units in total and a fire flow demand between 200 L/s and 300 L/s (12,000 L/min to 18,000 L/min respectively). These Boundary Conditions were used in the report "Hydraulic Capacity and Modelling Analysis for Heron Gate Subdivision Redevelopment", prepared by GeoAdvice Engineering Inc. and included in Appendix B of the FSR. Unit breakdown consists of 957 existing apartment units to remain, 176 new townhome units, and 5,267 new apartment units as the ultimate post-development build-out.

## 2.3 Design Criteria

### 2.3.1 Water Demands

The current master plan for Heron Gate consists of 54 townhouses, 957 existing apartment units to be retained and 5,991 units in new mid- to high-rise apartment buildings.

In order to calculate water demand rates, the per unit population density and consumption rates are taken from Tables 4.1 and 4.2 of the Ottawa Design Guidelines – Water Distribution were used and are summarized as follows:

Townhouse	2.7 persons per unit
Average Apartment	1.8 persons per unit

The total estimated Phase 8 population is 592. Based on the following criteria:

Average Day Demand	280 l/c/d
Peak Day Demand	700 l/c/d
Peak Hour Demand	1540 l/c/d

The following water demands are determined:

Average Day	41.00 l/s
Peak Day	102.51 l/s
Peak Hour	225.51 l/s

### 2.3.2 System Pressure

The 2010 City of Ottawa Water Distribution Guidelines state that the preferred practice for design of a new distribution system is to have normal operating pressures range between 345 kPa (50 psi) and 552 kPa (80 psi) under maximum daily flow conditions. Other pressure criteria identified in the guidelines are as follows:

Minimum Pressure	Minimum system pressure under peak hour demand conditions shall not be less than 276 kPa (40 psi)
Fire Flow	During the period of maximum day demand, the system pressure shall not be less than 150 kPa (21 psi) during a fire flow event.
Maximum Pressure	Maximum pressure at any point in the distribution system shall not exceed 689 kPa (100 psi). In accordance with the Ontario Building/Plumbing Code, the maximum pressure should not exceed 552 kPa (80 psi). Pressure reduction controls may be required for buildings where it is not possible/feasible to maintain the system pressure below 552 kPa.

### 2.3.3 Fire Flow Rate

Fire flow calculations have been conducted using the Fire Underwriters Survey (FUS) method for representative buildings shown on the conceptual master plan. This resulted in fire flow demands of up to 17,000 L/min for the worst case buildings by configuration and building type. A copy of the FUS calculations is included in **Appendix B**. These results are in line with the FSR.

### 2.3.4 Boundary Conditions

Per the Preconsultation Feedback Form from the City of Ottawa, Arcadis has reached out to the City for boundary conditions. After a meeting with the City of Ottawa, the City has declined to provide boundary conditions for the Assessment of Adequacy, stating that the FSR results still apply based on the similar master plan. A copy of the related correspondence is included in **Appendix B**.

## 2.4 Proposed Water Plan

The Heron Gate Master Plan has undergone a revision since the FSR. A current unit breakdown per Block is tabulated below:

*Table 2-4 Updated Unit Count by Block*

Block	Townhouses	Apartment Units
1	0	-*
2	0	863
3	0	1054
4	0	802
5	54	0
6	0	368
7	0	673
8	0	1393
9	0	838
10	0	0

*\*Note: Block 1 water is serviced from Heron Road*

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This represents a moderate increase in units in comparison to the FSR. To note, the master plan is conceptual and unit counts will continue to be revised at intervals. Ultimately, each Block will require a Site Plan Application at detailed design stage. ROW watermain will be upsized in stages as required to maintain adequate levels of service and fire protection.

An overall hydraulic analysis should be conducted with each Site Plan Application with the unit variances at detailed building stage so that ROW watermain may be upsized appropriately as needed.

## 3 Wastewater Disposal

### 3.1 Existing Conditions

The subject property is currently improved with 250mm concrete sanitary sewers throughout the public ROWs. Additionally, each Block has private servicing connecting to City wastewater sewers. **Figure 1.3 in Appendix A** illustrates the existing sewer layout. The Heron Gate Master Plan envisions maintaining the existing right-of-ways for Sandalwood Drive, Baycrest Drive, and Cedarwood Drive.

The 250mm concrete sewers in Baycrest Drive and Cedarwood Drive outlet to a 300mm sanitary in Walkley Road. This sewer currently travels east on Walkley, ranging in sizes of 300mm to 525mm, for approximately 2km before veering onto a 750mm concrete sanitary sewer in Conroy Road, which then travels 650m south until outletting into the deep 2700mm South Ottawa Trunk Collector sewer leading to Robert O. Pickard Environmental Centre (ROPEC) wastewater treatment plant on Shefford Road.

### 3.2 Functional Servicing Study

As part of ongoing efforts to implement the Heron Gate Master Plan, a Functional Servicing and Stormwater Management Report was prepared by DSEL in 2021. This report analyzed the existing sewer network along with the post-development stormwater demands and provided stormwater management recommendations to accommodate the ultimate design.

This FSR report estimated the existing subdivision's peak wastewater flows and assessed the residual capacity of the existing downstream sewers by analyzing all upstream tributary areas.

The extents of the study include the residential areas of Colbert Court and Finn Crescent as the sanitary sewer in this area travels through a landscaped area to Colliston Crescent. Colliston Crescent currently travels west on Walkley away from Heron Gate and down Jasper Avenue, connecting to the sanitary sewer in Albion Road at Kitchener Avenue.

Per the FSR, a section of 250mm concrete sanitary sewer on Cedarwood Drive will require upsizing to 300mm. The remainder of public ROW sanitary sewers in Cedarwood Drive, Baycrest Drive, and Sandalwood Drive can remain as 250mm sewers. However, the FSR also concludes that offsite works will be needed.

A future 375mm sanitary sewer in Walkley Road is planned in this report which will adequately service the Heron Gate Master Plan. This new 375mm sanitary will direct outflows from Cedarwood Drive westward to Albion Road, and then a new sanitary sewer in Albion will carry flows south to the South Ottawa Collector sewer.

The existing sanitary sewer in Walkley does not have sufficient capacity for full development without this upgrade.

### 3.3 Design Criteria

The sanitary flows for the development are based on the City of Ottawa design criteria which includes, but is not limited to the following criteria:

- Average Residential Flow 280 l/p/d
- Average Population density 1.8 PPU for apartments  
2.7 PPU for townhomes
- Residential Peaking Factor Harmon Formula [max = 4.0, min. = 2.0]
- Infiltration allowance 0.33 l/s/ha
- Velocities 0.60 m/s min. to 3.0 m/s max.
- Apartments 1.8 ppu

### 3.4 Proposed Wastewater Plan

The recommended wastewater plan for Phase 8 is shown on **Figure 3.1** which is included in **Appendix C**. In accordance with the recommendations from the FSR discussed in Section 3.2, a section of sanitary sewer in Cedarwood Drive is to be upsized to 300mm, and a 375mm extension from Cedarwood Drive to the South Ottawa Collector sewer is proposed through Walkley and Albion. The City of Ottawa was reached out to for confirmation of capacity in the sanitary sewers, however as with the boundary condition request, Arcadis was redirected back to the FSR.

As mentioned in Section 2.4 there is a moderate increase in units in comparison to the FSR, however, once the upgrades have been implemented, there is spare capacity in each outlet even at full build-out as noted in the FSR. To note, the master plan is conceptual and unit counts will continue to be revised at intervals. Each Block will require a Site Plan Application at detailed design stage. Development of Blocks tributary to the Cedarwood Drive sanitary outlet will ultimately trigger the need for the Walkley/Albion extension. Also to note, a new 250mm sanitary sewer is proposed in the new ROW between Sandalwood Drive and Cedarwood Drive to allow for servicing of internal blocks should there be a difference in ownership preventing servicing from the east in Baycrest Drive or the west in Cedarwood Drive.

