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# 1944 Bradley Avenue, London Transportation Impact Assessment

Paradigm Transportation Solutions Limited

July 2023  
220319



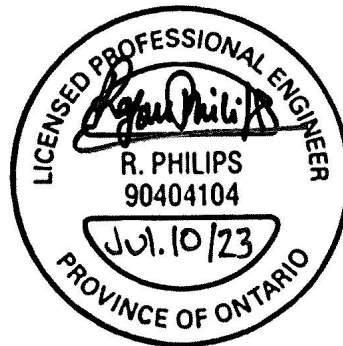
**Project Number**  
220319

## 1944 Bradley Avenue, London Transportation Impact Assessment

**Date: July 2023**  
Version 1.0.0

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# Executive Summary

## Content

Paradigm Transportation Solutions Limited (Paradigm) has been retained to conduct this Transportation Impact Assessment (TIA) for a proposed residential development located at 1944 Bradley Avenue in the City of London.

This TIA includes an analysis of existing traffic conditions, a description of the proposed development, traffic forecasts for five years from the date of development completion (2029), and assessment of traffic impacts with recommendations to accommodate the proposed development as appropriate.

## Development Concept

The subject lands are located on the north side of Bradley Avenue, east of Jackson Road. The development is proposed to include 281 dwelling units, comprising 49 singles, 144 street townhouses, and 88 block townhouses.

Two accesses to the development are proposed: a new road connection south to Bradley Avenue, and a second road connection to Jackson Road at the existing T-intersection at Evans Boulevard. The development is anticipated to be completed by 2024.

## TIA Scope

The scope of the Transportation Impact Assessment for the proposed development includes:

- ▶ **Study Area Intersections:**
  - Bradley Avenue and Jackson Road;
  - Jackson Road and Evans Boulevard/Proposed Road; and
  - Bradley Avenue and Proposed Road Connection.
- ▶ **Analysis Periods:** Weekday AM and PM peak hours.
- ▶ **Background Developments:** Parker Jackson subdivision comprising 519 single detached units and 489 multi-family/townhouse units.
- ▶ **Traffic Conditions:** Existing (2022) and five years from date of development completion (2029).



## Conclusions

Based on the investigations carried out, it is concluded that:

- ▶ **Existing Traffic Conditions:** All study area intersections are currently operating at acceptable levels of service.
- ▶ **Development Trip Generation:** The development is forecast to generate 154 and 186 trips during the AM and PM peak hours, respectively.
- ▶ **2029 Background Traffic Conditions:** All study area intersections are forecast to operate at acceptable levels of service.
- ▶ **2029 Total Traffic Conditions:** All study area intersections are forecast to operate at acceptable levels of service.
- ▶ **Site Access Intersections:** Both site access intersections are forecast to operate at acceptable levels of service under 2029 total traffic conditions. An eastbound left-turn lane with 25 metres of storage is forecast to be warranted on Bradley Avenue at the new road connection under 2029 total traffic conditions.

## Recommendations

Based on the findings of this study, it is recommended that the development be considered for approval as proposed, with an eastbound left-turn lane with 25 metres of storage constructed on Bradley Avenue at the new road connection.



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# 1 Introduction

## 1.1 Overview

Paradigm Transportation Solutions Limited (Paradigm) has been retained to conduct this Transportation Impact Assessment (TIA) for a proposed residential development located at 1944 Bradley Avenue in the City of London. **Figure 1.1** details the subject development location.

The subject lands are located on the north side of Bradley Avenue, east of Jackson Road. The development is proposed to include 281 dwelling units, comprising 49 singles, 144 street townhouses, and 88 block townhouses.

Two accesses to the development are proposed: a new road connection south to Bradley Avenue, and a second road connection to Jackson Road at the existing T-intersection at Evans Boulevard. The development is anticipated to be completed by 2024.

## 1.2 Purpose and Scope

The purpose of this report is to identify and assess the potential traffic impact resulting from the proposed development. The scope of the study, developed in consultation with City of London staff via e-mail in July 2022, includes:

- ▶ assessment of the current traffic and site conditions within the study area;
- ▶ estimates of background traffic growth for five years after completion (2029);
- ▶ the traffic forecasts of the Parker Jackson subdivision, which comprises 519 single detached units and 489 multi-family/townhouse units;
- ▶ estimates of additional traffic generated by the subject site;
- ▶ analyses of the impact of the future traffic on the surrounding road network, including the following study area intersections:
  - Bradley Avenue and Jackson Road;
  - Jackson Road and Evans Boulevard/Proposed Road; and
  - Bradley Avenue and Proposed Road Connection.
- ▶ recommendations, if necessary, to mitigate the site generated traffic in a satisfactory manner.



**Appendix A** contains the pre-study consultation material and responses from the City of London.

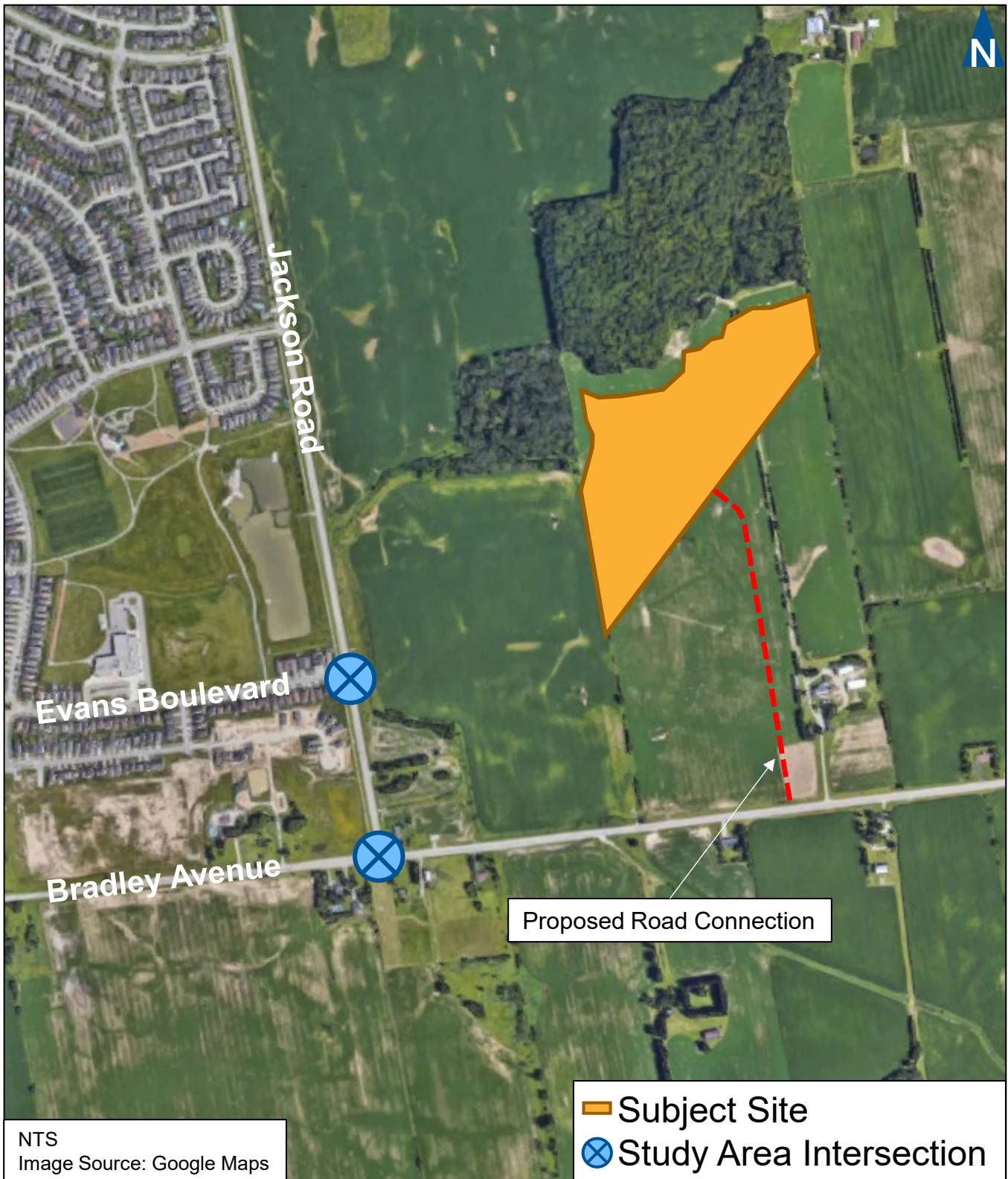
This study has been prepared in accordance with the requirements detailed by the City of London Transportation Impact Assessment Guidelines<sup>1</sup>.

