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36 Years

10 des Oblats Avenue Buildings 2A and 2B

Transportation Impact Assessment

10 des Oblats Avenue
Buildings 2A and 2B

Transportation Impact Assessment

Prepared By:

NOVATECH
Suite 200, 240 Michael Cowpland Drive
Ottawa, Ontario
K2M 1P6

March 2018
Revised December 2018

Novatech File: 114025
Ref No. R-2018-009

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Engineers, Planners & Landscape Architects

December 7th, 2018

City of Ottawa
Planning and Growth Management Department
110 Laurier Ave. W., 4th Floor,
Ottawa, Ontario K1P 1J1

Attention: **Mr. Wally Dubyk**
Project Manager, Infrastructure Approvals

Dear Sir:

Reference: **10 des Oblats Avenue – Buildings 2A and 2B**
Transportation Impact Assessment
Novatech File No. 114025

We are pleased to submit the following revised Transportation Impact Assessment (TIA) in support of Zoning By-law Amendment and Site Plan Control applications for 10 des Oblats Avenue. The report has been revised to reflect updates to the site plan, including additional parking in the underground parking garage. The structure and format of this report is in accordance with the 2017 City of Ottawa TIA Guidelines.

Please call if you have any questions as you complete your review.

Yours truly,

NOVATECH

B. Byvelds

Brad Byvelds, P. Eng.
Project Coordinator | Transportation/Traffic

Suite 200, 240 Michael Cowpland Drive, Ottawa ON K2M 1P6 Tel: 613.254.9643 Fax: 613.254.5867 www.novatech-eng.com

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EXCECUTIVE SUMMARY

This Transportation Impact Assessment (TIA) has been prepared in support of a Zoning By-law Amendment and Site Plan Control applications for 10 des Oblats Avenue. The subject site forms part of the Greystone Village subdivision and is located in the southeast corner of the Main Street/des Oblats Avenue intersection. The subject site is surrounded by the following:

- des Oblats Avenue and mid/high rise residential to the north;
- Future Grand Allée parkland/open space to the south;
- Future Deschâtelets Avenue and townhouse dwellings to the east; and
- Immaculata High School and Low rise/single detached dwellings to the west.

The proposed development consists of a nine-storey rental apartment building and a six-storey mixed-use building. The proposed nine-storey rental apartment building will contain 119 units and approximately 2,000ft^2 gross floor area (GFA) of commercial. The proposed six-storey mixed-use building will contain eight commercial units with a total of approximately 18,000ft^2 GFA and 125 rental apartment units. A surface parking lot containing 26 parking spaces and an underground parking garage containing 270 parking spaces are proposed with access on des Oblats Avenue.

As the Greystone Village CTS was prepared within the last five years, the existing and planned conditions have not changed since the submission. As such, a further review of the existing and planned conditions in the vicinity of the subject site has not been completed as part of this report.

The study area for this report will include the proposed site accesses, the Domicile access and des Oblats Avenue. The selected time periods for the analysis are the weekday AM and PM peak hours, as they represent the 'worst case' combination of site generated traffic and adjacent street traffic. The proposed development is anticipated to be constructed in 2021. The TIA will review the operations within the study area for the 2021 build-out and 2026 horizon years.

The trips generated by the proposed development are generally consistent with the assumed development in the Greystone Village CTS. As such, the intersection analysis and transit analysis presented in the Greystone Village CTS is representative of the projected operations following the build-out of the subject site. As such Module 4.7 (Transit) and Module 4.9 (Network Intersections) have been omitted from the required analysis. As the projected traffic volumes along des Oblats Avenue (as described in the foregoing section) will not exceed the City's ME capacity thresholds for a local roadway or the ATM thresholds for a collector roadway, Module 4.6 (Neighbourhood Traffic Management) is exempt from the required analysis. As the proposed development is not anticipated to generate 200 person trips in excess of the equivalent volumes permitted by the established zoning for this site, Module 4.8 (Network Concept) is exempt from the required analysis. The following modules are included in the TIA report:

- Module 4.1 – Development Design
- Module 4.2 – Parking
- Module 4.3 – Boundary Streets
- Module 4.4 – Access Intersections
- Module 4.5 – Transportation Demand Management

The conclusions and recommendations of this TIA can be summarized as follows:

- The person trips generated by the proposed development during peak periods is based on the number of apartment units and the retail GFA. As some residents may own a vehicle for off-peak use and choose different modes of transportation for peak hour trips, the proposed parking does not correspond to the overall peak hour vehicular travel demand by the site.

- The additional trips generated by the proposed development will have no significant impact on the operating conditions identified in the Greystone Village CTS.

- Pedestrian facilities will be provided between all building entrances the sidewalks along Main Street, des Oblats Avenue and Deschâtelets Avenue as well as the Grand Allée.

- The existing bus shelter at OC Transpo bus stop #7636 is proposed to be relocated approximately 6m to the south to improve sight lines to the main leasable unit in the corner of the Main Street/des Oblats Avenue intersection. The relocation of the bus shelter will also improve pedestrian circulation near this intersection by reducing conflicts between pedestrians destined to the retail units and pedestrians waiting for the bus.

- As development progresses within the Greystone Village subdivision, OC Transpo Route 16 will travel east on Hazel Street, north on Deschâtelets Avenue, and west on des Oblats Avenue. A new bus stop will be located in the southeast corner of the des Oblats Avenue/Deschâtelets Avenue intersection.

- OC Transpo staff have advised that a new transit Route 55 will be introduced along Main Street following the implementation of Light Rail Transit in the City of Ottawa.

- All required TDM-supportive design and infrastructure measures in the TDM – *Supportive Development Design and Infrastructure Checklist* are met.

- On-street lay-bys are proposed along des Oblats Avenue adjacent to the subject site, and will require RMA approval.

- The majority of deliveries will be performed by medium single-unit trucks (MSU) and will occur on-site in the surface parking lot. Deliveries by any larger vehicles such as heavy single-unit (HSU) trucks will be performed in the on-street lay-bys.

- The proposed vehicular parking exceeds the minimum requirement identified in the ZBL. The proposed vehicular parking for the residential component (excluding visitor parking) equates to one vehicle parking space per unit, and will be charged separately from the monthly rent.

- The bicycle parking provided for the proposed development meets the minimum requirement identified in the ZBL.

- Des Oblats Avenue meets the target PLOS, BLOS and Auto LOS for the General Urban Area.

- The proposed development will be served by two accesses on des Oblats Avenue. The western access will lead to the underground parking garage containing 270 parking spaces. The eastern access will lead to a surface parking lot containing 26 parking spaces.

- The proposed driveway locations (with respect to the adjacent right-of-way), width and grading meet the minimum criteria identified in the City's Private Approach By-law and Zoning By-law. A waiver to the private approach by-law is required for the spacing between the driveways.

- The proposed accesses are located on the side street, are located an appropriate distance from Main Street (15m in excess of the minimum requirement of the City's Private Approach By-law), and the eastern driveway is not anticipated to carry high traffic volumes. In addition, as shown by the projected future traffic and the cross section/posted speed limit of 30km/hr, des Oblats Avenue is a low volume and low speed roadway. Based on the foregoing, the proposed spacing of 9m between the proposed accesses is considered sufficient and a waiver to the private approach by-law is recommended.

- A clear throat length of 5m is provided within the surface parking lot. This clear throat length is sufficient to accommodate one vehicle in queue entering the site. The driveway to the surface parking lot is not anticipated to carry high traffic volumes and des Oblats Avenue is a low volume and low speed roadway. Additionally, transit only travels westbound along des Oblats Avenue, and the majority of traffic entering the surface parking lot will arrive from the west (i.e. to/from Main Street). Based on the foregoing, spillover of queued vehicles onto des Oblats Avenue is anticipated to be infrequent, particularly for westbound left turning vehicles, and the 5m clear throat length is considered sufficient.

- The proposed development conforms to the City of Ottawa's Transportation Demand Management (TDM) principles by providing easy access to local pedestrian, bicycle and transit systems. The proponent agrees to implement the following supplementary TDM measures to improve non-auto modal shares during peak hours:
    - Display local area maps with walking/cycling access routes and key destinations at major entrances;
    - Display relevant transit schedules and route maps at entrances; and
    - Unbundle parking cost from monthly rent.

1.0 INTRODUCTION

This Transportation Impact Assessment (TIA) has been prepared in support of Zoning By-law Amendment and Site Plan Control applications for 10 des Oblats Avenue. The subject site forms part of the Greystone Village subdivision and is located in the southeast corner of the Main Street/ des Oblats Avenue intersection. The subject site is surrounded by the following:

- des Oblats Avenue and mid/high rise residential to the north;
- Future Grand Allée parkland/open space to the south;
- Future Deschâtelets Avenue and townhouse dwellings to the east; and
- Immaculata High School and Low rise/single detached dwellings to the west.

An aerial photo of the subject site is provided in **Figure 1**. A concept plan for the Greystone Village subdivision is included in **Appendix A**.

Figure 1: Aerial Photo of Subject Site

2.0 PROPOSED DEVELOPMENT

The proposed development consists of a nine-storey rental apartment building and a six-storey mixed-use building. The proposed nine-storey rental apartment building will contain 119 units and approximately 2,000ft^2 gross floor area (GFA) of commercial. The proposed six-storey mixed-use building will contain eight commercial units with a total of approximately 18,000ft^2 GFA and 125 rental apartment units. A surface parking lot containing 26 parking spaces and an underground parking

garage containing 270 parking spaces are proposed with access on des Oblats Avenue. A site plan is included in **Appendix B**.