## 4 Stormwater Management

### 4.1 Existing Conditions

Under existing conditions, stormwater from the private Blocks outlets to storm sewers in the municipal right-of-ways ranging from 300mm concrete sewers to 750mm concrete sewers. **Figure 1.3** in **Appendix A** illustrates the existing sewer layout. The Heron Gate Master Plan envisions maintaining the existing right-of-ways for Sandalwood Drive, Baycrest Drive, and Cedarwood Drive.

Per the 2021 Functional Servicing Report (FSR) prepared by DSEL, the sewer network in these roads was constructed pre-1970 and captures flow from a 2-year storm, with flows greater than a 2-year storm directed to Walkley Road overland.

### 4.2 Functional Servicing Study

As part of ongoing efforts to implement the Heron Gate Master Plan, a Functional Servicing and Stormwater Management Report was prepared by DSEL in 2021. This report analyzed the existing sewer network along with the post-development stormwater demands and provided stormwater management recommendations to accommodate the ultimate design.

This FSR report determined, through consultation with the City of Ottawa, that the existing network was sized to handle a 2-year storm. Private blocks will be required to restrict the offsite stormwater release rate to a runoff coefficient of  $C = 0.50$  for a 2-year storm with a calculated time of concentration. This restricted release rate must be able to accommodate up to a 100-year storm event. This is a higher level of service than existing conditions and will therefore improve downstream capacity as the master plan is built out. Additionally, per correspondence included in the FSR report, the Rideau Valley Conservation Authority will not require quality control for this site.

The FSR determined that private blocks inside the Heron Gate Master Plan will be restricted to an allowable release rate of 80.7 L/s/Ha. The master plan has evolved since the 2021 report, and so the release rates of each block have been reassessed based on the latest plan and summarized below:

*Table 4-2 Updated Restricted Release Rate by Block*

Block	Area (Ha)	Release Rate (L/s)
1	1.58*	158.8
2	2.78	224.3
3	2.72	219.5
4	2.60	226.0
5	2.31	186.4

Block	Area (Ha)	Release Rate (L/s)
6	1.23	99.3
7	1.13	91.2
8	2.03	163.8
9	1.87	150.9
10	1.53	123.5

*\*Note: Block 1 (constructed) release rate is per the SWM Report for SPA prepared by MMM Group Ltd.*

The sum of all flowrates per Block is 1643.7 L/s. This is slightly less than the total of 1651.0 L/s calculated in Section 5.2 of the FSR, however this may be caused by rounding errors or using a different ROW boundary in measuring the areas of each block. Given that the differences are negligible, the findings of the FSR report continue to apply to the Heron Gate Master Plan.

## 4.3 Minor Storm Sewer Design Criteria

As noted in the FSR, the City of Ottawa requires the site to follow the following design criteria;

- Site to be designed to limit the 100-year post development flow to a maximum of the 2-year rate with C=0.5.

The stormwater system is to be designed following the principles of dual drainage, making accommodations for both major and minor flow.

Some of the key criteria include the following:

- Design Storm 1:2 year return (Ottawa)
- Initial Time of Concentration 10 minutes
- Runoff Coefficients
  - Softscape Areas C = 0.20
  - Asphalt/Concrete C = 0.90
  - Roof C = 0.90
- Pipe Velocities 0.80 m/s to 6.0 m/s
- Minimum Pipe Size 250 mm diameter
- Minimum allowable slopes to maintain pipe velocities per the Table below:

**Table 4-3 Minimum Allowable Slopes**

Diameter (mm)	Slope (%)
250	0.43
300	0.34
375	0.25
450	0.20
525	0.16
600	0.13
675	0.11
>675	0.10

## 4.4 Proposed Minor Storm Sewer Plan

As stated in Section 4.2, the Functional Servicing and Stormwater Management Report for the Heron Gate Master Plan has analyzed pre- and post-development storm runoff and is proposing to maintain the existing storm sewers in the City ROWs of Baycrest Drive, Sandalwood Drive, and Cedarwood Drive. At detailed design stage, each Block will submit a Site Plan Application with the proposed site plan design including stormwater management measures that conform to the allowable restricted release rates cited in Section 4.2, based on a release rate of 80.7 L/s/Ha. These measures may range from inlet control devices, rooftop flow control, underground storage, and surface storage.

Using the above-noted criteria, the proposed storm services for each Block are to be sized accordingly. A proposed minor storm plan is included in **Appendix D**. As recommended by the FSR, no changes are proposed to storm sewers in City ROWs. However, a new 375mm storm sewer is proposed in the new public ROW between Sandalwood Drive and Cedarwood Drive to allow for servicing of internal blocks should there be a difference in ownership that prevents servicing from the 750mm storm to the east in Baycrest Drive or the 750mm storm to the west in Cedarwood Drive.

## 5 Sedimentation and Erosion Control Plan

### 5.1 General

During construction, existing stream and conveyance systems can be exposed to significant sediment loadings. Although construction is only a temporary situation, it is proposed to introduce a number of mitigative construction techniques to reduce unnecessary construction sediment loadings. These will include:

- Installation of filter cloths on open surface structures such as maintenance holes and catchbasins during building construction.
- Installation of silt fence on the site perimeter, where practical.

### 5.2 Trench Dewatering

Although little groundwater is expected during construction of municipal services, any trench dewatering using pumps will be discharged into a filter trap made up of geotextile filters and straw bales similar in design to the OPSD 219.240 Dewatering Trap. These will be constructed in a bowl shape with the fabric forming the bottom and the straw bales forming the sides. Any pumped groundwater will be filtered prior to release to the existing surface runoff. The contractor will inspect and maintain the filters as needed including sediment removal and disposal and material replacement as needed.

### 5.3 Surface Structure Filters

All catchbasins, and to a lesser degree manholes, convey surface water to sewers. However, until the surrounding surface has been completed these structures should be covered in some fashion to prevent sediment from entering the minor storm sewer system. Until landscaped areas are sodded or until drive isles and parking lots are asphalted and curbed, catchbasins and manholes will be constructed with geotextile filter bags or a geotextile filter fabric located between the structure frame and cover respectively. These will stay in place and be maintained during construction and build until it is appropriate to remove.

## 6 Conclusions and Recommendations

### 6.1 Conclusion

The Heron Gate Master Plan provided a vision and guidance for the community. The 2021 FSR built upon the master plan and provided a preferred servicing scheme for the development of the subject property. Most of the required major municipal infrastructure to support the development already exists.

The sanitary outlet for the site can be improved to handle wastewater for the full development with an extension on Walkley and Albion. As the Blocks develop, the ROW watermain will be upgraded from 200mm watermain to 250mm watermain as needed to maintain adequate service and fire protection. The existing minor storm sewers in the public ROW are sufficient to service the site. It has been confirmed that additional quality control will not be required.

We therefore conclude that, with the above-noted improvements of local municipal infrastructure, Heron Gate Master Plan can be readily serviced.

### 6.2 Recommendation

Based on the conclusion noted above, we recommend that the zoning application for Heron Gate Master Plan not be held up because of the lack of adequacy of public services.



# Appendix A



Project Title

Drawing Title

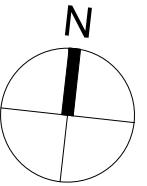
Sheet No.