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<sup>1</sup> Transportation Impact Assessment Guidelines, City of London, April 2012.







## 2 Existing Conditions

### 2.1 Existing Roadways

The main roadways near the subject site considered in assessing the traffic impacts of the development include:

- ▶ **Bradley Avenue** is an east-west Urban Thoroughfare<sup>2</sup> with a two-lane cross-section and a posted speed limit of 60 km/h west of Jackson Road. East of Jackson Road, the posted speed limit is 80 km/h. Sidewalks are not provided on either side of the roadway.
- ▶ **Jackson Road** is a north-south Civic Boulevard with a two-lane cross-section and a posted speed limit of 70 km/h. Sidewalks are provided on the west side of the roadway.
- ▶ **Evans Boulevard** is an east-west Neighbourhood Connector with a two-lane cross section and a posted speed limit of 40 km/h. Sidewalks are provided on both sides of the roadway.

The intersections of Jackson Road and Evans Boulevard, and Bradley Avenue and Jackson Road operate under side-street stop-control.

**Figure 2.1** illustrates the traffic control and lane configuration at the study area intersections.

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<sup>2</sup> City of London, The London Plan, Map 3: Street Classifications, 2016.







## 2.2 Transit Service

The nearest London Transit route is **Route 24**, which services the development on the west side of Jackson Road. The nearest stop for **Route 24** is located 1.2 kilometres from the subject development which is outside the standard walking distance of 400 metres.

**Figure 2.2** illustrates the existing transit service.

## 2.3 Traffic Volumes

Paradigm conducted turning movement counts at the study area intersections on 27 July 2022.

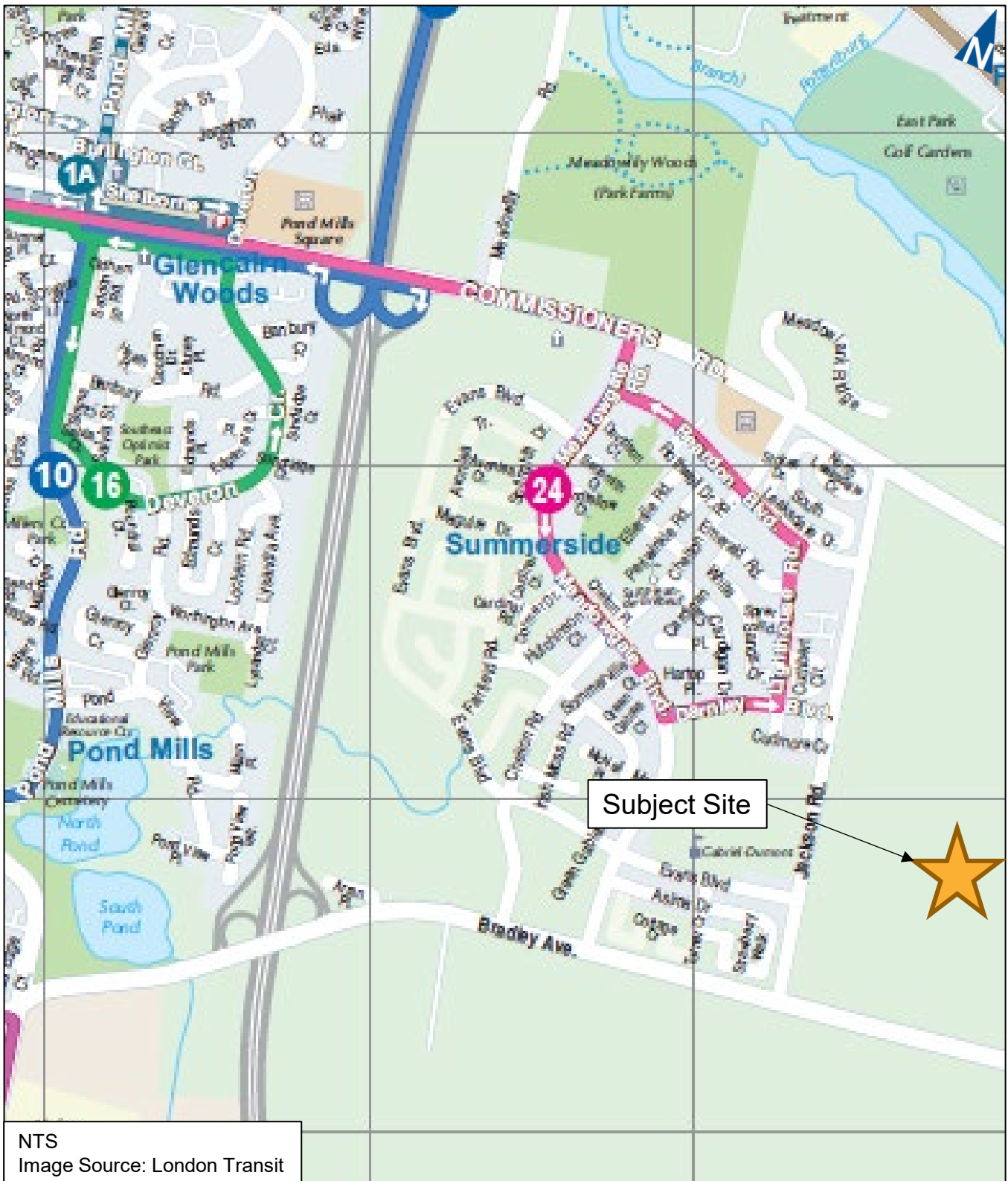
**Figure 2.3** illustrates the existing AM and PM weekday peak hour turning movement traffic volumes. **Table 2.1** summarizes the peak hours at each intersection.