3.0 SCREENING AND SCOPING

3.1 Screening Form

The City's 2017 TIA Guidelines identify three triggers for completing a TIA report, including trip generation, location, and safety. The criteria for each trigger are outlined in the City's TIA Screening Form.

The subject application satisfies the trip generation, location and safety triggers for completing a TIA study. A copy of the TIA Screening Form is included in **Appendix C**. As described in the following sections, the trips generated by the proposed development are generally consistent with the assumed development in the Greystone Village Community Transportation Study (CTS), dated January 2016. As such, the intersection analysis presented in the Greystone Village CTS is representative of the projected intersection operations following the build-out of the subject site and the TIA report will address the Design Review component and the Transportation Demand Management (TDM) component of the guidelines only.

3.2 Existing and Planned Conditions

As identified above, the subject site forms part of the Greystone Village subdivision. A Community Transportation Study (CTS) was prepared by Novatech in January 2015 in support of the Greystone Village Draft Plan. This CTS provided a review of the existing and planned conditions in the vicinity of the subdivision, and performed intersection analysis for the following intersections:

- Main Street/des Oblats Avenue
- Main Street/Hazel Street
- Main Street/Clegg Street
- Clegg Street/Access

As the Greystone Village CTS was prepared within the last five years, the existing and planned conditions have not changed since the submission. As such, a further review of the existing and planned conditions in the vicinity of the subject site has not been completed as part of this report.

3.3 Study Area and Time Periods

The study area for this report will include the proposed site accesses, the Domicile access and des Oblats Avenue. The selected time periods for the analysis are the weekday AM and PM peak hours, as they represent the 'worst case' combination of site generated traffic and adjacent street traffic. The proposed development is anticipated to be constructed in 2021.

3.4 Exemptions Review

As described in the following forecasting section, the trips generated by the proposed development are generally consistent with the assumed development in the Greystone Village CTS. The intersection analysis and transit analysis presented in the Greystone Village CTS is representative of the projected operations following the build-out of the subject site. As such Module 4.7 (Transit)

and Module 4.9 (Network Intersections) are omitted from the required analysis. As the projected traffic volumes along des Oblats Avenue will not exceed the assumed roadway capacity of 400vphpl for a local roadway (consistent with the strategic long range planning model), Module 4.6 (Neighbourhood Traffic Management) is exempt from the required analysis. As the proposed development is not anticipated to generate 200 person trips in excess of the equivalent volumes permitted by the established zoning for this site, Module 4.8 (Network Concept) is exempt from the required analysis. The following modules are included in the TIA report:

- Module 4.1 – Development Design
- Module 4.2 – Parking
- Module 4.3 – Boundary Streets
- Module 4.4 – Access Intersections
- Module 4.5 – Transportation Demand Management

4.0 FORECASTING

The Greystone Village CTS assumed a development of 215 condominium units and approximately 37,000ft^2 GFA of specialty retail for the subject site. The site plan has now been revised to include 244 rental apartment units and approximately 20,000ft^2 GFA of specialty retail. This equates to an increase of approximately 30 residential units and a decrease of approximately 17,000ft^2 GFA of commercial retail, compared to the assumed development in the Greystone Village CTS.

The person trips generated by the proposed development during peak periods is based on the number of apartment units and the retail GFA. As some residents may own a vehicle for off-peak use and choose different modes of transportation for peak hour trips, the proposed parking does not correspond to the overall peak hour vehicular travel demand by the site. The person trips generated by the proposed development, compared to the assumed trip generation for the subject site in the CTS is summarized below.

Table 1: Person Trip Generation

Land Use	ITE Code	Units/ GFA	AM Peak (PPH[1])			PM Peak (PPH)		
			IN	OUT	TOTAL	IN	OUT	TOTAL
Greystone Village CTS								
Condo	230	215	23	112	135	107	54	161
Specialty Retail	826	37,000 ft^2	16	20	36	62	79	141
		Total	**39**	**132**	**171**	**169**	**133**	**302**
Proposed Development								
Apartment	220	244	34	141	175	139	77	216
Specialty Retail	826	20,000 ft^2	9	11	20	34	43	77
		Total	**43**	**152**	**195**	**173**	**120**	**293**
		Difference	**4**	**20**	**24**	**4**	**-13**	**-9**

1) PPH = Persons Per Hour – calculated using an ITE Trip to Person Trip factor of 1.42, consistent with the Greystone Village CTS

Based on the foregoing, the proposed development is anticipated to generate an additional 24 person trips during the AM peak hour and a reduction of 9 person trips during the PM peak hour compared to the assumed development in the Greystone Village CTS.

The modal shares for the proposed development are anticipated to be consistent with the modal shares proposed in the Greystone Village CTS. The projected person trips by modal share, compared to the assumed trip generation for the subject site in the CTS is summarized below.

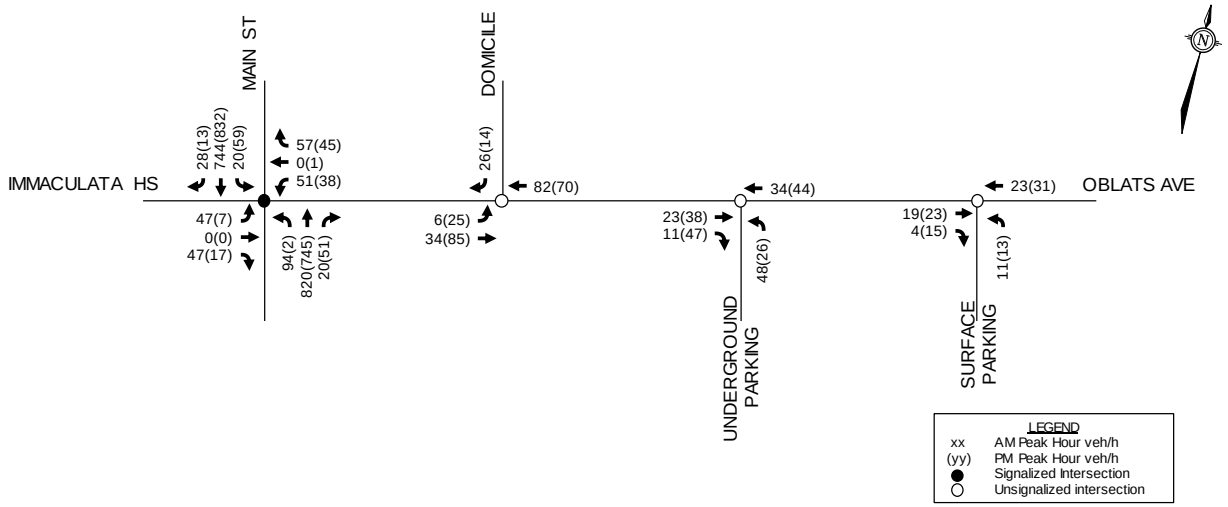
Table 2: Person Trips by Modal Share

Travel Mode	Modal Share	AM Peak			PM Peak		
		IN	OUT	TOTAL	IN	OUT	TOTAL
Greystone Village CTS							
Condo Person Trips		23	112	135	107	54	161
Auto Driver	40%	9	45	54	43	22	65
Auto Passenger	10%	2	11	13	11	5	16
Transit	25%	6	28	34	27	13	40
Non-Auto	25%	6	28	34	26	14	40
Retail Person Trips		16	20	36	62	79	141
Auto Driver	20%	4	4	8	12	16	28
Auto Passenger	10%	2	2	4	6	8	14
Transit	10%	1	2	3	6	8	14
Non-Auto	60%	9	12	21	38	47	85
Auto Driver (Total)		**13**	**49**	**62**	**55**	**38**	**93**
Auto Passenger (Total)		**4**	**13**	**17**	**17**	**13**	**30**
Transit (Total)		**7**	**30**	**37**	**33**	**21**	**54**
Non-Auto (Total)		**15**	**40**	**55**	**64**	**61**	**125**
Proposed Development							
Apartment Person Trips		34	141	175	139	77	216
Auto Driver	40%	13	57	70	55	31	86
Auto Passenger	10%	3	14	17	14	8	22
Transit	25%	9	35	44	35	19	54
Non-Auto	25%	9	35	44	35	19	54
Retail Person Trips		9	11	20	34	43	77
Auto Driver	20%	2	2	4	7	8	15
Auto Passenger	10%	1	1	2	4	4	8
Transit	10%	1	1	2	3	5	8
Non-Auto	60%	5	7	12	20	26	46
Auto Driver (Total)		**15**	**59**	**74**	**62**	**39**	**101**
Auto Passenger (Total)		**4**	**15**	**19**	**18**	**12**	**30**
Transit (Total)		**10**	**36**	**46**	**38**	**24**	**62**
Non-Auto (Total)		**14**	**42**	**56**	**55**	**45**	**100**
Auto Driver (Difference)		2	10	12	7	1	8
Auto Pass. (Difference)		0	2	2	1	-1	0
Transit (Difference)		3	6	9	5	3	8
Non-Auto (Difference)		-1	2	1	-9	-16	-25

Based on the foregoing, the proposed development is anticipated to generate an additional 12 vehicle trips during the AM peak hour and 8 vehicle trips during the PM peak hour. In general, background traffic and the assignment of the additional vehicle trips generated by the proposed development will be consistent with the Greystone Village CTS. The revised 2026 total traffic

volumes at the accesses and the Main Street/des Oblats Avenue intersection are shown in **Figure 2**.