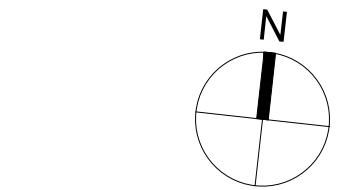
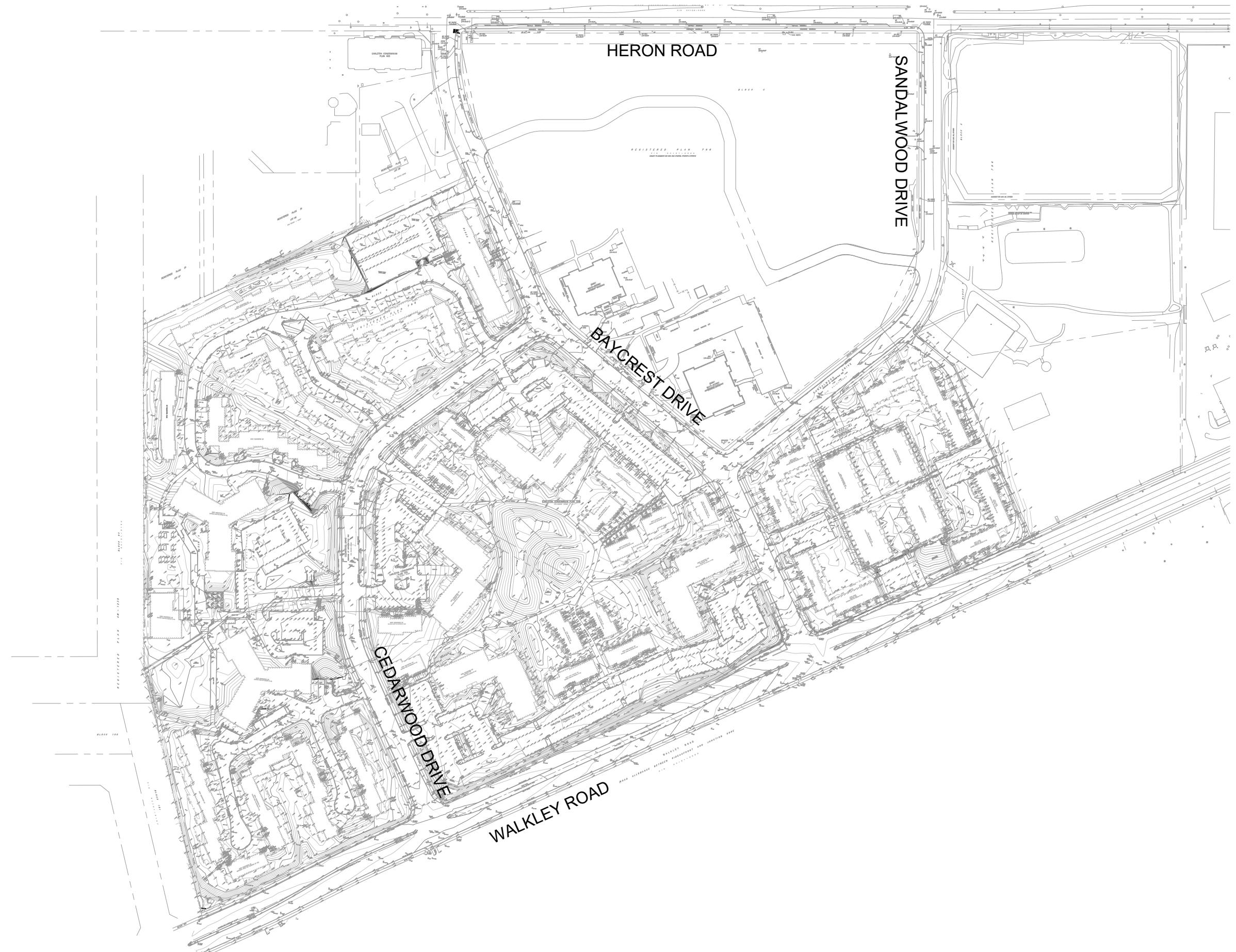


Project Title

Drawing Title

Sheet No.





LEGEND:  
→ SURFACE FLOW DIRECTION

Project Title

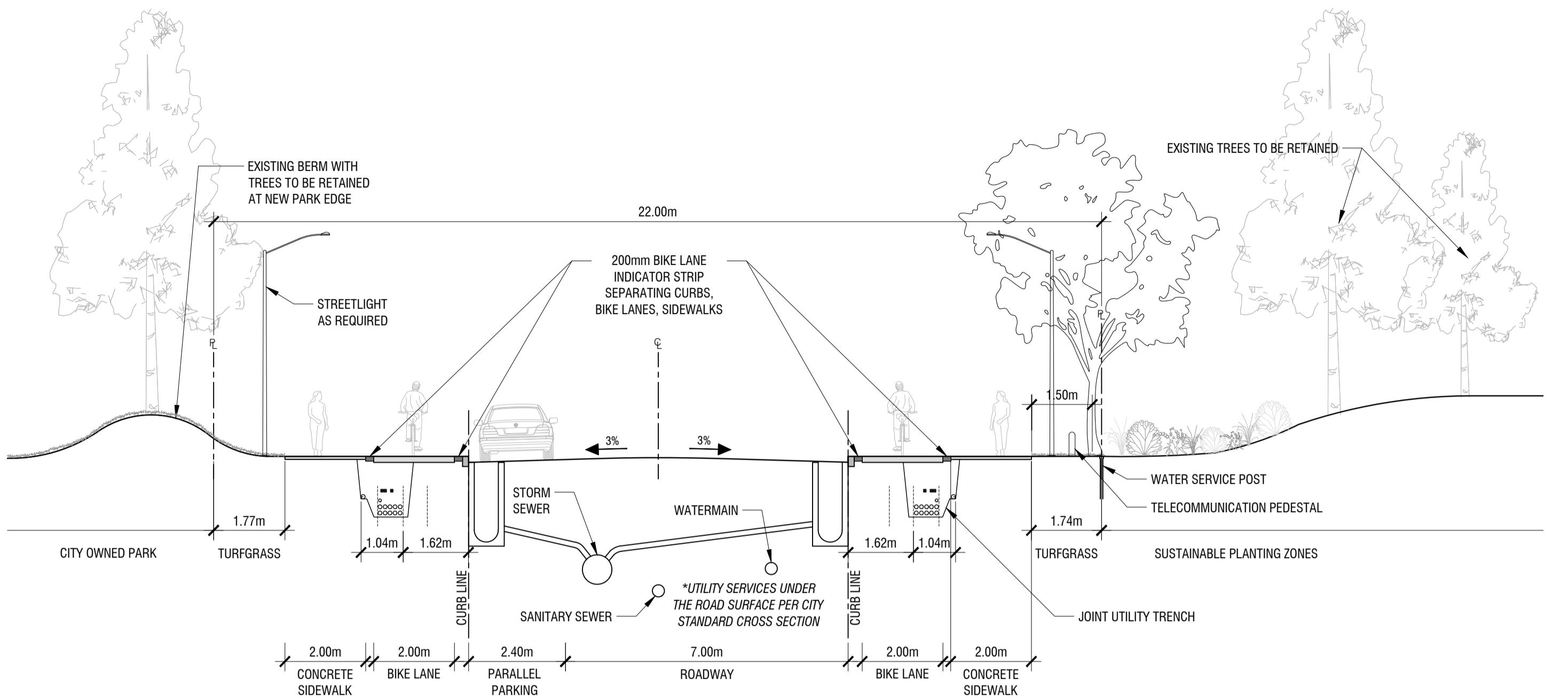
Drawing Title

Sheet No.

