

Starlight Group Property Holdings Inc.

City of Toronto

TRANSPORTATION IMPACT ASSESSMENT

1637-45 Bathurst Street

18105/200

February 2018



LEA Consulting Ltd.

Consulting Engineers & Planners

Suite 900, 625 Cochrane Drive, Markham, ON, L3R 9R9 CANADA
Tel: 905-470-0015 Fax: 905-470-0030 www.LEA.ca

February 9, 2018

Our Ref.:18105/200

Tyler Peck, MCIP, RPP
Walker, Nott, Dragicevic Associates Limited
90 Eglinton Avenue East, Suite 970
Toronto, ON
M4P 2Y3

Dear Tyler Peck:

Re: Transportation Impact Assessment (TIA) – 1637-45 Bathurst Street, City of Toronto

LEA Consulting Ltd. is pleased to present the findings of our report, entitled *Transportation Impact Assessment – 1637-45 Bathurst Street* dated February 2018. The report has been completed on behalf of Starlight Group Property Holdings Inc.

Should you have any question regarding this report, please do not hesitate to contact Kenneth Chan at (905) 470-0015 ext. 292.

Yours very truly,

LEA Consulting Ltd.

Paul Grove, M.Pl.
Transportation Planner

Kenneth Chan, P.Eng., PTOE, PMP
Head of Transportation Engineering

:pg

Encl.: Transportation Impact Assessment – 1637-45 Bathurst Street

LEAdership in engineering & planning solutions

TABLE OF CONTENTS

1	INTRODUCTION	1
1.1	Site Context.....	1
1.2	Proposed Redevelopment.....	2
2	EXISTING TRANSPORTATION CONDITIONS	3
2.1	Pedestrian Network	3
2.2	Cycling Network	3
2.3	Transit Network	4
2.3.1	Existing Transit Capacity Analysis.....	5
2.4	Road Network	5
3	FUTURE BACKGROUND TRANSPORTATION CONDITIONS	7
3.1	Background Transit Network.....	7
3.1.1	Future Background Transit Capacity Analysis	7
4	FUTURE TRANSPORTATION CONDITIONS	8
4.1	Future Road Network.....	8
4.1.1	Trip Generation	8
4.2	Future Transit Network.....	8
4.2.1	Methodology	8
4.2.2	Trip Generation	9
4.2.3	Trip Distribution	9
4.2.4	Future Total Transit Capacity Analysis	9
5	PARKING.....	11
5.1	Bicycle Parking	11
5.1.1	Bicycle Parking Standards	11
5.1.2	Bicycle Parking Proposed	11
5.2	Car Parking	11
5.2.1	Car Parking Standards.....	11
5.2.2	Car Parking Proposed.....	12
6	LOADING	13
6.1	Loading Standards	13
6.2	Loading Proposed	13
7	CONCLUSIONS.....	14

LIST OF TABLES

Table 1-1: Proposed Site Statistics	2
Table 2-1: Existing Transit Capacity Analysis.....	5
Table 3-1: Future Background (2022) Transit Capacity Analysis	7
Table 4-1: ITE Trip Generation Rates	8
Table 4-2: Subject Site Auto Trip Generation.....	8
Table 4-3: Transit Trip Generation Rates	9
Table 4-4: Subject Site Transit Trip Generation.....	9
Table 4-5: Transit Trip Distribution	9
Table 4-6: Future Total (2022) Transit Capacity Analysis.....	10
Table 5-1: Zoning By-Law 569-2013 / Toronto Green Standard (TGS) Tier 1 Bicycle Parking Standards	11
Table 5-2: Bicycle Parking Proposed	11
Table 5-3: Zoning By-Law 569-2013 Car Parking Standards.....	12
Table 5-4: Car Parking Proposed	12

Table 6-1: Zoning By-Law 569-2013 Loading Standards	13
Table 6-2: Loading Spaces Proposed.....	13

LIST OF FIGURES

Figure 1-1: Site Location	1
Figure 1-2: Proposed Site Plan.....	2
Figure 2-1: Existing Cycling Facilities	3
Figure 2-2: Existing TTC Transit Network.....	4
Figure 2-3: Existing Road Network and Lane Configuration	6

APPENDICES

APPENDIX A: Trip Generation Survey Summary
APPENDIX B: TTS Transit Trip Generation Rates
APPENDIX C: Turning Path Diagrams

1 INTRODUCTION

Starlight Investments Inc. is currently proposing to redevelop 1637 Bathurst Street in the City of Toronto (herein referred to as the “subject site”). LEA Consulting Ltd. has been retained to provide transportation consulting services as they relate to the proposed redevelopment. These services have been provided for the purposes of completing the necessary transportation analyses to assess the operations of the surrounding transportation networks given the realization of the proposed redevelopment, as well as to assess the parking and loading supply proposed on-site.

This Transportation Impact Assessment (TIA) will firstly outline and describe the redevelopment as proposed. Subsequently, transportation analyses will be conducted of the existing and future conditions. Given the site is forecasted to generate a minimal number of net auto trips, intersection capacity analysis has not been performed. Rather transit capacity analysis has been conducted. A parking analysis and review of the proposed loading on-site has also been completed.

1.1 SITE CONTEXT

The subject site location is illustrated in **Figure 1-1**.