Figure 2: Revised 2026 Total Traffic Volumes



The additional trips generated by the proposed development will have no significant impact on the operating conditions identified in the Greystone Village CTS.

5.0 ANALYSIS

5.1 Development Design

Pedestrian facilities will be provided between all building entrances and the sidewalks along Main Street, des Oblats Avenue and Deschâtelets Avenue as well as the Grand Allée.

OC Transpo bus stops #6809 and #7636 are located in the northwest and southeast corners of the des Oblats Avenue/Main Street intersection. These bus stops serve OC Transpo Route 5 and Route 16. OC Transpo Route 5 is a local route that travels between the Rideau Centre and the Billings Bridge transit station. OC Transpo Route 16 is a local route that travels between St. Paul University and Britannia Park. Both OC Transpo Route 5 and Route 16 provide all day service, seven days a week. As development progresses within the Greystone Village subdivision, OC Transpo Route 16 will travel east on Hazel Street, north on Deschâtelets Avenue, and west on des Oblats Avenue. A new bus stop will be located in the southeast corner of the des Oblats Avenue/Deschâtelets Avenue intersection. The existing bus shelter at OC Transpo bus stop #7636 is proposed to be relocated approximately 6m to the south to improve sight lines to the main leasable unit in the corner of the Main Street/des Oblats Avenue intersection. The relocation of the bus shelter will also improve pedestrian circulation near this intersection by reducing conflicts between pedestrians destined to the retail units and pedestrians waiting for the bus.

OC Transpo staff have advised the following transit service will be provided following the introduction of Light Rail Transit in the City of Ottawa.

- A new transit Route 55 will be introduced with regular service (15 to 20 minute headways), and will replace the existing Route 101. The new route will start in the west end, connect to

the three Ottawa Hospitals, as well as Greenfield Avenue, Mann Avenue, Lees Transit Station, Lees Avenue, and Main Street/Smyth Road to Elmvale Aces.
- Route 5 will not change.
- The Main Street section of Route 16 will not change.

Bike surface parking will be provided near the main entrance at the northwest corner of Building 2A, as shown on the site plan attached in **Appendix B**. Underground bicycle parking is described further in Section 5.2.

A review of the Transportation Demand Management (TDM) – *Supportive Development Design and Infrastructure Checklist* has been conducted. A copy of the TDM checklist is included in **Appendix D**. All required TDM-supportive design and infrastructure measures in the TDM checklist are met.

On-street lay-bys are proposed along des Oblats Avenue adjacent to the subject site, and will require RMA approval. The proposed lay-bys along Deschâtelets Avenue were previously approved as part of the Greystone Village CTS.

The majority of deliveries will be performed by medium single-unit trucks (MSU) and will occur on-site in the surface parking lot. Deliveries by any larger vehicles such as heavy single-unit (HSU) trucks will be performed in the on-street lay-bys.

5.2 Parking

The subject site is located in Area B of Schedule 1 and Area Y of Schedule 1A to the City of Ottawa's *Zoning By-law* (ZBL). Minimum vehicular and bicycle parking rates for the proposed development are identified in the ZBL, and are summarized in the following table. As the commercial component of the ground floor is split between eight units, where only one exceeds 500 m^2, the vehicular parking rates only apply to the larger unit.

Table 3: Parking Requirement

Land Use	Rate	Units/GFA		Requirement	
		Building 2A	Building 2B	Building 2A	Building 2B
Vehicle Parking					
Apartment	0.5 spaces per unit in excess of 12 (Resident)	125	119	57	54
	0.1 spaces per unit in excess of 12 (Visitor)			11	11
Commercial	1.25 spaces per 100m^2 of GFA	790 m^2	-	10	-
			Total	**78**	**65**
			Provided	**167**	**129**
Bicycle Parking					
Apartment	0.5 spaces per unit	125	119	63	60
Commercial	1 spaces per 250m^2 of GFA	1,680m^2	-	7	-
			Total	**70**	**60**
			Provided	**70**	**60**

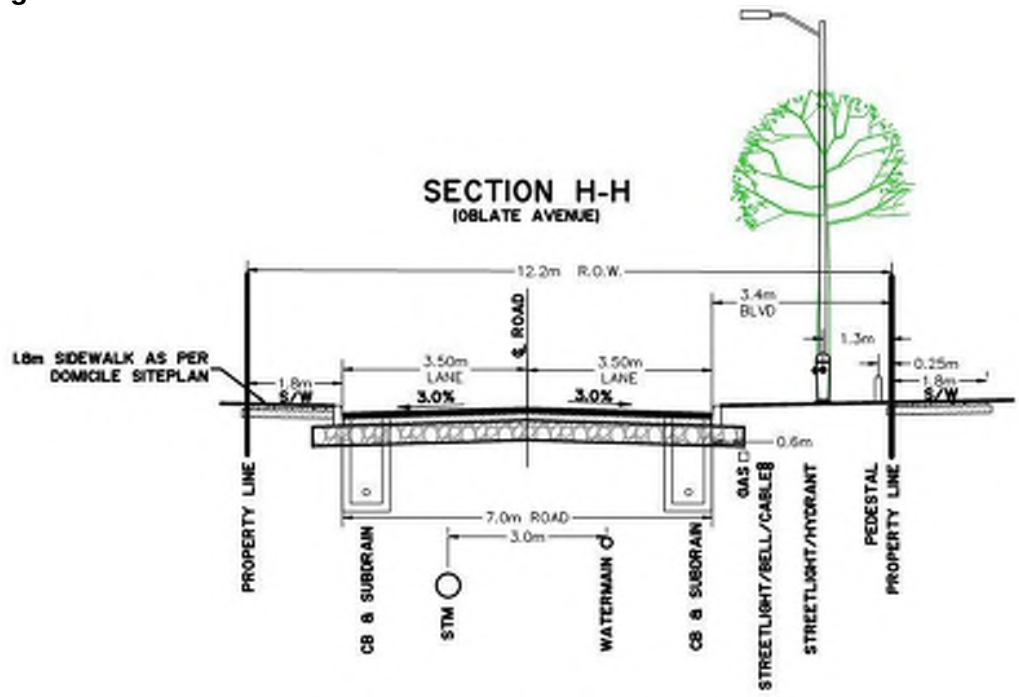
The proposed vehicular parking exceeds the minimum requirement identified in the ZBL. The proposed vehicular parking for the residential component (excluding visitor parking) equates to one vehicle parking space per unit, and will be charged separately from the monthly rent. As some residents may own a vehicle for off-peak use and choose different modes for peak hour trips, the proposed parking does not correspond to the overall peak hour vehicular travel demand by the site.

The bicycle parking provided for the proposed development meets the minimum requirement identified in the ZBL.

5.3 Boundary Streets

This section provides a review of the boundary streets using complete streets principles. The Multi-Modal Level of Service (MMLOS) guidelines produced by IBI Group in October 2015 were used to evaluate the LOS of all roadway segments for each mode of transportation. Schedule B of the City of Ottawa's Official Plan indicates des Oblats Avenue is located in the General Urban Area. The cross section for des Oblats Avenue is shown in **Figure 3**.

Figure 3: Cross Section – des Oblats Avenue



5.3.1 Pedestrian Level of Service (PLOS)

Exhibit 4 of the MMLOS guidelines has been used to evaluate the existing segment PLOS within the project limits. Exhibit 22 of the MMLOS guidelines suggests a target PLOS C for collector roadways in the General Urban Area. The results of the segment PLOS analysis is summarized in the following table.

Table 4: PLOS Segment Analysis

Sidewalk Width	Boulevard Width	Motor Vehicle AADT	Presence of On-Street Parking	Operating Speed[1]	Segment PLOS
des Oblats Avenue (North Side)					
1.8m	-	≤3000 vpd	No	30km/hr	A
des Oblats Avenue (South Side)					
1.8m	3.4m	≤3000 vpd	No	30km/hr	A

1. Operating Speed based on Posted Speed Limit

5.3.2 Bicycle Level of Service (BLOS)

Exhibit 11 of the MMLOS guidelines has been used to evaluate the existing segment BLOS along des Oblats Avenue. Exhibit 22 of the MMLOS guidelines suggests a target BLOS B for local bicycle routes in the General Urban Area.

Des Oblats Avenue has a posted speed limit of 30km/hr and a two-lane undivided urban cross section with mixed traffic lanes. This results in a BLOS B along des Oblats Avenue, meeting the desired BLOS.

5.3.3 Transit Level of Service (TLOS)

Des Oblats Avenue is a local roadway that is not identified as not part of the City's Rapid Transit and Transit Priority Network in the TMP. As such, Exhibit 22 of the MMLOS guidelines does not suggest a target TLOS for des Oblats Avenue. Although not part of the rapid transit network, local transit service will be provided along des Oblats Avenue and Exhibit 15 of the MMLOS guidelines has been used to determine the TLOS. Des Oblats Avenue has mixed traffic lanes with limited driveway friction, resulting in a TLOS D.

5.3.4 Truck Level of Service (TkLOS)

Exhibit 20 of the MMLOS guidelines has been used to evaluate the existing segment TkLOS along des Oblats Avenue. Exhibit 22 of the MMLOS does not identify a target TkLOS for local roadways. Based on a two-lane cross section and a curbside lane width of 3.5m, Exhibit 20 identifies a TkLOS C along des Oblats Avenue.