**TABLE 2.1: INTERSECTION PEAK HOURS**

Intersection	AM Peak Hour	PM Peak Hour
Jackson Road and Evans Boulevard	7:00 AM – 8:00 AM	4:45 PM – 5:45 PM
Bradley Avenue and Jackson Road	7:15 AM – 8:15 AM	4:30 PM – 5:30 PM

**Appendix B** contains the detailed traffic count information.

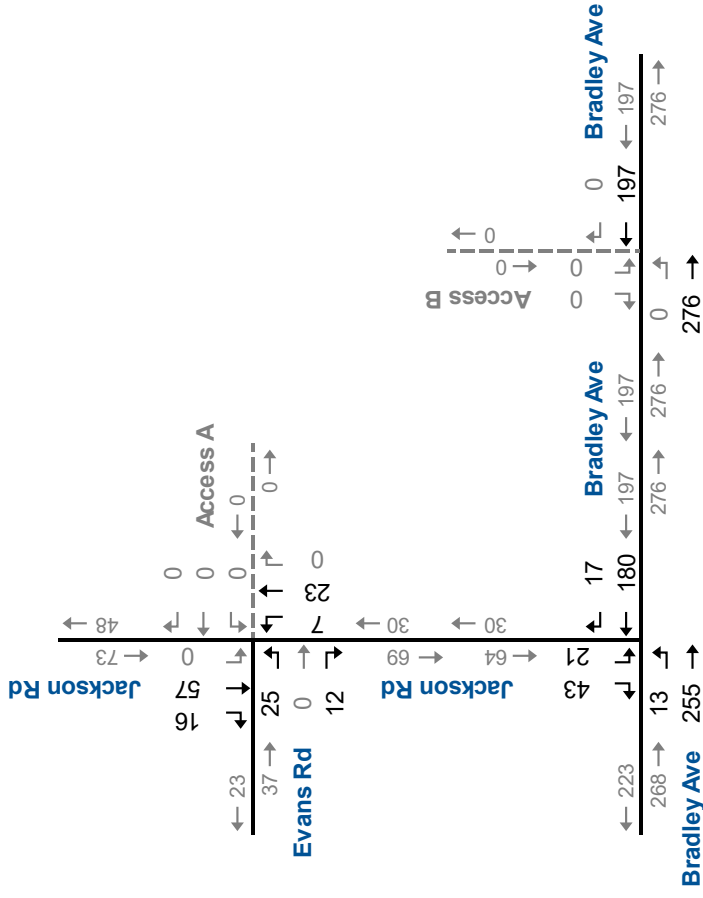




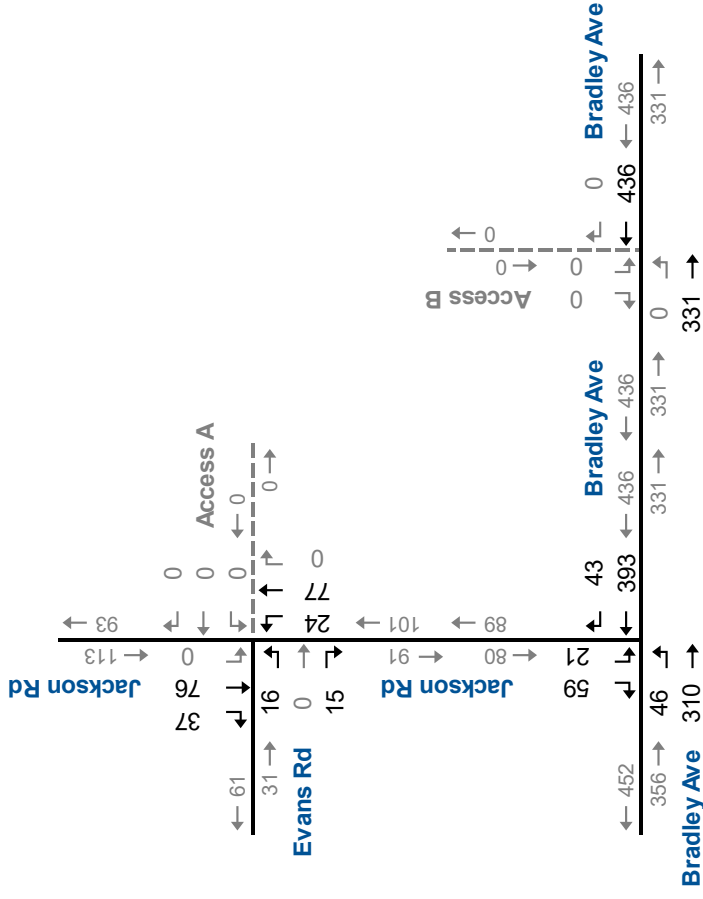
## Existing Transit Network



### AM Peak Hour



### PM Peak Hour



1944 Bradley Avenue, London T1A 2Z0319

## Existing Traffic Volumes

Figure 2.3

## 2.4 Traffic Operations

The level of service conditions at the study area intersections have been assessed through intersection operational analysis using Synchro 11.

Intersection level of service (LOS) is a recognized method of quantifying the average delay experienced by drivers at intersections. It is based on the delay experienced by individual vehicles executing the various movements. The delay is related to the number of vehicles intending to make a particular movement, compared to the estimated capacity for that movement. The capacity is based on several criteria related to the opposing traffic flows and intersection geometry.

The highest possible rating is LOS A, under which the average total delay is equal or less than 10.0 seconds per vehicle. When the average delay exceeds 80 seconds for signalized intersections, 50 seconds for unsignalized intersections or when the volume to capacity (v/c) ratio is greater than 1.00, the movement is classed as LOS F and remedial measures are usually implemented if they are feasible. LOS E is usually used as a guideline for the determination of road improvement needs on through lanes, while LOS F may be acceptable for left-turn movements at peak times, depending on delays.

Movements are considered critical under the following conditions:

- ▶ v/c ratios for overall intersection operations, through movements or shared through/turning movements increased to 0.90 or above and Level of Service 'E' or worse;
- ▶ v/c ratios for dedicated turning movements increased to 0.90 or above and Level of Service 'E' or worse; or
- ▶ 95th percentile queue lengths for individual movements exceeds available lane storage.

**Table 2.2** summarizes the results of the intersection operational analysis under existing conditions, including the AM and PM peak hour LOS, v/c ratios, and 95th percentile queues experienced.

The results indicate that the study area intersections are operating at acceptable levels of service, and with no problem movements.

**Appendix C** contains the detailed Synchro 11 reports.



**TABLE 2.2: EXISTING TRAFFIC OPERATIONS**

Analysis Period	Intersection	Control Type	MOE	Direction/Movement/Approach																Overall
				Eastbound				Westbound				Northbound				Southbound				
				Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
AM Peak Hour	Jackson Road & Evans Road	TWSC	LOS Delay V/C Q Stor. Avail.	A 9 0.03 1 45 44	</> 0 0.01 0 - -	A 9 0 - -	A 9 0 - -	</> </> </> </> </>	</> </> </> </> </>	A 0 0 - -	</> </> </> </> </>	A 0 0 - -	</> </> </> </> </>	A 2 0 - -	</> </> </> </> </>	A 0 0 - -	</> </> </> </> </>	A 0 0 - -		
	Bradley Avenue & Jackson Road	TWSC	LOS Delay V/C Q Stor. Avail.	A 8 0.01 0 60 60	A 0 0.00 0 - -	A 0 0 - -	</> </> </> </> </>	</> </> </> </> </>	A 0 0 - -	</> </> </> </> </>	A 0 0 - -	</> </> </> </> </>	A 0 0 - -	</> </> </> </> </>	B 12 0.04 1 85 84	</> </> </> </> </>	A 10 0.06 2 - -	B 10 - - -		
PM Peak Hour	Jackson Road & Evans Road	TWSC	LOS Delay V/C Q Stor. Avail.	A 10 0.02 1 45 44	</> 0 0.02 1 - -	A 9 0 - -	A 9 0 - -	</> </> </> </> </>	</> </> </> </> </>	A 0 0 - -	</> </> </> </> </>	A 0 0 - -	</> </> </> </> </>	A 2 0 - -	</> </> </> </> </>	A 0 0 - -	</> </> </> </> </>	A 0 0 - -		
	Bradley Avenue & Jackson Road	TWSC	LOS Delay V/C Q Stor. Avail.	A 8 0.05 1 60 59	A 0 0.00 0 - -	A 0 0 - -	</> </> </> </> </>	</> </> </> </> </>	A 0 0 - -	</> </> </> </> </>	A 0 0 - -	</> </> </> </> </>	A 0 0 - -	</> </> </> </> </>	C 18 0.08 2 85 83	</> </> </> </> </>	B 12 0.11 3 - -	B 13 - -		

MOE - Measure of Effectiveness  
 LOS - Level of Service  
 Delay - Average Delay per Vehicle in Seconds  
 V/C - Volume to Capacity Ratio  
 Q - 95th Percentile Queue Length (m)  
 Stor. - Existing Storage (m)  
 Avail. - Available Storage (m)  
 TWSC - Two-Way Stop Control  
 </> - Shared with through movement



## 3 Development Concept

### 3.1 Development Description

The subject lands are located on the north side of Bradley Avenue, east of Jackson Road. The development is proposed to include 281 dwelling units, comprising 49 singles, 144 street townhouses, and 88 block townhouses.