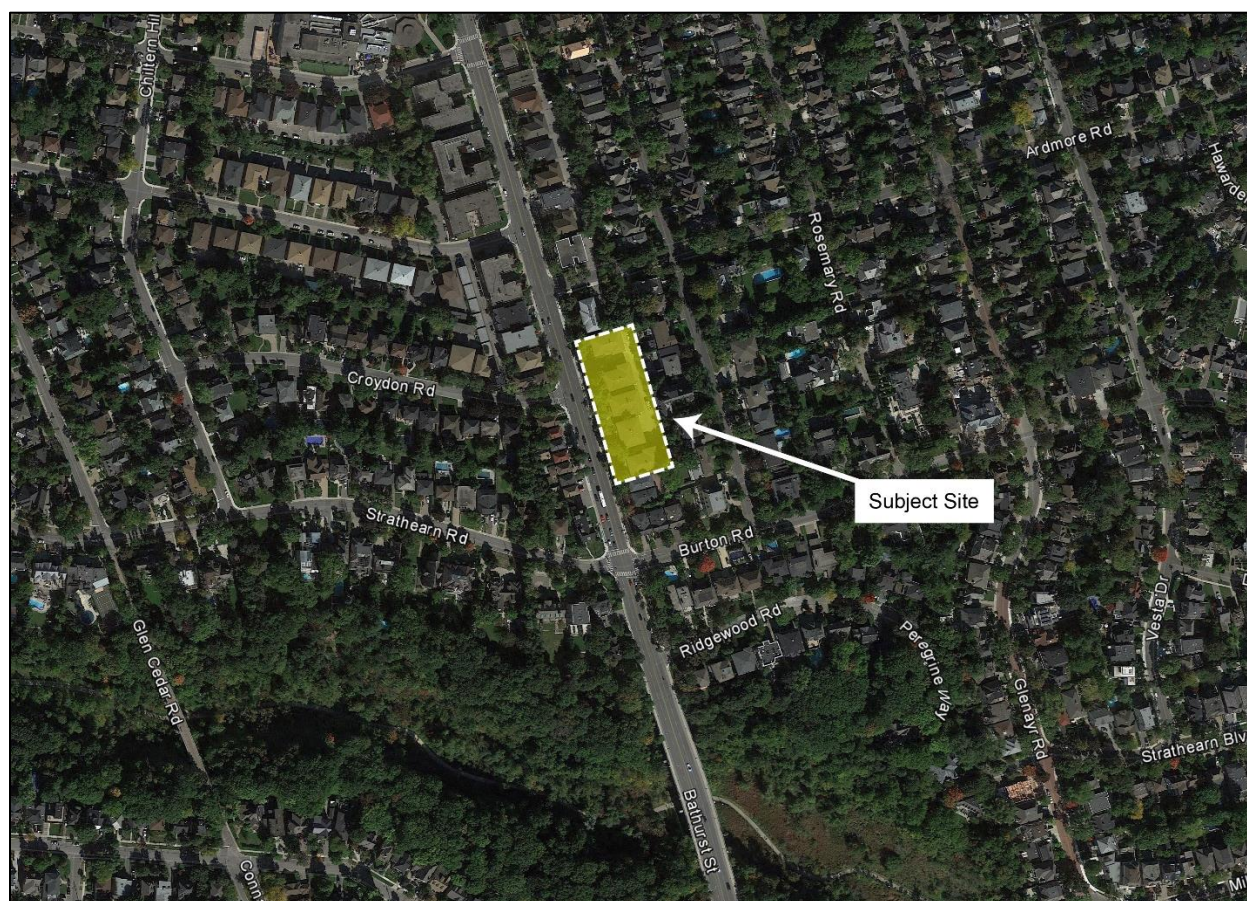


Figure 1-1: Site Location

The subject site is bound abutting properties to the north, east, and south, and Bathurst Street to the west.

1.2 PROPOSED REDEVELOPMENT

The redevelopment as proposed will involve the construction of a 4-storey residential building, replacing the existing residential buildings on-site. The existing single site access to Bathurst Street is proposed to be maintained. The proposed site plan is displayed below in **Figure 1-2**.

The proposed site statistics of the proposed redevelopment are presented below in **Table 1-1**.

Land Use	Units / GFA (m ²)
1-Bedroom	9
2-Bedroom	22
3-Bedroom	36
TOTAL	67

Table 1-1: Proposed Site Statistics

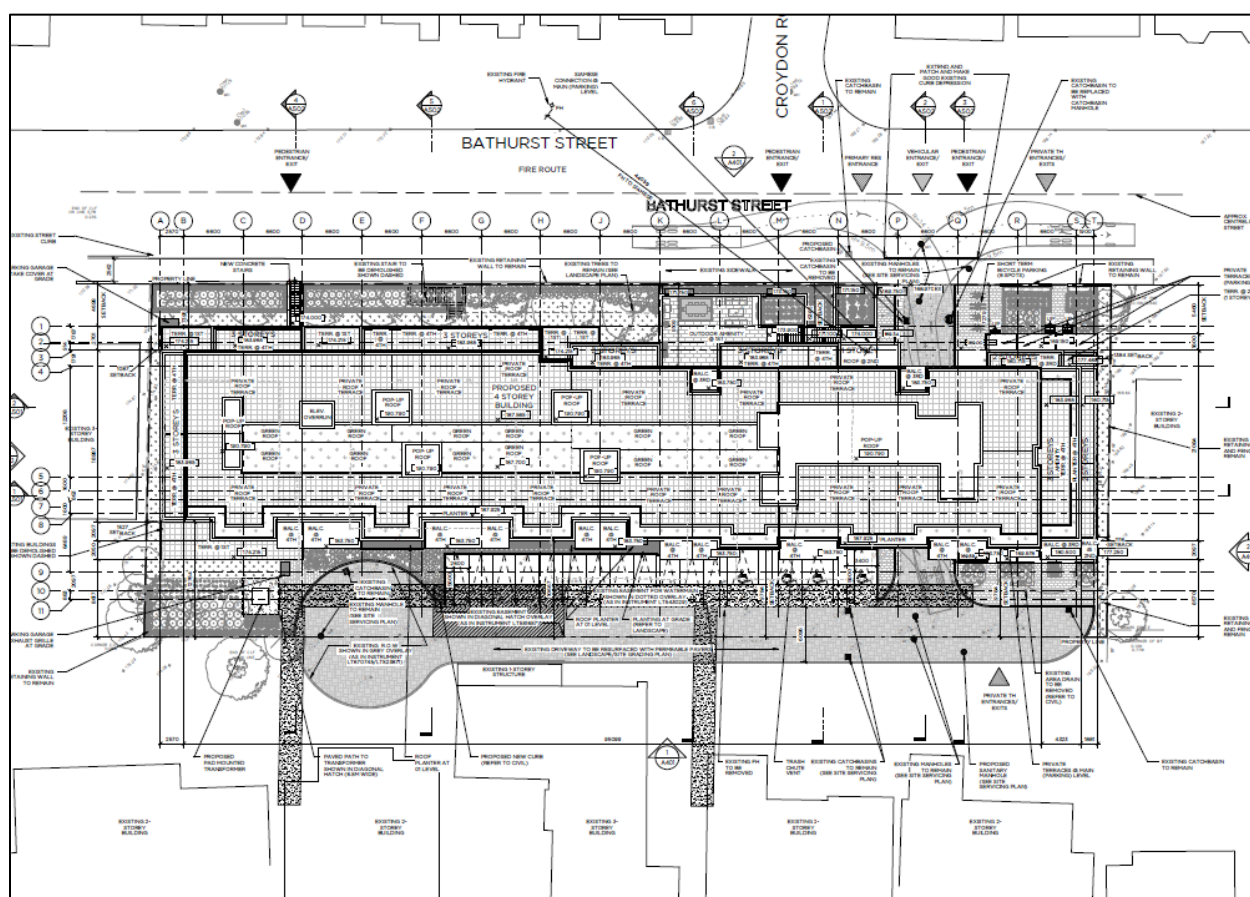


Figure 1-2: Proposed Site Plan

2 EXISTING TRANSPORTATION CONDITIONS

Each of the respective transportation networks that exist in the area of the subject site will be identified and inventoried.

