

Phoenix Homes

Design Brief

1773 & 1767 Baseline

July 2026

Design Brief

1773 & 1767 Baseline

July 2026

Prepared By:

Arcadis Canada Inc.
333 Preston Street, Suite 500
Ottawa, Ontario K1S5N4
Canada
Phone: 613 721 0555

Prepared For:

Michael Boucher
VP - Land Development
DCR Phoenix
18A Bentley Ave.
Ottawa, Ontario K2E 6T8, CA

Our Ref:

30297182.05



Sam Labadie, P.Eng.,
Land Development Engineer, Arcadis Canada Inc.



This document is intended only for the use of the individual or entity for which it was prepared and may contain information that is privileged, confidential and exempt from disclosure under applicable law. Any dissemination, distribution or copying of this document is strictly prohibited.

Table of Contents

1	INTRODUCTION	1
1.1	Geotechnical Concerns	1
1.2	Easements	2
2	WATER DISTRIBUTION	3
2.1	Existing Conditions	3
2.2	Design Criteria	3
2.2.1	Water Demands	3
2.2.2	System Pressures	3
2.2.3	Fire Flow Rate	4
2.2.4	Boundary Conditions	4
2.3	Proposed Water Plan	5
3	WASTEWATER	6
3.1	Existing Conditions	6
3.2	Design Criteria	6
3.3	Recommended Wastewater Plan	6
4	SITE STORMWATER MANAGEMENT	7
4.1	Existing Conditions	7
4.2	Design Criteria	7
4.3	Stormwater Management	7
4.3.1	Stormwater Quantity Control	7
5	SEDIMENT AND EROSION CONTROL PLAN	10
5.1	General	10
5.2	Trench Dewatering	10
5.3	Bulkhead Barriers	10
5.4	Seepage Barriers	10
5.5	Surface Structure Filters	10
6	CONCLUSIONS & RECOMMENDATIONS	12
6.1	Conclusions	12
6.2	Recommendations	12

List of Appendices

APPENDIX A

Site Plan
Topographic Plan of Survey prepared by Annis O'Sullivan Vollebekk Ltd
30297182-001 General Plan of Services

APPENDIX B

Water Demand Calculations
FUS Calculations
Boundary Conditions

APPENDIX C

Sanitary Sewer Design Sheet

APPENDIX D

Storm Sewer Design Sheet
30297182-500 Storm Drainage Area Plan
Modified Rational Method SWM Calculations
Runoff Coefficient Calculations
Watt's Adjustable Flow Control Roof Drain Spec
IPEX Spec Sheet

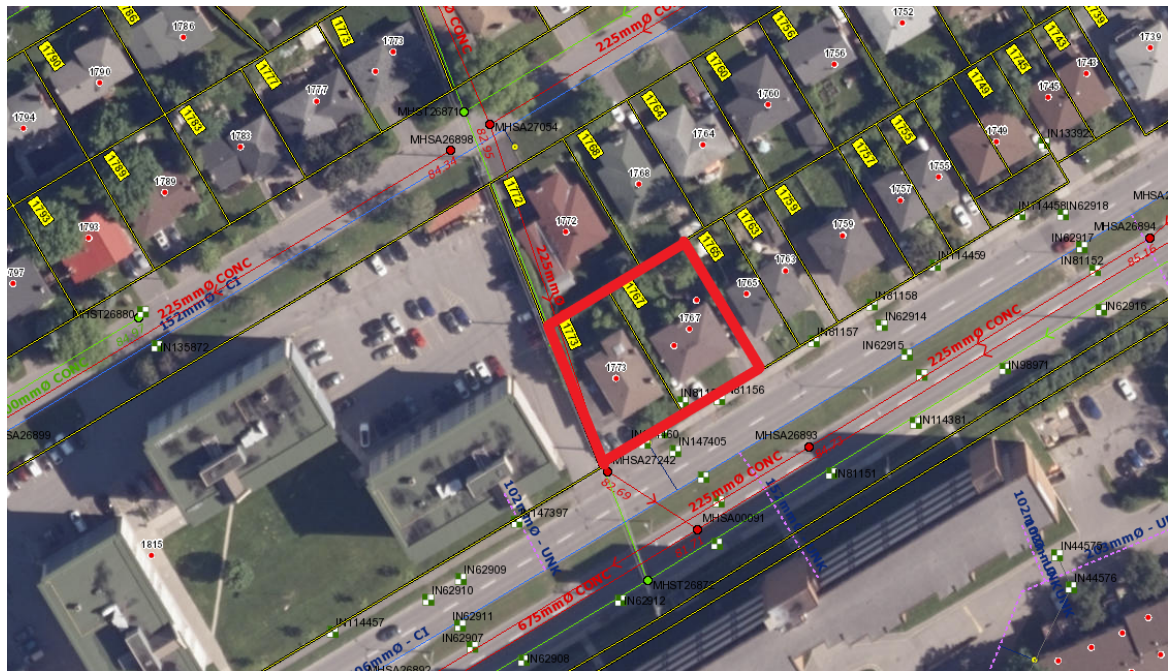
APPENDIX E

30297182-900 Erosion and Sediment Control Plan
30297182-EXCON Existing Conditions
30297182-REM Removals
30297182-200 Grading Plan

1 INTRODUCTION

1773 & 1767 Baseline Road is located on the north side of Baseline Road, between the intersection with Navaho Drive to the west and Ferguson Street to the east, in Ottawa, Ontario. This proposed site is abutted by an apartment complex to the west, residential to the east and north, and Baseline Road to the south. Arcadis Professional Services (Canada) Inc. (formerly IBI Group) has been retained by Phoenix Homes to provide professional engineering services for 1773 & 1767 Baseline Road. The subject site is approximately 0.11 ha and consists of one 5-storey apartment building to be completed in one phase. Refer to key plan on **Figure 1.1** for Site location.

Figure 1.1 Site Location



The report will conclude if the subject site is considered suitable for the proposed development.

1.2 Easements

There is an existing storm and sanitary sewer running through the west portion of the site. These sewers are in a 6.1m subject agreement easement NST. CR375146E. Sewers and other underground infrastructure will not be proposed inside the easement.

Easement lines are shown on drawing C-001 General Plan of Services as well as on the Topographic Plan of Survey prepared by AOV, both included in **Appendix A**.

2 WATER DISTRIBUTION

2.1 Existing Conditions

1773 & 1767 Baseline Road will be serviced with potable water from the City of Ottawa's existing watermain. There is an existing 400 mm diameter watermain inside Baseline Road adjacent to the site. This watermain falls within the City of Ottawa's pressure district Pressure Zone 2W which will provide the water supply to the site.

2.2 Design Criteria

2.2.1 Water Demands

The proposed development plan includes 46 residential units. The population for apartment buildings is assumed at 1.4 persons per unit for 1-bedroom units, and 2.1 persons per unit for 2-bedroom units as found in Table 4.1 of the Design Guidelines. Per unit population density and consumption rates are taken from Tables 4.1 and 4.2 at the Ottawa Design Guidelines – Water Distribution and are summarized as follows:

- Residential Average Day Demand 280 l/cap/day
- Residential Peak Daily Demand 700 l/cap/day
- Residential Peak Hour Demand 1540 l/cap/day

A water demand calculation sheet is included in **Appendix B** and the total water demands are summarized as follows:

- Average Day 0.26 l/s
- Maximum Day 0.65 l/s
- Peak Hour 1.42 l/s

2.2.2 System Pressures

The 2010 City of Ottawa Water Distribution Guidelines states that the preferred practice for the 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 in unoccupied areas 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) in occupied areas. Pressure reduction controls may be required for buildings when it is not possible/feasible to maintain the system pressure below 552 kPa.

2.2.3 Fire Flow Rate

The 2020 Canada Fire underwriter's Survey was used to determine the fireflow for the site per City of Ottawa technical bulletin 2024-05. The calculations result in a fire flow of 14,000 L/min (233.3 L/s) based on wood-frame construction. A copy of the FUS calculation is included in **Appendix B**.

2.2.4 Boundary Conditions

The City of Ottawa has provided updated hydraulic boundary conditions for the connection to Baseline Road. The boundary conditions are based on the water demand and fire flow rates provided. A copy of the boundary conditions received July 22, 2026 is included in **Appendix B** and is summarized as follows:

SCENARIO	HYDRAULIC HEAD (M)
Maximum HGL	133.4
Peak Hour	125.6
Max Day + Fire Flow (233.3 l/s)	127.2

2.3 Proposed Water Plan

The site will be serviced by one 150mm diameter watermain from Baseline Road. There are two existing small-diameter water services for the existing buildings onsite that will need to be abandoned. There is sufficient hydrant coverage for the site, including one directly in front of the building, therefore no new hydrants are proposed.

Per Section 2.2.4, the building will need a fire flow of up to 14,000 L/min. With at least one hydrant within 75m of the building and three additional within 300m, the capacity needed to deliver the required fire flow to the structures are being provided in accordance with Technical Bulletin ISTB-2018-02 dated March 21, 2018. Furthermore, the fire dept. connection for each building is also located within 45m of a hydrant.

HYDRANT AVAILABILITY				
BUILDING ID	FIRE FLOW DEMAND (L/MIN)	FIRE HYDRANT(S) WITHIN 75M (5,700 L/MIN)	FIRE HYDRANT(S) WITHIN 300M (2,800 L/MIN)	AVAILABLE FLOW (L/MIN)
Apartment	14,000	1	3	14,100

For the purposes of this report, assuming a minimal loss within the service connection the pressures within the site can be estimated as follows:

Minimum Pressure (Peak Hour) – The minimum peak hour pressure on the site can be estimated as HGL 125.6m – meter elevation of 88.5m = 37.1m or 364.0 kPa which exceeds the minimum requirement of 276 kPa. The pressure on the top floor can be estimated as 125.6m – 104.62m = 20.98m or 205.8 KPa which is below the minimum of 276 kPa and will require a water pump.

Fire Flow – The max day plus fire flow can be estimated as HGL 127.2 – ground floor elevation plus 0.4m 88.5 = 38.7m or 379.6 KPa which exceeds the minimum of 150kPa.

Max HGL (High Pressure Check) – The high-pressure check can be estimated as HGL 132.4 – (lowest level) 88.1 = 44.3m or 434.6 KPa which is below the maximum of 552 kPa, therefore a pressure reducing valve is not required.

The above results indicate the municipal infrastructure can support the proposed development.

3 WASTEWATER

3.1 Existing Conditions

There is an existing 225mm concrete sanitary sewer in an easement on the west side of the subject site, as well as an existing 225mm and 675mm concrete sanitary in Baseline Road. There is currently 0.12 L/s of residential wastewater flow offsite from the two existing residential houses.

3.2 Design Criteria

The sanitary sewers for the subject site will be based on the City of Ottawa design criteria. It should be noted that the sanitary sewer design for this study incorporates the latest City of Ottawa design parameters identified in Technical Bulletin ISTB-2018-01. Some of the key criteria will include the following:

- | | |
|---------------------------------|--|
| • Commercial/Institutional flow | 28,000 l/ha/d |
| • Residential flow | 280 l/c/d |
| • Peaking factor | 1.5 if ICI in contributing area >20%
1.0 if ICI in contributing area <20% |
| • Infiltration allowance | 0.33 l/s/ha |
| • Velocities | 0.60 m/s min. to 3.0 m/s max. |

3.3 Recommended Wastewater Plan

Wastewater flows have been calculated for the subject site, see detailed Sanitary Sewer Design Sheet in **Appendix C**.

As discussed in Section 3.1, there is an existing 225mm sanitary sewer located through an easement on the subject site. As shown in the sanitary sewer design sheet (included in **Appendix C**), the residential wastewater effluent will increase from 0.12 L/s to 0.97L/s. The City of Ottawa is asked to comment on if the existing 225mm sanitary sewer has sufficient capacity for the proposed redevelopment.

4 SITE STORMWATER MANAGEMENT

4.1 Existing Conditions

There is an existing 750mm concrete storm sewer in an easement on the west side of the subject site, as well as an existing 1500mm concrete sanitary in Baseline Road. There are currently two catchbasins onsite, one in the driveway of 1767 Baseline Road and the other on the front lawn.

The front of the site currently drains towards a series of catchbasins in drive aisles and front lawns, as well as Heron Road ROW. The rear of the site flows to an informal swale near the back property line and offsite to the western private property. Stormwater from private properties to the north and east also enter this swale. Currently, no known flow control measures have been implemented.

4.2 Design Criteria

The stormwater management infrastructure was designed per the City of Ottawa 2012 Sewer Design Guidelines. Previous consultation with the City has also confirmed water quantity and quality requirements for this site, as summarized below,

- Design Storm 1:5-year return (Ottawa)
- Rational Method Sewer Sizing
- Initial Time of Concentration 10 minutes
- Runoff Coefficients
 - Softscape Areas C = 0.20
 - Hardscape Areas C = 0.90
- Pipe Velocities 0.80 m/s to 3.0 m/s
- Minimum Pipe Size 250 mm diameter
(200 mm CB Leads)

4.3 Stormwater Management

The subject site is identified on the City of Ottawa's official Plan (OP) Schedule C15, classified as lands within the urban boundary and is subject to development. This site is designed to have minimal impact on adjacent properties grading, drainage, access, circulation, and privacy. This will be achieved by means of Water Quantity Controls.

4.3.1 Stormwater Quantity Control

Stormwater effluent from the subject site is proposed to be limited to a 5-year design storm with a runoff coefficient of 0.5 and a time of concentration of 10 minutes for all storm events up to and including the 100-year event.

The release rate can be therefore calculated as follows,

$$\begin{array}{ll}
 Q_{\text{restricted}} &= 2.78 \times C \times i_{5\text{yr}} \times A \quad \text{where:} \\
 C &= \text{Runoff coefficient} = 0.50 \\
 i_{5\text{yr}} &= \text{Intensity of 5-year storm event (mm/hr)} \\
 &= 998.071 \times (T_c + 6.053)^{0.814} = 104.19 \text{ mm/hr; where } T_c = 10 \text{ minutes} \\
 A &= 0.11 \text{ Ha}
 \end{array}$$

$$\begin{aligned} Q_{\text{restricted}} &= 2.78 \times C \times i_{5\text{yr}} \times A \\ &= 2.78 \times 0.50 \times 104.19 \times 0.11 \\ &= 15.93 \text{ L/s} \end{aligned}$$

It is therefore proposed to restrict the 100-year stormwater outflow from the subject site to 15.93 L/s. This will be achieved through a combination of inlet control devices (ICD's), surface storage where possible, and roof storage.

