

18 May 2018

OUR REF: 476088 - 01000

Hobin Architecture
63 Pamilla Street
Ottawa, ON K1S 3K7

Attention: Rheal Labelle

Dear Rheal:

**Re: 770 Brookfield Transportation Impact Assessment
Addendum #1**

1. INTRODUCTION

The Transportation Impact Assessment (TIA) for the proposed residential development located at 929 Richmond Road was submitted in December 2017. Comments have been received on the TIA from the City of Ottawa and the Site Plan has been revised. In addition, discussion regarding the inclusion of on-street parking along the south side of Brookfield Road have been on-going with the City. This Addendum #1 has been prepared to address the City's transportation comments and provide details regarding the possibility of providing on-street parking in front of the development. The revised Site Plan is included as Attachment #1.

2. CITY COMMENTS

2.1. GENERAL

Comment 1: Brookfield Road is designated as an Arterial road within the City's Official Plan with a ROW protection of 26.0 metres. The ROW limits are to be shown on all the drawings and the offset distance (13.0 metres) to be dimensioned from the existing centerline of pavement.

Response 1: Noted and the architect has been advised.

Comment 2: ROW interpretation – Land for a road widening will be taken equally from both sides of a road, measured from the centreline in existence at the time of the widening if required by the City. The centreline is a line running down the middle of a road surface, equidistant from both edges of the pavement. In determining the centreline, paved shoulders, bus lay-bys, auxiliary lanes, turning lanes and other special circumstances are not included in the road surface.

Response 2: Noted and the architect has been advised.

Comment 3: The Tactile Walking Surface Indicator (TWSI) should be provided at pedestrian crossings. Under the Integrated Accessibility Standards of the Accessibility for Ontarians with Disabilities Act, 2005, and the City of Ottawa Accessibility Design Standards, TWSI's are required for new construction and the redevelopment of elements in public spaces, such as for exterior paths of travel (e.g. sidewalks and at the top of stairs).

Response 3: Noted and the architect has been advised.

Comment 4: *The closure of an existing private approach shall reinstate the sidewalk, shoulder, curb and boulevard to City standards.*

Response 4: Noted and the architect has been advised.

Comment 5: *Curb returns are to be provided at the accesses with a minimum radius of 5.0 metres and are to be dimensioned on the drawings.*

Response 5: Noted and the architect has been advised.

Comment 6: *Ensure that the end of the curb return at the proposed driveway does not encroach within the frontage of the adjacent property.*

Response 6: Noted and the architect has been advised.

Comment 7: *Minimum lane width for fire trucks is 6.0 metres.*

Response 7: Noted and the architect has been advised.

Comment 8: *The Owner is responsible for identifying the type and location of existing signage that will be removed from within the Right-of-Way to accommodate the development site. The Owner is responsible for providing the General Manager with a detailed drawing identifying the type and position of the existing signs and roadway pavement markings along the site frontage.*

Response 8: Noted. The detailed sign and roadway pavement marking plan will be provided once details regarding the Site Plan are finalized.

Comment 9: *A separate pavement markings and signage drawings are to be provided.*

Response 9: Noted.

Comment 10: *A Construction Traffic Management Plan is to be provided for approval by the Senior Engineer, Traffic Management, Transportation Services Dept.*

Response 10: Noted and the proponent has been advised.

2.2. TRANSPORTATION

Comment 11: *The 3.0 m MUP + Buffer width would replace existing sidewalk and provide continuous facility for pedestrians that is separated from vehicles but shared with cyclists.*

Response 11: There is a desire from the proponent to provide a pedestrian mall type facility fronting the buildings along Brookfield Road. This would be in addition to the MUP. The pedestrian facility fronting the buildings would provide space for pedestrians to stand, while leaving the MUP free for commuting cyclists.

Comment 12: *The existing hydrant is to be relocated to accommodate the width of the MUP and Buffer.*

Response 12: Noted and the architect has been advised.

Comment 13: *Adjust the modal share for the specialty retail portion of the development to reflect the TOD targets.*

Response 13: Modal shares values were discussed significantly with the City's Transportation Project Manager prior to the completion of the TIA report. The new guidelines require the submission of a Forecasting Report, which provides the proposed modal splits and other data related to the trip-generation analysis. Revisions were completed and the modal shares were confirmed and accepted by the City.