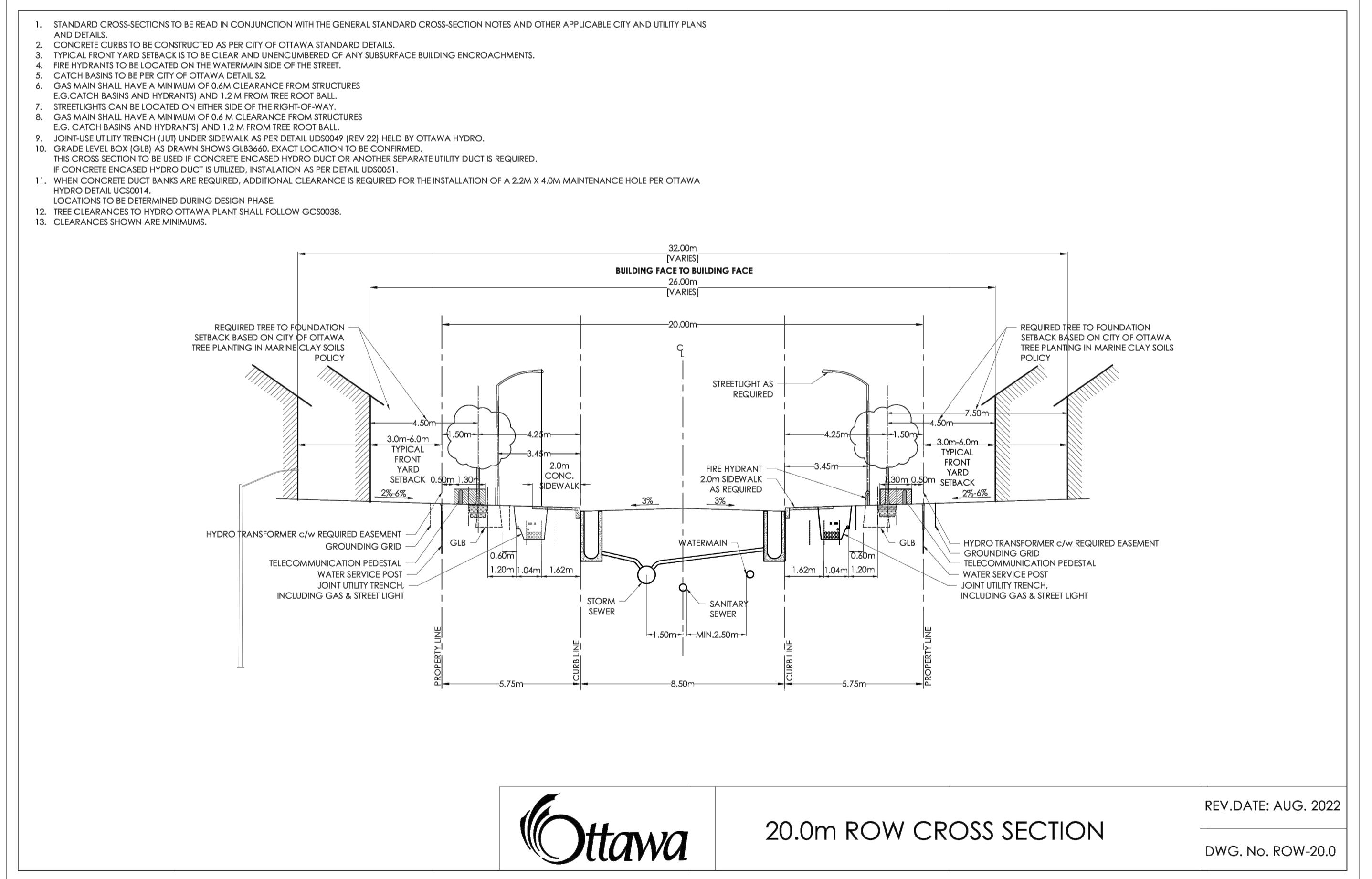


key plan / plan repère

legend / légende

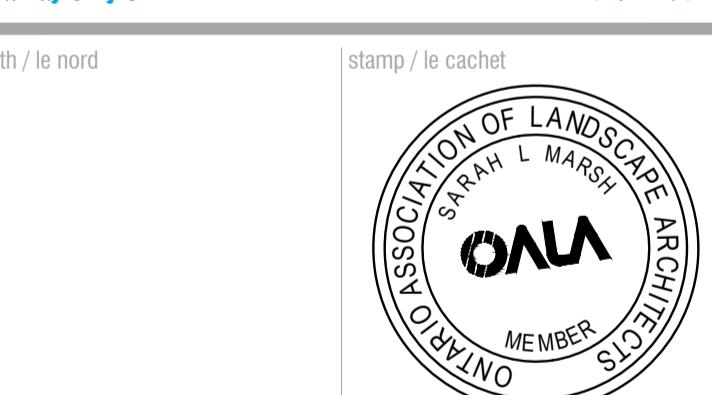


**1 L6 CONCEPTUAL ALTERNATE 22m RIGHT OF WAY SECTION - BAYCREST DR.  
n.t.s.**



03	Reissued for ZBA & DPOS	2025/11/04
02	issue for ZBA & DPOS	2025/07/15
01	issue for coordination	2025/06/03
00	issue for client review	2025/05/26
revn	description / la description	yyyy/mm/dd

**FOTENN** Planning + Design  
420 O'Connor Street  
Ottawa, ON, CANADA K2P 1W4  
613.730.5709  
fotenn.com



stamp / le cachet  
north / le nord  
project / projet

HERON GATE MASTERPLAN  
drawing / dessin

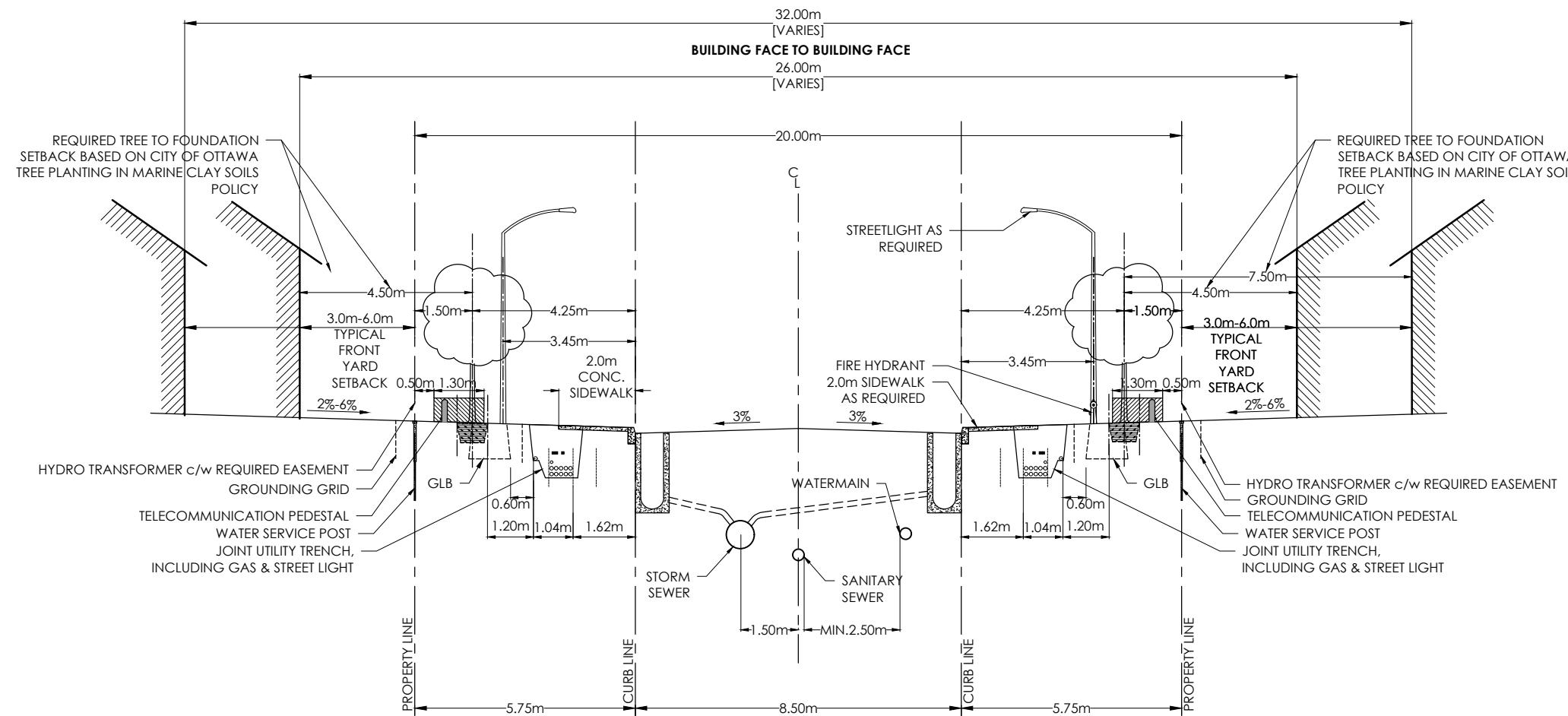
SECTIONS

designed / conçu EM / SM / DF / SP	drawn / dessiné EM / SM / DF / SP	reviewed / examiné SM / DF
date May 2025	project number / No. du projet	