Surface flows in excess of the site's allowable release rate will be stored on site and gradually released into the minor system to respect the site's allowable release rate. The average rooftop retention depth located within the building area will be limited to 75mm during a 1:100-year event as shown on the ponding plan located in **Appendix D** and grading plans located in **Appendix E**.

Some stormwater from adjacent lands currently flow through the subject site as part of an overland flow route. The overland flow route has been maintained as part of the proposed grading. Any water over and above the 100-year storm event storage volume will continue to flow overland along the existing flow route, while quantities below the 100-year level of storage provided will be captured and released into the municipal storm sewer at a restricted rate.

It should be noted that the reason for maintaining this overland flow route is that:

- There is an existing private-to-private drainage route traversing the rear of the site
- Baseline Road ROW is notably higher than the rear of the site
- Should the rear of the site be raised and the existing overland flow route blocked via a retaining wall/etc, it could cause flooding on private lands upstream of the subject site.
- The addition of a catchbasin and swale is improving the existing conditions while capturing up to and including the 100-year post-development stormwater event flow for the site.
- In case of high HGL in the mainline storm sewer, a backflow preventor to be added to CB1 in addition to the building outlets. The overland flow route will ensure that if the city's mainline storm sewer is beyond capacity, water will not back up to residents' houses and instead flow overland to Gage Crescent ROW through the adjacent parking lot, mirroring current conditions.
- In case of high HGL in the mainline storm sewer, an emergency roof overflow outlet is to be installed near the front of the building, allowing rooftop stormwater to outlet overland towards Baseline ROW when the city storm sewer is beyond capacity. The flow restriction for the roof is at the rooftop level, therefore even if the storm sewer is beyond capacity, the roof stormwater is still restricted during a 100-year storm event.

Along the perimeter of the site, the opportunity to capture and store runoff is limited due to grading constraints and building geometry. These areas will discharge uncontrolled to Heron Road and existing catchbasins. These areas are located at the perimeter of the site where it is necessary to tie into public boulevards and adjacent properties or in areas where ponding stormwater is undesirable.

Based on the proposed site plan, the total uncontrolled area has been calculated to be 0.0151 Ha. For the detailed storm drainage area plan for the site, refer to Drawing 500 in **Appendix D**.

Based on a 1:100-year event, the flow from the 0.0151 Ha uncontrolled area to the west can be determined as:

$$\begin{aligned} Q_{\text{uncontrolled}} &= 2.78 \times C \times i_{100\text{yr}} \times A \quad \text{where:} \\ C &= \text{Average runoff coefficient} = 0.71 \times 1.25 = 0.8875 \text{ (100 year C-value)} \\ i_{100\text{yr}} &= \text{Intensity of 100-year storm event (mm/hr)} \\ &= 1735.688 \times (T_c + 6.014)^{0.820} = 178.56 \text{ mm/hr; where } T_c = 10 \text{ minutes} \end{aligned}$$

A = Uncontrolled Area = 0.0151 Ha

Therefore, the uncontrolled release rate can be determined as:

$$\begin{aligned} Q_{\text{uncontrolled1}} &= 2.78 \times C \times i_{100\text{yr}} \times A \\ &= 2.78 \times 0.8875 \times 178.56 \times 0.0151 \\ &= 6.65 \text{ L/s} \end{aligned}$$

Similarly, a ramp to the underground parking garage is also present onsite and will be unrestricted:

$$\begin{aligned} Q_{\text{uncontrolled2}} &= 2.78 \times C \times i_{100\text{yr}} \times A \\ &= 2.78 \times 1.00 \times 178.56 \times 0.0015 \\ &= 0.74 \text{ L/s} \end{aligned}$$

The Maximum allowable release rate from the site can be determined by subtracting the Uncontrolled release rate from the minor system restricted flow rate

$$Q_{\text{max}} = Q_{\text{restricted}} - Q_{\text{uncontrolled1}} - Q_{\text{uncontrolled2}}$$

$$Q_{\text{max}} = 15.93 \text{ L/s} - 6.65 \text{ L/s} - 0.74 \text{ L/s}$$

$$Q_{\text{max}} = 8.53 \text{ L/s}$$

Therefore, the total restricted flow rate through the minor system will be the design flow rate of **8.53 L/s**. This will be achieved using Inlet Control Devices and surface ponding. A summary of the ICD's, their corresponding storage requirements, storage availability, and associated drainage areas has been provided below.

DRAINAGE AREA	ICD RESTRICTED FLOW (L/s)	100 YEAR STORAGE REQUIRED (m ³)	2 YEAR STORAGE REQUIRED (m ³)	STORAGE PROVIDED (m ³)
ROOF	2.00	20.77	5.48	28.13
CB1	6.00	2.57	0.05	4.34
TOTAL	8.00	23.34	5.53	32.47

Detailed stormwater management calculations for the 2-year event, 100-year event, and stress test (100-year plus 20%) event can be found in **Appendix D**.

There will be no 2-year surface ponding per the modified rational method calculations.

A 0.3m freeboard from downstream high points/maximum ponding elevations to first floor building opening is maintained in all scenarios including emergency overflow conditions.

Refer to the geotechnical report for information regarding foundation drainage. Foundation drainage systems are to be independent and connected to the storm service downstream of any stormwater management control device.

A backwater valve is required on the building storm outlet due to high HGL in downstream storm sewer. The rear catchbasin system will overflow along the existing overland flow route in case of high HGL conditions during a major storm event.

Detailed roof design to be completed by others at a later date. Roof design is to adhere to the requirements of this report (notably, the stormwater capacity and release rate) as well as any requirements in the Ontario Building Code (scupper details, emergency overflow, etc). Roof drain flow controls to be Watts Adjustable Accutrol Weir or equivalent (specification sheet found in **Appendix D**). A ground-level emergency overflow outlet is required in front of the building outletting to Heron Road ROW in case storm sewer is at capacity during a major storm event (note shown on drawing C-001 General Plan of Services in **Appendix A**).

5 SEDIMENT 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:

- groundwater in trench will be pumped into a filter mechanism prior to release to the environment;
- bulkhead barriers will be installed at the nearest downstream manhole in each sewer which connects to an existing downstream sewer;
- seepage barriers will be constructed in any temporary drainage ditches; and
- silt sacks will remain on open surface structure such as manholes and catchbasins until these structures are commissioned and put into use.
- Prior to roads having a granular base, construction traffic exiting the site to be directed to a mud mat to reduce sediment tracked offsite

5.2 Trench Dewatering

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 Bulkhead Barriers

At the first manhole constructed immediately upstream of an existing sewer, a ½ diameter bulkhead will be constructed over the lower half of the outletting sewer. This bulkhead will trap any sediment carrying flows, thus preventing any construction –related contamination of existing sewers. The bulkheads will be inspected and maintained including periodic sediment removal as needed.

5.4 Seepage Barriers

These barriers will consist of both the Light Duty Straw Bale Barrier as per OPSD 219.100 or the Light Duty Silt Fence Barrier as per OPSD 219.110 and will be installed in accordance with the sediment and erosion control drawing. The barriers are typically made of layers of straw bales or geotextile fabric staked in place. All seepage barriers will be inspected and maintained as needed.

5.5 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 will be covered to prevent sediment from entering the minor storm sewer system. Until rear yards are sodded or until streets are asphalted and curbed, all catchbasins and manholes will be equipped with geotextile filter socks. These will stay in place and be maintained during construction and build until it is appropriate to remove them.

6 CONCLUSIONS & RECOMMENDATIONS

6.1 Conclusions

This report and the accompanying working drawings clearly indicate that the proposed development meets the requirements of the stakeholder regulators, including the City of Ottawa..

There is a reliable water supply available adjacent to the proposed development; a wastewater outlet is available adjacent to the site; local storm sewers have been installed adjacent to the site.

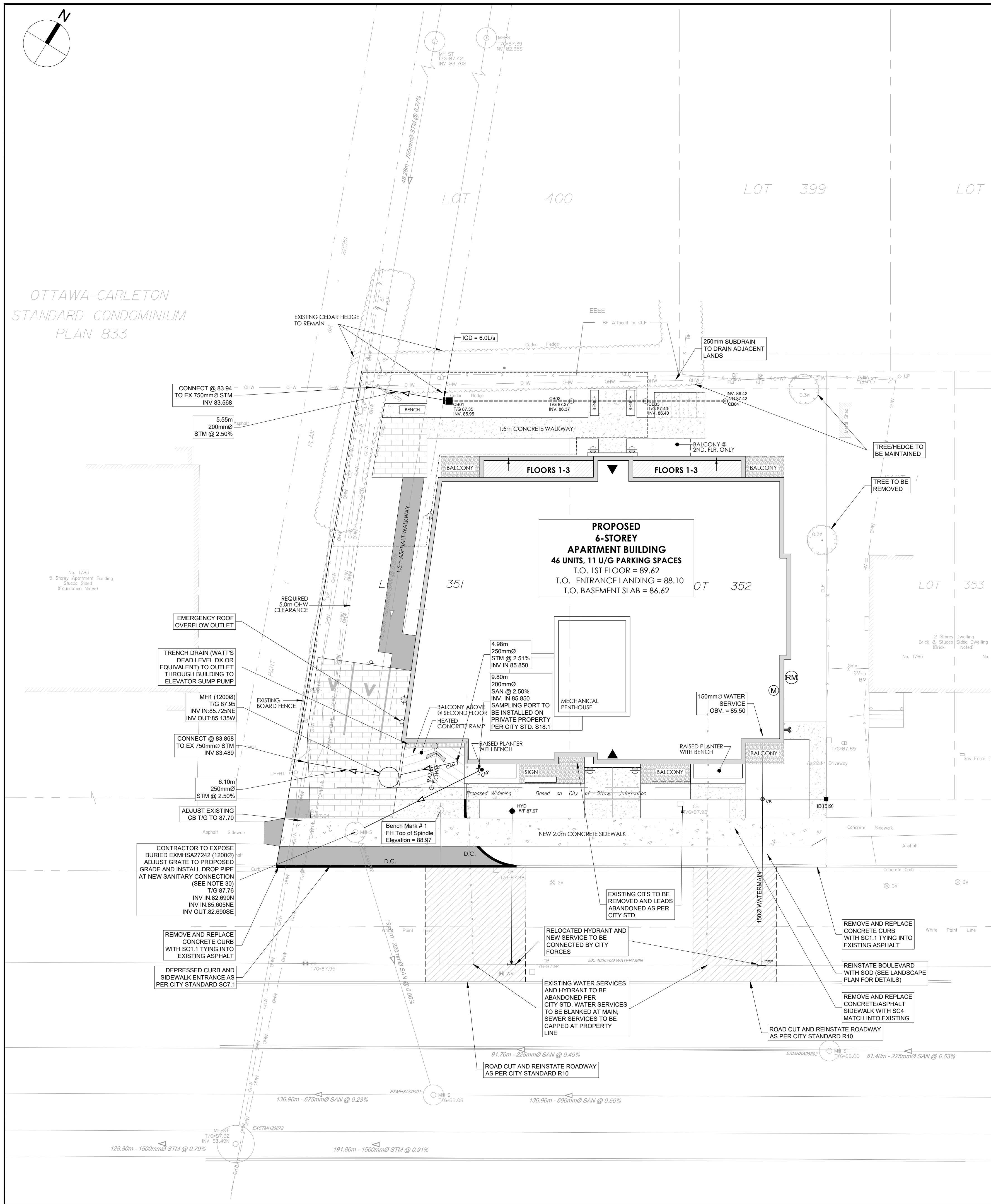
6.2 Recommendations

It is recommended that the regulators review this submission with an aim of providing the requisite approvals to permit the owners to proceed to the construction stage of the subject site.

Appendix A

TOPOGRAPHIC PLAN OF SURVEY OF
LOTS 351 and 352
REGISTERED PLAN 372115
CITY OF OTTAWA
Surveyed by Annis, O'Sullivan, Vollebakk Ltd.