2.1 PEDESTRIAN NETWORK

In the area immediately surrounding the subject site, the existing pedestrian network and environment is fair. Continuous sidewalks are available on all streets in the study area, and crosswalks are available at all major intersections. The closest crossing point of Bathurst Street is located at the Burton Road/Strathearn Road intersection, which is less than 100m from the site. However, there are currently no marked crosswalks at the Bathurst Street intersections with Ardmore Road, as well as Markdale Avenue.

In terms of general amenities, on the Walkscore application, the subject site receives a Walkscore of 50/100 – Somewhat Walkable. There are a number of general amenities reachable within a reasonable walking distance, including restaurants, schools, parks, and other errands.

2.2 CYCLING NETWORK

The cycling network in the area of the subject site is fair. There are a number of significant cycling facilities that are located nearby, and in the surrounding area. Located nearby or on the doorstep of the subject site are the shared roadways of both Burton Road/Strathearn Road which provide for east/west connectivity to/from the Kay Gardner Beltline Trail, a significant multi-use trail running northwest to the southeast in the area. A map of the existing cycling facilities present in the area is shown in **Figure 2-1**.

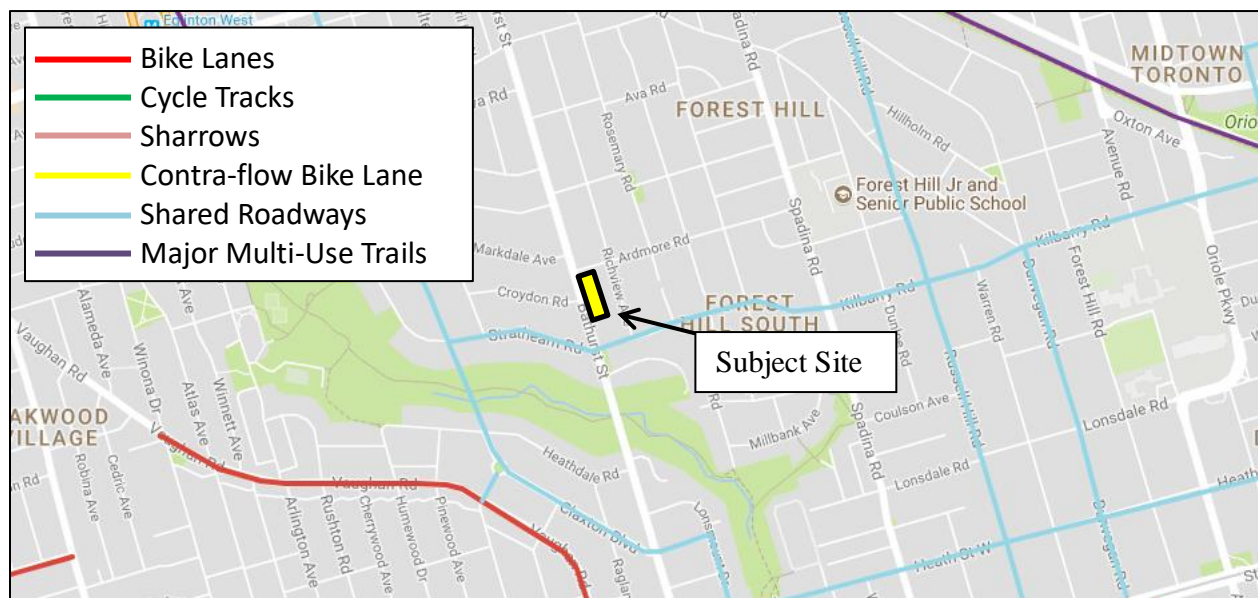


Figure 2-1: Existing Cycling Facilities

2.3 TRANSIT NETWORK

The subject site is located on the doorstep of Toronto Transit Commission (TTC) transit services. The existing transit network surrounding the subject site will be outlined below. The existing transit network is shown in **Figure 2-2**.