drawing number / No. du dessin

L6

1. STANDARD CROSS-SECTIONS TO BE READ IN CONJUNCTION WITH THE GENERAL STANDARD CROSS-SECTION NOTES AND OTHER APPLICABLE CITY AND UTILITY PLANS AND DETAILS.
2. CONCRETE CURBS TO BE CONSTRUCTED AS PER CITY OF OTTAWA STANDARD DETAILS.
3. TYPICAL FRONT YARD SETBACK IS TO BE CLEAR AND UNENCUMBERED OF ANY SUBSURFACE BUILDING ENCROACHMENTS.
4. FIRE HYDRANTS TO BE LOCATED ON THE WATERMAIN SIDE OF THE STREET.
5. CATCH BASINS TO BE PER CITY OF OTTAWA DETAIL S2.
6. GAS MAIN SHALL HAVE A MINIMUM OF 0.6M CLEARANCE FROM STRUCTURES  
E.G.CATCH BASINS AND HYDRANTS) AND 1.2 M FROM TREE ROOT BALL.
7. STREETLIGHTS CAN BE LOCATED ON EITHER SIDE OF THE RIGHT-OF-WAY.
8. GAS MAIN SHALL HAVE A MINIMUM OF 0.6 M CLEARANCE FROM STRUCTURES  
E.G. CATCH BASINS AND HYDRANTS) AND 1.2 M FROM TREE ROOT BALL.
9. JOINT-USE UTILITY TRENCH (JUT) UNDER SIDEWALK AS PER DETAIL UDS0049 (REV 22) HELD BY OTTAWA HYDRO.
10. GRADE LEVEL BOX (GLB) AS DRAWN SHOWS GLB3660. EXACT LOCATION TO BE CONFIRMED.  
THIS CROSS SECTION TO BE USED IF CONCRETE ENCASED HYDRO DUCT OR ANOTHER SEPARATE UTILITY DUCT IS REQUIRED.  
IF CONCRETE ENCASED HYDRO DUCT IS UTILIZED, INSTALLATION AS PER DETAIL UDS0051.
11. WHEN CONCRETE DUCT BANKS ARE REQUIRED, ADDITIONAL CLEARANCE IS REQUIRED FOR THE INSTALLATION OF A 2.2M X 4.0M MAINTENANCE HOLE PER OTTAWA HYDRO DETAIL UCS0014.  
LOCATIONS TO BE DETERMINED DURING DESIGN PHASE.
12. TREE CLEARANCES TO HYDRO OTTAWA PLANT SHALL FOLLOW GCS0038.
13. CLEARANCES SHOWN ARE MINIMUMS.



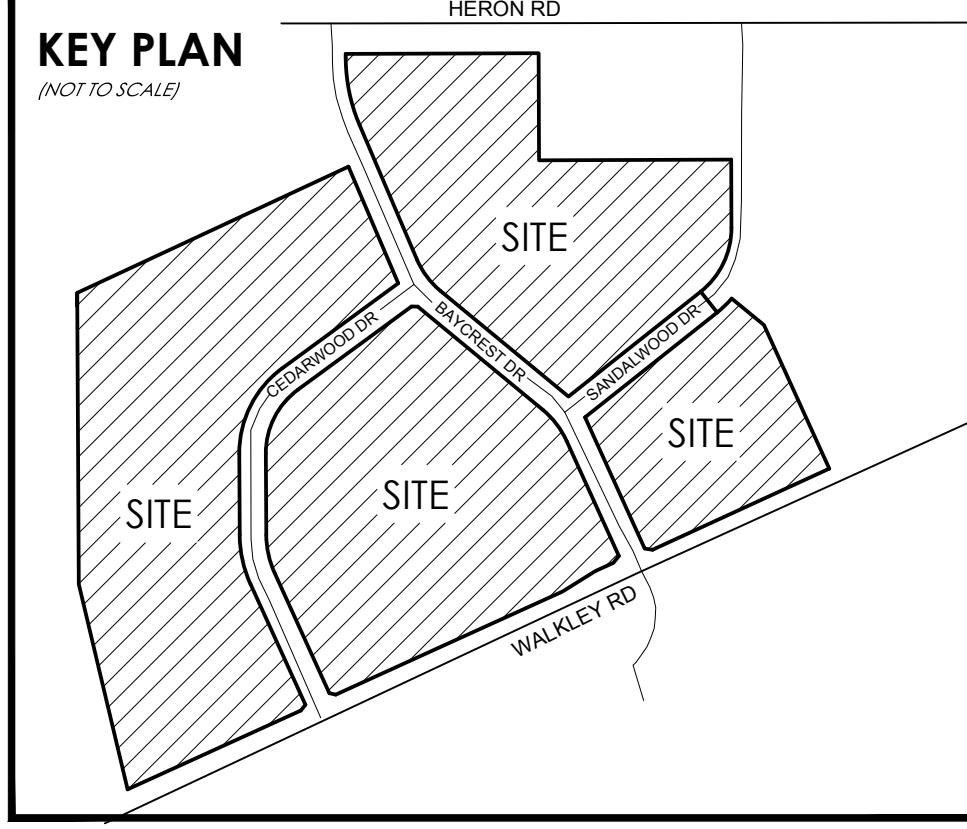
## 20.0m ROW CROSS SECTION

REV. DATE: AUG. 2022

DWG. No. ROW-20.0

SUBJECT TO THE CONDITIONS, IF ANY, SET FORTH IN  
OUR LETTER DATED \_\_\_\_\_ 20\_\_\_\_\_  
THIS DRAFT PLAN IS APPROVED BY THE CITY OF  
OTTAWA UNDER SECTION 51 OF THE PLANNING ACT.  
THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_\_.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

ANDREW McCREIGHT, MANAGER  
DEVELOPMENT REVIEW-CENTRAL  
PLANNING, DEVELOPMENT AND BUILDING  
SERVICES DEPARTMENT, CITY OF OTTAWA