5.3.5 Auto LOS

Exhibit 22 of the MMLOS guidelines suggests a target Auto LOS D in the General Urban Area. The lane capacity along des Oblats Avenue is estimated at 400 vehicles per hour per lane based on the City's guidelines for the TRANS long-range transportation model. Based on the projected 2026 total traffic volumes presented above, the peak directional traffic volumes results in an Auto LOS A.

5.3.6 MMLOS Summary

A summary of the results of the segment MMLOS analysis is provided in the following table.

Table 5: Segment MMLOS Summary

Segment		des Oblats Avenue
Pedestrian	Sidewalk Width	1.8m
	Boulevard Width	0m (North)/3.4m (South)
	AADT	≤3000 vpd
	On-Street Parking	No
	Operating Speed	30km/hr
	Level of Service	A
	Target	**C**
Cyclist	Number of Travel Lanes (Per Direction)	1
	Type of Bikeway	Mixed Traffic
	Operating Speed	30km/hr
	Level of Service	B
	Target	**B**
Transit	Facility Type	Mixed Traffic
	Friction/Congestion/Incident Potential	Limited
	Level of Service	D
	Target	**-**
Truck	Lane Width	3.5m
	Travel Lanes (Per Direction)	1
	Level of Service	C
	Target	**-**
Auto	Level of Service	A
	Target	**D**

Based on the foregoing, des Oblats Avenue meets the target PLOS, BLOS and Auto LOS for the General Urban Area.

5.4 Access Design

The proposed development will be served by two accesses on des Oblats Avenue. The western access will lead to an underground parking garage containing 270 parking spaces. This access will be 6.7m in width and will be located approximately 60m from the Main Street ROW limit. The grade of this underground parking ramp does not exceed 6% for a distance of 9m within the property. The eastern access will lead to a surface parking lot containing 26 parking spaces. This access will be 6.7m in width and located approximately 57m west of the Deschatelets Avenue ROW. The curb-to-curb distance between the two accesses is 9m measured at the property line.

The City of Ottawa Private Approach By-law identifies where a property abuts on or is within 46m of an arterial roadway, a minimum distance of 45m is required between any private approach for a residential development leading to 200 to 299 parking spaces and the nearest intersecting streetline as well as any other access to the same property. If the western property limit was 47m east of Main Street, the minimum driveway spacing identified in the by-law would be reduced to 9m and the proposed spacing would conform with the By-law requirement. The City of Ottawa's Zoning By-law

identifies the minimum width of 6.0m for a double traffic lane driveway leading to an underground parking garage, and a maximum width of 6.7m. The proposed driveway locations (with respect to the adjacent ROW), width and grading meet the minimum criteria identified in the City's Private Approach By-law and Zoning By-law. A waiver to the private approach by-law is required for the spacing between the driveways.

The proposed accesses are located on the side street, are located an appropriate distance from Main Street (15m in excess of the minimum requirement of the City's Private Approach By-law), and the eastern driveway is not anticipated to carry high traffic volumes. In addition, as shown by the projected future traffic and the cross section/posted speed limit of 30km/hr, des Oblats Avenue is a low volume and low speed roadway. Based on the foregoing, the proposed spacing of 9m between the proposed accesses is considered sufficient and a waiver to the private approach by-law is recommended.

As identified by City staff during the pre-consultation meeting, des Oblats Avenue carries transit and acts as a collector roadway. TAC suggests a minimum clear throat length of 8m for driveways located along collector roadways serving commercial developments with less than 25,000m^2 GFA. The intent of the clear throat length is to provide a sufficient distance between the roadway and an on-site conflict to avoid a spillover of queued vehicles onto the roadway.

A clear throat length of 5m is provided within the surface parking lot. This clear throat length is sufficient to accommodate one vehicle in queue entering the site. As identified above, the driveway to the surface parking lot is not anticipated to carry high traffic volumes and des Oblats Avenue is a low volume and low speed roadway. Additionally, transit only travels westbound along des Oblats Avenue, and the majority of traffic entering the surface parking lot will arrive from the west (i.e. to/from Main Street). Based on the foregoing, spillover of queued vehicles onto des Oblats Avenue is anticipated to be infrequent, particularly for westbound left turning vehicles, and the 5m clear throat length is considered sufficient.

5.5 Transportation Demand Management

The proposed development conforms to the City of Ottawa's Transportation Demand Management (TDM) principles by providing easy access to local pedestrian, bicycle and transit systems. The proponent is engaged with Vrtucar to provide a car share facility at the Terraces of Greystone located along De Mazenod Avenue. The Vrtucar space will be located along Philosopher Private, south of the Terraces of Greystone. Vrtucar is currently provided in two spaces on the south side of the Grand Allée. The proponent has agreed that the Greystone Village subdivision will be included in the catchment area when Vrtucar enrolls their program where cars can be parked on any public street where there is a legal parking spot.

A review of the City of Ottawa's *TDM Measures Checklist* for the residential development was reviewed with the proponent, and is provided in **Appendix D**. The proponent agrees to implement the following supplementary TDM measures from the City's TDM Measures Checklist

- Display local area maps with walking/cycling access routes and key destinations at major entrances;
- Display relevant transit schedules and route maps at entrances; and
- Unbundle parking cost from monthly rent.

The proposed development will provide a total of 297 parking spaces for the proposed development. As described above, the proposed vehicular parking for the residential component (excluding visitor parking) equates to one vehicle parking space per unit, and will be charged separately from the monthly rent. Some residents may own a vehicle for off-peak use and choose different modes for peak hour trips. The aforementioned TDM measures are anticipated to improve non-auto modal shares during peak hours.

It is anticipated that each of the retail units will have less than 60 employees on-site at any given time during the day. As such, a review of the *TDM Measures Checklist* is not required for the retail component.

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the foregoing, the conclusions and recommendations of this TIA can be summarized as follows:

- The person trips generated by the proposed development during peak periods is based on the number of apartment units and the retail GFA. As some residents may own a vehicle for off-peak use and choose different modes of transportation for peak hour trips, the proposed parking does not correspond to the overall peak hour vehicular travel demand by the site.

- The additional trips generated by the proposed development will have no significant impact on the operating conditions identified in the Greystone Village CTS.

- Pedestrian facilities will be provided between all building entrances the sidewalks along Main Street, des Oblats Avenue and Deschâtelets Avenue as well as the Grand Allée.

- The existing bus shelter at OC Transpo bus stop #7636 is proposed to be relocated approximately 6m to the south to improve sight lines to the main leasable unit in the corner of the Main Street/des Oblats Avenue intersection. The relocation of the bus shelter will also improve pedestrian circulation near this intersection by reducing conflicts between pedestrians destined to the retail units and pedestrians waiting for the bus.

- As development progresses within the Greystone Village subdivision, OC Transpo Route 16 will travel east on Hazel Street, north on Deschâtelets Avenue, and west on des Oblats Avenue. A new bus stop will be located in the southeast corner of the des Oblats Avenue/Deschâtelets Avenue intersection.

- OC Transpo staff have advised that a new transit Route 55 will be introduced along Main Street following the implementation of Light Rail Transit in the City of Ottawa.

- All required TDM-supportive design and infrastructure measures in the TDM – *Supportive Development Design and Infrastructure Checklist* are met.

- On-street lay-bys are proposed along des Oblats Avenue adjacent to the subject site, and will require RMA approval.

- The majority of deliveries will be performed by medium single-unit trucks (MSU) and will occur on-site in the surface parking lot. Deliveries by any larger vehicles such as heavy single-unit (HSU) trucks will be performed in the on-street lay-bys.

- The proposed vehicular parking exceeds the minimum requirement identified in the ZBL. The proposed vehicular parking for the residential component (excluding visitor parking) equates to one vehicle parking space per unit, and will be charged separately from the monthly rent.

- The bicycle parking provided for the proposed development meets the minimum requirement identified in the ZBL.

- Des Oblats Avenue meets the target PLOS, BLOS and Auto LOS for the General Urban Area.

- The proposed development will be served by two accesses on des Oblats Avenue. The western access will lead to the underground parking garage containing 270 parking spaces. The eastern access will lead to a surface parking lot containing 26 parking spaces.

- The proposed driveway locations (with respect to the adjacent right-of-way), width and grading meet the minimum criteria identified in the City's Private Approach By-law and Zoning By-law. A waiver to the private approach by-law is required for the spacing between the driveways.

- The proposed accesses are located on the side street, are located an appropriate distance from Main Street (15m in excess of the minimum requirement of the City's Private Approach By-law), and the eastern driveway is not anticipated to carry high traffic volumes. In addition, as shown by the projected future traffic and the cross section/posted speed limit of 30km/hr, des Oblats Avenue is a low volume and low speed roadway. Based on the foregoing, the proposed spacing of 9m between the proposed accesses is considered sufficient and a waiver to the private approach by-law is recommended.

- A clear throat length of 5m is provided within the surface parking lot. This clear throat length is sufficient to accommodate one vehicle in queue entering the site. The driveway to the surface parking lot is not anticipated to carry high traffic volumes and des Oblats Avenue is a low volume and low speed roadway. Additionally, transit only travels westbound along des Oblats Avenue, and the majority of traffic entering the surface parking lot will arrive from the west (i.e. to/from Main Street). Based on the foregoing, spillover of queued vehicles onto des Oblats Avenue is anticipated to be infrequent, particularly for westbound left turning vehicles, and the 5m clear throat length is considered sufficient.

