

# **Technical Memorandum**

To/Attention Carlos Ramirez, York Date August 28, 2023

Developments

From Eric McLaren Project No 143900

CC

Subject 3080 Bostwick Road Transportation Impact Study Addendum #1

Arcadis IBI Group was retained by York Developments to prepare an addendum to the 2019 Transportation Impact Study (TIS) prepared in support of the 3080 Bostwick Road development. This TIS addendum is being prepared to support a resubmission of a Zoning By-law Amendment (ZBLA) application to permit a change in land use for 'Site 5' of the 3080 Bostwick Road development. Previously, a 3-storey commercial building and 17-storey residential building were proposed. The revised plans instead feature a 12-storey mixed-use building combined with the previously proposed 17-storey residential building (currently under construction).

The following items have been discussed as part of this TIS addendum:

- 1. Summary of the Proposed Changes
- 2. Background Review
- 3. Trip Generation
- 4. Network Impact
- 5. Site Plan Review
- 6. Parking and Loading Review

# **Proposed Development**

Site 5 of the 3080 Bostwick Road development is located in the southwest quadrant of the Southdale Road West & Yorkville Street intersection. The proposed changes result in a significant reduction in commercial space and the addition of 136 residential units to the site.

**Table 1** summarizes the change in land use for Site 5 since the 2019 TIS was submitted.

Table 1 - Land Uses

Landillo	Number of Units/Size			
Land Use	2019 TIS	Current Proposal		
Residential	198 units	334 units		
Commercial	1,000 m <sup>2</sup>	163 m <sup>2</sup>		
Office	2,000 m <sup>2</sup>	-		

Access to Site 5 will be provided via a single full-movement access on Yorkville Street, approximately 95m south of Southdale Road West. The proposed development will include direct sidewalk connections between building entrances and the sidewalks on the adjacent streets. A surface and underground parking lot will provide vehicle parking for visitors and residents. Bicycle parking will be accommodated through outdoor short-term parking spaces and indoor long-term parking spaces.

The site plan of the proposed development has been provided in **Appendix A**.

# **Background Review**

Since the submission of the TIS in 2019, there have been a number of changes to the existing transportation network. There have also been some modifications to the timing and details of planned transportation network improvements. The impact of these changes has been reviewed to determine whether they significantly change the results of the 2019 TIS.

# **Existing Transportation Network**

The existing transportation network in the vicinity of 3080 Bostwick Road has remained largely the same since 2019 with the exception of the following changes:

- Southdale Road is currently being widened to a 4-lane cross-section with concrete sidewalks on both sides of the road from Farnham Road/Bostwick Road to Pine Valley Boulevard
- Cycle tracks have been provided on both sides of Wonderland Road from Southdale Road to Wharncliffe Road

Transit routes near the proposed development have remained largely the same but there has been a reduction in service frequency for some routes since 2019, as summarized below:

- Route #12: Reduction in frequency from 20-minute intervals in 2019 to 30-minute intervals in 2023.
- **Route #15:** Reduction in frequency from 15-minute intervals in 2019 to 30-minute intervals in 2023.
- Route #24: Reduction in frequency from 30-minute intervals in 2019 to 45-minute intervals in 2023.
- Route #28: Reduction in frequency from 30-minute intervals in 2019 to 40-minute intervals in 2023.

#### **Future Transportation Network**

The 2021 Development Charges (DC) Background Study (October 2020) has provided updated timelines for the planned transportation network improvements within the study area. The key changes include:

 Wonderland Road: The 2019 TIS assumed that Wonderland Road would be widened to six lanes north of Southdale Road by 2028. Based on recent discussions with City of London staff, however, the six-lane widening north of Southdale Road has been put on hold until further notice.

• **Bradley Avenue:** The construction of the Bradley Avenue extension between Wharncliffe Road and Jalna Boulevard has been tentatively scheduled for 2024.

The timing for the planned improvements to Southdale Road and Bostwick Road has not changed since the 2019 TIS was submitted, however, instead of bicycle lanes/paths, cycle tracks will be provided on both sides of these roadways.

There have been no changes to the planned transit routes since the 2019 TIS was submitted.

# **Trip Generation**

The baseline trip generation of Site 5 was estimated using the Institute of Transportation Engineers (ITE) Trip Generation Manual (11<sup>th</sup> Edition). These baseline trips were subsequently converted into person-trips at a rate of 1.19 person-trips per baseline vehicle-trip based on vehicle occupancy and mode share data provided in the ITE Trip Generation Handbook (3<sup>rd</sup> Edition). These person-trips were finally subdivided by mode based on the City of London 2016 Household Travel Survey Summary Report (IBI Group, July 2016) in order to reflect the unique travel mode choices of residents of London.

**Table 2** below summarizes the baseline vehicle-trip generation of Site 5, as well as the resulting number of person-trips this equates to.