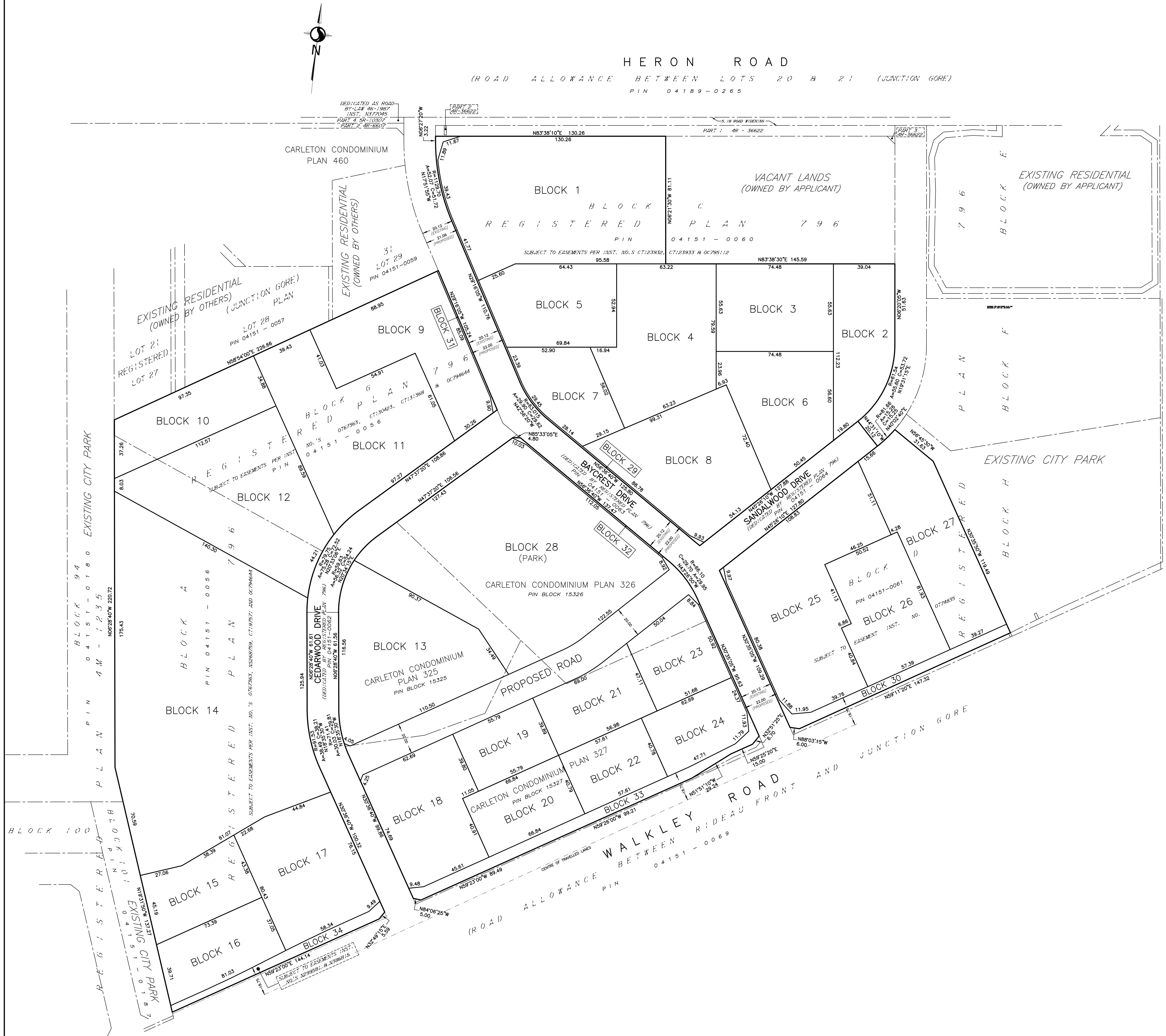


## DRAFT PLAN OF SUBDIVISION OF

**BLOCK G AND  
PART OF BLOCKS A, C AND  
REGISTERED PLAN 796  
AND  
CARLETON CONDOMINIUM PLANS No's  
325, 239 AND 327**

Scale 1:1000  
  
20 0 20 40 60 METRES  
Stantec Geomatics Ltd.

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



**OWNER'S CERTIFICATE**

I HEREBY AUTHORIZE STANTEC GEOMATICS LTD. TO SUBMIT THIS DRAFT PLAN OF  
SUBDIVISION ON MY BEHALF

**SURVEYOR'S CERTIFICATE**

I HEREBY CERTIFY THAT THE BOUNDARIES OF THE SUBJECT LANDS AND THEIR RELATIONSHIP TO ADJOINING LANDS HAVE BEEN ACCURATELY AND CORRECTLY SHOWN

---

DATE \_\_\_\_\_

---

FRANCIS LAU  
ONTARIO LAND SURVEYOR

TEL. 613.722.4420  
stantec.com

# Appendix B

Assumptions							
Population Density	Water Demand Rates		Peaking Factors for Pop. of 501 to 3000			Fire Demands	
New Apartment - Avg	1.8 persons/unit	Residential	280 l/cap/day	Maximum Daily		High Density	13,000 l/min (216.7 l/s)
				Residential	2.5 x avg. day		
Townhouse	2.7 persons/unit			Commercial	1.5 x avg. day	Medium Density 15,000 l/min (250 l/s)	
		Commercial Shopping Center	2,500 L/(1000m <sup>2</sup> )/day	Maximum Hourly			
ExApartment - Avg	1.8 persons/unit			Residential	2.2 x max. day	Towns	17,000 l/min (283.3 l/s)
				Commercial	1.8 x max. day		

STEP	Contents	Description		Adjustment Factor	Result
1	Floor Area	Building 8.1 (25-storey highrise)		Floors 1-2 50% Floors 3-10	2604 m <sup>2</sup> 5208 m <sup>2</sup> <b>7812</b> m <sup>2</sup>
2	<b>Type of Construction</b>	Type V Wood Frame 1.5 Type III Ordinary Construction 1.0 Type II Noncombustible Construction 0.8 Type I Fire Resistive Construction 0.6		Type II Noncombustible Construction 0.8	
3	<b>Required Fire Flow</b>	RFF = 220C <sup>1/2</sup> A			<b>16000</b> L/min
4	<b>Occupancy and Contents</b>	Noncombustible Contents -25% Limited Combustible Contents -15% Combustible Contents 0% Free Burning Contents 15% Rapid Burning Contents 25%	Limited Combustible Contents	-15%	-2400 L/min
	<b>Fire Flow</b>				<b>13600</b> L/min
5	<b>Automatic Sprinkler Protection</b>	Automatic Sprinkler Conforming to NFPA 13 -30% Standard Water Supply for both the system -10% and Fire Department Hose Lines Fully Supervised System -10%	Yes No No	-30% 0 0	-4080 L/min 0 L/min <b>-4080</b> L/min
	<b>Fire Flow</b>				
	<b>Exposure Adjustment</b>	Based on <b>Table 6</b> Exposure Adjustment Charges for Subject Building			
6	North	Separation (m) 28.8 Length X Height Factor (m.storeys) 528 Construction Type Type II	With unprotected opening	4%	544 L/min
	South	Separation (m) 28.8 Length X Height Factor (m.storeys) 423 Construction Type Type II	With unprotected opening	4%	544 L/min
	East	Separation (m) 10 Length X Height Factor (m.storeys) 141 Construction Type Type II	With unprotected opening	11%	1496 L/min
	West	Separation (m) 26.9 Length X Height Factor (m.storeys) 176 Construction Type Type II	With unprotected opening	4%	544 L/min
	<b>Fire Flow</b>				<b>3128</b> L/min
7	<b>Total Required Fire Flow</b>	Rounded to Nearest 1000 L/min			<b>12648</b>
					<b>13000</b> L/min

Notes 1. Fire flow calculation are based on Fire Underwriters Survey version 2020.