Two accesses to the development are proposed: a new road connection south to Bradley Avenue, and a second road connection to Jackson Road at the existing T-intersection at Evans Boulevard. The development is anticipated to be completed by 2024.

**Figure 3.1** shows the draft plan of subdivision.





### 3.2 Development Trip Generation

The Institute of Transportation Engineers (ITE) Trip Generation Manual<sup>3</sup> rates and equations were used to estimate the peak hour traffic volumes generated by the subject development based on the following ITE Land Use Codes:

- ▶ 210, Single Family Detached Housing; and
- ▶ 215, Single Family Attached Housing.

**Table 3.1** summarizes the forecast number of net new trips generated by the proposed development.

**TABLE 3.1: TRIP GENERATION**

Land Use Code	Units	AM Peak Hour			PM Peak Hour				
		Rate	In	Out	Total	Rate	In	Out	Total
<b>210: Single-Family Detached Housing</b>	49	Eq	10	29	<b>39</b>	Eq	32	19	<b>51</b>
<b>215: Single-Family Attached Housing</b>	232	Eq	36	79	<b>115</b>	Eq	77	58	<b>135</b>
<b>Total Trip Generation</b>			<b>46</b>	<b>108</b>	<b>154</b>		<b>109</b>	<b>77</b>	<b>186</b>

LUC 210 | AM:  $\ln(T) = 0.91 \ln(X) + 0.12$  | PM:  $\ln(T) = 0.94 \ln(X) + 0.27$

LUC 215 | AM:  $T = 0.52(X) - 5.70$  | PM:  $T = 0.60(X) - 3.93$

### 3.3 Development Trip Distribution and Assignment

The trip distribution was determined based on existing travel patterns within the study area as well as the distribution used in the Parker Jackson Subdivision TIA, mentioned in **Section 4.1.1**. **Table 3.2** displays the breakdown of trip distributions used in this study.

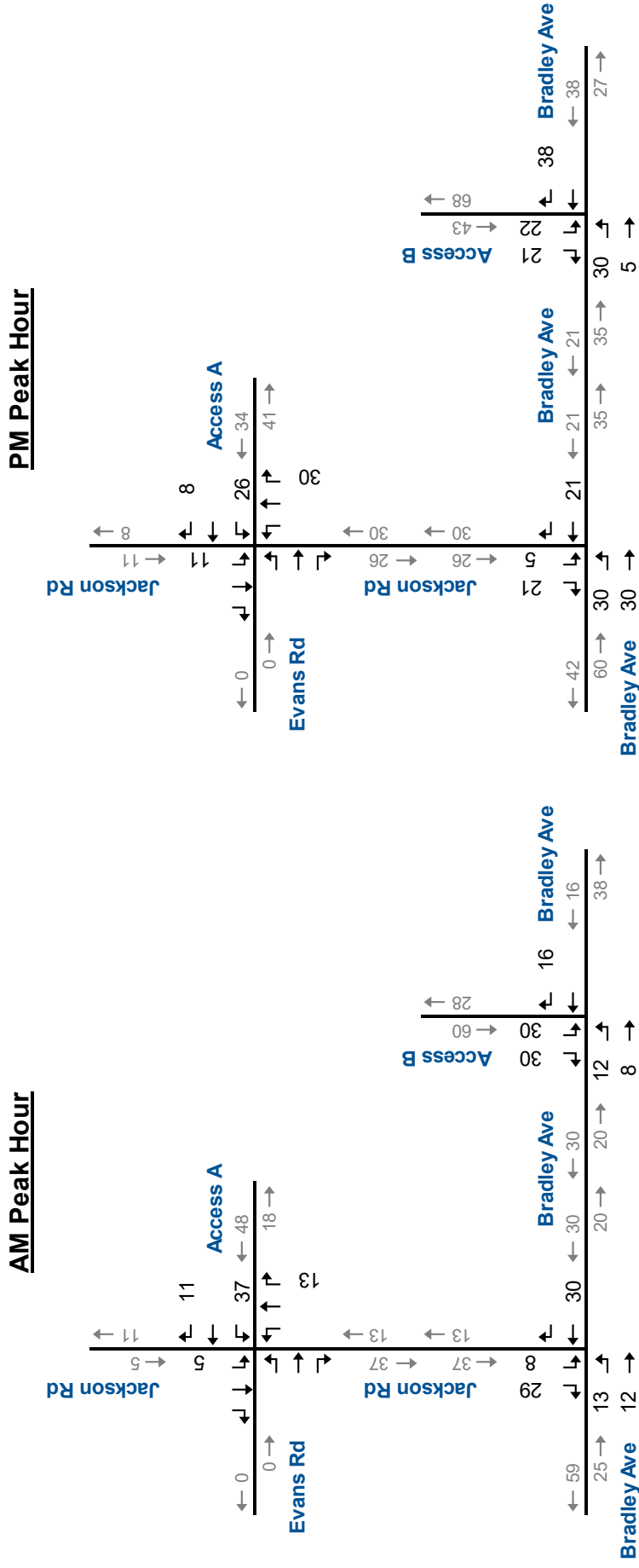
**TABLE 3.2: ESTIMATED TRIP DISTRIBUTION**

Origin/Destination	Distribution
North via Jackson Road	10%
West via Bradley Avenue	55%
East via Bradley Avenue	35%
<b>Total</b>	<b>100%</b>

**Figure 3.2** illustrates the site-generated traffic volumes for the AM and PM peak hours.

<sup>3</sup> Institute of Transportation Engineers, Trip Generation Manual 11<sup>th</sup> Edition, September 2021.





1944 Bradley Avenue, London T1A 2Z0319

## Site Generated Traffic Volumes

Figure 3.2

## 4 Evaluation of Future Traffic Conditions

The assessment of future traffic conditions contained in this section includes estimates of future background and total traffic volumes, and the analyses for the traffic conditions five years after development opening (2029).

### 4.1 Background Traffic Forecasts

In order to derive the 2029 generalized background traffic volumes, a growth rate of 1.5% per annum was applied to the existing roadway traffic volumes. This growth rate was confirmed with the City during the pre-study consultation.

#### 4.1.1 Other Area Developments

During pre-study consultation, the City indicated that the Parker Jackson Subdivision should be included in the background traffic volumes.

The subdivision is located on the east side of Jackson Road between Commissioners Road East and Bradley Avenue. The site is located west of the subject development. **Figure 4.1** illustrates the location of the background development.

The Parker Jackson subdivision comprises 519 detached single-family units and 489 multi-family/townhouse units and is expected to be completed by 2026. The TIA<sup>4</sup> completed for this location indicates the development is forecast to generate 557 trips during the AM peak hour and 683 trips during the PM peak hour.

The TIA notes that a southbound left-turn lane is assumed to be in place under future traffic conditions at the intersection of Jackson Road and Evans Road/ Access A. Therefore, the left-turn lane is assumed to be in place under 2029 Background and Total conditions herein.