- The proposed development conforms to the City of Ottawa's Transportation Demand Management (TDM) principles by providing easy access to local pedestrian, bicycle and transit systems. The proponent agrees to implement the following supplementary TDM measures to improve non-auto modal shares during peak hours:
    - Display local area maps with walking/cycling access routes and key destinations at major entrances;
    - Display relevant transit schedules and route maps at entrances; and
    - Unbundle parking cost from monthly rent.

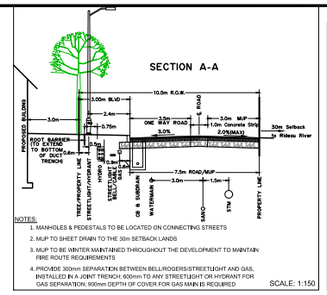
NOVATECH

Prepared by:

Brad Byvelds, P. Eng.
Project Coordinator | Transportation/Traffic

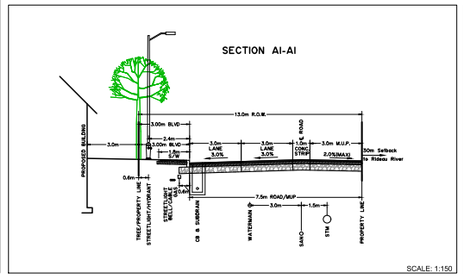
APPENDIX A

Greystone Village Concept Plan



NOTES:
1. MANHOLES & PEDESTALS TO BE LOCATED ON CONNECTING STREETS
2. MUP TO SHEET DRAIN TO THE 30m SETBACK LANDS
3. MUP TO BE WINTER MAINTAINED THROUGHOUT THE DEVELOPMENT TO MAINTAIN FIRE ROUTE REQUIREMENTS
4. PROVIDE 300mm SEPARATION BETWEEN BELL/ROGERS/STREETLIGHT AND GAS, INSTALLED IN A JOINT TRENCH; 600mm TO ANY STREETLIGHT OR HYDRANT FOR GAS SEPARATION; 900mm DEPTH OF COVER FOR GAS MAIN IS REQUIRED

SCALE: 1:150



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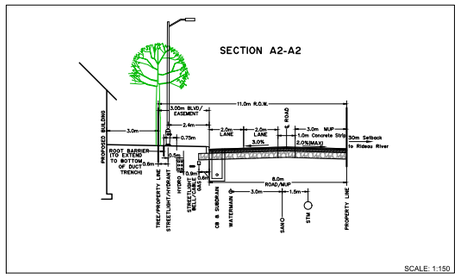

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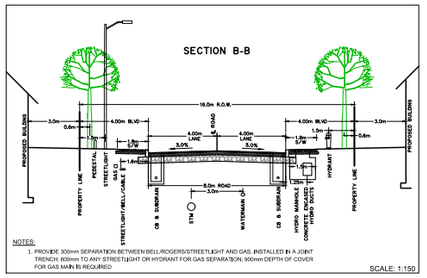

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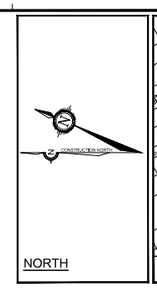

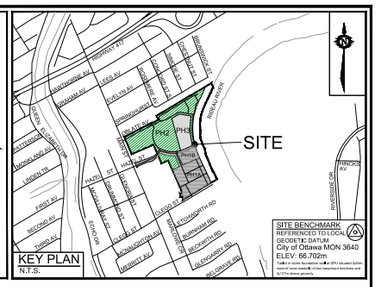

NOTES:
1. NOT PART OF PHASE 1
2. PROVIDE 300mm SEPARATION BETWEEN BELL/ROGERS/STREETLIGHT AND GAS, INSTALLED IN A JOINT TRENCH; 600mm TO ANY STREETLIGHT OR HYDRANT FOR GAS SEPARATION; 900mm DEPTH OF COVER FOR GAS MAINS REQUIRED

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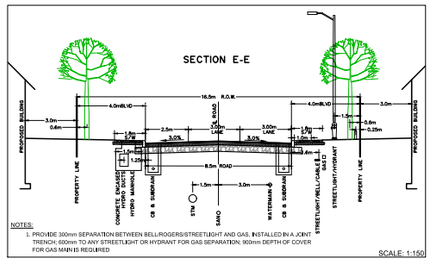

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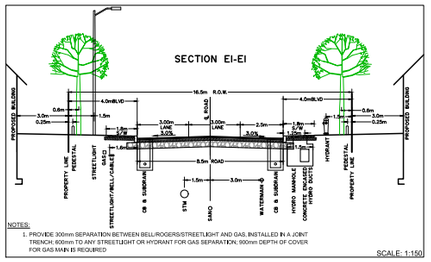

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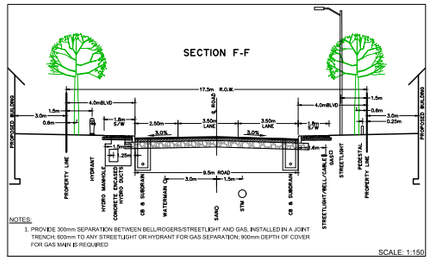

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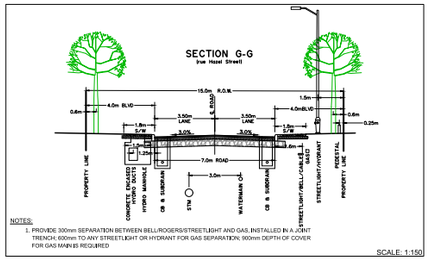

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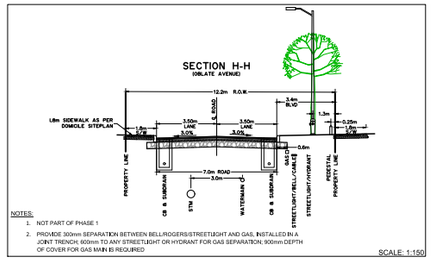

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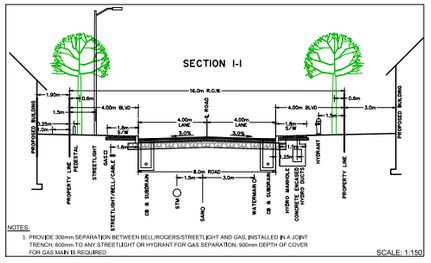

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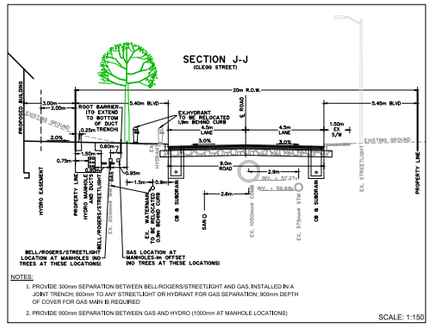

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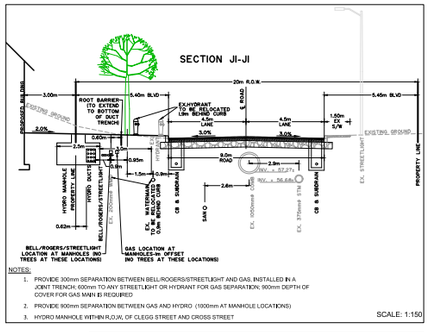
2. PROVIDE 900mm SEPARATION BETWEEN GAS AND HYDRO (1000mm AT MANHOLE LOCATIONS)

SCALE: 1:150



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2. PROVIDE 900mm SEPARATION BETWEEN GAS AND HYDRO (1000mm AT MANHOLE LOCATIONS)
3. HYDRO MANHOLE WITHIN R.O.W. OF CLEGG STREET AND CROSS STREET

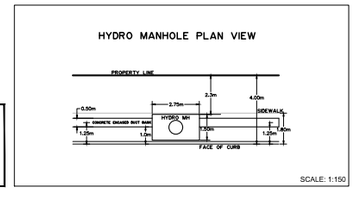
SCALE: 1:150

Reviewed By Development Review Branch

Signed: _____

Date: _____, 2016

Plan Number: _____



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D07-16-15-0001 PHASE 2 AND 3

NOTE:
THE POSITION OF ALL POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

No.	REVISION	DATE	BY
7.	ISSUED FOR INFORMATION	OCT 30/17	JAG
6.	ISSUED FOR CONSTRUCTION	JUL 6/17	JAG
5.	FOR INFORMATION PURPOSES ONLY	JUN 8/17	MSP
4.	REVISED AS PER CITY COMMENTS AND ISSUED FOR E.C.A.	MAY 26/17	JAG
3.	ISSUED FOR TENDER	APR 19/17	JAG
2.	RE-ISSUED AS PER CITY COMMENTS	MAR 8/17	JAG
1.	ISSUED FOR CITY OF OTTAWA REVIEW	NOV 21/16	JAG

SCALE 1:1000

1:1000
0 10 20 30 40

DESIGN
CHECKED
DRAWN:
CHECKED
APPROVED

FOR REVIEW ONLY

REGISTERED PROFESSIONAL ENGINEER J.G. RIDDELL PROVINCE OF ONTARIO

NOVATECH
Engineers, Planners & Landscape Architects
Suite 200, 240 Michael Cowpland Drive
Ottawa, Ontario, Canada K2M 1P6
Telephone (613) 254-9643
Facsimile (613) 254-5867
Website www.novatech-eng.com