STEP	Contents	Description		Adjustment Factor	Result
1	Floor Area	Building 1.3 (6-storey highrise)		Floors 1-2 50% Floors 3-6	6770 m <sup>2</sup> 6770 m <sup>2</sup> <b>13540</b> m <sup>2</sup>
2	<b>Type of Construction</b>	<b>Type V</b> Wood Frame 1.5 <b>Type III</b> Ordinary Construction 1.0 <b>Type II</b> Noncombustible Construction 0.8 <b>Type I</b> Fire Resistive Construction 0.6		Type II Noncombustible Construction 0.8	
3	<b>Required Fire Flow</b>	RFF = 220C√A			<b>20000</b> L/min
4	<b>Occupancy and Contents</b>	Noncombustible Contents -25% Limited Combustible Contents -15% Combustible Contents 0% Free Burning Contents 15% Rapid Burning Contents 25%	Limited Combustible Contents -15%		-3000 L/min
	<b>Fire Flow</b>				<b>17000</b> L/min
5	<b>Automatic Sprinkler Protection</b>	Automatic Sprinkler Conforming to NFPA 13 -30% Standard Water Supply for both the system and Fire Department Hose Lines -10% Fully Supervised System -10%	Yes -30% No No		-5100 L/min 0 L/min
	<b>Fire Flow</b>				<b>-5100</b> L/min
	<b>Exposure Adjustment</b>	Based on <b>Table 6</b> Exposure Adjustment Charges for Subject Building			
6	North	Separation (m) 18.7 Length X Height Factor (m.storeys) 567.6 Construction Type Type II	With unprotected opening 8%		1360 L/min
	South	Separation (m) >30 Length X Height Factor (m.storeys) Construction Type			0 L/min
	East	Separation (m) 17 Length X Height Factor (m.storeys) 534 Construction Type Type II	With unprotected opening 8%		1360 L/min
	West	Separation (m) 23.3 Length X Height Factor (m.storeys) 501.9 Construction Type Type II	With unprotected opening 4%		680 L/min
	<b>Fire Flow</b>				<b>3400</b> L/min
7	<b>Total Required Fire Flow</b>	Rounded to Nearest 1000 L/min			<b>15300</b>
					<b>15000</b> L/min

Notes 1. Fire flow calculation are based on Fire Underwriters Survey version 2020.

STEP	Contents	Description		Adjustment Factor	Result
1	Floor Area	Building 4.5 (4-storey towns)		Floors 1-4	1908 m <sup>2</sup>
	<b>Total Effective Floor Area</b>				m <sup>2</sup>
2	<b>Type of Construction</b>	Type V Wood Frame	1.5	Type V Wood Frame	1.5
		Type III Ordinary Construction	1.0		
		Type II Noncombustible Construction	0.8		
		Type I Fire Resistive Construction	0.6		
3	<b>Required Fire Flow</b>	RFF = 220C <sup>1/2</sup> A			<b>14000</b> L/min
4	<b>Occupancy and Contents</b>	Noncombustible Contents	-25%		
		Limited Combustible Contents	-15%	Limited Combustible	
		Combustible Contents	0%	Contents	-15%
		Free Burning Contents	15%		-2100 L/min
		Rapid Burning Contents	25%		
	<b>Fire Flow</b>				<b>11900</b> L/min
5	<b>Automatic Sprinkler Protection</b>	Automatic Sprinkler Conforming to NFPA 13	-30%	No	0 L/min
		Standard Water Supply for both the system	-10%	No	0 L/min
		and Fire Department Hose Lines			
		Fully Supervised System	-10%	No	
	<b>Fire Flow</b>				<b>0</b> L/min
6	<b>Exposure Adjustment</b>	Based on <b>Table 6</b> Exposure Adjustment Charges for Subject Building			
	<b>North</b>	Separation (m)	13		
		Length X Height Factor (m.storeys)	59.6	With unprotected	
		Construction Type	Type II	opening	5%
	<b>South</b>	Separation (m)	21.4		
		Length X Height Factor (m.storeys)	152	With unprotected	
		Construction Type	Type V	opening	10%
	<b>East</b>	Separation (m)		Firewall	
		Length X Height Factor (m.storeys)			1190 L/min
		Construction Type			
	<b>West</b>	Separation (m)	12.8		
		Length X Height Factor (m.storeys)	201.2	With unprotected	
		Construction Type	Type V	opening	15%
	<b>Fire Flow</b>				<b>4760</b> L/min
7	<b>Total Required Fire Flow</b>				<b>16660</b>
		Rounded to Nearest 1000 L/min			<b>17000</b> L/min

Notes 1. Fire flow calculation are based on Fire Underwriters Survey version 2020.

## Labadie, Sam

---

**From:** Bramah, Bruce <bruce.bramah@ottawa.ca>  
**Sent:** May 21, 2025 10:43 AM  
**To:** Labadie, Sam  
**Cc:** Sharif, Golam  
**Subject:** RE: Herongate MSS - Boundary Condition Request

**Arcadis Warning:** Exercise caution with email messages from external sources such as this message. Always verify the sender and avoid clicking on links or scanning QR codes unless certain of their authenticity.

Good morning Sam,

Upon review of the BC request with our modelling group, we do not believe you require boundary conditions at this preliminary stage. The FSR for the Heron Gate Community prepared by DSEL, dated May 2021 – Rev 3 had the BC provided and modelling complete to determine upsizing of the existing public watermains was not required.

Based on the population counts from the FSR to your BC request, updated BC are not required.  
Happy to discuss further if you have any questions.

Thanks,

--  
**Bruce Bramah, P.Eng**  
Project Manager  
Planning, Development and Building Services department (PDBS)/ Direction générale des services de la planification, de l'aménagement et du bâtiment (DGSPAB) - South Branch  
City of Ottawa | Ville d'Ottawa  
110 Laurier Avenue West Ottawa, ON | 110, avenue. Laurier Ouest. Ottawa (Ontario) K1P 1J1  
613.580.2424 ext. 29686, [Bruce.Bramah@ottawa.ca](mailto:Bruce.Bramah@ottawa.ca)

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

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**From:** Sharif, Golam <sharif.sharif@ottawa.ca>  
**Sent:** April 16, 2025 1:16 PM  
**To:** Bramah, Bruce <bruce.bramah@ottawa.ca>  
**Subject:** FW: Herongate MSS - Boundary Condition Request

Water BC

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

---

**From:** Sevigny, John <[John.Sevigny@ottawa.ca](mailto:John.Sevigny@ottawa.ca)>  
**Sent:** Wednesday, April 16, 2025 12:07 PM  
**To:** Labadie, Sam <[samantha.labadie@arcadis.com](mailto:samantha.labadie@arcadis.com)>  
**Cc:** Shillington, Jeffrey <[jeff.shillington@ottawa.ca](mailto:jeff.shillington@ottawa.ca)>; Sharif, Golam <[sharif.sharif@ottawa.ca](mailto:sharif.sharif@ottawa.ca)>  
**Subject:** RE: Herongate MSS - Boundary Condition Request

Hi Sam,

I'm no longer in Development Review South. By copy of this email, I'm putting you in touch with the Senior Engineering Team in the south.

Regards,

**John Sevigny C.E.T.**

A/Manager, Development Review East Branch | Gestionnaire (I), Direction de l'examen des projets d'aménagement - Est Planning, Development and Building Services Department (PDBS) | Direction générale des services de la planification, de l'aménagement et du bâtiment (DGSPAB)  
City of Ottawa | Ville d'Ottawa  
110 Laurier Avenue West | 110 avenue Laurier Ouest  
Ottawa, ON K1P 1J1  
Tel.|Tél. 613.580.2424 ext.| poste 74388

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

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**From:** Labadie, Sam <[samantha.labadie@arcadis.com](mailto:samantha.labadie@arcadis.com)>  
**Sent:** April 16, 2025 11:58 AM  
**To:** Sevigny, John <[John.Sevigny@ottawa.ca](mailto:John.Sevigny@ottawa.ca)>  
**Subject:** Herongate MSS - Boundary Condition Request

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

Hi John,

We are the civil engineers for the Herongate Master Servicing Study. This is very preliminary, but we are looking for boundary conditions to confirm that there is sufficient water pressure for the conceptual design.