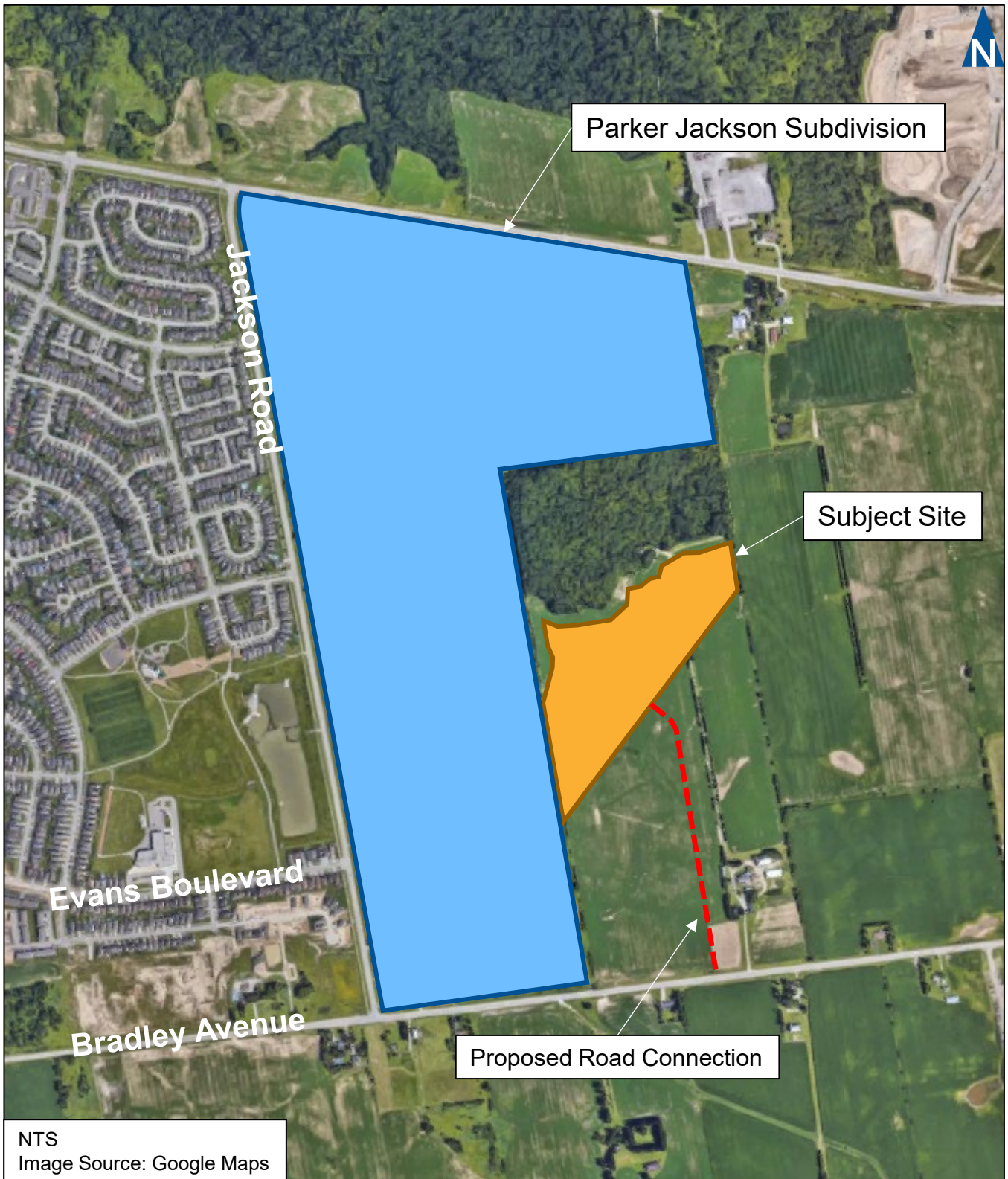
**Appendix D** contains the background development traffic volumes.

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<sup>4</sup> Prepared by Stantec Consulting Ltd., *Transportation Impact Assessment, Parker Jackson Lands, London, ON, August 2016.*







## Background Development Location

## 4.2 2029 Background Traffic Operations

**Figure 4.2** illustrates the 2029 background traffic volumes, including road traffic growth and other area development traffic.

The 2029 background traffic volumes have been analyzed using the same methodology as under existing traffic conditions.

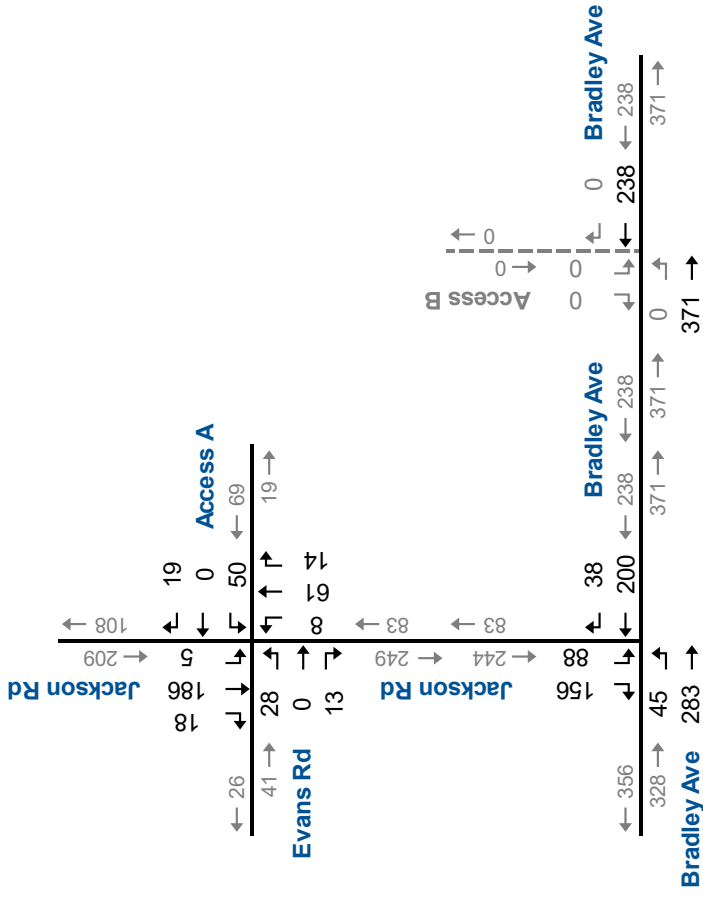
**Table 4.1** summarizes the results of the 2029 background traffic operations. The results indicate that the study area intersections are forecast to operate at acceptable levels of service during the AM and PM peak hours. It is noted that the southbound left-turn movement at Bradley Avenue and Jackson Road is forecast to operate at LOS E with a v/c ratio of 0.42 during the PM peak hour.