CITY of OTTAWA
GREYSTONE VILLAGE
OLD OTTAWA EAST - 175 MAIN STREET

DRAWING NAME
CONCEPT PLAN WITH ROAD CROSS SECTIONS PHASE 2 AND 3

PROJECT No. 114025-00
REV REV # 7
DRAWING No. 114025-BP-B

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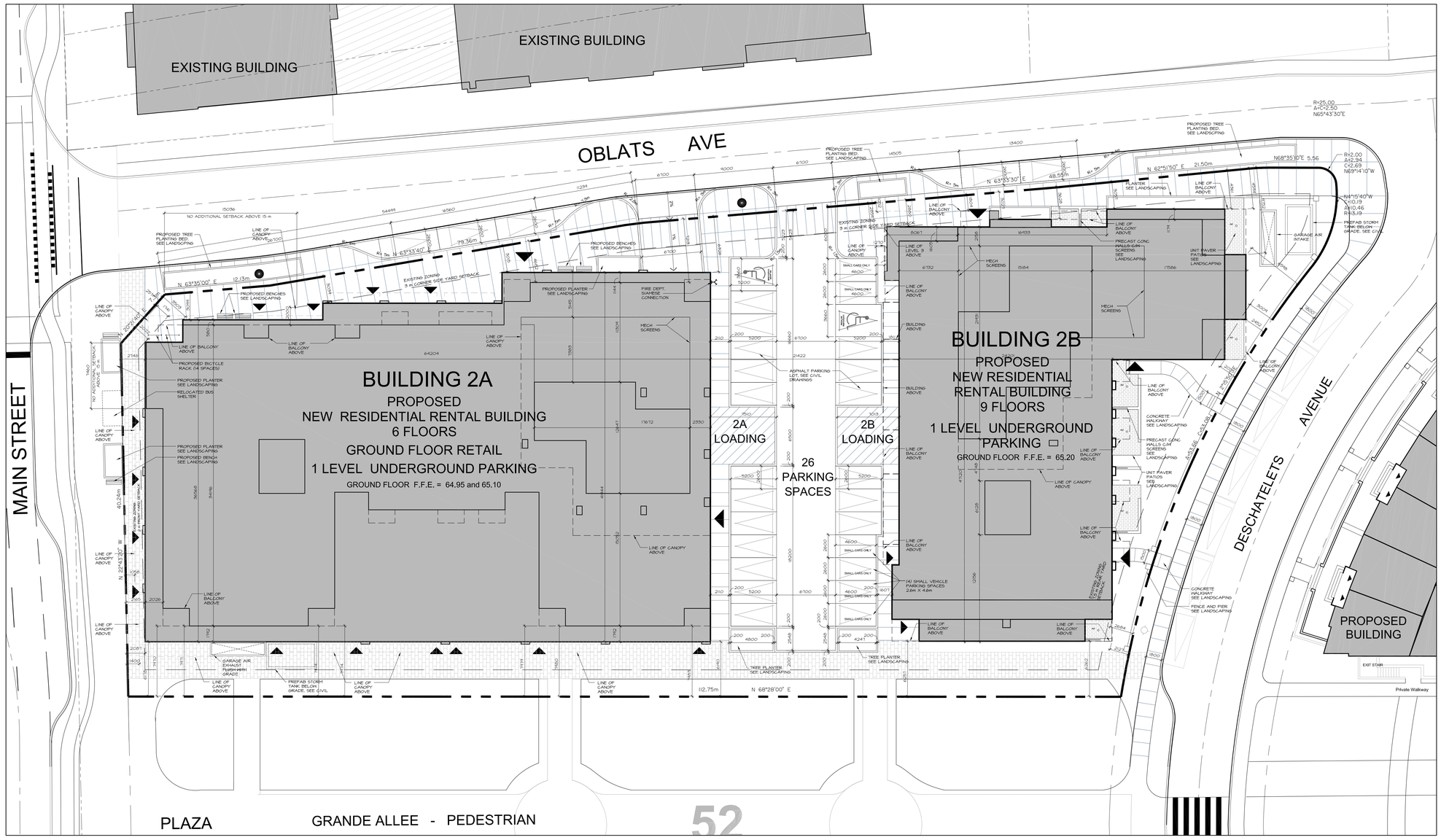
APPENDIX B

Proposed Site Plan



BUILDING 2A

ZONING SUMMARY:	REQUIRED	PROVIDED
VEHICULAR PARKING:		
RESIDENTIAL PARKING 125 units (-first 12 units) x 0.5 = 57 spaces)	57 spaces	125 spaces
VISITOR PARKING (125 units (-first 12 units) x 0.1 = 11 spaces)	11 spaces	16 spaces (inside) 16 spaces (outside)
RETAIL 1.25 / 100 sq.m (784 sq.m / 100 = 16.8 X 1.25)	10 spaces	10 spaces (outside)
	78 spaces	167 spaces
BICYCLE PARKING		
RESIDENTIAL (125 units x 0.5 = 63 spaces)	63 spaces	63 spaces
RETAIL (1/ 250 sq.m.) (1,674 sq.m. / 250 = 7 spaces)	7 spaces	7 spaces
AMENITY		
(125 units x 6 sq.m/unit = 750 sq.m)	750 sq.m	1,684 sq.m
(Communal, 50% of Req'd = 375 sq.m)	375 sq.m	244 sq.m Indoor 684 sq.m Outdoor Roof Terrace

BUILDING SUMMARY:		
RENTAL UNITS		125
	GROSS FLOOR AREA	NET FLOOR AREA
MECH, PENT/ ROOF	2,271 sq.ft.	-
LEVELS 3-6	19,856 sq.ft.	70,412 sq.ft.
LEVEL 2	19,884 sq.ft.	17,128 sq.ft.
GROUND	21,011 sq.ft.	17,857 sq.ft. (Commercial)
	129,231 sq.ft.	106,497 sq.ft.
GARAGE P1	56, 441 sq.ft.	
GARAGE P2	56, 441 sq.ft.	
	249,113 sq.ft.	

UNIT TYPE / FLOOR	BACH.	1 BED	1 BED +DEN	2 BED	2 BED +DEN	TOTAL/ FLOOR
LEVEL 6	-	13	5	4	3	25
LEVEL 5	-	13	5	4	3	25
LEVEL 4	-	13	5	4	3	25
LEVEL 3	-	13	5	4	3	25
LEVEL 2	-	13	5	3	3	25
TOTAL	-	65	25	20	15	125

BUILDING 2 B

ZONING SUMMARY:	REQUIRED	PROVIDED
VEHICULAR PARKING:		
RESIDENTIAL PARKING (118 Units (-first 12 units) x 0.5 = 54 spaces)	54 spaces	118 spaces
VISITOR PARKING (118 Units (-first 12 units) x 0.1 = 11 spaces)	11 spaces	11 spaces (inside)
	65 spaces	129 spaces
BICYCLE PARKING		
RESIDENTIAL (118 units x 0.5 = 60 spaces)	60 spaces	60 spaces
AMENITY		
(118 units x 6 sq.m/unit = 714 sq.m)	714 sq.m	1, 298 sq.m
(Communal, 50% of Req'd = 357 sq.m)	357 sq.m	202 sq.m Indoor 338 sq.m Outdoor Roof Terrace

BUILDING SUMMARY:		
RENTAL UNITS		118
	GROSS FLOOR AREA	NET FLOOR AREA
MECH, PENT/ ROOF	2, 641 sq.ft.	-
LEVEL 9	12,748 sq.ft.	11,398 sq.ft.
LEVEL 8	14,370 sq.ft.	12,744 sq.ft.
LEVEL 7	14,370 sq.ft.	12,744 sq.ft.
LEVELS 3-6	61,268 sq.ft.	54,852 sq.ft.
LEVEL 2	14,553 sq.ft.	12,938 sq.ft.
GROUND	14,908 sq.ft.	7,190 sq.ft. (Residential) 1,302 sq.ft. (Commercial)
	134, 958 sq.ft.	113, 164 sq.ft.

UNIT TYPE / FLOOR	BACH.	1 BED	1 BED +DEN	2 BED	2 BED +DEN	TOTAL/ FLOOR
LEVEL 9	-	3	-	-	7	10
LEVEL 8	-	3	3	3	4	13
LEVEL 7	-	3	3	3	4	13
LEVEL 6	-	4	5	1	5	15
LEVEL 5	-	4	5	1	5	15
LEVEL 4	-	4	5	1	5	15
LEVEL 3	-	4	5	1	5	15
LEVEL 2	1	4	5	1	4	15
GROUND	-	2	3	1	2	8
TOTAL	1	31	34	12	41	118

PROJECT CONSULTANTS:

Developer / Owner
eQ Homes Inc.
The Regional Group of Companies Inc.
1737 Woodward Drive - 2nd Floor
Ottawa, ON K2C 0P9
voice: (613) 230-2100 fax: (613) 230-2962

Architect
Hobin Architecture Inc.
63 Pamilla Street
Ottawa, ON K1S 3K7
Contact:
Marc Thivierge
voice: (613) 238-7200 x 105 fax: (613) 235-2005
web: www.hobinarc.com

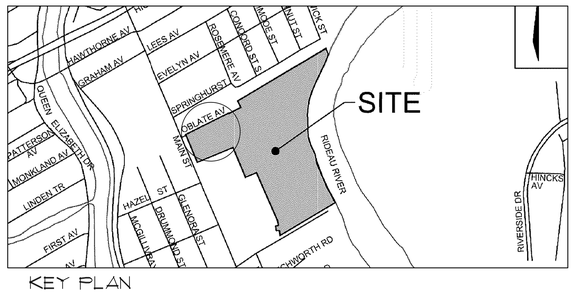
Planning
240 Michael Cowpland Drive, Suite 200
Ottawa, ON K2M 1P6
Contact:
Murray Chow
voice: (613) 254-9643 fax: (613) 254-5867