Table 2 - Baseline and Person Trip Generation

Land Use	Ci-o	AM Peak Hour			PM Peak Hour		
Lanu USe	Size	In	Out	Total	ln	Out	Total
High-Rise Residential	334 units	24	68	92	68	42	110
Retail 163 m <sup>2</sup>		2	2	4	6	6	12
Baseline \	26	70	96	74	47	121	
Р	31	84	115	88	57	145	

Notes: 1 Person-trips were calculated by multiplying baseline vehicle-trips by 1.19.

The 2016 Household Travel Survey Summary Report (IBI Group, July 2016) indicates that within the City of London, the current mode share distribution is as follows:

Auto Driver: 62.5%Auto Passenger: 14.1%

Transit: 7.6%Walk: 11.3%Bicycle: 1.4%Other: 3.2%

Multiplying the person-trip estimates from **Table 2** by the auto driver mode share yields the number of vehicle-trips the proposed development is expected to generate. **Table 3** below summarizes the vehicle-trip generation of Site 5 and compares it to the trip generation estimates for Site 5 from the 2019 TIS.

**Table 3 - Trip Generation Comparison** 

Site Dlan Version	AM Peak Hour			PM Peak Hour		
Site Plan Version	ln	Out	Total	In	Out	Total
2019 TIS	47	47	94	50	52	102
Current Proposal	19	52	71	55	35	90
Relative Change	-28	+5	-23	+5	-17	-12

As shown above, Site 5 is expected to generate fewer trips than was estimated in the 2019 TIS despite the proposed increase in density. This decrease in trip generation can primarily be attributed to the removal of the office land use and the significant decrease in commercial space as each of those land uses are high traffic generators.

# **Network Impact**

Based on the 2019 TIS, the Wonderland & Southdale intersection was expected to be operating at capacity under background traffic conditions in its present configuration and would require the addition of a westbound right-turn lane and the six-lane widening of Wonderland Road in order to operate at an acceptable Level of Service. As a result of the deferral of the six-lane widening, it is likely that background traffic patterns will adapt to these capacity constraints by either diverting to alternative routes with spare capacity or by drivers transitioning to alternative travel modes (e.g., transit).

The 2019 TIS did not find that the addition of site-generated traffic would trigger additional capacity issues at the Wonderland & Southdale intersection beyond those caused by background traffic. As such, the need for roadway modifications at the Wonderland & Southdale intersection is solely due to background traffic demand.

Based on the findings of this addendum, it is not necessary to revise the intersection capacity analysis for the following reasons:

- The only significant change to the future roadway network is the deferral of the Wonderland Road widening. This is expected to result in roadway capacity issues but as stated above, these issues will be due to background traffic demand rather than sitegenerated traffic.
- The proposed change in land use will result in a net decrease in site-generated traffic, thereby reducing the impact of the site on all study area intersections.

As such, the mitigation measures identified in the 2019 TIS to address site-generated traffic impacts for the entirety of the 3080 Bostwick Road development are still applicable. These include:

- **Southdale & Street #3:** Provide an eastbound right-turn deceleration taper when this right-in/right-out access is constructed.
- **Bostwick & E-W Collector:** Provide a southbound left-turn lane with a minimum of 25m of storage and a northbound right-turn lane when this intersection is constructed.
- Bostwick & Street #4: Construct this access as a right-in/right-out access.

#### Site Access and Circulation

As Site 5 will generate fewer than 100 trips per hour, the proposed driveway on Yorkville Street is considered a *minor access connection*. The City of London Access Management Guidelines (April 2012) indicates that minor access connections must maintain a minimum corner clearance of 75m from signalized intersections. Additionally, a spacing of 30m to 60m between driveways is also desirable, although at a minimum a 10-metre tangent should be provided between adjacent driveways.

A corner clearance of approximately 95m will be provided between the proposed driveway and Southdale Road, thereby meeting the minimum corner clearance requirements. The proposed driveway will also be approximately 70m from the adjacent driveway for Site 6 and therefore also meets the minimum driveway spacing requirements.

The City of London Access Management Guidelines indicate that driveways must adhere to the following minimum and maximum widths:

- Medium/high density residential: 6.0m to 7.3m
- Commercial: 6.7m to 12.0m

The driveway on Yorkville Street will have a width of 6.5m which meets the minimum width for a residential driveway but is deficient by 0.2m for a commercial driveway. As the commercial component of Site 5 will represent only a very small portion of the site as a whole, it is not expected that this minor deficiency will create any issues with regards to traffic circulation or the movement of heavy vehicles. As such, the proposed 6.5m driveway width is expected to be sufficient to meet the functional needs of the site.

The proposed drive aisle widths will range from as low as 6.0m to as high as 7.8m. The minimum proposed drive aisle width is generally considered acceptable for parking lots in Ontario and therefore it is expected it will be adequate for this development.