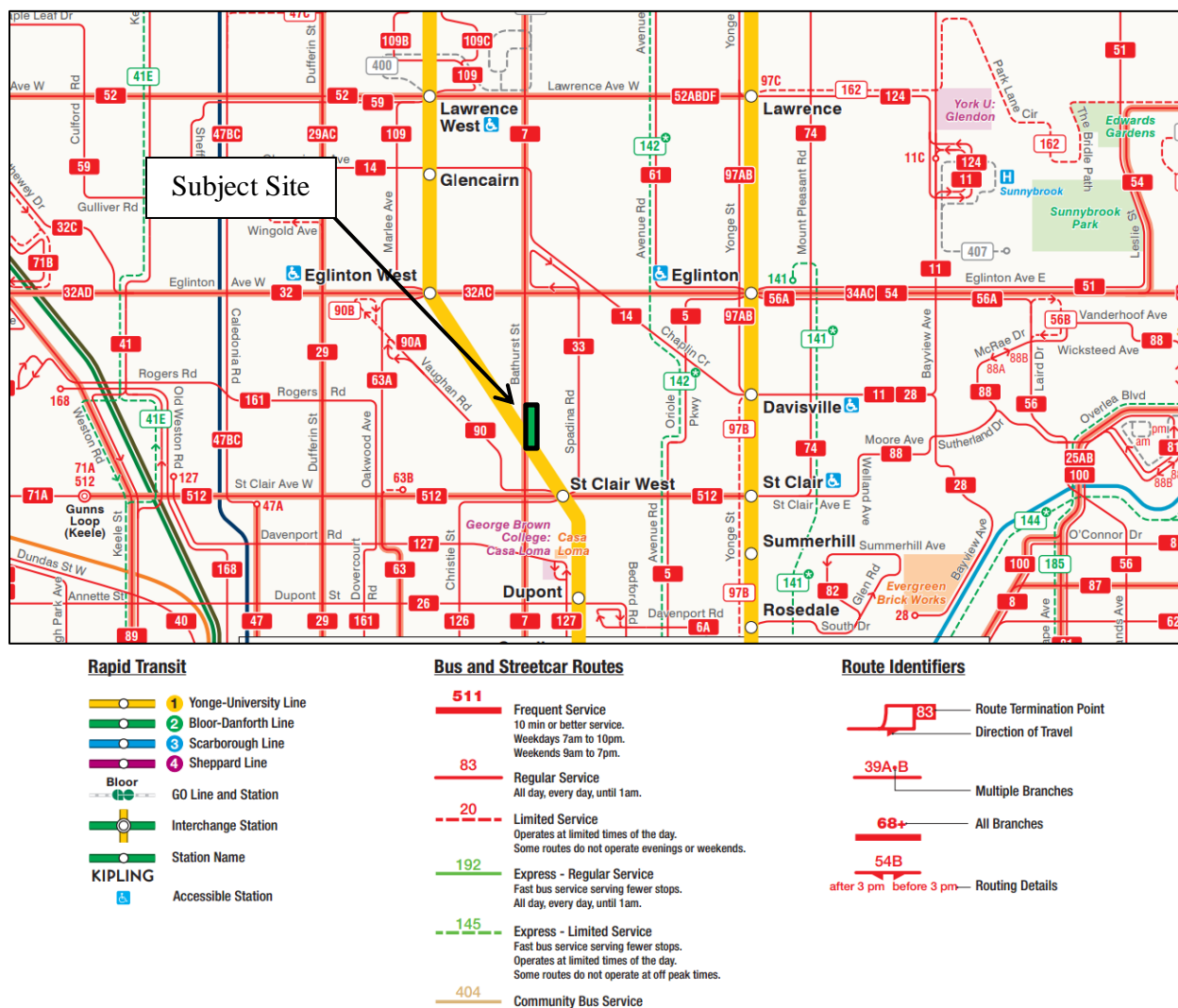


Figure 2-2: Existing TTC Transit Network

TTC Route 7 – Bathurst is a bus route operating in a north-south direction between Bathurst Station on the Bloor-Danforth Subway line and the area of Bathurst Street and Steeles Avenue West. TTC Route 7 operates all days of the week and is part of the 10 Minute Network. TTC Route 7 can be accessed at the intersection of Bathurst Street & Ardmore Road. TTC 7 provides for a direct connection to Bathurst Station on Line 2 – Bloor/Danforth where a direct connection can be made to either Line 2, or TTC 511 Bathurst streetcar. TTC Route 7 is accessible on the doorstep of the subject site, permitting for a high degree of transit accessibility to residents.

2.3.1 Existing Transit Capacity Analysis

The transit capacity analysis has been conducted using data received from the TTC for TTC Route 7 Bathurst. Data provided from the TTC was collected in 2015. To account for growth since 2015, an annual growth rate of 2.2% has been applied for a period of seven (7) years and two (2) years. This growth rate has been based on ridership growth of TTC transit routes generally since 1996.¹ TTC Route 514 Cherry has not been analyzed as all future growth will be directed to TTC 504 to be conservative. **Table 2-1** below summarizes the results of the existing TTC transit capacity analysis.

Route	Direction	Location	Time Period	Capacity	Departure Demand	Departure % Utilization	Arrival Demand	Arrival % Utilization
7 Bathurst	NB	Ardmore and Bathurst	AM Peak	539	248	46%	247	46%
7 Bathurst	SB	Ardmore and Bathurst	AM Peak	539	483	90%	456	85%
7 Bathurst	NB	Ardmore and Bathurst	PM Peak	616	454	74%	466	76%
7 Bathurst	SB	Ardmore and Bathurst	PM Peak	693	285	41%	282	41%

Table 2-1: Existing Transit Capacity Analysis

The existing transit capacity analysis shows TTC Route 7 Bathurst operates within capacity during the weekday AM and PM peak hours. TTC Route 7 during the weekday AM peak hour operates with notable demand in the southbound direction, departing the stop at Ardmore Road 90% utilized. This can be expected given the peak direction of travel during the weekday AM peak hour is in the southbound direction, and the TTC Route 7 connects to numerous other TTC services including TTC Line 2.

2.4 ROAD NETWORK

This subsection will describe the road network in the immediately surrounding area. The road network and lane configuration is shown in **Figure 2-3** and is described as follows:

Bathurst Street is a north-south major arterial road with a four-lane cross-section (2-lanes per direction). Bathurst Street operates from Queens Quay West in the City of Toronto to Steeles Avenue West and beyond in York Region.

Ardmore Road is an east-west local roadway with a two-lane cross section (one per direction). Ardmore Road operates from Bathurst Street to Spadina Road. On-street parking is permitted on the north side of the street.

Croydon Road is an east-west local roadway with a two-lane cross section (one per direction). Croydon Road operates Bathurst Street to Chiltern Hill Road. On-street parking is permitted on the both sides of the street but alternates mid-month between for seasonal purposes.

¹ Toronto Transit Commission Report No. Additional Operating Resource Requirements to Meet Increasing TTC Ridership, May 30, 2012:

[https://ttc.ca/About the TTC/Commission reports and information/Commission meetings/2012/May 30/Reports/Additional Operating.pdf](https://ttc.ca/About%20the%20TTC/Commission%20reports%20and%20information/Commission%20meetings/2012/May%2030/Reports/Additional%20Operating.pdf)

Burton Road is an east-west collector road with a two-lane cross section (one per direction). Burton Road operates from Bathurst Street to Spadina Road, continuing west of Bathurst Street as Strathearn Road, and east of Spadina Road as Kilbarry Road. On-street parking is permitted on both the north and south side of Burton Road.

Spadina Road is a minor arterial road with a two-lane cross section (one per direction) within the area of the subject site. Spadina Road operates from Eglinton Avenue West to the Gardiner Expressway, where it continues to Queens Quay West as Lower Spadina Avenue.