The modal share values for the retail assumes that the retail will attract patrons from other areas of the neighbourhood, not just the student residents. It is unlikely that the majority of patrons to these smaller retail developments would take transit to access these services given the walking distance to the rapid transit station is approximately 600 m. A 25% transit mode share was assumed, which is more appropriate given the type of retail expected.

Comment 14: Given the midblock VLOS is A (Parsons to confirm) and the PLOS is not being achieved, provide a complete street concept for Brookfield Road between Riverside Drive and the roundabout. Clarify the planned facilities along the frontage of Brookfield Road as identified in Module 4.3. Confirm financial responsibility for the MUP along the frontage. Given the TOD objectives and modal shares, the applicant should be providing high quality infrastructure to encourage walking, cycling and transit use to and from the development. Connections to existing facilities should be included in the scope of the project not just along the frontage.

Response 14: As outlined in the MMLoS Guidelines, vehicle level of service is provided at signalized and unsignalized intersections only. No midblock level of service for vehicles is calculated, based on the guidelines.

The intersection level of service for vehicles indicates that there is significant spare capacity at the signalized intersections along Brookfield Road between Riverside Drive and the Brookfield/Flannery roundabout intersection (LoS 'A' to 'B').

The proposed plan shows sidewalks and an MUP fronting the development along Brookfield Road. Based on a City's Addendum to the MMLoS Guidelines, a revision to the Brookfield Road segment PLoS calculation results in a PLoS 'A' for this location, as shown in the Table 1 below. The revision was to the AADT, which was previously assumed to be over 3,000 vehicles per day, however, the Addendum to the City's MMLoS Guideline states that this value should be the "Average Daily Curb Lane Traffic Volume." The eastbound AADT along Brookfield Road is approximately 4,130 vehicles per day in two lanes. As such, the curb lane traffic can be assumed to be half this amount (approximately 2,000 vehicles per day). With this revision, the resulting PLoS for pedestrians adjacent to the development is PLoS 'A'.

Table 1: Revised PLoS Brookfield Road Segment

Sidewalk Width (m)	Boulevard Width (m)	Motor Vehicle Traffic Volume (AADT)	Presence of On-street Parking	Segment PLOS			
				Operating Speed (km/h)			
				≤30	>30 or 50	>50 or 60	>60 ¹
2.0 or more	> 2	≤ 3000	N/A	A	A	A	B
		> 3000	Yes	A	B	B	N/A
	0.5 to 2		No	A	B	C	D
		≤ 3000	N/A	A	A	A	B
		> 3000	Yes	A	B	C	N/A
			No	A	C	D	E
	0	≤ 3000	N/A	A	B	C	D
		> 3000	Yes	B	B	D	N/A
			No	B	C	E	F

As shown in Table 1, the pedestrian level of service along the frontage of the site is PLoS 'A', which meet's the target PLoS. There are existing off-site pedestrian and cycling facilities connecting the 770 Brookfield Road site to the Mooney's Bay Transit Station including a MUP along the west side of the Airport Parkway. It is our understanding that the proponent will be financially responsible for the construction of the MUP in front of the site.

Comment 15: The transit TLOS for this street is D as it is within a TOD area.

Response 15: Disagree. The transit target level of service is based on the transit priority plans for the segment roadway. As there are no plans for Brookfield Road to implement transit priority, there is no target level of service for the bus routes along Brookfield Road. This is highlighted in Table 2, which is an excerpt from the 'Minimum Desirable MMLoS Targets' in the MMLoS Guidelines.

Table 2: Transit LoS Targets

OP Designation / Policy Area	Road Class	Transit - TLOS ²		
		Rapid Transit Corridor	TP - Continuous Lanes	TP - Isolated Measures
Policy Area ¹				
Within 600m of a rapid transit station	Arterial	A	C	D
	Collector	A	C	D
	Local	A	C	D

Comment 16: Complete the TDM Measures checklist. Contact Kathleen Wilker at Travelwise@ottawa.ca for information.

Response 16: TDM Measures checklist is provided as Appendix E of the original TIA and TDM measures are highlighted in Section 4.5 of the TIA.

Comment 17: Prepare a monitoring plan to ensure that modal shares are achieved following occupancy. Consider future remedial action if modal shares are not achieved.