Scale 1 : 150
0 4.5 9 13.5 18 22.5 27 31.5 36 40.5 45 49.5 54 58.5 63 67.5 72 76.5 81 85.5 90 94.5 99 103.5 108 112.5 117 121.5 126 130.5 135 139.5 144 148.5 153 157.5 162 166.5 171 175.5 180 184.5 189 193.5 198 202.5 207 211.5 216 220.5 225 229.5 234 238.5 243 247.5 252 256.5 261 265.5 270 274.5 279 283.5 288 292.5 297 301.5 306 310.5 315 319.5 324 328.5 333 337.5 342 346.5 351 355.5 360 364.5 369 373.5 378 382.5 387 391.5 396 400.5 405 409.5 414 418.5 423 427.5 432 436.5 441 445.5 450 454.5 459 463.5 468 472.5 477 481.5 486 490.5 495 499.5 504 508.5 513 517.5 522 526.5 531 535.5 540 544.5 549 553.5 558 562.5 567 571.5 576 580.5 585 589.5 594 598.5 603 607.5 612 616.5 621 625.5 630 634.5 639 643.5 648 652.5 657 661.5 666 670.5 675 679.5 684 688.5 693 697.5 702 706.5 711 715.5 720 724.5 729 733.5 738 742.5 747 751.5 756 760.5 765 769.5 774 778.5 783 787.5 792 796.5 801 805.5 810 814.5 819 823.5 828 832.5 837 841.5 846 850.5 855 859.5 864 868.5 873 877.5 882 886.5 891 895.5 900 904.5 909 913.5 918 922.5 927 931.5 936 940.5 945 949.5 954 958.5 963 967.5 972 976.5 981 985.5 990 994.5 999 1003.5 1008 1012.5 1017 1021.5 1026 1030.5 1035 1039.5 1044 1048.5 1053 1057.5 1062 1066.5 1071 1075.5 1080 1084.5 1089 1093.5 1098 1102.5 1107 1111.5 1116 1120.5 1125 1129.5 1134 1138.5 1143 1147.5 1152 1156.5 1161 1165.5 1170 1174.5 1179 1183.5 1188 1192.5 1197 1201.5 1206 1210.5 1215 1219.5 1224 1228.5 1233 1237.5 1242 1246.5 1251 1255.5 1260 1264.5 1269 1273.5 1278 1282.5 1287 1291.5 1296 1300.5 1305 1309.5 1314 1318.5 1323 1327.5 1332 1336.5 1341 1345.5 1350 1354.5 1359 1363.5 1368 1372.5 1377 1381.5 1386 1390.5 1395 1399.5 1404 1408.5 1413 1417.5 1422 1426.5 1431 1435.5 1440 1444.5 1449 1453.5 1458 1462.5 1467 1471.5 1476 1480.5 1485 1489.5 1494 1498.5 1503 1507.5 1512 1516.5 1521 1525.5 1530 1534.5 1539 1543.5 1548 1552.5 1557 1561.5 1566 1570.5 1575 1579.5 1584 1588.5 1593 1597.5 1602 1606.5 1611 1615.5 1620 1624.5 1629 1633.5 1638 1642.5 1647 1651.5 1656 1660.5 1665 1669.5 1674 1678.5 1683 1687.5 1692 1696.5 1701 1705.5 1710 1714.5 1719 1723.5 1728 1732.5 1737 1741.5 1746 1750.5 1755 1759.5 1764 1768.5 1773 1777.5 1782 1786.5 1791 1795.5 1800 1804.5 1809 1813.5 1818 1822.5 1827 1831.5 1836 1840.5 1845 1849.5 1854 1858.5 1863 1867.5 1872 1876.5 1881 1885.5 1890 1894.5 1899 1903.5 1908 1912.5 1917 1921.5 1926 1930.5 1935 1939.5 1944 1948.5 1953 1957.5 1962 1966.5 1971 1975.5 1980 1984.5 1989 1993.5 1998 2002.5 2007 2011.5 2016 2020.5 2025 2029.5 2034 2038.5 2043 2047.5 2052 2056.5 2061 2065.5 2070 2074.5 2079 2083.5 2088 2092.5 2097 2101.5 2106 2110.5 2115 2119.5 2124 2128.5 2133 2137.5 2142 2146.5 2151 2155.5 2160 2164.5 2169 2173.5 2178 2182.5 2187 2191.5 2196 2200.5 2205 2209.5 2214 2218.5 2223 2227.5 2232 2236.5 2241 2245.5 2250 2254.5 2259 2263.5 2268 2272.5 2277 2281.5 2286 2290.5 2295 2299.5 2304 2308.5 2313 2317.5 2322 2326.5 2331 2335.5 2340 2344.5 2349 2353.5 2358 2362.5 2367 2371.5 2376 2380.5 2385 2389.5 2394 2398.5 2403 2407.5 2412 2416.5 2421 2425.5 2430 2434.5 2439 2443.5 2448 2452.5 2457 2461.5 2466 2470.5 2475 2479.5 2484 2488.5 2493 2497.5 2502 2506.5 2511 2515.5 2520 2524.5 2529 2533.5 2538 2542.5 2547 2551.5 2556 2560.5 2565 2569.5 2574 2578.5 2583 2587.5 2592 2596.5 2601 2605.5 2610 2614.5 2619 2623.5 2628 2632.5 2637 2641.5 2646 2650.5 2655 2659.5 2664 2668.5 2673 2677.5 2682 2686.5 2691 2695.5 2700 2704.5 2709 2713.5 2718 2722.5 2727 2731.5 2736 2740.5 2745 2749.5 2754 2758.5 2763 2767.5 2772 2776.5 2781 2785.5 2790 2794.5 2799 2803.5 2808 2812.5 2817 2821.5 2826 2830.5 2835 2839.5 2844 2848.5 2853 2857.5 2862 2866.5 2871 2875.5 2880 2884.5 2889 2893.5 2898 2902.5 2907 2911.5 2916 2920.5 2925 2929.5 2934 2938.5 2943 2947.5 2952 2956.5 2961 2965.5 2970 2974.5 2979 2983.5 2988 2992.5 2997 3001.5 3006 3010.5 3015 3019.5 3024 3028.5 3033 3037.5 3042 3046.5 3051 3055.5 3060 3064.5 3069 3073.5 3078 3082.5 3087 3091.5 3096 3100.5 3105 3109.5 3114 3118.5 3123 3127.5 3132 3136.5 3141 3145.5 3150 3154.5 3159 3163.5 3168 3172.5 3177 3181.5 3186 3190.5 3195 3199.5 3204 3208.5 3213 3217.5 3222 3226.5 3231 3235.5 3240 3244.5 3249 3253.5 3258 3262.5 3267 3271.5 3276 3280.5 3285 3289.5 3294 3298.5 3303 3307.5 3312 3316.5 3321 3325.5 3330 3334.5 3339 3343.5 3348 3352.5 3357 3361.5 3366 3370.5 3375 3379.5 3384 3388.5 3393 3397.5 3402 3406.5 3411 3415.5 3420 3424.5 3429 3433.5 3438 3442.5 3447 3451.5 3456 3460.5 3465 3469.5 3474 3478.5 3483 3487.5 3492 3496.5 3501 3505.5 3510 3514.5 3519 3523.5 3528 3532.5 3537 3541.5 3546 3550.5 3555 3559.5 3564 3568.5 3573 3577.5 3582 3586.5 3591 3595.5 3600 3604.5 3609 3613.5 3618 3622.5 3627 3631.5 3636 3640.5 3645 3649.5 3654 3658.5 3663 3667.5 3672 3676.5 3681 3685.5 3690 3694.5 3699 3703.5 3708 3712.5 3717 3721.5 3726 3730.5 3735 3739.5 3744 3748.5 3753 3757.5 3762 3766.5 3771 3775.5 3780 3784.5 3789 3793.5 3798 3802.5 3807 3811.5 3816 3820.5 3825 3829.5 3834 3838.5 3843 3847.5 3852 3856.5 3861 3865.5 3870 3874.5 3879 3883.5 3888 3892.5 3897 3901.5 3906 3910.5 3915 3919.5 3924 3928.5 3933 3937.5 3942 3946.5 3951 3955.5 3960 3964.5 3969 3973.5 3978 3982.5 3987 3991.5 3996 4000.5 4005 4009.5 4014 4018.5 4023 4027.5 4032 4036.5 4041 4045.5 4050 4054.5 4059 4063.5 4068 4072.5 4077 4081.5 4086 4090.5 4095 4099.5 4104 4108.5 4113 4117.5 4122 4126.5 4131 4135.5 4140 4144.5 4149 4153.5 4158 4162.5 4167 4171.5 4176 4180.5 4185 4189.5 4194 4198.5 4203 4207.5 4212 4216.5 4221 4225.5 4230 4234.5 4239 4243.5 4248 4252.5 4257 4261.5 4266 4270.5 4275 4279.5 4284 4288.5 4293 4297.5 4302 4306.5 4311 4315.5 4320 4324.5 4329 4333.5 4338 4342.5 4347 4351.5 4356 4360.5 4365 4369.5 4374 4378.5 4383 4387.5 4392 4396.5 4401 4405.5 4410 4414.5 4419 4423.5 4428 4432.5 4437 4441.5 4446 4450.5 4455 4459.5 4464 4468.5 4473 4477.5 4482 4486.5 4491 4495.5 4500 4504.5 4509 4513.5 4518 4522.5 4527 4531.5 4536 4540.5 4545 4549.5 4554 4558.5 4563 4567.5 4572 4576.5 4581 4585.5 4590 4594.5 4599 4603.5 4608 4612.5 4617 4621.5 4626 4630.5 4635 4639.5 4644 4648.5 4653 4657.5 4662 4666.5 4671 4675.5 4680 4684.5 4689 4693.5 4698 4702.5 4707 4711.5 4716 4720.5 4725 4729.5 4734 4738.5 4743 4747.5 4752 4756.5 4761 4765.5 4770 4774.5 4779 4783.5 4788 4792.5 4797 4801.5 4806 4810.5 4815 4819.5 4824 4828.5 4833 4837.5 4842 4846.5 4851 4855.5 4860 4864.5 4869 4873.5 4878 4882.5 4887 4891.5 4896 4900.5 4905 4909.5 4914 4918.5 4923 4927.5 4932 4936.5 4941 4945.5 4950 4954.5 4959 4963.5 4968 4972.5 4977 4981.5 4986 4990.5 4995 4999.5 5004 5008.5 5013 5017.5 5022 5026.5 5031 5035.5 5040 5044.5 5049 5053.5 5058 5062.5 5067 5071.5 5076 5080.5 5085 5089.5 5094 5098.5 5103 5107.5 5112 5116.5 5121 5125.5 5130 5134.5 5139 5143.5 5148 5152.5 5157 5161.5 5166 5170.5 5175 5179.5 5184 5188.5 5193 5197.5 5202 5206.5 5211 5215.5 5220 5224.5 5229 5233.5 5238 5242.5 5247 5251.5 5256 5260.5 5265 5269.5 5274 5278.5 5283 5287.5 5292 5296.5 5301 5305.5 5310 5314.5 5319 5323.5 5328 5332.5 5337 5341.5 5346 5350.5 5355 5359.5 5364 5368.5 5373 5377.5 5382 5386.5 5391 5395.5 5400 5404.5 5409 5413.5 5418 5422.5 5427 5431.5 5436 5440.5 5445 5449.5 5454 5458.5 5463 5467.5 5472 5476.5 5481 5485.5 5490 5494.5 5499 5503.5 5508 5512.5 5517 5521.5 5526 5530.5 5535 5539.5 5544 5548.5 5553 5557.5 5562 5566.5 5571 5575.5 5580 5584.5 5589 5593.5 5598 5602.5 5607 5611.5 5616 5620.5 5625 5629.5 5634 5638.5 5643 5647.5 5652 5656.5 5661 5665.5 5670 5674.5 5679 5683.5 5688 5692.5 5697 5701.5 5706 5710.5 5715 5719.5 5724 5728.5 5733 5737.5 5742 5746.5 5751 5755.5 5760 5764.5 5769 5773.5 5778 5782.5 5787 5791.5 5796 5800.5 5805 5809.5 5814 5818.5 5823 5827.5 5832 5836.5 5841 5845.5 5850 5854.5 5859 5863.5 5868 5872.5 5877 5881.5 5886 5890.5 5895 5899.5 5904 5908.5 5913 5917.5 5922 5926.5 5931 5935.5 5940 5944.5 5949 5953.5 5958 5962.5 5967 5971.5 5976 5980.5 5985 5989.5 5994 5998.5 6003 6007.5 6012 6016.5 6021 6025.5 6030 6034.5 6039 6043.5 6048 6052.5 6057 6061.5 6066 6070.5 6075 6079.5 6084 6088.5 6093 6097.5 6102 6106.5 6111 6115.5 6120 6124.5 6129 6133.5 6138 6142.5 6147 6151.5 6156 6160.5 6165 6169.5 6174 6178.5 6183 6187.5 6192 6196.5 6201 6205.5 6210 6214.5 6219 6223.5 6228 6232.5 6237 6241.5 6246 6250.5 6255 6259.5 6264 6268.5 6273 6277.5 6282 6286.5 6291 6295.5 6300 6304.5 6309 6313.5 6318 6322.5 6327 6331.5 6336 6340.5 6345 6349.5 6354 6358.5 6363 6367.5 6372 6376.5 6381 6385.5 6390 6394.5 6399 6403.5 6408 6412.5 6417 6421.5 6426 6430.5 6435 6439.5 6444 6448.5 6453 6457.5 6462 6466.5 6471 6475.5 6480 6484.5 6489 6493.5 6498 6502.5 6507 6511.5 6516 6520.5 6525 6529.5 6534 6538.5 6543 6547.5 6552 6556.5 6561 6565.5 6570 6574.5 6579 6583.5 6588 6592.5 6597 6601.5 6606 6610.5 6615 6619.5 6624 6628.5 6633 6637.5 6642 6646.5 6651 6655.5 6660 6664.5 6669 6673.5 6678 6682.5 6687 6691.5 6696 6700.5 6705 6709.5 6714 6718.5 6723 6727.5 6732 6736.5 6741 6745.5 6750 6754.5 6759 6763.5 6768 6772.5 6777 6781.5 6786 6790.5 6795 6799.5 6804 6808.5 6813 6817.5 6822 6826.5 6831 6835.5 6840 6844.5 6849 6853.5 6858 6862.5 6867 6871.5 6876 6880.5 6885 6889.5 6894 6898.5 6903 6907.5 6912 6916.5 6921 6925.5 6930 6934.5 6939 6943.5 6948 6952.5 6957 6961.5 6966 6970.5 6975 6979.5 6984 6988.5 6993 6997.5 7002 7006.5 7011 7015.5 7020 7024.5 7029 7033.5 7038 7042.5 7047 7051.5 7056 7060.5 7065 7069.5 7074 7078.5 7083 7087.5 7092 7096.5 7101 7105.5 7110 7114.5 7119 7123.5 7128 7132.5 7137 7141.5 7146 7150.5 7155 7159.5 7164 7168.5 7173 7177.5 7182 7186.5 7191 7195.5 7200 7204.5 7209 7213.5 7218 7222.5 7227 7231.5 7236 7240.5 7245 7249.5 7254 7258.5 7263 7267.5 7272 7276.5 7281 7285.5 7290 7294.5 7299 7303.5 7308 7312.5 7317 7321.5 7326 7330.5 7335 7339.5 7344 7348.5 7353 7357.5 7362 7366.5 7371 7375.5 7380 7384.5 7389 7393.5 7398 7402.5 7407 7411.5 7416 7420.5 7425 7429.5 7434 7438.5 7443 7447.5 7452 7456.5 7461 7465.5 7470 7474.5 7479 7483.5 7488 7492.5 7497 7501.5 7506 7510.5 7515 7519.5 7524 7528.5 7533 7537.5 7542 7546.5 7551 7555.5 7560 7564.5 7569 7573.5 7578 7582.5 7587 7591.5 7596 7600.5 7605 7609.5 7614 7618.5 7623 7627.5 7632 7636.5 7641 7645.5 7650 7654.5 7659 7663.5 7668 7672.5 7677 7681.5 7686 7690.5 7695 7699.5 7704 7708.5 7713 7717.5 7722 7726.5 7731 7735.5 7740 7744.5 7749 7753.5 7758 7762.5 7767 7771.5 7776 7780.5 7785 7789.5 7794 7798.5 7803 7807.5 7812 7816.5 7821 7825.5 7830 7834.5 7839 7843.5 7848 7852.5 7857 7861.5 7866 7870.5 7875 7879.5 7884 7888.5 7893 7897.5 7902 7906.5 7911 7915.5 7920 7924.5 7929 7933.5 7938 7942.5 7947 7951.5 7956 7960.5 7965 7969.5 7974 7978.5 7983 7987.5 7992 7996.5 8001 8005.5 8010 8014.5 8019 8023.5 8028 8032.5 8037 8041.5 8046 8050.5 8055 8059.5 8064 8068.5 8073 8077.5 8082 8086.5 8091 8095.5 8100 8104.5 8109 8113.5 8118 8122.5 8127 8131.5 8136 8140.5 8145 8149.5 8154 8158.5 8163 8167.5 8172 8176.5 8181 8185.5 8190 8194.5 8199 8203.5 8208 8212.5 8217 8221.5 8226 8230.5 8235 8239.5 8244 8248.5 8253 8257.5 8262 8266.5 8271 8275.5 8280 8284.5 8289 8293.5 8298 8302.5 8307 8311.5 8316 8320.5 8325 8329.5 8334 8338.5 8343 8347.5 8352 8356.5 8361 8365.5 8370 8374.5 8379 8383.5 8388 8392.5 8397 8401.5 8406 8410.5 8415 8419.5 8424 8428.5 8433 8437.5 8442 8446.5 8451 8455.5 8460 8464.5 8469 8473.5 8478 8482.5 8487 8491.5 8496 8500.5 8505 8509.5 8514 8518.5 8523 8527.5 8532 8536.5 8541 8545.5 8550 8554.5 8559 8563.5 8568 8572.5 8577 8581.5 8586 8590.5 8595 8599.5 8604 8608.5 8613 8617.5 8622 8626.5 8631 8635.5 8640 8644.5 8649 8653.5 8658 8662.5 8667 8671.5 8676 8680.5 8685 8689.5 8694 8698.5 8703 8707.5 8712 8716.5 8721 8725.5 8730 8734.5 8739 8743.5 8748 8752.5 8757 8761.5 8766 8770.5 8775 8779.5 8784 8788.5 8793 8797.5 8802 8806.5 8811 8815.5 8820 8824.5 8829 8833.5 8838 8842.5 8847 8851.5 8856 8860.5 8865 8869.5 8874 8878.5 8883 8887.5 8892 8896.5 8901 8905.5 8910 8914.5 8919 8923.5 8928 8932.5 8937 8941.5 8946 8950.5 8955 8959.5 8964 8968.5 8973 8977.5 8982 8986.5 8991 8995.5 9000 9004.5 9009 9013.5 9018 9022.5 9027 9031.5 9036 9040.5 9045 9049.5 9054 9058.5 9063 9067.5 9072 9076.5 9081 9085.5 9090 9094.5 9099 9103.5 9108 9112.5 9117 9121.5 9126 9130.5 9135 9139.5 9144 9148.5 9153 9157.5 9162 9166.5 9171 9175.5 9180 9184.5 9189 9193.5 9198 9202.5 9207 9211.5 9216 9220.5 9225 9229.5 9234 9238.5 9243 9247.5 9252 9256.5 9261 9265.5 9270 9274.5 9279 9283.5 9288 9292.5 9297 9301.5 9306 9310.5 9315 9319.5 9324 9328.5 9333 9337.5 9342 9346.5 9351 9355.5 9360 9364.5 9369 9373.5