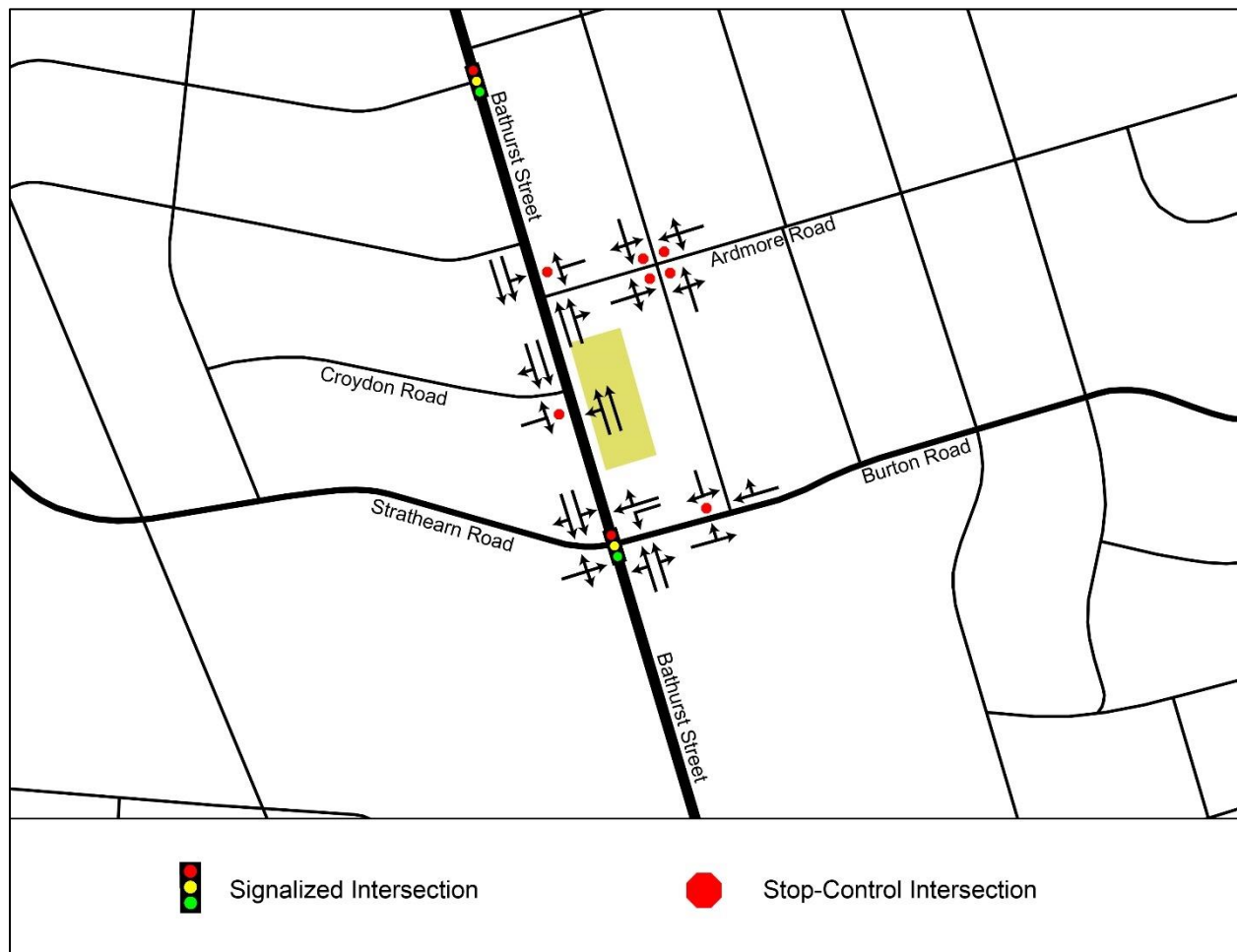


Figure 2-3: Existing Road Network and Lane Configuration

3 FUTURE BACKGROUND TRANSPORTATION CONDITIONS

Identified and discussed here will be the background transportation conditions assumed to be present in the area given the planning horizon year of 2022. As a minimal number of net auto trips are forecasted to be generated by the subject site as discussed in **Section 4**, no intersection capacity analysis has been performed under future background (2022) conditions.

3.1 BACKGROUND TRANSIT NETWORK

The background transit network assumed to be present by the planning horizon year of 2022 is that of the existing transit network. No improvements to the surrounding transit network have been identified within the planning horizon of this study.

3.1.1 Future Background Transit Capacity Analysis

The transit capacity analysis assumes the existing transit network is in place by 2022. The capacity analysis involves the trips evaluated under existing conditions, plus the addition of a growth rate over the five (5) year planning horizon of this study. This growth rate is the growth rate for all TTC services as observed since 1996 of 2.2%.² The background transit capacity analysis results are summarized in **Table 3-1** below.

Route	Direction	Location	Time Period	Capacity	Departure Demand	Departure % Utilization	Arrival Demand	Arrival % Utilization
7 Bathurst	NB	Ardmore and Bathurst	AM Peak	539	276	51%	275	51%
7 Bathurst	SB	Ardmore and Bathurst	AM Peak	539	539	100%	508	94%
7 Bathurst	NB	Ardmore and Bathurst	PM Peak	616	507	82%	519	84%
7 Bathurst	SB	Ardmore and Bathurst	PM Peak	693	317	46%	314	45%

Table 3-1: Future Background (2022) Transit Capacity Analysis

TTC Route 7 Bathurst will operate without constraint with the exception of the southbound direction during the weekday AM peak hour under future background (2022) conditions. The route will depart the stop at Ardmore Road fully utilized without residual capacity. To address these constraints, the TTC could consider increasing the frequency or decreasing the headway of vehicles during the weekday AM peak hour.

² Toronto Transit Commission Report No. Additional Operating Resource Requirements to Meet Increasing TTC Ridership, May 30, 2012:

[https://ttc.ca/About the TTC/Commission reports and information/Commission meetings/2012/May 30/Reports/Additional Operating.pdf](https://ttc.ca/About%20the%20TTC/Commission%20reports%20and%20information/Commission%20meetings/2012/May%2030/Reports/Additional%20Operating.pdf)

4 FUTURE TRANSPORTATION CONDITIONS

This section will assess the future operation of the road network and transit network given the realization of the proposed redevelopment of the subject site.