**Appendix E** contains the supporting detailed Synchro 11 reports.

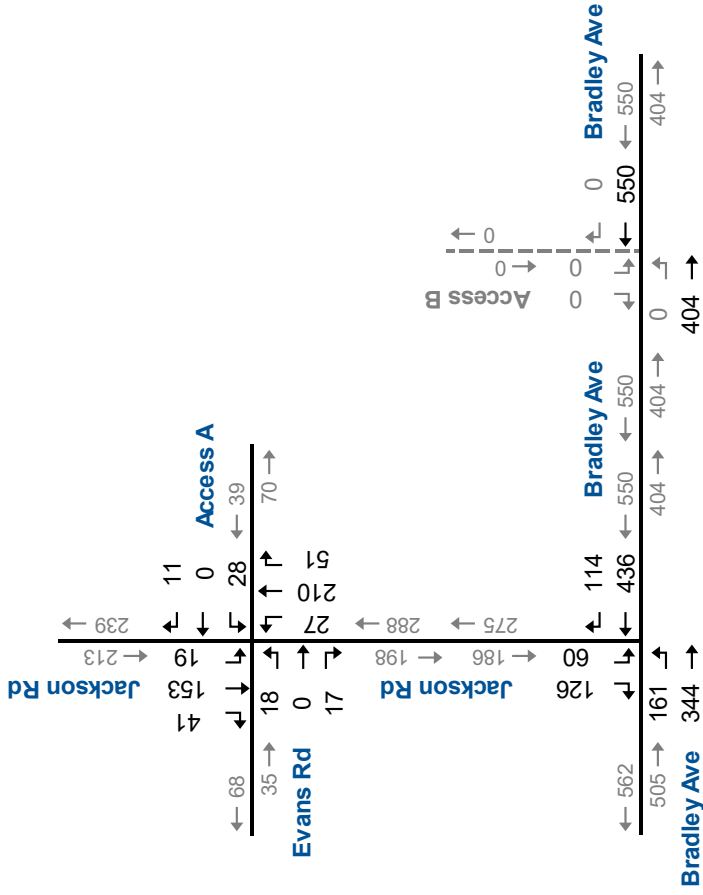




AM Peak Hour



PM Peak Hour



1944 Bradley Avenue, London T1A 2Z0  
220319

**2029 Background Traffic Volumes**

**Figure 4.2**



**TABLE 4.1: 2029 BACKGROUND TRAFFIC OPERATIONS**

Analysis Period	Intersection	Control Type	MOE	Direction/Movement/Approach																Overall
				Eastbound				Westbound				Northbound				Southbound				
				Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
AM Peak Hour	Jackson Road & Evans Road/Access A	TWSC	LOS Delay	B 11	A 9	> >	B 11	< <	B 11	> >	B 11	A 8	A 0	> >	A 1	A 7	A 0	> >	A 0	
			V/C	0.05	0.02	>	<	<	0.11	>		0.01	0.00	>		0.00	0.00	>		
			Q	2	1	>	<	<	3	>		0	0	>		0	0	>		
			Stor.	45	-	>	<	<	-	>		45	-	>		15	-	>		
			Avail.	43	-	>	<	<	-	>		45	-	>		15	-	>		
AM Peak Hour	Bradley Avenue & Jackson Road	TWSC	LOS Delay	A 8	A 0	> >	A 1	< <	A 0	> >	A 0			>		C 16		B 11	B 13	
			V/C	0.04	0.00	>		<	0.00	>				>		0.23		0.21		
			Q	1	0	>		<	0	>				>		7		6		
			Stor.	60	-	>		<	-	>				>		85		-		
			Avail.	59	-	>		<	-	>				>		78		-		
PM Peak Hour	Jackson Road & Evans Road/Access A	TWSC	LOS Delay	B 14	A 9	> >	B 12	< <	B 13	> >	B 13	A 8	A 0	> >	A 1	A 8	A 0	> >	A 1	
			V/C	0.05	0.02	>	<	<	0.09	>		0.02	0.00	>		0.02	0.00	>		
			Q	1	1	>	<	<	2	>		1	0	>		0	0	>		
			Stor.	45	-	>	<	<	-	>		45	-	>		15	-	>		
			Avail.	44	-	>	<	<	-	>		44	-	>		15	-	>		
PM Peak Hour	Bradley Avenue & Jackson Road	TWSC	LOS Delay	A 10	A 0	> >	A 3	< <	A 0	> >	A 0			>		E 44		B 14	C 24	
			V/C	0.18	0.00	>		<	0.00	>				>		0.42		0.25		
			Q	4	0	>		<	0	>				>		14		8		
			Stor.	60	-	>		<	-	>				>		85		-		
			Avail.	56	-	>		<	-	>				>		71		-		

MOE - Measure of Effectiveness      Q - 95th Percentile Queue Length (m)      </> - Shared with through movement  
 LOS - Level of Service      Stor. - Existing Storage (m)  
 Delay - Average Delay per Vehicle in Seconds      Avail. - Available Storage (m)  
 V/C - Volume to Capacity Ratio      TWSC - Two-Way Stop Control



### 4.3 2029 Total Traffic Operations

**Figure 4.3** illustrates the 2029 total traffic volumes, including trips generated by the proposed development.

The 2029 total traffic volumes have been analyzed using the same methodology as under existing and background traffic conditions.

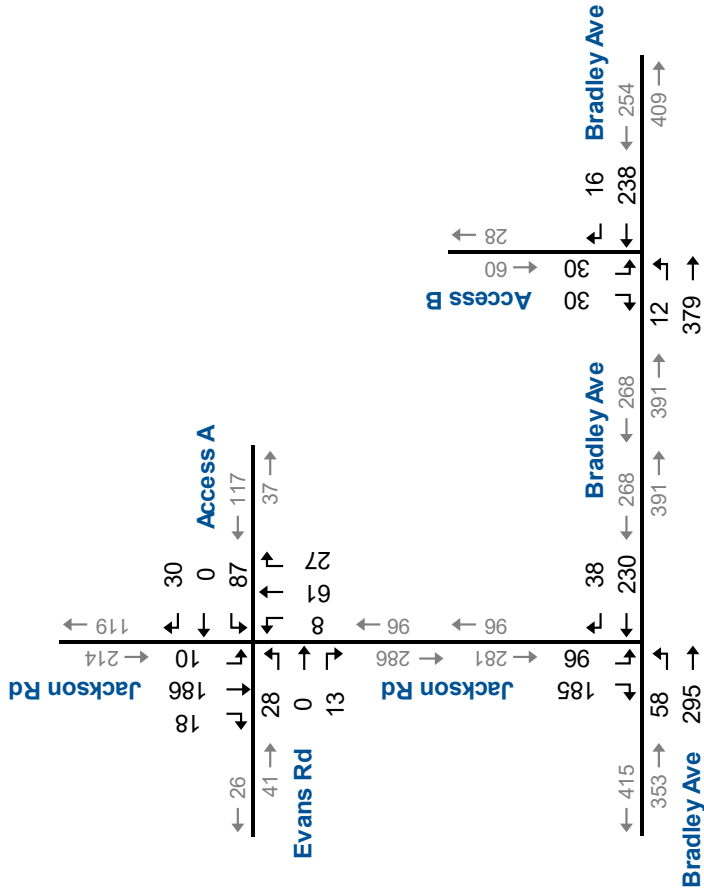
**Table 4.2** summarizes the results of the 2029 total traffic operations. The results indicate that the study area intersections are forecast to operate at acceptable levels of service during the AM and PM peak hours. It is noted that the southbound left-turn movement at Bradley Avenue and Jackson Road is forecast to operate at LOS F with a v/c ratio of 0.57 during the PM peak hour.