SERVICING LEGEND

- MH118A SANITARY MANHOLE
- 200mmØ SANITARY SEWER
- MH109 STORM MANHOLE
- 825mmØ STM STORM SEWER - LESS THAN 900
- 200Ø WATERMAIN WATERMAIN
- CB01 TIG 103.59 REAR YARD CATCHBASIN IN ROAD CONNECTING STRUCTURE C/W SOLID GRATE
- CB02 TIG 104.35 REAR YARD "TEE" CATCHBASIN (3000) C/W TOP OF GRATE AND INVERT OUT
- CB04 TIG 104.50 REAR YARD "END" CATCHBASIN (3000) C/W TOP OF GRATE AND INVERT OUT
- PERFORATED REAR YARD SUBDRAIN
- VB VALVE AND VALVE BOX
- SIAMSE CONNECTION (IF REQUIRED)
- METER (IF REQUIRED)
- RM REMOTE METER (IF REQUIRED)

Notes & Legend

- MH-S Denotes Maintenance Hole (Sanitary)
- VC Valve Chamber (Watermain)
- G Underground Gas
- W Underground Water
- OH-W Overhead Wires
- UP Utility Pole
- CB Catch Basin
- FH Fire Hydrant
- WV Water Valve
- GV Gas Valve
- GM Gas Meter
- HM Hydro Meter
- B Bollard
- CLF Chain Link Fence
- BF Board Fence
- RWS Stone Retaining Wall
- Deciduous Tree

NOTES :

- ALL MATERIALS AND CONSTRUCTION IS TO BE IN ACCORDANCE WITH THE CURRENT CITY OF OTTAWA STANDARD DRAWINGS & SPECIFICATIONS OR OTHERWISE IF CITY DRAWINGS AND SPECIFICATIONS DO NOT APPLY.
- THE POSITION OF UNDERGROUND AND ABOVE GROUND SERVICE, UTILITIES AND STRUCTURES ARE NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH SERVICE, UTILITIES AND STRUCTURES IS NOT GUARANTEED. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING SERVICES AND UTILITIES PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL REPORT ALL CONFLICTS, DISCOVERIES OF ERROR AND DISCREPANCIES TO THE ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO PROTECT AND ASSUME RESPONSIBILITY FOR ALL UTILITIES WHETHER OR NOT SHOWN ON THESE DRAWINGS.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO PROTECT ALL LANDS BEYOND THE SITE LIMITS. ANY AREAS BEYOND THE SITE LIMITS, WHICH ARE DISTURBED DURING CONSTRUCTION, SHALL BE REPAIRED AND RESTORED TO ORIGINAL CONDITION OR BETTER, TO THE SATISFACTION OF THE ADJACENT LAND OWNER. THE OWNER, THE OWNERS REPRESENTATIVES AND/OR THE AUTHORITY HAVING JURISDICTION AT THE EXPENSE OF THE CONTRACTOR.
- WHERE NECESSARY, THE CONTRACTOR SHALL IMPLEMENT A TRAFFIC MANAGEMENT PLAN TO THE SATISFACTION OF THE CITY OF OTTAWA. ALL CONSTRUCTION SIGNAGE MUST CONFORM TO THE LATEST VERSION OF THE M.T.O. MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. ALL TEMPORARY TRAFFIC CONTROL MEASURES MUST BE REMOVED UPON THE COMPLETION OF THE WORKS.
- SHOULD ANY BURIED ARCHAEOLOGICAL REMAINS BE FOUND ON THE PROPERTY DURING CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL NOTIFY THE OWNER TO CONTACT THE HERITAGE OPERATIONS UNIT OF THE ONTARIO MINISTRY OF CULTURE. MUST BE NOTIFIED IMMEDIATE, AND WORK WITHIN THE AREA SHALL BE CEASED UNTIL FURTHER NOTICE.
- FOR GEOTECHNICAL INFORMATION REFER TO GEOTECHNICAL REPORT PG7446-1 PREPARED BY PATERSON GROUP.
- FOR GEODETIC BENCHMARK AND GEOMETRIC LAYOUT OF STREET AND LOTS, REFER TO TOPOGRAPHICAL SURVEY AND PLAN OF SUBDIVISION PREPARED BY ANNIS, O'SULLIVAN, VOLLEBEK LTD. BENCHMARK BASED ON CAN-NET VIRTUAL REFERENCE SYSTEM NETWORK.
- FOR SITE PLAN INFORMATION, REFER TO SITE PLAN PREPARED BY M. DAVID BLAKELY ARCHITECT INC.
- THESE DRAWINGS ARE NOT TO BE SCALED OR USED FOR LAYOUT PURPOSES.
- ROADWAY SECTIONS REQUIRING GRADE RAISE TO PROPOSED SUB GRADE LEVEL TO BE FILLED WITH ACCEPTABLE NATIVE EARTH BORROW OR IMPORTED OPSS SELECTED SUBGRADE MATERIAL IF NATIVE MATERIAL IS DEFICIENT AS PER RECOMMENDATION OF GEOTECHNICAL ENGINEER.
- IN AREAS WHERE EXISTING GROUND IS BELOW THE PROPOSED ELEVATION OF SEWER AND WATERMANS, GRADE RAISING AND FILLING IS TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT. AS PER CITY GUIDELINES ALL WATERMANS IN FILL AREAS ARE TO BE TIED WITH RESTRAINING JOINTS AND THRUST BLOCKS.
- THE CONTRACTOR SHALL IMPLEMENT THE EROSION AND SEDIMENT CONTROL PLAN PRIOR TO THE COMMENCEMENT OF ANY SITE CONSTRUCTION. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED TO THE SATISFACTION OF THE ENGINEER, OR ANY REGULATORY AGENCY. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED UNTIL VEGETATION IS ESTABLISHED OR UNTIL THE START OF A SUBSEQUENT PHASE.
- CONTRACTORS SHALL BE RESPONSIBLE FOR KEEPING CLEAN ALL ROADS WHICH BECOME COVERED IN DUST, DEBRIS AND/OR MUD AS A RESULT OF ITS CONSTRUCTION OPERATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL BEDDING OR ADDITIONAL STRENGTH PIPE SHOULD THE MAXIMUM OPSD TRENCH WIDTH BE EXCEEDED.
- ALL PIPE, CULVERTS, STRUCTURES REFER TO NOMINAL INSIDE DIMENSIONS.
- UNLESS SPECIFICALLY NOTED OTHERWISE, PIPE MATERIALS SHALL BE AS FOLLOWS:
 - SANITARY SEWER TO BE PVC DR18
 - PERFORATED STORM SEWERS IN REAR YARDS AND LANDSCAPE AREAS TO BE HDPE
 - STORM SEWERS 375mm DIAMETER AND LESS TO BE PVC DR35
 - STORM SEWERS 450mm DIAMETER AND GREATER TO BE CONCRETE, CLASS AS PER OPSD 807.010 OR 807.030, OR HIGHER
 - FOR SHALLOW SEWERS, REFER TO CITY STANDARD S35.
- ALL CONNECTIONS TO EXISTING WATERMANS ARE TO BE COMPLETED BY CITY FORCES. CONTRACTOR IS TO EXCAVATE, BACKFILL, COMPACT AND REINSTATE.
- ANY WATERMAIN WITH LESS THAN 2.4m AND ANY SEWER WITH LESS THAN 2.0m DEPTH OF COVER REQUIRES THERMAL INSULATION AS PER CITY OF OTTAWA STANDARD W22 OR AS APPROVED BY THE ENGINEER.
- ALL FIRE HYDRANTS AS PER CITY STANDARD W19, c/w 150mmØ LEAD UNLESS OTHERWISE SPECIFIED.
- ALL STUBBED SEWERS SHALL HAVE PRE-MANUFACTURED CAPS INSTALLED.
- ALL CATCHBASINS SHALL HAVE A 600mm SUMP. ALL CATCHBASIN MANHOLES, AND ALL STORM MANHOLES WITH OUTLETTING PIPE SIZES LESS THAN 900mm, SHALL HAVE A 300mm SUMP.
- ALL SANITARY MANHOLES IN PONDING AREAS SHALL BE EQUIPPED WITH A WATERTIGHT COVER.
- ALL SEWER SERVICE LATERALS WITH MAINLINE CONNECTIONS DEEPER THAN 5.0m REQUIRE A CONTROLLED SETTLEMENT JOINT.
- EACH BUILDING SHALL BE EQUIPPED WITH A SANITARY AND STORM SEWER BACKWATER VALVE AND CLEAN-OUT ON ITS PRIMARY SERVICE, AS PER ONTARIO BUILDING CODE REQUIREMENTS (BY OTHERS). CB1 TO ALSO HAVE BACKFLOW PREVENTION INSTALLED IN CASE OF HIGH HGL IN STORM SEWER.
- THE SUBGRADE OF ALL STRUCTURES, PIPE, ROADS, SIDEWALKS, WALKWAYS, AND BUILDINGS SHALL BE INSPECTED BY THE GEOTECHNICAL ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
- TOP COURSE ASPHALT SHALL NOT BE PLACED UNTIL THE FINAL CCTV INSPECTION AND NECESSARY REPAIRS HAVE BEEN COMPLETED TO THE SATISFACTION OF THE ENGINEER AND THE CITY OF OTTAWA.
- SEWER SERVICE CONNECTIONS TO BE INSTALLED PER CITY STD. S11.
- EXISTING SANITARY MANHOLE EXMHA27242 IS CURRENTLY BURIED UNDER ASPHALT. CONTRACTOR TO EXPOSE, ADJUST GRATE TO PROPOSED GRADE, AND INSTALL DROP PIPE AT NEW SANITARY CONNECTION. MH TO BE REBENCHED FOR NEW SERVICE CONNECTION. CONTRACTOR TO COORDINATE WITH CITY INSPECTOR TO CONFIRM THAT THE MH IS IN GOOD CONDITION AND FREE OF DEFECTS PRIOR TO, AND UPON COMPLETION OF THE NEW CONNECTION AND REBENCHING.
- FLOW CONTROL DEVICE ON CB1 TO BE IPEX TEMPEST LMF ICD VORTEX (OR EQUIVALENT)

CLIENT



COPYRIGHT

This drawing has been prepared solely for the intended use, thus any reproduction or distribution for any purpose other than authorized by Arcadis is forbidden. Written dimensions shall have precedence over scaled dimensions. Contractors shall verify and be responsible for all dimensions and conditions on the job, and Arcadis shall be informed of any variations from the dimensions and conditions shown on the drawing. Shop drawings shall be submitted to Arcadis for general conformance before proceeding with fabrication.

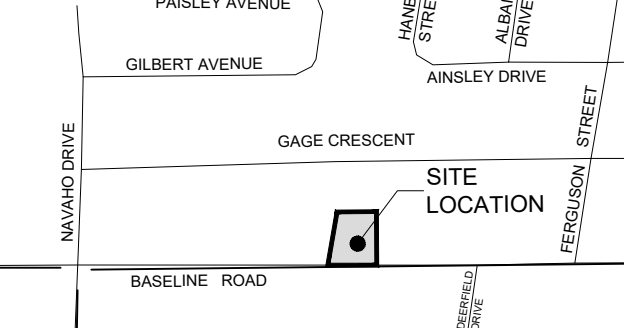
Arcadis Professional Services (Canada) Inc.
Formerly B Group Professional Services (Canada) Inc.

ISSUES

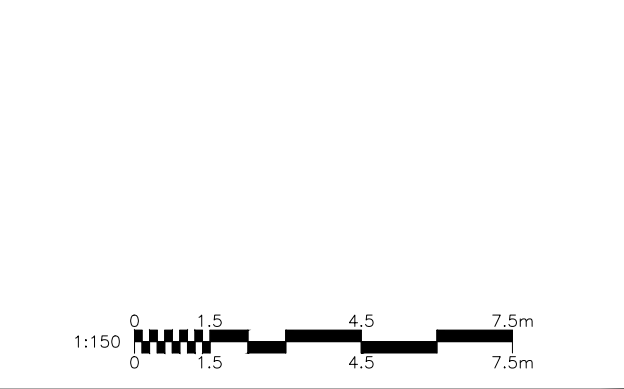
No.	DESCRIPTION	DATE
1	ISSUED FOR SPA	2025-12-18
2	REVISED AS PER NEW SITE PLAN	2026-02-20
3	REVISED AS PER CITY COMMENTS	2026-04-30
4	REVISED AS PER NEW SITE PLAN	2026-07-29

SEE 010, 011, 012 FOR NOTES, LEGEND, CB TABLE, STREET SECTIONS AND DETAILS

KEY PLAN



CONSULTANTS



SEAL



PRIME CONSULTANT



333 Preston Street - Suite 500
Ottawa ON K1S 5N4 Canada
tel 613 225 1311
www.arcadis.com

PROJECT

1773 & 1767 BASELINE ROAD
OTTAWA, ONTARIO

PROJECT NO:
30297182

DRAWN BY:
D.P.S.