4.1 FUTURE ROAD NETWORK

4.1.1 Trip Generation

To determine the anticipated trip generation of the subject site, the Institute of Transportation Engineers (ITE) Trip Generation Manual 9th Edition was used to apply the relevant weekday AM and PM peak hour trip generation rates. The typical rates of 230 – Condominium/Townhouse has been applied. In order to account for the net change in trip generation since there are existing uses on-site, a trip generation survey of the existing site was conducted on Tuesday, July 18, 2017 from 7:00 AM to 9:00 AM. **Table 4-1** below summarizes the residential trip generation rates applied to the subject site.

Commercial	Weekday AM Peak Hour			Weekday PM Peak Hour		
	In	Out	Total	In	Out	Total
Trip Rate (Per Unit) ITE 230	19%	81%	0.44	64%	36%	0.52

Table 4-1: ITE Trip Generation Rates

Upon applying the auto trip generation rates to the proposed number of units, the expected trips to be generated are summarized below in **Table 4-2**. Existing trip generation has been determined via on-site trip generation surveys conducted on Wednesday July 19, 2017 from 7:00AM to 9:00AM and from 4:00PM to 6:00PM. The survey summary is appended as **Appendix A**.

Land Use	Weekday AM Peak Hour			Weekday PM Peak Hour		
	In	Out	Total	In	Out	Total
Trip Generation (67 Units)	6	23	29	22	13	36
Existing Trips	0	-4	-4	-11	0	-11
TOTAL	6	19	25	11	13	24

Table 4-2: Subject Site Auto Trip Generation

The subject site is projected to generate 25 two-way net trips during the weekday AM peak hour (6 inbound and 19 outbound), and 24 two-way net trips during the weekday PM peak hour (11 inbound and 13 outbound). This is a minimal number of trips that are not expected to introduce a noticeable impact on the surrounding road network. As such, future total (2022) intersection capacity analysis has not been performed.

4.2 FUTURE TRANSIT NETWORK

4.2.1 Methodology

LEA has conducted transit capacity analysis of the study area transit network. Future total capacity analysis has been conducted for the weekday AM and PM peak hours for the horizon year of 2022.

4.2.2 Trip Generation

To determine the anticipated transit trip generation of the subject site, Transportation Tomorrow Survey (TTS) 2011 data were extracted for weekday AM and PM peak hour trips inbound/outbound from the area of the subject site conducted by transit. These trips were filtered for trip purposes relevant to the residential land use proposed, as well as trips conducted by apartment or townhouse type households. The extracted trips were then divided over the total number of apartment and townhouse units in the traffic zones to return a trip generation rate per unit. **Table 4-3** below summarizes the transit trip generation rates for each use. The TTS outputs for estimate the transit trip generation rates are available in **Appendix B**.

Land Use	Weekday AM Peak Hour			Weekday PM Peak Hour		
	In	Out	Total	In	Out	Total
Transit Trips per Unit	0.11	0.12	0.23	0.05	0.07	0.12

Table 4-3: Transit Trip Generation Rates

Upon applying the transit trip generation rates to the subject site, the expected transit trips to be generated are summarized below in **Table 4-4**.

Land Use	Weekday AM Peak Hour			Weekday PM Peak Hour		
	In	Out	Total	In	Out	Total
Transit Trips (67 Units)	7	8	15	3	5	8
TOTAL	7	8	15	3	5	8

Table 4-4: Subject Site Transit Trip Generation

The subject site is expected to generate 15 two-way transit trips during the weekday AM peak hour (7 inbound and 8 outbound), and 8 two-way transit trips during the weekday PM peak hour (3 inbound and 5 outbound).

4.2.3 Trip Distribution

Trip distribution for the proposed redevelopment has been estimated using the ridership data received from the TTC for TTC Route 7 Bathurst. The proportion of ridership in the northbound and southbound direction at the Ardmore Road stop was applied as the trip distribution for the respective weekday AM and PM peak hours. **Table 4-5** below summarizes the assumed trip distribution for this study.

	Weekday AM Peak Hour		Weekday PM Peak Hour	
	In	Out	In	Out
7 Bathurst Northbound	34%	34%	60%	60%
7 Bathurst Southbound	66%	66%	40%	40%
TOTAL	100%	100%	100%	100%

Table 4-5: Transit Trip Distribution

4.2.4 Future Total Transit Capacity Analysis

The future total transit (2022) capacity analysis involves the addition of the trips generated by the subject site to the future background (2022) transit conditions. **Table 4-6** below summarizes the future total transit capacity analysis.

Route	Direction	Location	Time Period	Capacity	Departure Demand	Departure % Utilization	Arrival Demand	Arrival % Utilization
7 Bathurst	NB	Ardmore and Bathurst	AM Peak	539	279	52%	277	51%
7 Bathurst	SB	Ardmore and Bathurst	AM Peak	539	544	101%	513	95%
7 Bathurst	NB	Ardmore and Bathurst	PM Peak	616	510	83%	521	85%
7 Bathurst	SB	Ardmore and Bathurst	PM Peak	693	319	46%	315	45%

Table 4-6: Future Total (2022) Transit Capacity Analysis

With the addition of the site trips from the subject site, a negligible increase in ridership is forecasted for the transit routes in the area. TTC Route 7 Bathurst in the northbound direction during the weekday AM peak hour is forecasted to operate just over capacity, which is comparable to the future background (2022) conditions. Overall the anticipated transit impact is acceptable given TTC Route 7 is forecasted to operate at capacity under future background (2022) conditions.

5 PARKING

5.1 BICYCLE PARKING

5.1.1 Bicycle Parking Standards

The subject site is currently zoned under City of Toronto Zoning By-Law 569-2013, as a result, these standards are the applicable bicycle parking standards to be utilized for the proposed redevelopment of the subject site. The parking standards are summarized below in **Table 5-1**.

Land Use	Units	Bicycle Parking Rates		Bicycle Parking Standard		Total Bicycle Parking
		Short-Term	Long-Term	Short-Term	Long-Term	
Residential	67	0.1 spaces/unit	0.9 spaces/unit	7	61	68
TOTAL				7	61	68

Table 5-1: Zoning By-Law 569-2013 / Toronto Green Standard (TGS) Tier 1 Bicycle Parking Standards

Given the redevelopment of the subject site, required will be the provision of 68 bicycle parking spaces (7 short-term and 61 long-term).