Response 17: The modal splits for the proposed student residential development were obtained from the National Capital Region Special Generator Survey- Public Post-Secondary Students' report, prepared for TRANS Committee. The existing mode shares for Carleton University students was summarized in the original TIA and is included herein as Table 3. As shown, the existing mode splits for Carleton University students are the same mode splits used for the analysis (rounded to the nearest 5%). The transit mode was rounded up given the site's close proximity to the O-Train Station. As such, no monitoring plan is required, as these mode splits are based on data collected for the existing conditions.

Table 3: Mode Shares for Carleton University Students

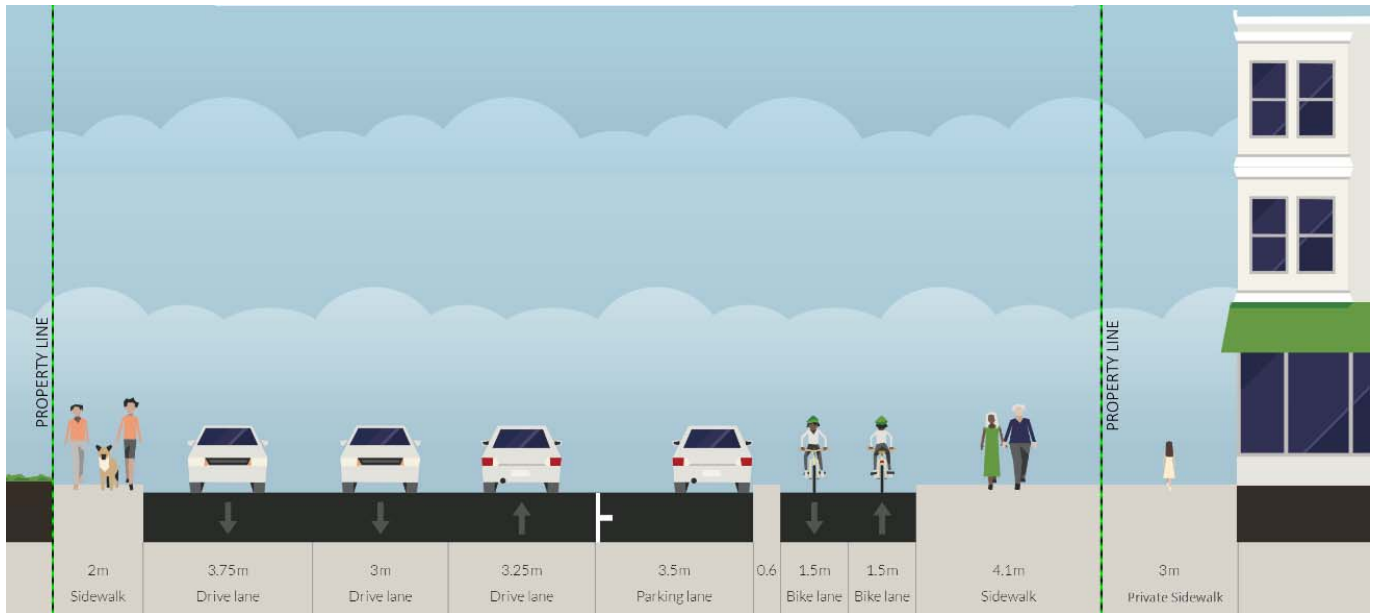
	Car Driver	Car Passenger	Urban Transit	Bicycle	Walk	Other
Existing Mode Splits	21.7%	6.7%	61.4%	2.0%	7.5%	0.8%
Mode Splits in TIA Calculations	20%	5%	65%	10%		-

3. PROPOSED ON-STREET PARKING

As part of the proposed development, there is a desire to provide on-street parking along Brookfield Road, adjacent to the site. This parking would allow drivers to park briefly to access the retail portion of the site. Given there is sufficient vehicle capacity along Brookfield Road to accommodate the vehicle demand, the southern curb lane is proposed as the location of on-street parking. The parking would be limited to off-peak hours only and would likely be 1-hour or 3-hour parking maximum (to be determined through consultation with the City). The parking is proposed to be implemented with signage.

The following Figure 1 shows the proposed cross-section of Brookfield Road. The cross-section shows a 3.5 m curb lane adjacent to the site, where parking is proposed during off-peak hours. A 0.6 m buffer is proposed between the curb lane/parking lane and the MUP to provide a dooring zone for cyclist. The 3.0 m MUP is provided next to a wider pedestrian area adjacent to the proposed retail buildings.