CHECKED BY:
D.G.Y.

PROJECT MGR:
D.G.Y.

APPROVED BY:
S.E.L.

SHEET TITLE

SITE SERVICING PLAN

SHEET NUMBER

C-001

ISSUE

4

Appendix B

WATERMAIN DEMAND CALCULATION SHEET

NODE	RESIDENTIAL				NON-RESIDENTIAL (ICI)			AVERAGE DAILY DEMAND (l/s)			MAXIMUM DAILY DEMAND (l/s)			MAXIMUM HOURLY DEMAND (l/s)			FIRE DEMAND (l/min)
	1 Bedroom Apartment	2 Bedroom Apartment	3 Bedroom Apartment	POPULATION	INDUST. (ha)	COMM. (m2)	INSTIT. (pp)	RESIDENTIAL	ICI	TOTAL	RESIDENTIAL	ICI	TOTAL	RESIDENTIAL	ICI	TOTAL	
1773 Baseline	27	17	2	79.7				0.26		0.26	0.65		0.65	1.42		1.42	14,000

POPULATION DENSITY		WATER DEMAND RATES		PEAKING FACTORS		FIRE DEMANDS
1 Bedroom Apartment	1.4 persons/unit	Residential	280 l/cap/day	Maximum Daily		Single Family
2 Bedroom Apartment	2.1 persons/unit	Commercial Shopping Center		Residential	2.5 x avg. day	Semi Detached & Townhouse
			2,500 L/(1000m2)/day	Commercial	1.5 x avg. day	
3 Bedroom Apartment	3.1 persons/unit	Institutional		Maximum Hourly		Medium Density 14,000 L/min
			75 l/cap/day	Residential	2.2 x avg. day	
				Commercial	1.8 x avg. day	

**ARCADIS PROFESSIONAL SERVICES (CANADA) INC.**

500-333 Preston Street
Ottawa, Ontario K1S 5N4 Canada
arcadis.com

FIRE UNDERWRITERS SURVEY

1773 Baseline Rd | Phoenix Homes
30297182.05 | Rev #2 | 2026-07-09
Prepared By: SL | Checked By: DY

STEP	Contents	Description	Adjustment Factor	Result
1	Building B 6-storey residential	Area per Floor 520	Floors 6	3120 m2
	Total Effective Floor Area			3120 m2
2	Type of Construction	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 V Wood Frame 1.5	
3	Required Fire Flow	RFF = 220C√A, rounded to nearest 1000 L/min		18000 L/min
4	Occupancy and Contents	Noncombustible Contents -25% Limited Combustible Contents -15% Combustible Contents 0% Free Burning Contents 15% Rapid Burning Contents 25%	Limited Combustible Contents -15%	-2700 L/min
	Fire Flow			15300 L/min
5	Automatic Sprinkler Protection	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 Yes -10%	-4590 L/min -1530 L/min
	Total Sprinkler Adjustment			-6120 L/min
6	Exposure Adjustment	Based on Table 6 Exposure Adjustment Charges for Subject Building		
	North	Separation (m) 14.6 Length X Height Factor (m.storeys) 16.0 Construction Type Type V	With unprotected opening 10%	1530 L/min
	South	Separation (m) >30 Length X Height Factor (m.storeys) Construction Type	With unprotected opening 0%	0 L/min
	East	Separation (m) 5.6 Length X Height Factor (m.storeys) 19.6 Construction Type Type V	With unprotected opening 15%	2295 L/min
	West	Separation (m) 14.8 Length X Height Factor (m.storeys) 86.0 Construction Type Type III	With unprotected opening 9%	1377 L/min
	Total Exposure Adjustment			5202 L/min
7	Total Required Fire Flow			14382 L/min
		Rounded to Nearest 1000 L/min		14000 L/min
				233 L/s

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

2. If any vertical opening in the building are unprotected (e.g. interconnected floor spaces, elevators etc.), consider the two largest adjoining floor area plus 50% of all floors immediately above them up to a maximum of eight.

Labadie, Sam

From: Rasool, Rubina <Rubina.Rasool@ottawa.ca>
Sent: July 22, 2026 2:17 PM
To: Labadie, Sam
Subject: RE: 1773 Baseline - Boundary Condition Request (Updated)
Attachments: 1773 Baseline Road October 2025.pdf

Follow Up Flag: Follow up
Flag Status: Completed

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.

Hello,

The following are boundary conditions, HGL, for hydraulic analysis at 1773 Baseline Road (zone 2W2C), assumed to be connected via the 406 mm watermain on Baseline Road (see attached PDF for location).

Minimum HGL = 125.6 m
Maximum HGL = 133.4 m
Max Day + Fire Flow (233 L/s) = 127.2 m

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

Note:

This review is based on the assumption that the development remains below the City's threshold for requiring two water connections. Should the final unit count exceed the City's criteria of 50 dwelling units, a second water connection/service will be required, in accordance with OWDG Tech Bulletin ISTB-2021-03, Section 4.3.1. Please note that these results are based on an updated water model and fire flow window over the previously reported BC back in October 2025.

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

Rubina

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

From: Labadie, Sam <samantha.labadie@arcadis.com>
Sent: July 09, 2026 2:36 PM
To: Rasool, Rubina <Rubina.Rasool@ottawa.ca>
Subject: RE: 1773 Baseline - Boundary Condition Request (Updated)

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

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

Hi Rubina,

Noted, please let us know as soon as you can.

Thanks,

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



From: Rasool, Rubina <Rubina.Rasool@ottawa.ca>
Sent: July 9, 2026 2:28 PM
To: Labadie, Sam <samantha.labadie@arcadis.com>
Subject: RE: 1773 Baseline - Boundary Condition Request (Updated)

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.

Hi Sam,

I will forward your WBC request; however, please note in some cases the water department may refuse the high fire flow demands. Typically, fire flows are capped at 10,000 L/min because the City anticipates under maintenance scenario and as the area if further intensified in the future that the demand of 14,000 L/min may not be available.

Rubina

Rubina Rasool
Project Manager
Planning, Infrastructure and Economic Development Department
Development Review – West Branch
City of Ottawa
110 Laurier Avenue West Ottawa, ON K1P 1J1

From: Labadie, Sam <samantha.labadie@arcadis.com>
Sent: July 09, 2026 11:43 AM
To: Rasool, Rubina <Rubina.Rasool@ottawa.ca>
Subject: RE: 1773 Baseline - Boundary Condition Request (Updated)

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

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

Hi Rubina,

We are working towards a solution to the easement issue. We are considering a new layout for the building that affects unit count and fire demand. Please provide updated boundary conditions per the following,

Avg Day = 0.26 l/s
Max day = 0.65 l/s
Peak Hour = 1.42 l/s
Fireflow = 14,000 L/min per FUS

Timely assistance on this would be greatly appreciated.

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



From: Rasool, Rubina <Rubina.Rasool@ottawa.ca>
Sent: October 21, 2025 9:07 AM
To: Labadie, Sam <samantha.labadie@arcadis.com>
Cc: Yannouloupoulos, Demetrius <demetrius.yannouloupoulos@arcadis.com>
Subject: RE: 1773 Baseline - 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.

Hello,

Labadie, Sam

From: Rasool, Rubina <Rubina.Rasool@ottawa.ca>
Sent: October 21, 2025 9:07 AM
To: Labadie, Sam
Cc: Yannoulopoulos, Demetrius
Subject: RE: 1773 Baseline - Boundary Condition Request
Attachments: 1773 Baseline Road October 2025.pdf

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.

Hello,

Please see below the WBC.

The following are boundary conditions, HGL, for hydraulic analysis at 1773 Baseline Road (zone 2W2C) assumed to be connected via the 406 mm watermain on Baseline Road. (see attached PDF for location).

Minimum HGL = 126.2 m

Maximum HGL = 132.4 m

Max Day + Fire Flow (105.0 L/s) = 125.7 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.

Thank you,
Simone

Rubina

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

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

From: Labadie, Sam <samantha.labadie@arcadis.com>
Sent: October 06, 2025 10:17 AM
To: Rasool, Rubina <Rubina.Rasool@ottawa.ca>
Cc: demetrius.yannoulopoulos <demetrius.yannoulopoulos@arcadis.com>
Subject: RE: 1773 Baseline - Boundary Condition Request

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

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

Thanks Rubina. We're getting mixed requests from the city recently, some strongly prefer OBC for buildings under 9,000 L/min per tech bulletin 2024-05. If there's an issue, let us know.

Wanted to make sure this request wasn't lost.

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



From: Rasool, Rubina <Rubina.Rasool@ottawa.ca>
Sent: October 6, 2025 10:09 AM
To: Labadie, Sam <samantha.labadie@arcadis.com>
Cc: Yannoulopoulos, Demetrius <demetrius.yannoulopoulos@arcadis.com>
Subject: RE: 1773 Baseline - 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.

Hi Sam,

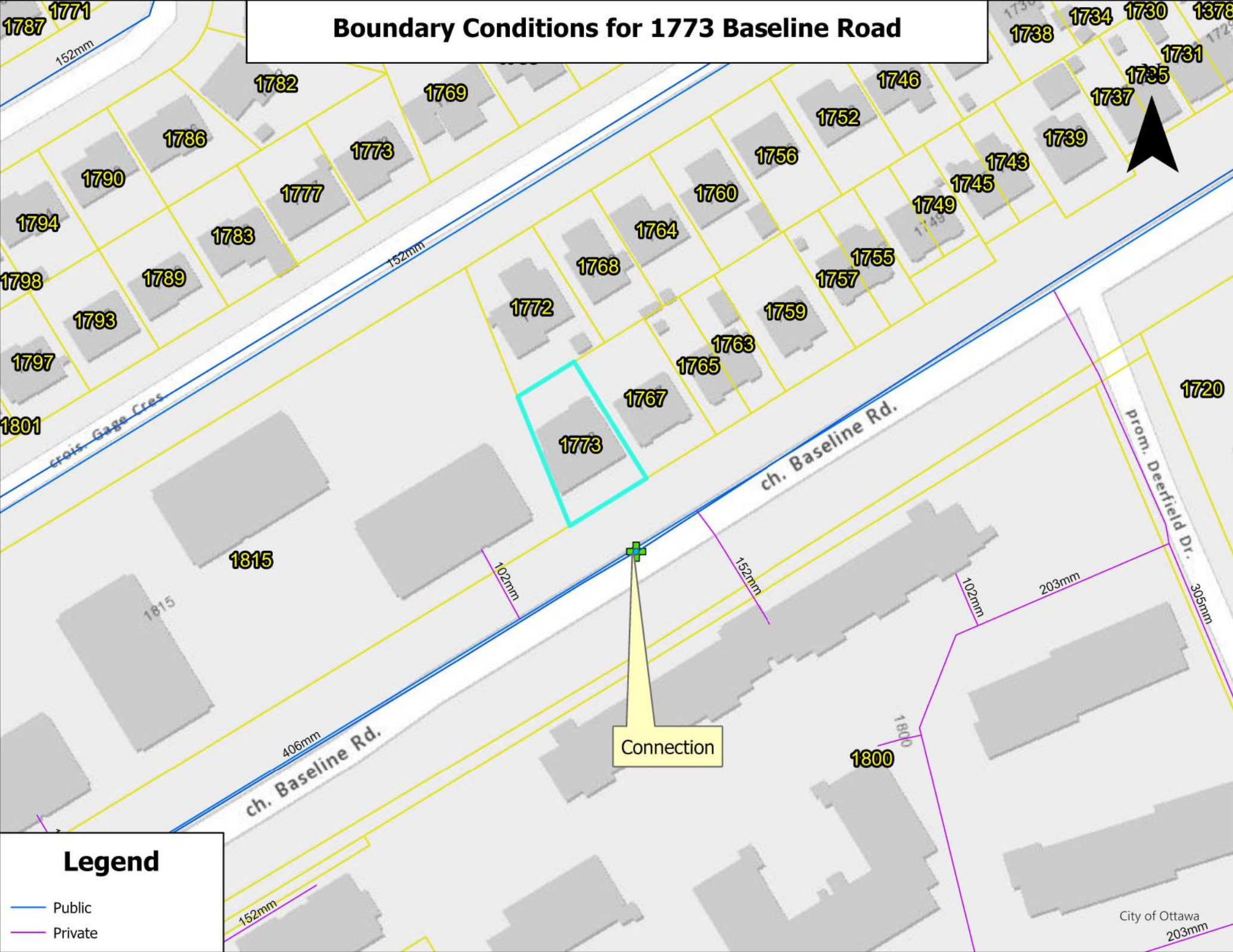
I have received your request for water boundary conditions. Typically, the Water Distribution team requires the demands in FUS for internal use; however, I am seeing if they are able to also accept the demands in OBC. OBC demands can be used for the site plan analysis provided they meet our technical memos/guidelines.