5.1.2 Bicycle Parking Proposed

Table 5-2 below summarizes the proposed provision of bicycle parking given the redevelopment of the subject site.

Land Use	Units/ GFA	Bicycle Parking Standard		Total Bicycle Parking Required	Bicycle Parking Proposed		Total Bicycle Parking Proposed
		Short-Term	Long-Term		Short-Term	Long-Term	
Residential	67	7	61	68	8	64	72
TOTAL		7	61	68	8	64	72

Table 5-2: Bicycle Parking Proposed

The proposed redevelopment will exceed the bicycle parking standards of Zoning By-Law 569-2013.

5.2 CAR PARKING

5.2.1 Car Parking Standards

Currently, the subject site is zoned under City of Toronto Zoning By-Law 569-2013. As a result, the standards outlined under Zoning By-Law 569-2013 are the applicable parking standards to the proposed redevelopment. The parking standards are summarized below in **Table 5-3**.

Land Use	GFA/Units	Minimum Parking Rate	Parking Spaces Required
Residential	67 Units	-	-
<i>Bachelor</i>	0 Units	0.80 spaces/unit	0
<i>1-Bedroom</i>	9 Units	0.90 spaces/unit	8
<i>2-Bedroom</i>	22 Units	1.00 spaces/unit	22
<i>3-Bedroom</i>	36 Units	1.20 spaces/unit	43
Residential Sub-Total			73
Visitor	-	0.20 spaces/unit	13
TOTAL			86

Table 5-3: Zoning By-Law 569-2013 Car Parking Standards

The subject site is required to provide 86 parking spaces with 73 allocated to residents and 13 allocated to visitor parking.

5.2.2 Car Parking Proposed

The parking to be provided given the redevelopment of the subject site is summarized in **Table 5-4** below, and is compared to the standards of Zoning By-Law 569-2013.

Land Use	GFA/Units	Parking Spaces Required	Parking Spaces Proposed
Residential	67 Units	-	89
<i>Bachelor</i>	0 Units	0	
<i>1-Bedroom</i>	9 Units	8	
<i>2-Bedroom</i>	22 Units	22	
<i>3-Bedroom</i>	36 Units	43	
Residential Sub-Total		73	89
Visitor	-	13	13
TOTAL		86	102

Table 5-4: Car Parking Proposed

The proposed redevelopment will satisfy the minimum parking requirements of Zoning By-Law 569-2013. It is understood that of the 89 resident parking spaces, 86 will be provided on the P1 level in the form of car stackers, while the remaining three (3) spaces will be provided on the ground-floor level.

In confirming that the car stackers are functional, a functional review was conducted in **Appendix C**. The review was conducted of a vehicle up to 5m in length, which is typical for SUVs and large sedans. This vehicle typology was used as the car stackers would not permit a pick-up-truck to use the stacker spaces. The review finds acceptable entry/exit paths of the car stackers.

6 LOADING

Discussed in the subsections to follow will be both the Zoning By-Law loading standards applicable to the subject site and the amount of loading that is being proposed.

6.1 LOADING STANDARDS

The subject site is currently within the area zoned under City of Toronto Zoning By-Law 569-2013, and therefore, it is the loading standards in Zoning By-Law 569-2013 that will govern the number of loading spaces to be provided by the proposed redevelopment. The Zoning By-Law standards are outlined in **Table 6-1**.

Zoning By-Law 569-2013 Loading Standards					
Land Use	Units	Loading Space Type			
		A	B	C	G
Residential	31-399	-	-	-	1
TOTAL		-	-	-	1

Table 6-1: Zoning By-Law 569-2013 Loading Standards

The subject site as proposed will be required to provide one (1) Type “G” loading space.

6.2 LOADING PROPOSED

Table 6-2 summarizes the number of loading spaces by type that will be provided given the proposed redevelopment of the subject site.

Loading Spaces Proposed				
Land Use	Loading Space Type			
	A	B	C	G
Residential	-	-	-	1
TOTAL Required	-	-	-	1
TOTAL Proposed	-	-	-	1

Table 6-2: Loading Spaces Proposed

The subject site will meet Zoning By-Law 569-2013 requirements by providing one (1) Type “G”. Available in **Appendix C** are the turning path diagrams. The functional review finds the acceptable operation of the loading space as proposed.

7 CONCLUSIONS

- The proposed redevelopment will replace the existing residential land uses on-site with new residential units. A total of 67 units are proposed. The redevelopment of the subject site proposes to maintain the single access to Bathurst Street.
- The subject site is situated in a fairly walkable area with cycling facilities located nearby. TTC surface transit services are accessible on the doorstep of the site.
- Under existing conditions, the TTC Bathurst bus operates within capacity, with the greatest observed demand in the southbound direction during the weekday AM peak hour.
- Under future background (2022) conditions, the TTC Bathurst bus is forecasted to operate at capacity in the southbound direction during the weekday AM peak hour. All other branches are forecasted to operate without constraint.
- It is estimated that the subject site will generate 25 two-way net auto trips (6 inbound and 19 outbound) during the weekday AM peak hour and 24 two-way net auto trips (11 inbound and 13 outbound) during the weekday PM peak hour.
- As a result of the minimal number of auto trips forecasted to be generated by the subject site, a minimal traffic impact is anticipated on the surrounding road network. Furthermore, future total (2022) transit analyses reveals the proposed redevelopment will introduce an acceptable impact on the transit network.
- It is estimated that the subject site will generate 15 two-way transit trips during the weekday AM peak hour (7 inbound and 8 outbound), and 8 two-way transit trips during the weekday PM peak hour (3 inbound and 5 outbound).
- The proposed redevelopment will satisfy the vehicular parking requirements of the City of Toronto Zoning By-Law.
- The proposed redevelopment will satisfy the bicycle parking requirements of the City of Toronto Zoning By-Law.
- The proposed redevelopment will satisfy City of Toronto Zoning By-Law requirements for loading by providing one (1) Type “G” loading space.