Figure 1: Proposed Brookfield Road Cross-Section



There is an existing bus stop located near side of the Brookfield/Canada Post signalized intersection. It is recommended that this bus stop be shifted to the far side of the intersection to ensure there are no conflicts with parked vehicles. If the bus stop cannot be moved, no parking signs should be installed within close proximity of the bus stop to allow buses to properly serve this stop.

Based on the foregoing, the proposed 770 Brookfield Road development continues to be recommended from a transportation perspective and providing on-street parking adjacent to the site during off-peak hours is recommended.

Prepared by:

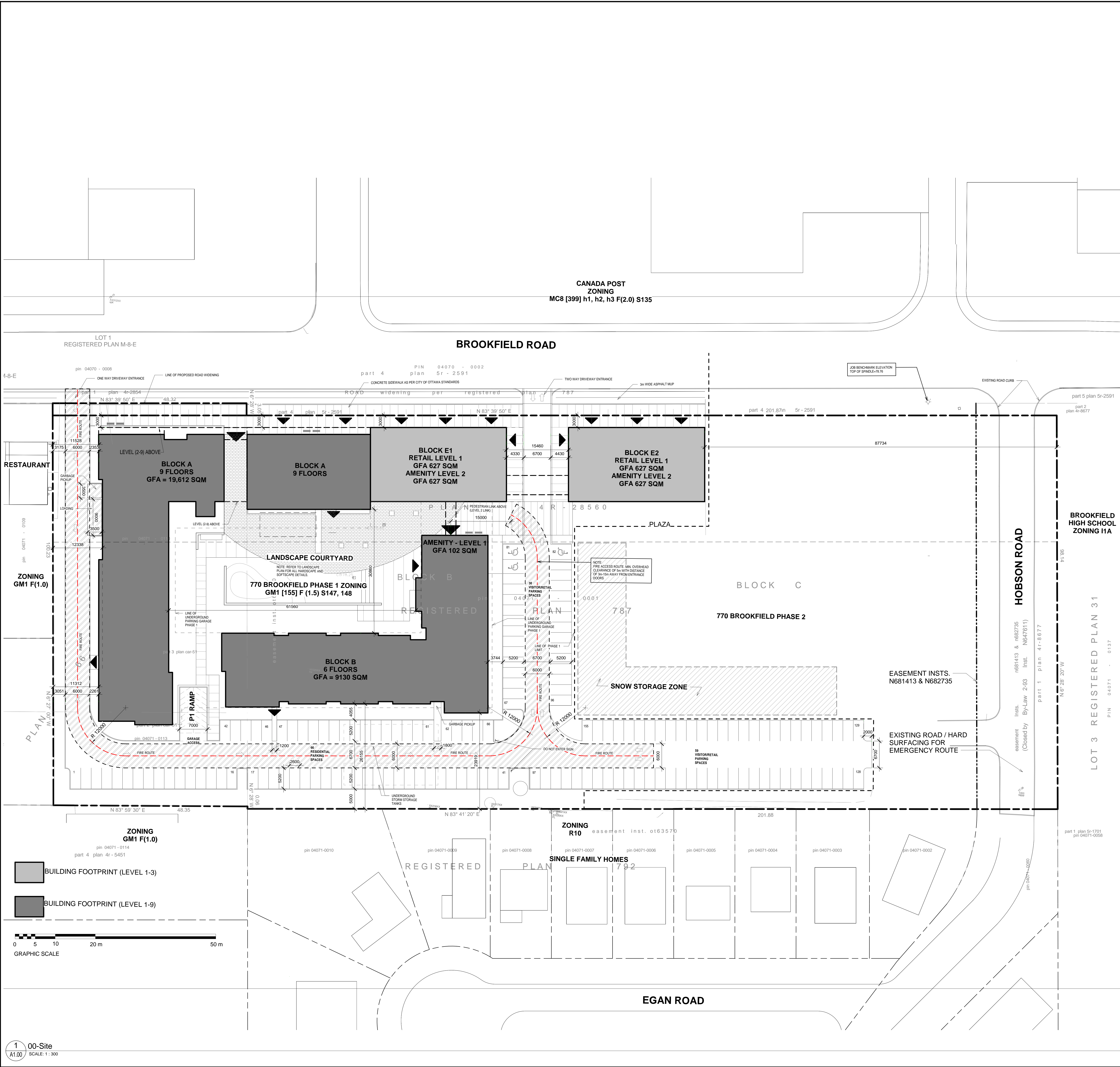
André Sponder, P.Eng.
Transportation Engineer

Reviewed by:

Christopher Gordon, P.Eng.
Senior Project Manager

Attachment #1

Revised Site Plan



SURVEY INFORMATION TAKE FROM:

TOPOGRAPHICAL PLAN OF BLOCKS B AND C
AND PART OF HOBSON ROAD (AS CLOSED)
CREATED/REVISED PLAN 787 AND PART OF LOTS 42 AND 43
REGISTERED PLAN 31
CITY OF OTTAWA
ANNIS, O'SULLIVAN, VOLLEBEKK LTD.