Thanks,

Rubina

Rubina Rasool
Project Manager
Planning, Infrastructure and Economic Development Department
Development Review – West Branch
City of Ottawa

Boundary Conditions for 1773 Baseline Road



Connection

Legend

- Public
- Private

City of Ottawa
203mm

Appendix C



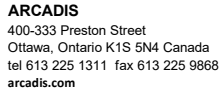
ARCADIS
400-333 Preston Street
Ottawa, Ontario K1S 5N4 Canada
tel 613 225 1311 fax 613 225 9868
arcadis.com

SANITARY SEWER DESIGN SHEET

1773 & 1767 Baseline Road
City of Ottawa
Phoenix Homes

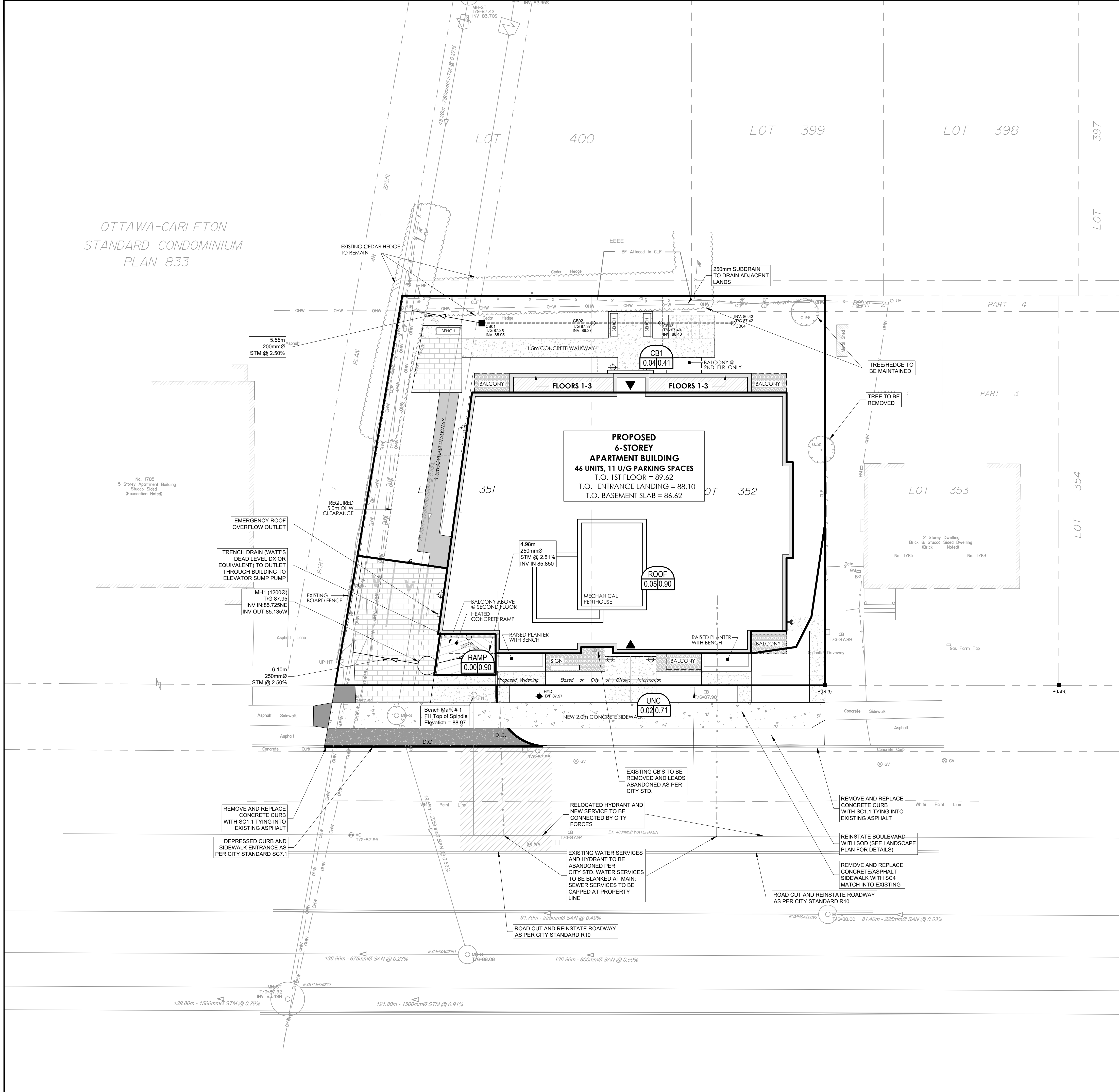
LOCATION				RESIDENTIAL								ICI AREAS								INFILTRATION ALLOWANCE			FIXED FLOW (L/s)		TOTAL FLOW	PROPOSED SEWER DESIGN											
STREET	AREA ID	FROM MH	TO MH	AREA w/ Units (Ha)	UNIT TYPES				AREA w/o Units (Ha)	POPULATION		RES PEAK FACTOR	PEAK FLOW (L/s)	INSTITUTIONAL		COMMERCIAL		INDUSTRIAL		ICI PEAK FACTOR	PEAK FLOW (L/s)	AREA (Ha)		FLOW	IND	CUM	(L/s)	IND	CUM	(L/s)	CAPACITY (L/s)	LENGTH (m)	DIA (mm)	SLOPE (%)	VELOCITY (full) (m/s)	AVAILABLE CAPACITY	
					1 BDRM	2 BDRM	3 BDRM	SINGLE		IND	CUM			IND	CUM	IND	CUM	IND	CUM			L/s	(%)														
1773 & 1767 Baseline Road Apartment Building																																					
EXISTING		BLDG	SAN	0.11				2		6.8	6.8	3.74	0.08		0.00		0.00		0.00	1.00	0.00	0.11	0.11	0.04		0.00	0.12	54.10	57.44	200	2.50	1.668	53.98	99.78%			
SITE PLAN PROPOSED		BLDG	EX SANMH	0.11	27	17	2			79.7	79.7	3.62	0.93		0.00		0.00		0.00	1.00	0.00	0.11	0.11	0.04		0.00	0.97	54.10	2.10	200	2.50	1.668	53.13	98.21%			
Design Parameters:				Notes:								Designed:				SL	No.	Revision										Date									
Residential				1. Mannings coefficient (n) = 0.013													1.	Submission No. 1 for City Review										2025-12-18									
				2. Demand (per capita): 280 L/day 200 L/day													2.	Submission No. 2 for City Review										2026-04-30									
				3. Infiltration allowance: 0.33 L/s/Ha													3.	Submission No. 3 for City Review										2026-07-31									
				4. Residential Peaking Factor: Harmon Formula = 1+(14/(4+(P/1000^0.5)))0.8 where K = 0.8 Correction Factor																																	
				5. Commercial and Institutional Peak Factors based on total area, 1.5 if greater than 20%, otherwise 1.0																																	
												Dwg. Reference:				30297182-400	File Reference:		30297182-05			Date:							Sheet No:								

Appendix D



1773 & 1767 Baseline Road
City of Ottawa
Phoenix Homes

https://arcadiso365.sharepoint.com/teams/ch-103070017/Shared Documents/Project/05 Project execution/Design Files/CCS_storm_Baseline_2026-04-30 - Copy



OTTAWA-CARLETON
STANDARD CONDOMINIUM
PLAN 833

LEGEND :

CB1

0.03 | 0.56

AREA NUMBER

RUNOFF COEFFICIENT

AREA IN HECTARES

CLIENT

**PHOENIX HOMES**
18A Bentley Ave Ottawa, ON K2E 6T8

COPYRIGHT

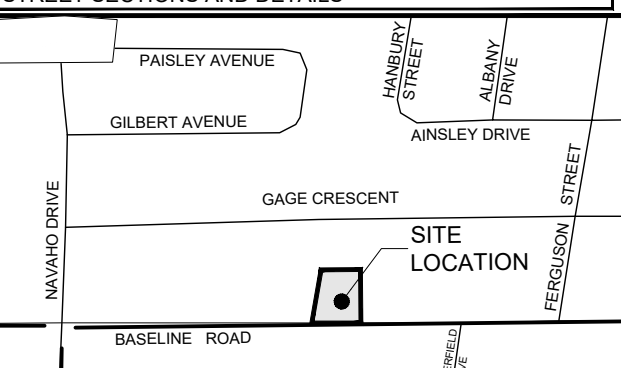
This drawing has been prepared solely for the intended use, thus any reproduction or distribution for any purpose other than authorized by Arcadis is forbidden. Written dimensions shall have precedence over scaled dimensions. Contractors shall verify and be responsible for all dimensions and conditions on the job, and Arcadis shall be informed of any variations from the dimensions and conditions shown on the drawing. Shop drawings shall be submitted to Arcadis for general conformance before proceeding with fabrication.

Arcadis Professional Services (Canada) Inc.

formerly (B) Group Professional Services (Canada) Inc.

No.	DESCRIPTION	DATE
1	ISSUED FOR SPA	2025-12-18
2	REVISED AS PER NEW SITE PLAN	2026-02-20
3	REVISED AS PER CITY COMMENTS	2026-04-30
4	REVISED AS PER NEW SITE PLAN	2026-07-29

SEE 010, 011, 012 FOR NOTES, LEGEND, CB TABLE, STREET SECTIONS AND DETAILS.



CONSULTANTS



PRIME CONSULTANT

**ARCADIS**
333 Preston Street - Suite 500
Ottawa ON K1S 5N4 Canada
tel 613 225 1311
www.arcadis.com

PROJECT

1773 & 1767 BASELINE ROAD
OTTAWA, ONTARIO

PROJECT NO:

30297182

DRAWN BY:

D.P.S.

CHECKED BY:

D.G.Y.

PROJECT MGR:

D.G.Y.

APPROVED BY:

S.E.L.

SHEET TITLE

SITE STORM DRAINAGE AREA
PLAN

SHEET NUMBER

C-500

ISSUE

4



IBI GROUP
400-333 Preston Street
Ottawa, Ontario K1S 5N4 Canada
tel 613 225 1311 fax 613 225 9868
ibigroup.com

PROJECT: 1773 Baseline
DATE: 2026-07-31
FILE: 30297182.05
REV #: 3
DESIGNED BY: SEL
CHECKED BY: D.Y.

STORMWATER MANAGEMENT

Formulas and Descriptions

i_{2yr} = 1:2 year Intensity = $732.951 / (T_c+6.199)^{0.810}$
 i_{5yr} = 1:5 year Intensity = $998.071 / (T_c+6.053)^{0.814}$
 i_{100yr} = 1:100 year Intensity = $1735.688 / (T_c+6.014)^{0.820}$
 T_c = Time of Concentration (min)
 C = Average Runoff Coefficient
 A = Area (Ha)
 Q = Flow = $2.78CiA$ (L/s)

Maximum Allowable Release Rate

Restricted Flowrate (based on $C=0.50$ $T_c=10min$)

C = 0.5
 T_c = 10 min
 i_{5yr} = 104.19 mm/hr
 A_{site} = 0.11 Ha

$Q_{restricted}$ = 15.93 L/s

UNC Uncontrolled Release ($Q_{uncontrolled} = 2.78 * C * i_{100yr} * A_{uncontrolled}$)

C = 0.89
 T_c = 10 min
 i_{100yr} = 178.56 mm/hr
 $A_{uncontrolled}$ = 0.0151 Ha

Q_{uncon} = 6.65 L/s

RAMP Uncontrolled Release ($Q_{uncontrolled} = 2.78 * C * i_{100yr} * A_{uncontrolled}$)

C = 1.00
 T_c = 10 min
 i_{100yr} = 178.56 mm/hr
 $A_{uncontrolled}$ = 0.0015 Ha

Q_{uncon} = 0.74 L/s

Maximum Allowable Release Rate ($Q_{max allowable} = Q_{restricted} - Q_{uncontrolled}$)

$Q_{max allowable}$ = 8.53 L/s

MODIFIED RATIONAL METHOD (100-Year, & 2-Year Ponding)

Drainage Area		ROOF			
Area (Ha)		0.05			
C =		1.00	Restricted Flow Q_r (L/s)= 2.00		
100-Year Ponding					
T_c Variable (min)	i_{100yr} (mm/hour)	Peak Flow $Q_p = 2.78 \times C i_{100yr} A$ (L/s)	Q_r (L/s)	$Q_p - Q_r$ (L/s)	Volume 100yr (m ³)
56	58.83	8.18	2.00	6.18	20.758
58	57.32	7.97	2.00	5.97	20.768
59	56.60	7.87	2.00	5.87	20.770
60	55.89	7.77	2.00	5.77	20.770
62	54.54	7.58	2.00	5.58	20.763

Storage (m ³)				
Overflow	Required	Surface	Sub-surface	Balance
0.00	20.77	28.13		0.00

Drainage Area		CB1			
Area (Ha)		0.04			
C =		0.51			
		Restricted Flow Q_r (L/s)= 6.00			
100-Year Ponding					
T_c Variable (min)	i_{100yr} (mm/hour)	Peak Flow $Q_p = 2.78xCi_{100yr}A$ (L/s)	Q_r (L/s)	$Q_p - Q_r$ (L/s)	Volume 100yr (m ³)
5	242.70	13.83	6.00	7.83	2.350
7	211.67	12.06	6.00	6.06	2.546
8	199.20	11.35	6.00	5.35	2.569
9	188.25	10.73	6.00	4.73	2.553
11	169.91	9.68	6.00	3.68	2.431

Storage (m ³)				
Overflow	Required	Surface	Sub-surface	Balance
0.00	2.57	4.34	0.64	0.00
*Vol of CB+TCB*2				

Drainage Area		ROOF			
Area (Ha)		0.05			
C =		0.90	Restricted Flow Q_r (L/s)= 2.00		
2-Year Ponding					
T_c Variable (min)	i_{2yr} (mm/hour)	Peak Flow $Q_p = 2.78 \times C i_{2yr} A$ (L/s)	Q_r (L/s)	$Q_p - Q_r$ (L/s)	Volume 2yr (m ³)
23	47.66	5.96	2.00	3.96	5.47
24	46.37	5.80	2.00	3.80	5.47
25	45.17	5.65	2.00	3.65	5.48
26	44.03	5.51	2.00	3.51	5.47
27	42.95	5.37	2.00	3.37	5.46

Storage (m ³)				
Overflow	Required	Surface	Sub-surface	Balance
0.00	5.48	28.13		0.00

Drainage Area		CB1			
Area (Ha)		0.04			
C =		0.41			
		Restricted Flow Q_r (L/s)= 6.00			
2-Year Ponding					
T_c Variable (min)	i_{2yr} (mm/hour)	Peak Flow $Q_p = 2.78 \times C i_{2yr} A$ (L/s)	Q_r (L/s)	$Q_p - Q_r$ (L/s)	Volume 2yr (m ³)
-1	192.83	8.79	6.00	2.79	-0.17
0	167.22	7.62	6.00	1.62	0.00
1	148.14	6.75	6.00	0.75	0.05
2	133.33	6.08	6.00	0.08	0.01
3	121.46	5.54	6.00	-0.46	-0.08

Storage (m ³)				
Overflow	Required	Surface	Sub-surface	Balance
0.00	0.05	4.34	0.64	0.00

RUNOFF COEFFICIENT CALCULATION SHEET

RESTRICTED

CB1	Area (m²)	C
Softscape	280	0.20
Hardscape	120	0.90
Total	400	0.41

UNRESTRICTED

UNC	Area (m²)	C
Softscape	41	0.20
Hardscape	110	0.90
Total	151	0.71



Adjustable Accutrol Weir

Tag: _____

Adjustable Flow Control for Roof Drains

ADJUSTABLE ACCUTROL (for Large Sump Roof Drains only)

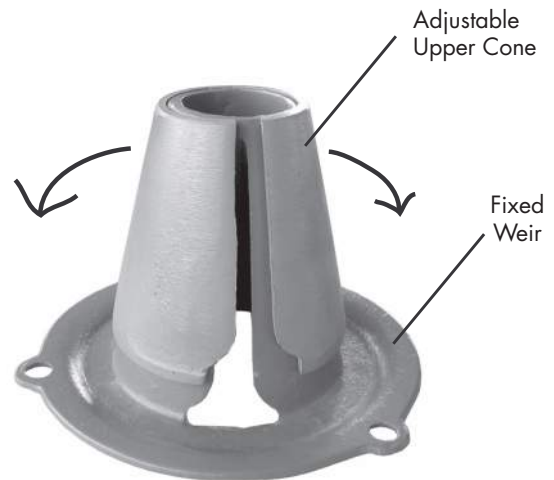
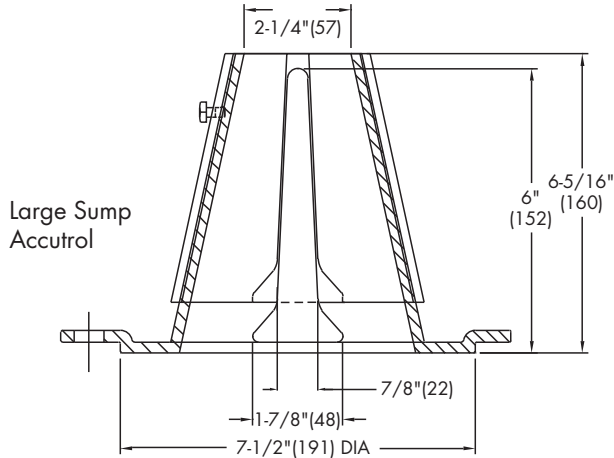
For more flexibility in controlling flow with heads deeper than 2", Watts Drainage offers the Adjustable Accutrol. The Adjustable Accutrol Weir is designed with a single parabolic opening that can be covered to restrict flow above 2" of head to less than 5 gpm per inch, up to 6" of head. To adjust the flow rate for depths over 2" of head, set the slot in the adjustable upper cone according to the flow rate required. Refer to Table 1 below.