Landscape
CSW
319 McRae Ave, Suite 502
Ottawa, ON K1Z 0B9
Contact:
Jerry Corush
voice: (613) 729-4536

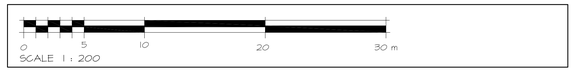
CIVIL
Novatech
240 Michael Cowpland Drive, Suite 200
Ottawa, ON K2M 1P6
Contact:
Justin Gautier
voice: (613) 254-9643 fax: (613) 254-5867

Surveyor
Annis, O'Sullivan, Vollebekk Ltd.
14 Concourse Gate, Suite 500
Ottawa, ON K2E 7S6
Contact:
Ian Watson
voice: (613) 727-0850 x 227 fax: (613) 727-1079

Geotechnical
Patterson Group Inc.
154 Colonnade Road South
Ottawa, ON K2E 7J5
Contact:
Carlos Da Silva
voice: (613) 226-7381 fax: (613) 226-6344



KEY PLAN



GRAPHIC SCALE

SURVEY INFORMATION TAKEN FROM:

PLAN OF SUBDIVISION
BLOCK 62
REGISTERED PLAN 4M-1596
CITY OF OTTAWA.

SURVEY BY ANNIS, O'SULLIVAN, VOLLEBEKK LTD.

EXISTING ZONING	TM (2301) H (20)
PROPOSED ZONING	TM (XXX)

ZONING PROVISIONS:	REQUIRED	PROVIDED
MIN LOT AREA :	NO MINIM	6,584.46 sqm.
BUILDING HEIGHT :	20 m	BLDG. A: 20 m BLDG. B: 28.3 m
MIN LOT WIDTH :	NO MINIM	N/A
FRONT YARD :	2 m (min) 3 m (max)	2.087 m 2.746 m
REAR YARD : - (Residential Use) - (Other Cases no. min.)	7.5 m	2.035 m
CORNER SIDE YARD :	3 m (min.)	2.854 m
INTERIOR SIDE YARD :	N/A	6.178 m (min) 6.251 m (max)
LANDSCAPED OPEN SPACE (30% OF LOT AREA) 6,584.46 sqm X 30% = 1,976.84 sqm	1,976.84 sqm	1,825.15 sqm (27 %)

ADDITIONAL SETBACK ABOVE 15m

BUILDING 2A

- FRONT YARD	2m	2.026 m (Except corner. No additional setback for 7.460m from corner)
- CORNER SIDE YARD	2m	6.178 m (min) (Except corner. No additional setback for 15.036m from corner)

BUILDING 2B

- CORNER SIDE YARD	2m	(No additional setback at 15m)
ADDITIONAL SETBACK ABOVE LEVEL 7 (118m) PROVIDED AS FOLLOWS:		1.17m and 1.6 m (As per Site Plan)

no.	date	revision
8	DEC 7, 2018	REISSUED FOR MINOR ZONING AMENDMENT REISSUED FOR SITE PLAN CONTROL
7	DEC 1, 2018	UPDATED BUILDING DATA 2B FOOTPRINT
6	SEPT 20,2018	UPDATED PARKING COUNT- BUILDING 2B RESIDENTIAL REDUCED TO 118 SPACES.
5	SEPT 19, 2018	4 VISITOR PARKING SPACES REVISED TO SMALL CARS 2.6m X 4.6m
4	AUG. 8, 2018	GROUND FLOOR OF BUILDING 2B RAISED TO 65.20
3	AUG. 8, 2018	UPDATED PARKING COUNT TO INCLUDE P2 GARAGE LEVEL
2	AUG. 1, 2018	ISSUED FOR PROGRESS - 30%
1	Mar. 9, 2018	ISSUED FOR MINOR ZONING AMENDMENT ISSUED FOR SITE PLAN CONTROL

It is the responsibility of the appropriate contractor to check and verify all dimensions on site and report all errors and/or omissions to the architect.

All contractors must comply with all pertinent codes and by-laws.

Do not scale drawings.

This drawing may not be used for construction until signed.

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REGIONAL

ONTARIO ASSOCIATION OF ARCHITECTS
MARC J. MOBIN
LICENCE
3049

Hobin Architecture Incorporated
63 Pamilla Street
Ottawa, Ontario
Canada K1S 3K7
T: 613-238-7200
F: 613-235-2005
E: mail@hobinarc.com
hobinarc.com

HOBIN ARCHITECTURE

BUILDING A & B

PROJECT/LOCATION:
MIXED USE DEVELOPMENT
10 OBLATS AVENUE

DRAWING TITLE:
SITE PLAN

DRAWN BY:	DATE:	SCALE:
MT	17/12/01	1:200

PROJECT: 1418.16

DRAWING NO.: A1.01

REVISION NO.:

None
None

APPENDIX C

TIA Screening Form

City of Ottawa 2017 TIA Guidelines Screening Form

1. Description of Proposed Development

Municipal Address	10 Oblate Avenue
Description of Location	Southeast corner of Main Street/Oblate Avenue
Land Use Classification	Residential and Commercial
Development Size (units)	244 Rental Units
Development Size (m^2)	Approx 18,000s.f. (1,680s.m.) GFA
Number of Accesses and Locations	Two accesses along Oblate Avenue
Phase of Development	One
Buildout Year	2021

If available, please attach a sketch of the development or site plan to this form.

2. Trip Generation Trigger

Considering the Development's Land Use type and Size (as filled out in the previous section), please refer to the Trip Generation Trigger checks below.

Land Use Type	Minimum Development Size
Single-family homes	40 units
Townhomes or apartments	90 units
Office	3,500 m^2
Industrial	5,000 m^2
Fast-food restaurant or coffee shop	100 m^2
Destination retail	1,000 m^2
Gas station or convenience market	75 m^2

** If the development has a land use type other than what is presented in the table above, estimates of person-trip generation may be made based on average trip generation characteristics represented in the current edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual.*

If the proposed development size is greater than the sizes identified above, the Trip Generation Trigger is satisfied.

3. Location Triggers

	Yes	No
Does the development propose a new driveway to a boundary street that is designated as part of the City's Transit Priority, Rapid Transit or Spine Bicycle Networks?		X
Is the development in a Design Priority Area (DPA) or Transit-oriented Development (TOD) zone?*	✓	

**DPA and TOD are identified in the City of Ottawa Official Plan (DPA in Section 2.5.1 and Schedules A and B; TOD in Annex 6). See Chapter 4 for a list of City of Ottawa Planning and Engineering documents that support the completion of TIA).*

If any of the above questions were answered with 'Yes,' the Location Trigger is satisfied.

4. Safety Triggers

	Yes	No
Are posted speed limits on a boundary street are 80 km/hr or greater?		X
Are there any horizontal/vertical curvatures on a boundary street limits sight lines at a proposed driveway?		X
Is the proposed driveway within the area of influence of an adjacent traffic signal or roundabout (i.e. within 300 m of intersection in rural conditions, or within 150 m of intersection in urban/ suburban conditions)?	✓	
Is the proposed driveway within auxiliary lanes of an intersection?		X
Does the proposed driveway make use of an existing median break that serves an existing site?		X
Is there is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development?		X
Does the development include a drive-thru facility?		X

If any of the above questions were answered with 'Yes,' the Safety Trigger is satisfied.

5. Summary

	Yes	No
Does the development satisfy the Trip Generation Trigger?	✓	
Does the development satisfy the Location Trigger?	✓	
Does the development satisfy the Safety Trigger?	✓	

If none of the triggers are satisfied, the TIA Study is complete. If one or more of the triggers is satisfied, the TIA Study must continue into the next stage (Screening and Scoping).

APPENDIX D

Transportation Demand Management Checklists

TDM-Supportive Development Design and Infrastructure Checklist:
Residential Developments (multi-family or condominium)

Legend

REQUIRED	The Official Plan or Zoning By-law provides related guidance that must be followed
BASIC	The measure is generally feasible and effective, and in most cases would benefit the development and its users
BETTER	The measure could maximize support for users of sustainable modes, and optimize development performance

		TDM-supportive design & infrastructure measures: *Residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	1.	**WALKING & CYCLING: ROUTES**	
	1.1	**Building location & access points**	
BASIC	1.1.1	Locate building close to the street, and do not locate parking areas between the street and building entrances	☑
BASIC	1.1.2	Locate building entrances in order to minimize walking distances to sidewalks and transit stops/stations	☑
BASIC	1.1.3	Locate building doors and windows to ensure visibility of pedestrians from the building, for their security and comfort	☑
	1.2	**Facilities for walking & cycling**	
REQUIRED	1.2.1	Provide convenient, direct access to stations or major stops along rapid transit routes within 600 metres; minimize walking distances from buildings to rapid transit; provide pedestrian-friendly, weather-protected (where possible) environment between rapid transit accesses and building entrances; ensure quality linkages from sidewalks through building entrances to integrated stops/stations *(see Official Plan policy 4.3.3)*	☑
REQUIRED	1.2.2	Provide safe, direct and attractive pedestrian access from public sidewalks to building entrances through such measures as: reducing distances between public sidewalks and major building entrances; providing walkways from public streets to major building entrances; within a site, providing walkways along the front of adjoining buildings, between adjacent buildings, and connecting areas where people may congregate, such as courtyards and transit stops; and providing weather protection through canopies, colonnades, and other design elements wherever possible *(see Official Plan policy 4.3.12)*	☑