The clear throat length is defined as the distance between the property line and the point of first conflict on a site (i.e., the nearest parking space or intersection). Providing a minimum clear throat length is intended to ensure that any on-site circulation blockages do not cause queues of vehicles entering the site to spillback onto the public road. The Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads suggests that a minimum clear throat length is not required for driveways on local roads such as Yorkville Street as the role of these streets is foremost to provide access to adjacent properties rather than to provide uninterrupted traffic flow. As such, minor interruptions to traffic flow on Yorkville Street due to queue spillback from the site can be tolerated and therefore the provision of a minimum clear throat length is not necessary.

# Parking and Loading

A total of 363 vehicle parking spaces (94 surface spaces and 269 underground spaces) will be provided for Site 5. A Minor Variance (A.087/19) was approved on September 30, 2019, to permit a minimum of 363 off-street parking spaces for all land uses within Site 5. As such, sufficient vehicular parking will be provided.

The Zoning By-law requires that all regular parking spaces be a minimum of 5.5m long and 2.7m wide. Type 'A' and Type 'B' accessible parking spaces must adhere to the same minimum length requirements but are required to be 3.4m and 2.4m wide instead, respectively, with an adjacent

1.5m wide access aisle. All parking spaces within the proposed development will adhere to these minimum standards.

**Table 4** below summarizes the bicycle parking requirements for the two buildings that make up Site 5.

**Table 4 - Bicycle Parking Requirements** 

Building	Land Use	Space Type	Parking Rate	Spaces Required	Spaces Provided	
	Residential	Long-Term	0.9 spaces per unit	108	108	
12-Storey	Residential	Short-Term	0.1 spaces per unit	12	16	
Mixed-Use Building	Commercial	Short-Term	3 spaces plus 0.3 spaces per 100 m <sup>2</sup> GFA	4		
			124	124		
		Long-Term	N/A <sup>1</sup>		156	
17-Storey	Residential	Short-Term	N/A <sup>1</sup>	181 <sup>1</sup>	15	
Residential Building		Shared	N/A <sup>1</sup>		10	
			Total	181	181	

Notes: <sup>1</sup> A Minor Variance (A.043/23) was approved on May 24, 2023, to permit a minimum of 181 bicycle parking spaces.

As shown above, both buildings are meeting their bicycle parking requirements.

The City of London Zoning By-law requires loading spaces for sites within particular zoning categories. Based on the City of London Zoning map, Site 5 is currently zoned R9-7 CC4(5) RO2(32) N-57 H40. As this does not correspond to any of the zones which are required to provide loading spaces, no loading spaces are required for Site 5.

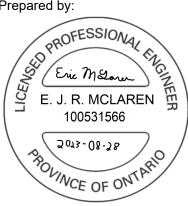
#### Conclusion

As a result of the proposed change in land use, Site 5 is expected to generate between 12 to 23 fewer trips than what the 2019 TIS estimated despite the planned increase in density. The relative impacts of the site, as described in the 2019 TIS can therefore be considered conservative. The site access location, vehicle parking, bicycle parking and loading space requirements were all reviewed, and no issues were identified.

The most significant concern identified as part of this TIS Addendum is the City of London's decision to postpone the six-lane widening of Wonderland Road. The 2019 TIS had previously identified the need for this widening by 2023 in order to accommodate background traffic demand. As such, it is expected that the Wonderland & Southdale intersection will likely experience capacity issues imminently. As these capacity issues would be due to background traffic rather than sitegenerated traffic, however, and no significant changes to the remainder of the roadway network are expected, the mitigation measures identified in the 2019 TIS to address site-generated traffic impacts are still applicable.

It is the overall opinion of Arcadis IBI Group that the proposed development can be safely accommodated by the adjacent transportation network with consideration of the recommendations outlined in the 2019 TIS.