**Appendix F** contains the supporting detailed Synchro 11 reports.

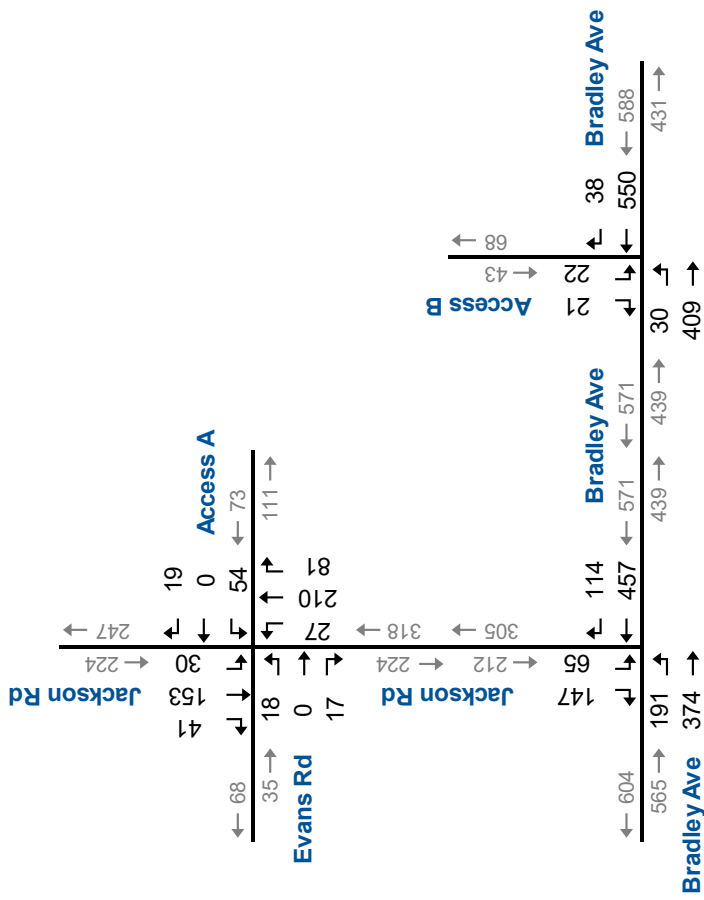




**AM Peak Hour**



**PM Peak Hour**



1944 Bradley Avenue, London T1A 2Z0

**2029 Total Traffic Volumes**

**Figure 4.3**

**TABLE 4.2: 2029 TOTAL TRAFFIC OPERATIONS**

Analysis Period	Intersection	Control Type	MOE	Direction/Movement/Approach																Overall
				Eastbound				Westbound				Northbound				Southbound				
				Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
AM Peak Hour	Jackson Road & Evans Road/Access A	TWSC	LOS Delay V/C Q Stor. Avail.	B 12 0.05 2 45 43	A 9 0.02 1 -> ->	> > > > >	B 11	< < < < <	B 12 0.19 5 -> ->	> > > > >	B 12	A 8 0.01 0 45 45	A 0 0.00 0 -> ->	> > > > >	A 1	A 7 0.01 0 15 15	A 0 0.00 0 -> ->	> > > > >	A 0	
	Bradley Avenue & Jackson Road	TWSC	LOS Delay V/C Q Stor. Avail.	A 8 0.05 2 60 58	A 0 0.00 0 -> ->	> > > > >	A 1	< < < < <	A 0 0.00 0 -> ->	> > > > >	A 0					C 18 0.28 8 85 77		B 11 0.26 8 -> ->	B 14	
	Bradley Avenue & Access B	TWSC	LOS Delay V/C Q	< < < <	A 8 0.01 0	> > > >	A 0	< < < <	A 0 0.00 0	> > > >	A 0						B 13 0.12 3		> > > >	B 13
PM Peak Hour	Jackson Road & Evans Road/Access A	TWSC	LOS Delay V/C Q Stor. Avail.	B 15 0.05 2 45 43	A 9 0.02 1 -> ->	> > > > >	B 12	< < < < <	B 15 0.18 4 -> ->	> > > > >	B 15	A 8 0.02 1 45 44	A 0 0.00 0 -> ->	> > > > >	A 1	A 8 0.03 1 15 14	A 0 0.00 0 -> ->	> > > > >	A 1	
	Bradley Avenue & Jackson Road	TWSC	LOS Delay V/C Q Stor. Avail.	A 10 0.22 6 60 54	A 0 0.00 0 -> ->	> > > > >	A 3	< < < < <	A 0 0.00 0 -> ->	> > > > >	A 0					F 67 0.57 21 85 64		B 15 0.30 10 -> ->	D 31	
	Bradley Avenue & Access B	TWSC	LOS Delay V/C Q	< < < <	A 9 0.04 1	> > > >	A 1	< < < <	A 0 0.00 0	> > > >	A 0						C 19 0.16 4		> > > >	C 19

MOE - Measure of Effectiveness      Q - 95th Percentile Queue Length (m)      </> - Shared with through movement  
 LOS - Level of Service      Stor. - Existing Storage (m)  
 Delay - Average Delay per Vehicle in Seconds      Avail. - Available Storage (m)  
 V/C - Volume to Capacity Ratio      TWSC - Two-Way Stop Control

## 4.4 Left-Turn Lanes

The need for an auxiliary eastbound left-turn turning lane on Bradley Avenue at Access B was assessed based on the requirements and procedures detailed in the Ministry of Transportation Design Supplement for the Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads<sup>5</sup>. The assessment is based on the nomographs for left-turn lanes on a two-lane undivided highway at an unsignalized intersection with a design speed of 20 kilometres per hour over the assumed and posted speed limits (100 km/h).