		TDM-supportive design & infrastructure measures: *Residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
REQUIRED	1.2.3	Provide sidewalks of smooth, well-drained walking surfaces of contrasting materials or treatments to differentiate pedestrian areas from vehicle areas, and provide marked pedestrian crosswalks at intersection sidewalks *(see Official Plan policy 4.3.10)*	☑
REQUIRED	1.2.4	Make sidewalks and open space areas easily accessible through features such as gradual grade transition, depressed curbs at street corners and convenient access to extra-wide parking spaces and ramps *(see Official Plan policy 4.3.10)*	☑
REQUIRED	1.2.5	Include adequately spaced inter-block/street cycling and pedestrian connections to facilitate travel by active transportation. Provide links to the existing or planned network of public sidewalks, multi-use pathways and on-road cycle routes. Where public sidewalks and multi-use pathways intersect with roads, consider providing traffic control devices to give priority to cyclists and pedestrians *(see Official Plan policy 4.3.11)*	☑
BASIC	1.2.6	Provide safe, direct and attractive walking routes from building entrances to nearby transit stops	☑
BASIC	1.2.7	Ensure that walking routes to transit stops are secure, visible, lighted, shaded and wind-protected wherever possible	☑
BASIC	1.2.8	Design roads used for access or circulation by cyclists using a target operating speed of no more than 30 km/h, or provide a separated cycling facility	☒ N/A
	1.3	**Amenities for walking & cycling**	
BASIC	1.3.1	Provide lighting, landscaping and benches along walking and cycling routes between building entrances and streets, sidewalks and trails	☑
BASIC	1.3.2	Provide wayfinding signage for site access (where required, e.g. when multiple buildings or entrances exist) and egress (where warranted, such as when directions to reach transit stops/stations, trails or other common destinations are not obvious)	☒

		TDM-supportive design & infrastructure measures: *Residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	2.	**WALKING & CYCLING: END-OF-TRIP FACILITIES**	
	2.1	**Bicycle parking**	
REQUIRED	2.1.1	Provide bicycle parking in highly visible and lighted areas, sheltered from the weather wherever possible *(see Official Plan policy 4.3.6)*	☑
REQUIRED	2.1.2	Provide the number of bicycle parking spaces specified for various land uses in different parts of Ottawa; provide convenient access to main entrances or well-used areas *(see Zoning By-law Section 111)*	☑
REQUIRED	2.1.3	Ensure that bicycle parking spaces and access aisles meet minimum dimensions; that no more than 50% of spaces are vertical spaces; and that parking racks are securely anchored *(see Zoning By-law Section 111)*	☑
BASIC	2.1.4	Provide bicycle parking spaces equivalent to the expected number of resident-owned bicycles, plus the expected peak number of visitor cyclists	☒
	2.2	**Secure bicycle parking**	
REQUIRED	2.2.1	Where more than 50 bicycle parking spaces are provided for a single residential building, locate at least 25% of spaces within a building/structure, a secure area (e.g. supervised parking lot or enclosure) or bicycle lockers *(see Zoning By-law Section 111)*	☑
BETTER	2.2.2	Provide secure bicycle parking spaces equivalent to at least the number of units at condominiums or multi-family residential developments	☒
	2.3	**Bicycle repair station**	
BETTER	2.3.1	Provide a permanent bike repair station, with commonly used tools and an air pump, adjacent to the main bicycle parking area (or secure bicycle parking area, if provided)	☒
	3.	**TRANSIT**	
	3.1	**Customer amenities**	
BASIC	3.1.1	Provide shelters, lighting and benches at any on-site transit stops	☒ N/A
BASIC	3.1.2	Where the site abuts an off-site transit stop and insufficient space exists for a transit shelter in the public right-of-way, protect land for a shelter and/or install a shelter	☑ Existing bus shelter at bus stop on Main Street adjacent to the subject site.
BETTER	3.1.3	Provide a secure and comfortable interior waiting area by integrating any on-site transit stops into the building	☒ N/A

		TDM-supportive design & infrastructure measures: *Residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	4.	**RIDESHARING**	
	4.1	**Pick-up & drop-off facilities**	
BASIC	4.1.1	Provide a designated area for carpool drivers (plus taxis and ride-hailing services) to drop off or pick up passengers without using fire lanes or other no-stopping zones	☒
	5.	**CARSHARING & BIKESHARING**	
	5.1	**Carshare parking spaces**	
BETTER	5.1.1	Provide up to three carshare parking spaces in an R3, R4 or R5 Zone for specified residential uses *(see Zoning By-law Section 94)*	☒
	5.2	**Bikeshare station location**	
BETTER	5.2.1	Provide a designated bikeshare station area near a major building entrance, preferably lighted and sheltered with a direct walkway connection	☒
	6.	**PARKING**	
	6.1	**Number of parking spaces**	
REQUIRED	6.1.1	Do not provide more parking than permitted by zoning, nor less than required by zoning, unless a variance is being applied for	☑
BASIC	6.1.2	Provide parking for long-term and short-term users that is consistent with mode share targets, considering the potential for visitors to use off-site public parking	☑
BASIC	6.1.3	Where a site features more than one use, provide shared parking and reduce the cumulative number of parking spaces accordingly *(see Zoning By-law Section 104)*	☒
BETTER	6.1.4	Reduce the minimum number of parking spaces required by zoning by one space for each 13 square metres of gross floor area provided as shower rooms, change rooms, locker rooms and other facilities for cyclists in conjunction with bicycle parking *(see Zoning By-law Section 111)*	☒
	6.2	**Separate long-term & short-term parking areas**	
BETTER	6.2.1	Provide separate areas for short-term and long-term parking (using signage or physical barriers) to permit access controls and simplify enforcement (i.e. to discourage residents from parking in visitor spaces, and vice versa)	☒

TDM Measures Checklist:
Residential Developments (multi-family, condominium or subdivision)

Legend

BASIC — The measure is generally feasible and effective, and in most cases would benefit the development and its users

BETTER — The measure could maximize support for users of sustainable modes, and optimize development performance

★ — The measure is one of the most dependably effective tools to encourage the use of sustainable modes

		TDM measures: *Residential developments*	Check if proposed & add descriptions
	1.	**TDM PROGRAM MANAGEMENT**	
	1.1	**Program coordinator**	
BASIC ★	1.1.1	Designate an internal coordinator, or contract with an external coordinator	☒
	1.2	**Travel surveys**	
BETTER	1.2.1	Conduct periodic surveys to identify travel-related behaviours, attitudes, challenges and solutions, and to track progress	☒
	2.	**WALKING AND CYCLING**	
	2.1	**Information on walking/cycling routes & destinations**	
BASIC	2.1.1	Display local area maps with walking/cycling access routes and key destinations at major entrances *(multi-family, condominium)*	☑
	2.2	**Bicycle skills training**	
BETTER	2.2.1	Offer on-site cycling courses for residents, or subsidize off-site courses	☒

			TDM measures: *Residential developments*	Check if proposed & add descriptions
		3.	**TRANSIT**	
		3.1	**Transit information**	
BASIC		3.1.1	Display relevant transit schedules and route maps at entrances *(multi-family, condominium)*	☑
BETTER		3.1.2	Provide real-time arrival information display at entrances *(multi-family, condominium)*	☒
		3.2	**Transit fare incentives**	
BASIC	★	3.2.1	Offer PRESTO cards preloaded with one monthly transit pass on residence purchase/move-in, to encourage residents to use transit	☒
BETTER		3.2.2	Offer at least one year of free monthly transit passes on residence purchase/move-in	☒
		3.3	**Enhanced public transit service**	
BETTER	★	3.3.1	Contract with OC Transpo to provide early transit services until regular services are warranted by occupancy levels *(subdivision)*	☒
		3.4	**Private transit service**	
BETTER		3.4.1	Provide shuttle service for seniors homes or lifestyle communities (e.g. scheduled mall or supermarket runs)	☒
		4.	**CARSHARING & BIKESHARING**	
		4.1	**Bikeshare stations & memberships**	
BETTER		4.1.1	Contract with provider to install on-site bikeshare station (*multi-family)*	☒
BETTER		4.1.2	Provide residents with bikeshare memberships, either free or subsidized *(multi-family)*	☒
		4.2	**Carshare vehicles & memberships**	
BETTER		4.2.1	Contract with provider to install on-site carshare vehicles and promote their use by residents	☒
BETTER		4.2.2	Provide residents with carshare memberships, either free or subsidized	☒
		5.	**PARKING**	
		5.1	**Priced parking**	
BASIC	★	5.1.1	Unbundle parking cost from purchase price *(condominium)*	☒
BASIC	★	5.1.2	Unbundle parking cost from monthly rent *(multi-family)*	☑

			TDM measures: *Residential developments*	Check if proposed & add descriptions
		6.	**TDM MARKETING & COMMUNICATIONS**	
		6.1	**Multimodal travel information**	
BASIC	★	6.1.1	Provide a multimodal travel option information package to new residents	☒
		6.2	**Personalized trip planning**	
BETTER	★	6.2.1	Offer personalized trip planning to new residents	☒