A copy of the anticipated water demands and fireflows are attached and summarized as follows;

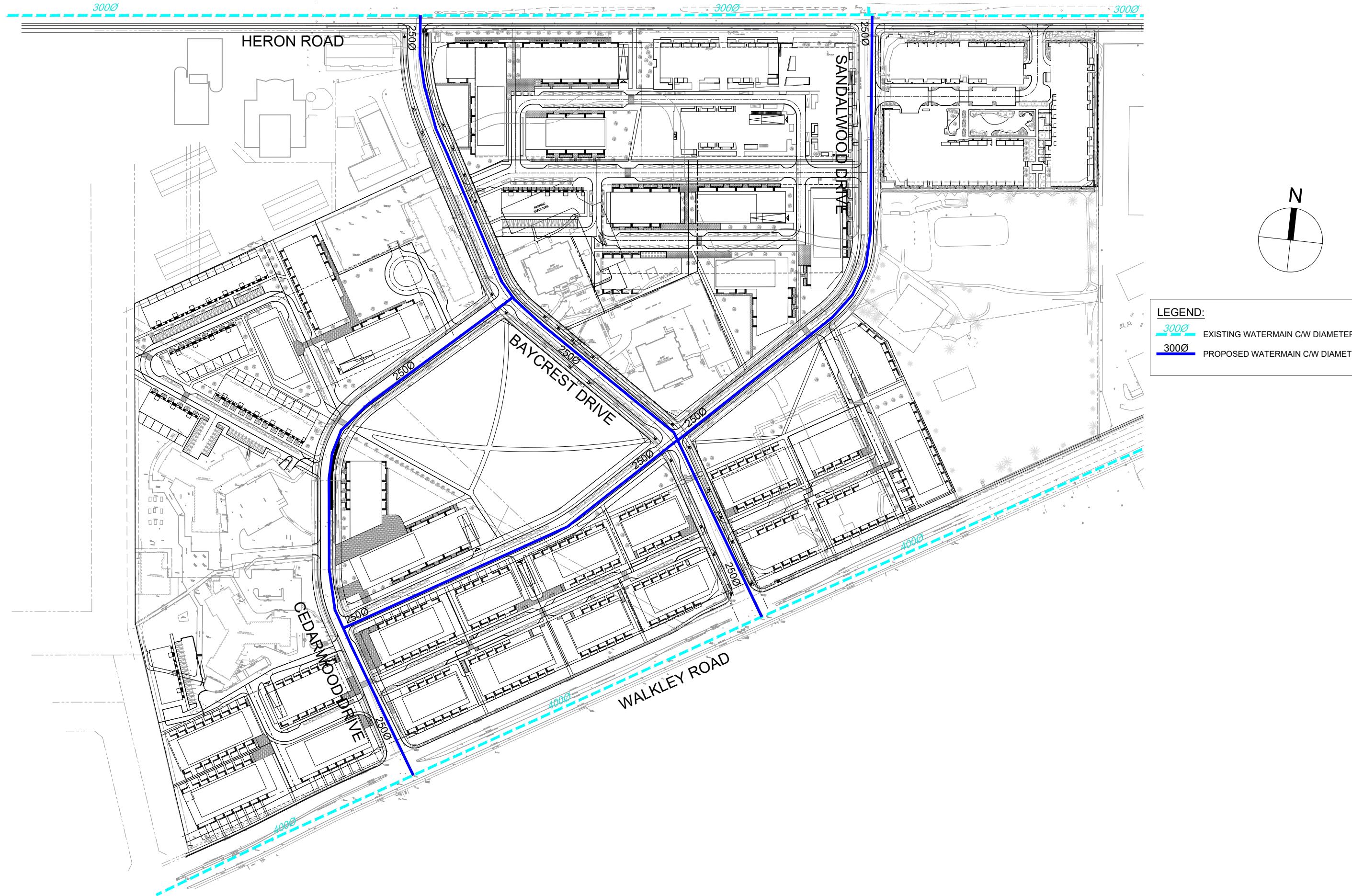
Avg Day 33.41 l/s  
Max day 83.52 l/s  
Peak Hour 183.74 l/s

Fireflow 1 = 13,000 L/min  
Fireflow 2 = 15,000 L/min  
Fireflow 3 = 17,000 L/min

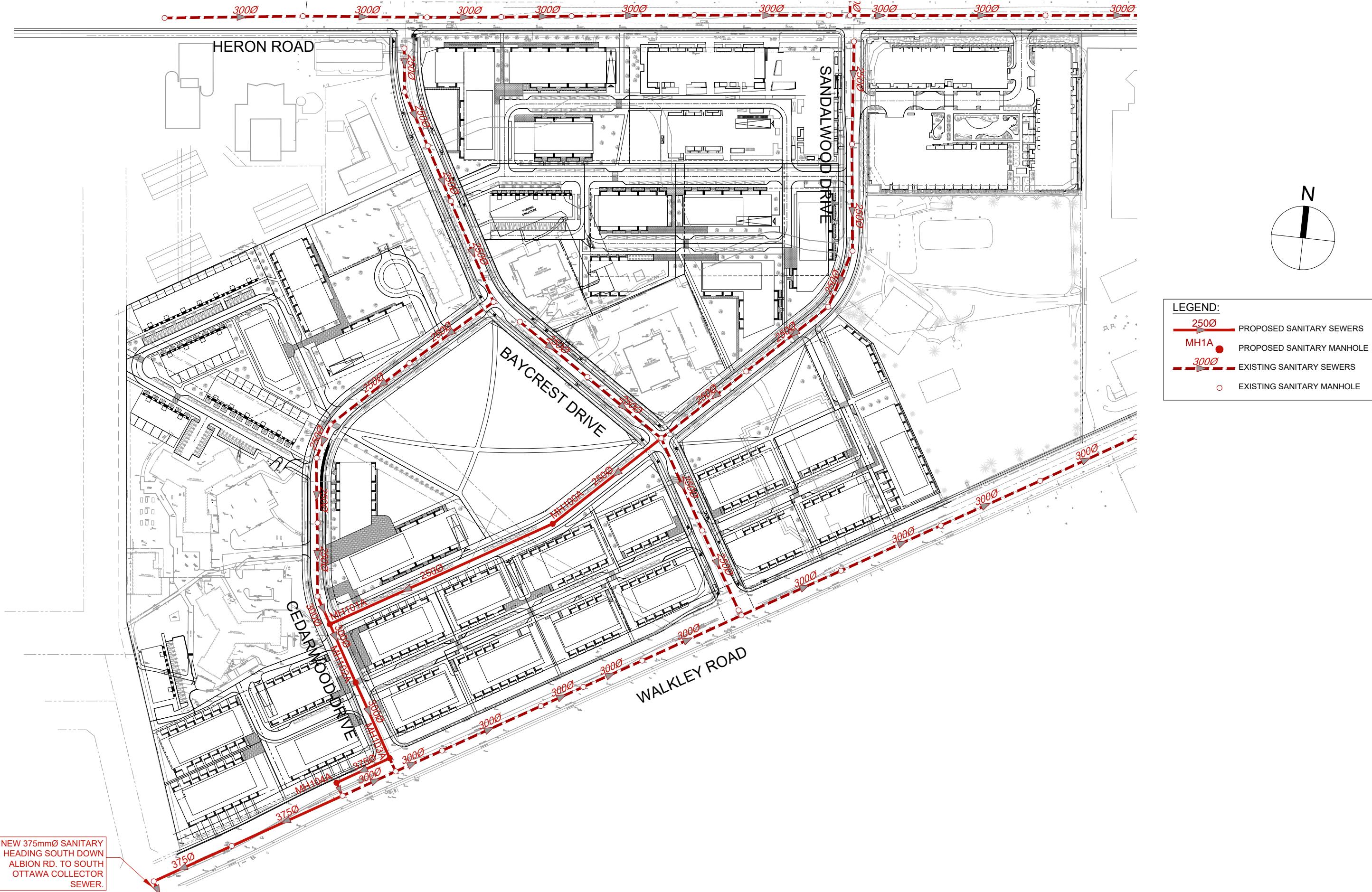
Thank you,

**Sam Labadie** P.Eng  
Civil Engineer  
Arcadis Professional Services (Canada) Inc.  
Suite 500, 333 Preston Street | Ottawa | ON | K1S 5N4 | Canada  
C: +1 613 899 5717  
[www.arcadis.com](http://www.arcadis.com)





# Appendix C



# Appendix D



Project Title

Drawing Title

Sheet No.