Note: Flow rates are directly proportional to the amount of weir opening that is exposed.

EXAMPLE:

For example, if the adjustable upper cone is set to cover 1/2 of the weir opening, flow rates above 2" of head will be restricted to 2-1/2 gpm per inch of head.

Therefore, at 3" of head, the flow rate through the Accutrol Weir that has 1/2 the slot exposed will be:
[5 gpm (per inch of head) x 2 inches of head] + 2-1/2 gpm (for the third inch of head) = 12-1/2 gpm.



1/2 Weir Opening Exposed Shown Above

TABLE 1. Adjustable Accutrol Flow Rate Settings

Weir Opening Exposed	1"	2"	3"	4"	5"	6"
	Flow Rate (gallons per minute)					
Fully Exposed	5	10	15	20	25	30
3/4	5	10	13.75	17.5	21.25	25
1/2	5	10	12.5	15	17.5	20
1/4	5	10	11.25	12.5	13.75	15
Closed	5	5	5	5	5	5

Job Name _____

Contractor _____

Job Location _____

Contractor's P.O. No. _____

Engineer _____

Representative _____

Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.

USA: Tel: (800) 338-2581 • Fax: (828) 248-3929 • Watts.com

Canada: Tel: (905) 332-4090 • Fax: (905) 332-7068 • Watts.ca

Latin America: Tel: (52) 81-1001-8600 • Fax: (52) 81-8000-7091 • Watts.com



A Watts Water Technologies Company

Square CB Installation Notes:

1. Materials and tooling verification:
 - Tooling: impact drill, 3/8'' concrete bit, torque wrench for 9/16'' nut, hand hammer, level, and marker.
 - Material: (4) concrete anchor 3/8x3-1/2, (4) washers, (4) nuts
2. Use the mounting wall plate to locate and mark the hole (4) pattern on the catch basin wall. You should use a level to ensure that the plate is at the horizontal.
3. Use an impact drill with a 3/8'' concrete bit to make the four holes at a minimum of 1-1/2'' depth up to 2-1/2''. Clean the concrete dust from the holes.
4. Install the anchors (4) in the holes by using a hammer. Put the nuts on the top of the anchors to protect the threads when you will hit the anchors with the hammer. Remove the nuts on the ends of the anchors
5. Install the wall mounting plate on the anchors and screw the nut in place with a maximum torque of 40 N.m (30 lbf-ft). There should be no gap between the wall mounting plate and the catch basin wall.
6. From ground above using a reach bar, lower the device by hooking the end of the reach bar to the handle of the LMF device. Align the triangular plate portion into the mounting wall plate. Push down the device to be sure it has centered in to the wall mounting plate and has created a seal.



Round CB Installation Notes: (Refer to square install notes above for steps 1 , 3, & 4)

2. Use spigot catch basin wall plate to locate and mark the hole (4) pattern on the catch basin wall. You should use a level to ensure that the plate is at the horizontal.
5. Install the CB spigot wall plate on the anchors and screw the 4 nuts in place with a maximum torque of 40 N.m (30 lb-ft). There should be no gap between the CB spigot wall plate and the catch basin wall.
6. Apply solvent cement on the hub of the universal mounting plate and the spigot of the spigot CB wall plate. Slide the hub over the spigot. Make sure the universal mounting plate is at the horizontal and its hub is completely inserted onto the spigot. Normally, the corners of the universal mounting plate hub adapter should touch the catch basin wall.
7. From ground above using a reach bar, lower the ICD device by hooking the end of the reach bar to the handle of the ICD device. Align the triangular plate portion into the mounting wall plate. Push down the device to be sure it has centered into the mounting plate and has created a seal.



CAUTION/WARNING/DISCLAIM:

- Verify that the inlet(s) pipe(s) is not protruding into the catch basin. If it is, cut it back so that the inlet pipe is flush with the catch basin wall.
- Any required cement in the installation must be approved for PVC.
- The solvent cement should not be used below 0°C (32°F) or in a high humidity environment. Please refer to the IPEX solvent cement guide to confirm required curing times or attend the IPEX [Online Solvent Cement Training Course](#).
- Call your IPEX representative for more information or if you have any questions about our products.

IPEX TEMPEST Inlet Control Devices Technical Specification

General

Inlet control devices (ICD's) are designed to provide flow control at a specified rate for a given water head level and also provide odour and floatable control where specified. All ICD's will be IPEX Tempest or approved equal.

All devices shall be removable from a universal mounting plate. An operator from street level using only a T-bar with a hook will be able to retrieve the device while leaving the universal mounting plate secured to the catch basin wall face. The removal of the TEMPEST devices listed above must not require any unbolting or special manipulation or any special tools.

High Flow (HF) Sump devices will consist of a removable threaded cap which can be accessible from street level with out entry into the catchbasin (CB). The removal of the threaded cap shall not require any special tools other than the operator's hand.

ICD's must have no moving parts.

Materials

ICD's are to be manufactured from Polyvinyl Chloride (PVC) or Polyurethane material, designed to be durable enough to withstand multiple freeze-thaw cycles and exposure to harsh elements.

The inner ring seal will be manufactured using a Buna or Nitrile material with hardness between Duro 50 and Duro 70.

The wall seal is to be comprised of a 3/8" thick Neoprene Closed Cell Sponge gasket which is attached to the back of the wall plate.

All hardware will be made from 304 stainless steel.

Dimensioning

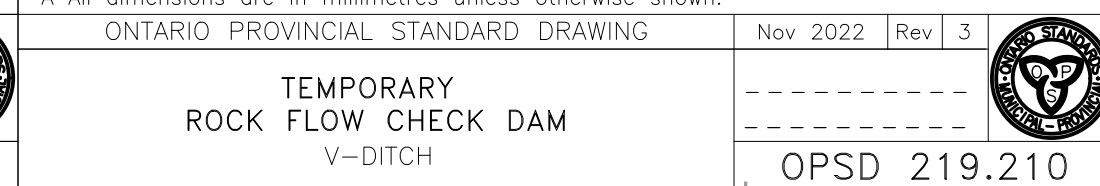
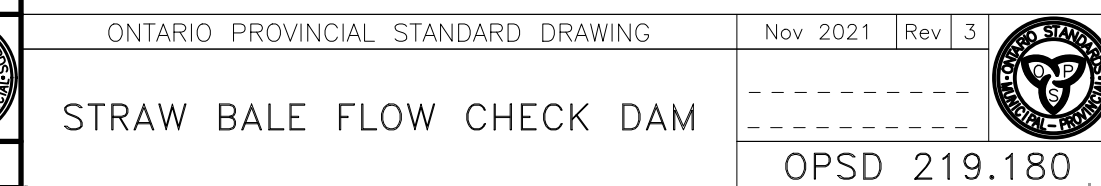
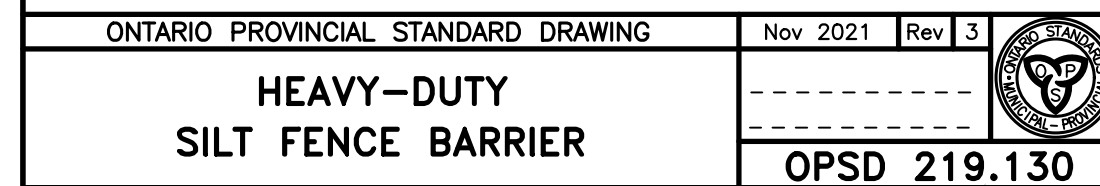
The Low Medium Flow (LMF), High Flow (HF) and the High Flow (HF) Sump shall allow for a minimum outlet pipe diameter of 200mm with a 600mm deep Catch Basin sump.

Installation

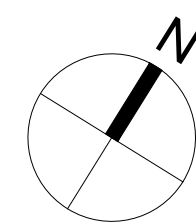
Contractor shall be responsible for securing, supporting and connecting the ICD's to the existing influent pipe and catchbasin/manhole structure as specified and designed by the Engineer.



Appendix E



- LEGEND:**
- | | |
|---|--|
|  | HEAVY DUTY SILT FENCE AS PER
OPSD-219.130 |
|  | SNOW FENCE |
|  | STRAW BALE CHECK DAM AS PER
OPSD-219.180 |
|  | ROCK CHECK DAM AS PER OPSD-219.210 |
|  | FILTER CLOTH PLACED UNDER EXISTING C
COVER |
|  | TEMPORARY MUD MAT 0.15m THICK 50mm
CLEAR STONE ON NON WOVEN FILTER
CLOTH |



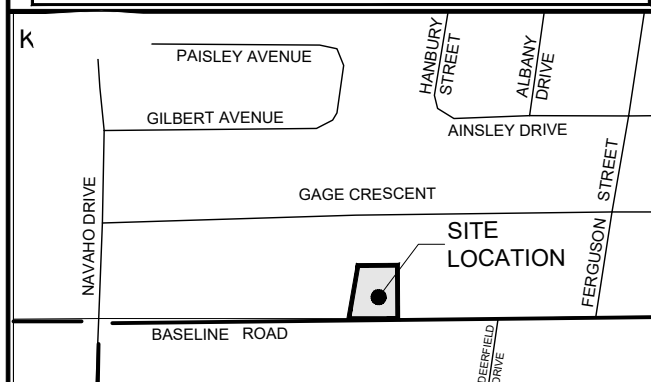
PHOENIX HOMES
18A Bentley Ave Ottawa, ON K2E 6T8

COPYRIGHT

This drawing has been prepared solely for the intended use, thus any reproduction or distribution for any purpose other than authorized by Arcadis is forbidden. Written dimensions shall have precedence over scaled dimensions. Contractors shall verify and be responsible for all dimensions and conditions on the job, and Arcadis shall be informed of any variations from the dimensions and conditions shown on the drawing. Shop drawings shall be submitted to Arcadis for general conformance before proceeding with fabrication.

Arcadis Professional Services (Canada) Inc.
formerly IBI Group Professional Services (Canada) Inc.

ISSUES		
No.	DESCRIPTION	DATE
1	ISSUED FOR SPA	2025-12-18
2	REVISED AS PER NEW SITE PLAN	2026-02-20
3	REVISED AS PER CITY COMMENTS	2026-04-30
4	REVISED AS PER NEW SITE PLAN	2026-07-29

SEE 010, 011, 012 FOR NOTES, LEGEND, CB TABLE,
STREET SECTIONS AND DETAILS S

333 Preston Street - Suite 500
Ottawa ON K1S 5N4 Canada
tel 613 225 1311
www.arcadis.com

PROJECT
1773 & 1767 BASELINE ROAD
OTTAWA, ONTARIO

PROJECT NO
30297182

DRAWN BY:
D.P.S.

CHECKED BY:
D.G.Y.

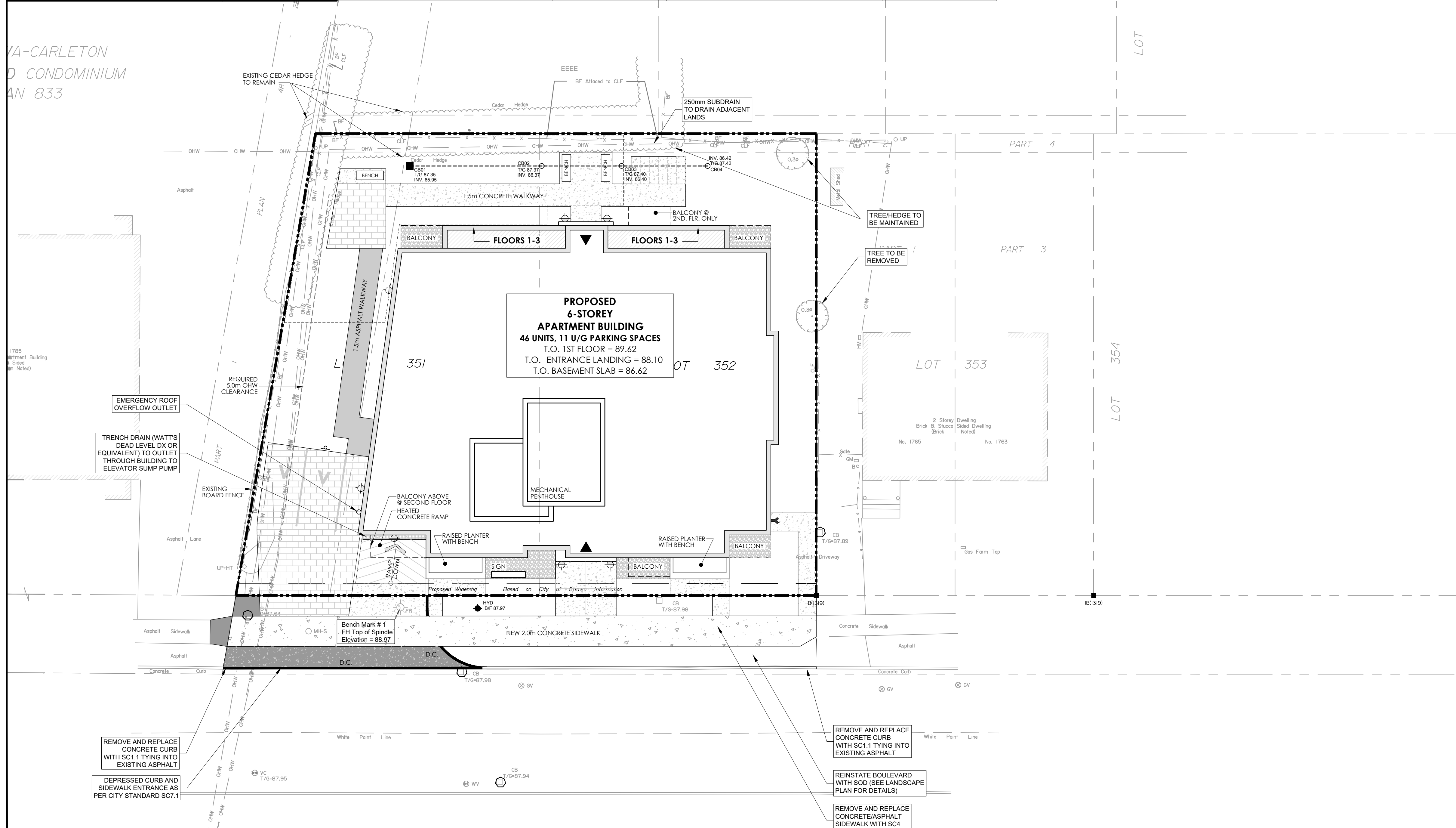
PROJECT MG
D.G.V.