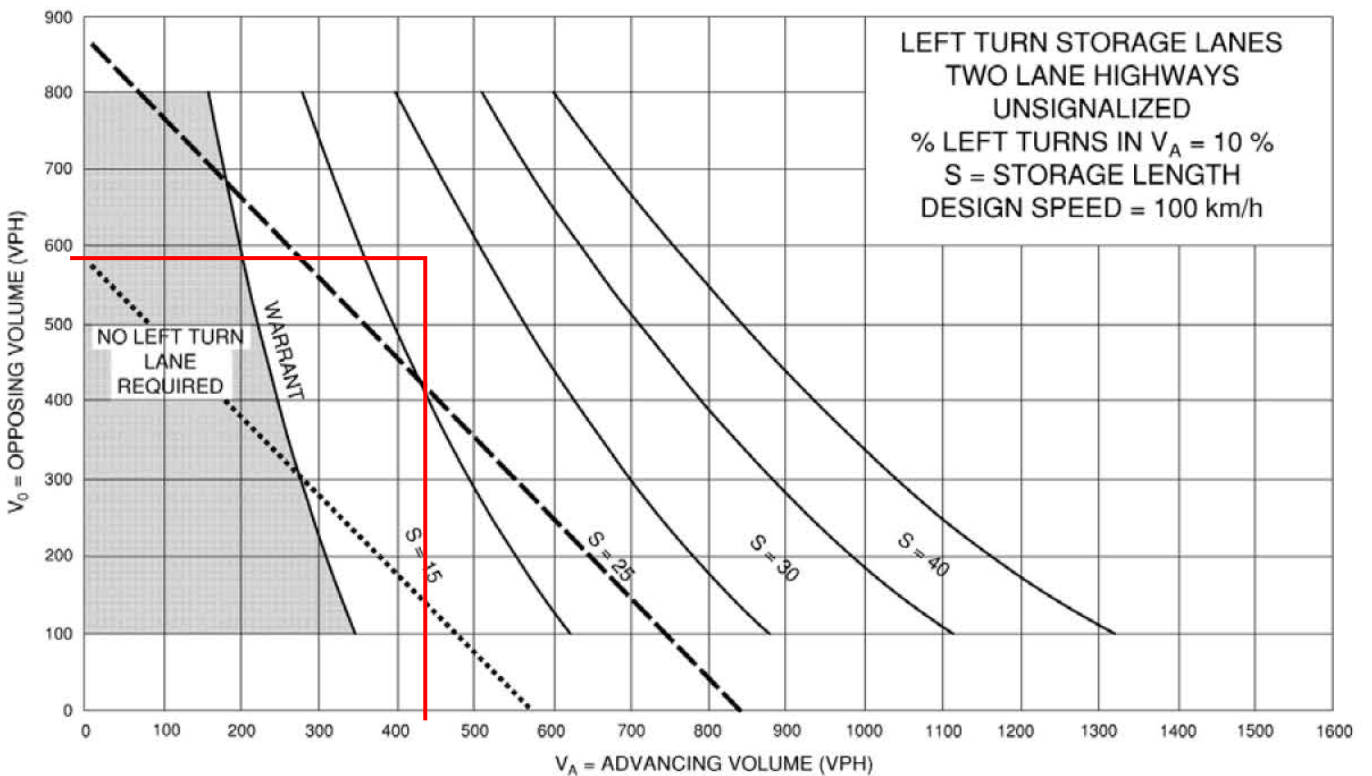
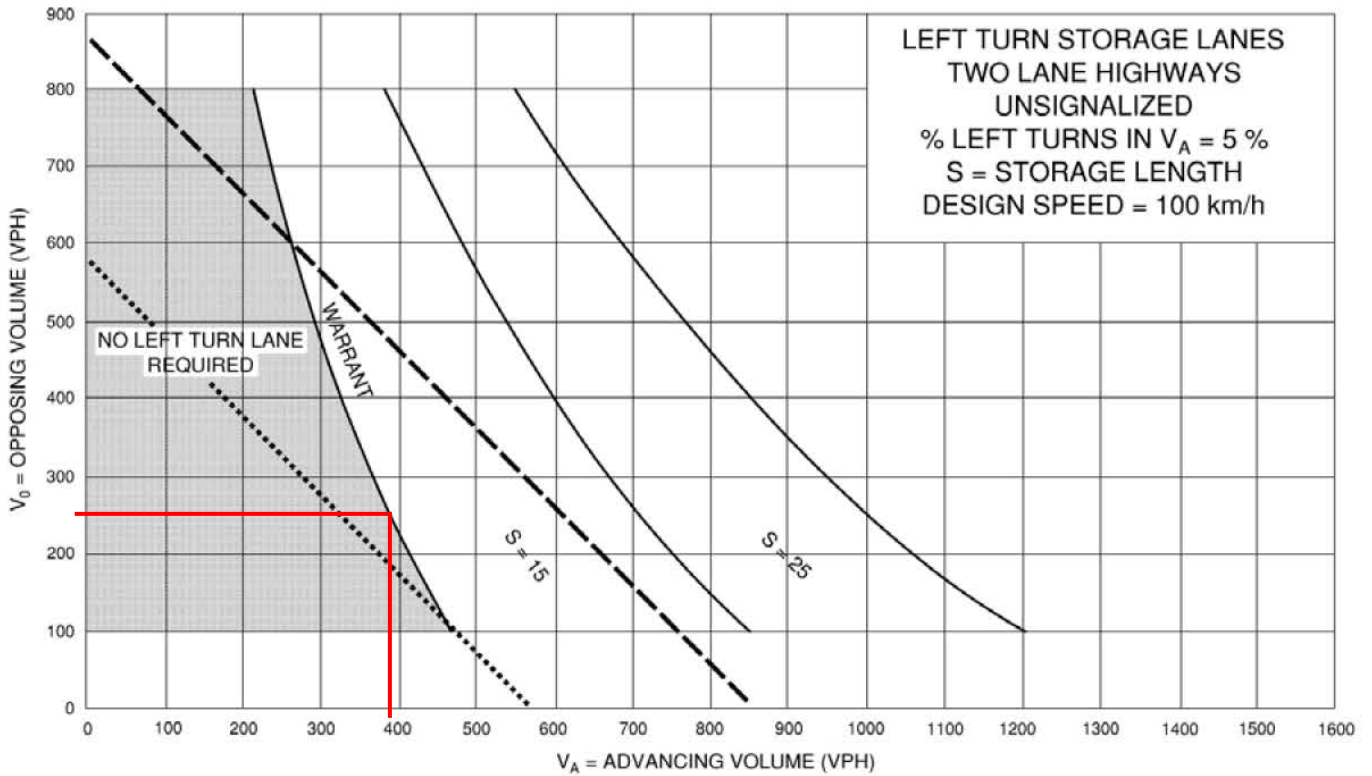
Based on these criteria, an eastbound left-turn lane on Bradley Avenue at Access B is warranted with 25 metres of storage under 2029 total traffic conditions.

**Figure 4.4** contains the warrant nomographs.

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<sup>5</sup> *MTO Design Supplement for TAC Geometric Design Guide for Canadian Roads*, June 2017.





## Bradley Avenue & Access B Eastbound Left-Turn Lane 2029 Total Conditions

## 5 Transportation Demand Management

Transportation Demand Management (TDM) refers to ways of making the capacity of roads more efficient by reducing vehicle demand. TDM approaches consider how people's choices of travel mode are affected by land use patterns, development design, parking availability, parking cost, and the relative cost, convenience, and availability of alternative modes of travel. Various TDM strategies are used to influence those factors so that the alternatives are more competitive with single-occupancy travel and potentially reduce reliance on motor vehicles.

The City of London requires TIA submissions to include a suitable travel demand management plan with reasonable measures to facilitate reduced automobile reliance and promote transit, cycling and walking for trips to and from the site. This requirement is consistent with the goal established by the 2004 Transportation Master Plan to reduce SOV (single occupancy vehicle) dependency by 10%<sup>6</sup>.

Potential TDM measures appropriate for the proposed development include facilitating active transportation and extending transit service to the new development.

### 5.1 Walking

The pedestrian accessibility of a development is essential in helping to ensure that those that can walk have access to accessible pedestrian connections.

Proper pedestrian connections from the surrounding community to the development should be available to ensure safety and to enhance the experience of those that choose to walk. The subdivision should provide sidewalks on both sides of all internal roadways and connections to sidewalks in the adjacent Parker Jackson subdivision.

### 5.2 Cycling

It is expected that each single-family and townhouse dwelling unit will be able to accommodate bicycle parking.

Bike lanes are not currently provided in vicinity of the subject development. However, a Designated Facility<sup>7</sup> is planned for Bradley Avenue and an Off-Road Secondary Route is planned north of the subject lands.

<sup>6</sup> Transportation Impact Assessment Guidelines, City of London, April 2012.

<sup>7</sup> City of London, *London ON Bikes*, September 2016.



### 5.3 Transit

As discussed in **Section 2.2**, London Transit currently does not provide transit service within a reasonable walking distance to the development.

The City of London in coordination with London Transit should consider extending the service of Route 24 or adding new service to accommodate the subject and adjacent developments.





## 6 Conclusions and Recommendations

### 6.1 Conclusions

Based on the investigations carried out, it is concluded that:

- ▶ **Existing Traffic Conditions:** All study area intersections are currently operating at acceptable levels of service.
- ▶ **Development Trip Generation:** The development is forecast to generate 154 and 186 trips during the AM and PM peak hours, respectively.
- ▶ **2029 Background Traffic Conditions:** All study area intersections are forecast to operate at acceptable levels of service.
- ▶ **2029 Total Traffic Conditions:** All study area intersections are forecast to operate at acceptable levels of service.
- ▶ **Site Access Intersections:** Both site access intersections are forecast to operate at acceptable levels of service under 2029 total traffic conditions. An eastbound left-turn lane with 25 metres of storage is forecast to be warranted on Bradley Avenue at the new road connection under 2029 total traffic conditions.

### 6.2 Recommendations

Based on the findings of this study, it is recommended that the development be considered for approval as proposed, with an eastbound left-turn lane with 25 metres of storage constructed on Bradley Avenue at the new road connection.



# Appendix A

## Pre-Study Consultation



# Appendix B

## Existing Traffic Data



# Appendix C

## Existing Traffic Operations Reports



# Appendix D

## Background Development Traffic Volumes



# Appendix E

## 2029 Background Traffic Operations Reports



# Appendix F

## 2029 Total Traffic Operations Reports