SITE SUMMARY

PROPERTY ADDRESS:	770 BROOKFIELD ROAD
ZONING:	GM [155] F(1.5) S147, 148
SITE AREA (ZONING SCH. 147):	24,655 m ²
SITE AREA (SURVEY):	24,655 m ²
PROPOSED USE:	APARTMENT BUILDING
BUILDING FOOTPRINT: (ABOVE GRADE):	BLOCK A + 2,024 m ² BLOCK B + 1,571 m ² BLOCK E1 + 1,571 m ² BLOCK E2 + 1,571 m ² TOTAL: + 6,737 m ²

ZONING SUMMARY: REQUIRED PROVIDED

TOTAL RESIDENTIAL UNITS	426 UNITS
TOTAL RETAIL AREA	1,206 m ²
FSI - BLOCK A	1.5
BUILDING HEIGHT:	27m MAX

YARDS:

FRONT YARD:	3m MIN.	3m
BROOKFIELD ROAD:	7.5m MIN.	20m
REAR YARD:	3m MIN.	30.5m WEST 12.2m EAST
INTERIOR SIDE YARD:		

VEHICULAR PARKING: REQUIRED PROVIDED

RESIDENTIAL PARKING TOTAL 426 UNITS MINUS FIRST 12 UNITS 414 - 12 = 402 UNITS	(MIN. 0.5 UNITS) 207 SPACES	207 SPACES
VISITORS PARKING 426 - 12 = 414 UNITS	(MIN. 0.2 UNITS) 83 SPACES	83 SPACES
RETAIL PARKING 426 - 12 = 414 UNITS	(MIN. 0.4 UNITS) 211 SPACES	211 SPACES
TENANT BLOCK E1-A	198 m ² 6.7 SPACES	6.7 SPACES
TENANT BLOCK E1-B	198 m ² 6.7 SPACES	6.7 SPACES
TENANT BLOCK E1-C	198 m ² 6.7 SPACES	6.7 SPACES
TENANT BLOCK E2-D	198 m ² 6.7 SPACES	6.7 SPACES
TENANT BLOCK E2-E	198 m ² 6.7 SPACES	6.7 SPACES
TENANT BLOCK E2-F	198 m ² 6.7 SPACES	6.7 SPACES
TOTAL PARKING	311.5 SPACES	311.5 SPACES

PARKING DISTRIBUTION

PHASE 1 UNDERGROUND PARKING LEVEL SURFACE PARKING	135 SPACES 135 SPACES
TOTAL PARKING	250 SPACES

BICYCLE PARKING REQUIRED PROVIDED

BLOCK A 150 UNITS	MIN. 0.5 UNITS 202 SPACES	202 SPACES
BLOCK B 150 UNITS	MIN. 0.5 UNITS 202 SPACES	202 SPACES
RETAIL 1206 m ²	1/1,500 m ² 2.5 SPACES	3 SPACES
TOTAL	205 SPACES	205 SPACES

AMENITY REQUIRED PROVIDED

BLOCK A 150 UNITS	1198 m ² (MIN. 6 m ² /UNIT)	1,002 m ²
BLOCK B 150 UNITS	900 m ² (MIN. 6 m ² /UNIT)	346 m ²
LANDSCAPE COURT YARD		1967 m ²
TOTAL	2098 m ²	3,355 m ²

OWNER

ATLANTIS INVESTMENTS INC.
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REVISION

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contractor to check and verify all dimensions
on site and report all errors and/or
omissions to the engineer.
All contractors must comply with all

Do not scale drawings.
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HOBIN
ARCHITECTURE

770 BROOKFIELD

770 BROOKFIELD, OTTAWA, ON.

SITE PLAN

DATE: 15/05/14 SCALE: 1 : 300

PROJECT: 1741

DRAWING: A1.00

REVISION: 01