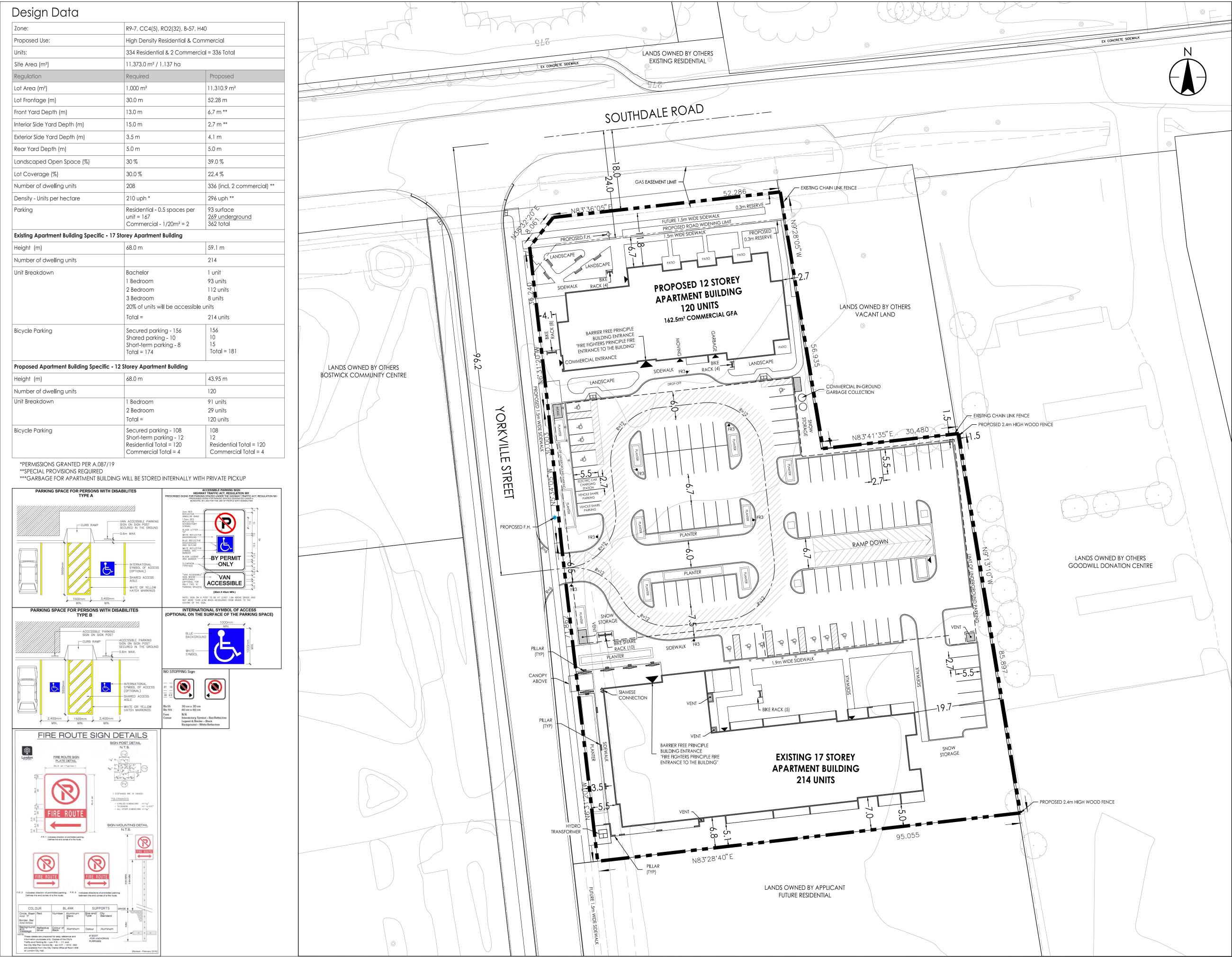
Prepared by:



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Transportation Engineer

# Appendix A – Site Plan





600-171 Queens Avenue London ON N6A 5J7 Tel. 519-645-2007 www.stantec.com

Liability Note

The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay.



SITE BOUNDARY

ACCESSIBLE PARKING SIGN

FIRE ROUTE SIGN

PRINCIPLE BUILDING ACCESS

SECONDARY BUILDING ACCESS

PROPOSED FIRE HYDRANT

HYDRO TRANSFORMER

	6.	PER UPDATED UNIT COUNT	RT	DH	22.09.3
	5.	PER REVISED COMMERCIAL/OFFICE BUILDING	RT	DH	20.06.2
	4.	PER CITY COMMENTS	DRR	DH	19.10.0
	3.	PER REQUIRED ROAD WIDENING	RT	DH	19.09.1
	2.	PER CITY COMMENTS	RT	DH	19.08.2
_	1.	PER CITY COMMENTS	RT	DH	19.06.2
	Re	vision	Ву	Appd.	YY.MM.E
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_	7.	FOR SITE PLAN APPROVAL	RT	DH	22.09.3
_	6.	FOR SITE PLAN APPROVAL	RT	DH	20.06.2
	5.	FOR SITE PLAN APPROVAL	DRR	DH	19.10.0
	4.	FOR SITE PLAN APPROVAL	RT	DH	19.09.1
	3.	FOR SITE PLAN APPROVAL	RT	DH	19.08.2
	2.	FOR SITE PLAN APPROVAL	RT	DH	19.06.2
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Client/Project

Permit-Seal

YORK DEVELOPMENTS

3080 BOSTWICK ROAD - SITE 5

London, ON Canada

SITE PLAN

Project No. 161413832	Scale HO	RZ - 1 : 400 0 8m
Drawing No.	Sheet	Revision
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