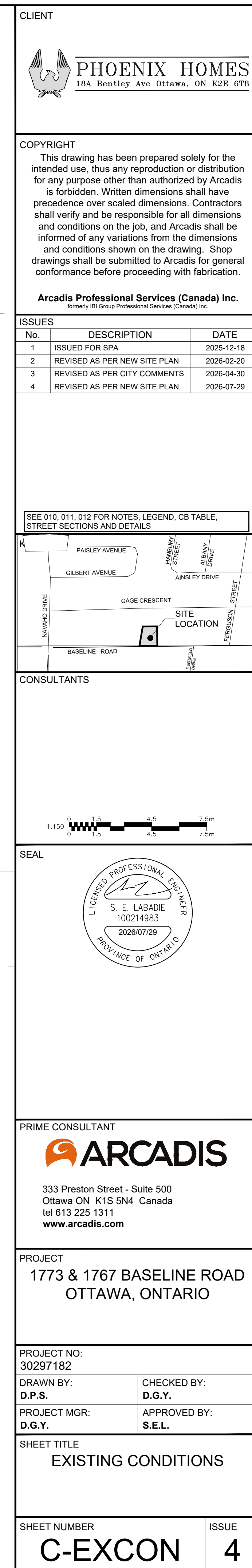
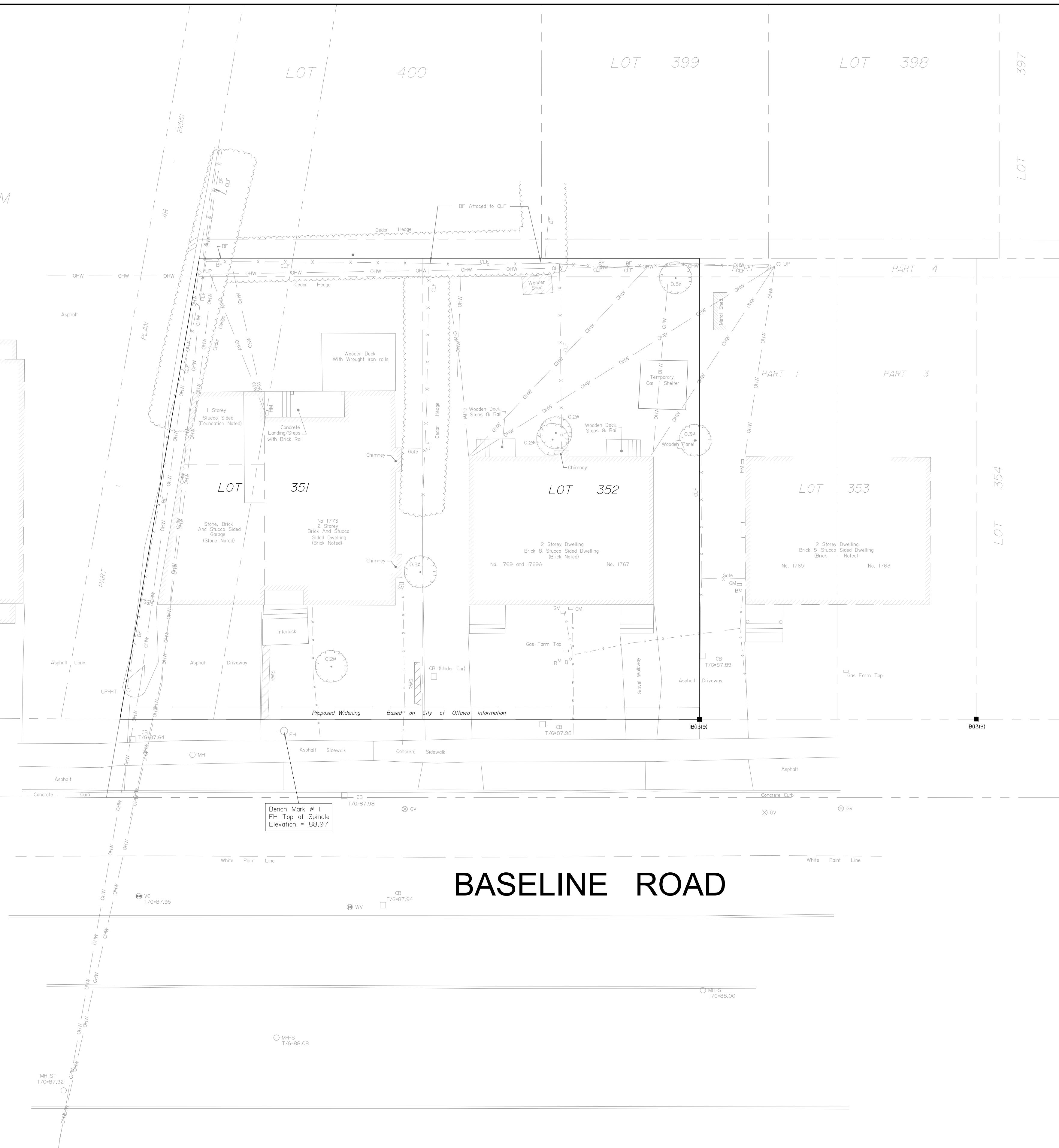
D.S.T.	S.E.L.
SHEET TITLE	

SHEET NUMBER
C-900

ISSUE
4

File Location: C:\Users\slumard31\5D\DWG\ACCDocs\Arcadis ACC USIACA-30297\182-Baseline Road Redevelopment\Project Files\10_WIP\04_CIVIL\Sheets\C-600 SEDIMENT - EROSION PLAN.dwg Last Saved: April 23, 2026, by slumard310 Plotted: July 31, 2026 2:32:55 PM by Slurna, Don





OTTAWA-CARLETON
STANDARD CONDOMINIUM
PLAN 833

POND ID	CB01
TOP OF GRATE (m)	87.35
STATIC ELEV (m)	87.60
STATIC DEPTH (m)	0.25
STATIC VOLUME (m³)	4.34
CB01 ICD = 6 L/s	

**PROPOSED
4-STORY
APARTMENT BUILDING**
46 UNITS, 11 U/G PARKING SPACES
T.O. 1ST FLOOR = 89.62
T.O. ENTRANCE LANDING = 88.10
T.O. BASEMENT SLAB = 86.62

Roof Storage
Restricted Flowrate = 2 L/s
100-Yr Storage Volume = 20.77 m³
Total Area = 500m²
Usable Area for Storage = 375m²
Average Depth during 100-Yr = 0.055m

**MECHANICAL
PENTHOUSE**

GRADING LEGEND

- PROPOSED DITCH C/W FLOW DIRECTION AND SLOPE
- SLOPE C/W FLOW DIRECTION
- MAJOR OVERLAND FLOW ROUTE
- PROPOSED SPOT GRADE
- PROPOSED SWALE GRADE
- PROPOSED SWALE HIGH POINT GRADE
- LOT CORNER GRADE C/W EXISTING GRADE
- FULL STATIC PONDING GRADE

- RETAINING WALL C/W TOP OF WALL AND GRASS GRADE
- TERRACING 3:1 MAXIMUM UNLESS NOTED OTHERWISE
- PRESSURE REDUCING VALVE

- FINISHED FLOOR ELEVATION
- TOP OF FOUNDATION ELEVATION
- UNDERSIDE OF FOOTING ELEVATION
- MINIMUM UNDERSIDE OF FOOTING (Based on the higher of the sewer overbuts, or hydraulic grade line)
- MINIMUM GARAGE GRADE

- WALKUP UNIT
- WALKOUT UNIT
- NON-STANDARD FOUNDATION (Frost cover not provided for standard unit)
- HIGHBACK UNIT (1.5m frost cover on footings)
- NOISE BARRIER LOCATION
- NOISE BARRIER GATE
- RIP-RAP
- TOWN HOUSE SPLITS
- 2 hr FIREWALL

- Denotes
- Survey Monument Planted
- Survey Monument Found
- Standard Iron Bar
- Short Standard Iron Bar
- Iron Bar
- Concrete Pin
- Witness
- Annis, O'Sullivan, Vollebakk Ltd.
- Measured
- Proportioned
- Registered Plan 372115
- (AOG) Plan, November 15, 1990
- Plan 4R-22510
- Plan 4R-8091
- Maintenance Hole (Sanitary)
- Valve Chamber (Watermain)
- Underground Gas
- Underground Water
- Overhead Wires
- Utility Pole
- Catch Basin
- Fire Hydrant
- Water Valve
- Gas Valve
- Gas Meter
- Hydro Meter
- Bollard
- Chain Link Fence
- Board Fence
- Stone Retaining Wall
- Diameter
- Location of Elevations
- Top of Concrete Curb Elevation
- Top of Stone Retaining Wall Elevation
- Centreline
- Deciduous Tree

CLIENT

PHOENIX HOMES
18A Bentley Ave Ottawa, ON K2E 6T8

COPYRIGHT

This drawing has been prepared solely for the intended use, thus any reproduction or distribution for any purpose other than authorized by Arcadis is forbidden. Written dimensions shall have precedence over scaled dimensions. Contractors shall verify and be responsible for all dimensions and conditions on the job, and Arcadis shall be informed of any variations from the dimensions and conditions shown on the drawing. Shop drawings shall be submitted to Arcadis for general conformance before proceeding with fabrication.

Arcadis Professional Services (Canada) Inc.
Formerly B Group Professional Services (Canada) Inc.

No.	DESCRIPTION	DATE
1	ISSUED FOR SPA	2025-12-18
2	REVISED AS PER NEW SITE PLAN	2026-02-20
3	REVISED AS PER CITY COMMENTS	2026-04-30
4	REVISED AS PER NEW SITE PLAN	2026-07-29

SEE 010, 011, 012 FOR NOTES, LEGEND, CB TABLE, STREET SECTIONS AND DETAILS

CONSULTANTS

SEAL

PRIME CONSULTANT

ARCADIS

333 Preston Street - Suite 500
Ottawa ON K1S 5N4 Canada
tel 613 225 1311
www.arcadis.com

PROJECT

1773 & 1767 BASELINE ROAD
OTTAWA, ONTARIO

PROJECT NO:
30297182

DRAWN BY:
D.P.S.

CHECKED BY:
D.G.Y.

PROJECT MGR:
D.G.Y.

APPROVED BY:
S.E.L.

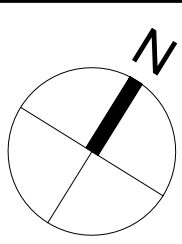
SHEET TITLE

SITE GRADING PLAN

SHEET NUMBER	ISSUE
C-200	4



- REMOVAL
⊙ ADJUST MANHOLE VALVES
⊠ ADJUST CATCH BASIN
⊞ ADJUSTMENT BY BELL OR HYDRO APPROVED CONTRACTOR
X REMOVE OR ABANDON SEWER, WATERMAIN, UTILITY, CURB RETURNS
┌ PLUS
- DRY GRIND EXISTING ASPHALT, AVERAGE DEPTH 50mm
FULL DEPTH ASPHALT REMOVAL
AREA TO BE CLEARED AND GRUBBED
REMOVAL OF BUILDINGS, FOUNDATIONS, SEPTIC SYSTEM AND WELL
REMOVALS OF CONCRETE/ ASPHALT SIDEWALK



CLIENT

PHOENIX HOMES
18A Bentley Ave Ottawa, ON K2E 6T8

COPYRIGHT

This drawing has been prepared solely for the intended use, thus any reproduction or distribution for any purpose other than authorized by Arcadis is forbidden. Written dimensions shall have precedence over scaled dimensions. Contractors shall verify and be responsible for all dimensions and conditions on the job, and Arcadis shall be informed of any variations from the dimensions and conditions shown on the drawing. Shop drawings shall be submitted to Arcadis for general conformance before proceeding with fabrication.

Arcadis Professional Services (Canada) Inc.
Formerly (B) Group Professional Services (Canada) Inc.

ISSUES

No.	DESCRIPTION	DATE
1	ISSUED FOR SPA	2025-12-18
2	REVISED AS PER NEW SITE PLAN	2026-02-20
3	REVISED AS PER CITY COMMENTS	2026-04-30

SEE 010, 011, 012 FOR NOTES, LEGEND, CB TABLE, STREET SECTIONS AND DETAILS

CONSULTANTS

SEAL

PRIME CONSULTANT

ARCADIS

333 Preston Street - Suite 500
Ottawa ON K1S 5N4 Canada
tel 613 225 1311
www.arcadis.com

PROJECT

1773 & 1767 BASELINE ROAD
OTTAWA, ONTARIO

PROJECT NO:
30297182

DRAWN BY:
D.P.S.

CHECKED BY:
D.G.Y.

PROJECT MGR:
D.G.Y.

APPROVED BY:
S.E.L.

SHEET TITLE

REMOVALS DRAWING

SHEET NUMBER

C-REM

ISSUE

3