APPENDIX A

Trip Generation Survey Summary

LEA CONSULTING LTD

625 Cochrane Drive 9th Floor
Markham, Ontario, L3R 9R9

Project No.: 18105

Location: Bathurst St / Croydon Rd

Weather: Clear

Surveyor(s): May Yue & Belinda Wong

File Name : Bathurst&Croydon-MERGED-AM

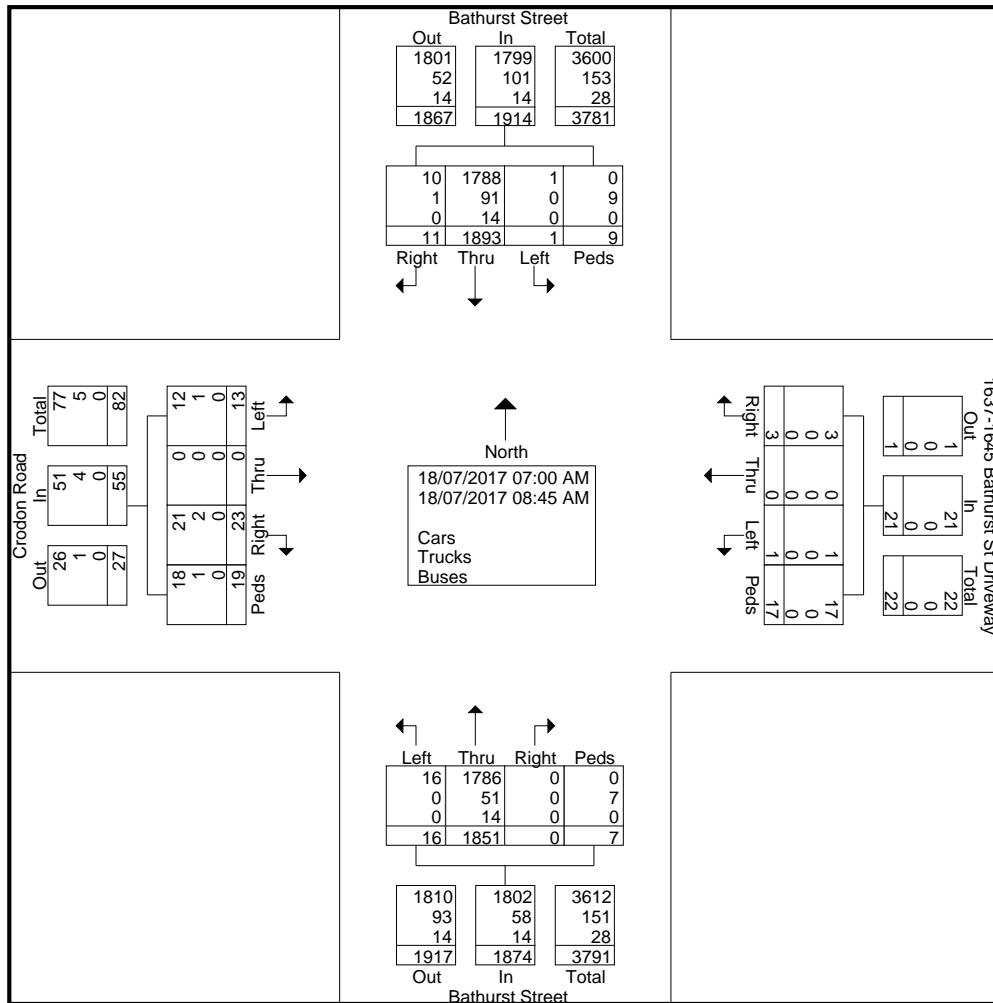
Site Code : 18105005

Start Date : 18/07/2017

Page No : 1

Groups Printed- Cars - Trucks - Buses

	Bathurst Street Southbound					1637-1645 Bathurst St Driveway Westbound					Bathurst Street Northbound					Crodon Road Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	169	0	2	171	0	0	0	1	1	1	164	0	1	166	0	0	0	2	2	340
07:15 AM	0	207	3	0	210	0	0	0	0	0	1	213	0	1	215	2	0	0	5	7	432
07:30 AM	1	242	2	0	245	0	0	0	1	1	4	261	0	1	266	0	0	4	2	6	518
07:45 AM	0	238	0	2	240	1	0	3	7	11	0	239	0	0	239	0	0	1	3	4	494
Total	1	856	5	4	866	1	0	3	9	13	6	877	0	3	886	2	0	5	12	19	1784
08:00 AM	0	268	0	1	269	0	0	0	0	0	2	242	0	1	245	3	0	5	3	11	525
08:15 AM	0	252	0	2	254	0	0	0	2	2	2	247	0	0	249	1	0	8	0	9	514
08:30 AM	0	266	4	0	270	0	0	0	3	3	2	274	0	1	277	2	0	5	2	9	559
08:45 AM	0	251	2	2	255	0	0	0	3	3	4	211	0	2	217	5	0	0	2	7	482
Total	0	1037	6	5	1048	0	0	0	8	8	10	974	0	4	988	11	0	18	7	36	2080
Grand Total	1	1893	11	9	1914	1	0	3	17	21	16	1851	0	7	1874	13	0	23	19	55	3864
Apprch %	0.1	98.9	0.6	0.5		4.8	0	14.3	81		0.9	98.8	0	0.4		23.6	0	41.8	34.5		
Total %	0	49	0.3	0.2	49.5	0	0	0.1	0.4	0.5	0.4	47.9	0	0.2	48.5	0.3	0	0.6	0.5	1.4	
Cars	1	1788	10	0	1799	1	0	3	17	21	16	1786	0	0	1802	12	0	21	18	51	3673
% Cars	100	94.5	90.9	0	94	100	0	100	100	100	100	96.5	0	0	96.2	92.3	0	91.3	94.7	92.7	95.1
Trucks	0	91	1	9	101	0	0	0	0	0	0	51	0	7	58	1	0	2	1	4	163
% Trucks	0	4.8	9.1	100	5.3	0	0	0	0	0	0	2.8	0	100	3.1	7.7	0	8.7	5.3	7.3	4.2
Buses	0	14	0	0	14	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	28
% Buses	0	0.7	0	0	0.7	0	0	0	0	0	0	0.8	0	0	0.7	0	0	0	0	0	0.7



LEA CONSULTING LTD

625 Cochrane Drive 9th Floor
Markham, Ontario, L3R 9R9

Project No.: 18105

Location: Bathurst St / Croydon Rd

Weather: Clear

Surveyor(s): May Yue & Belinda Wong

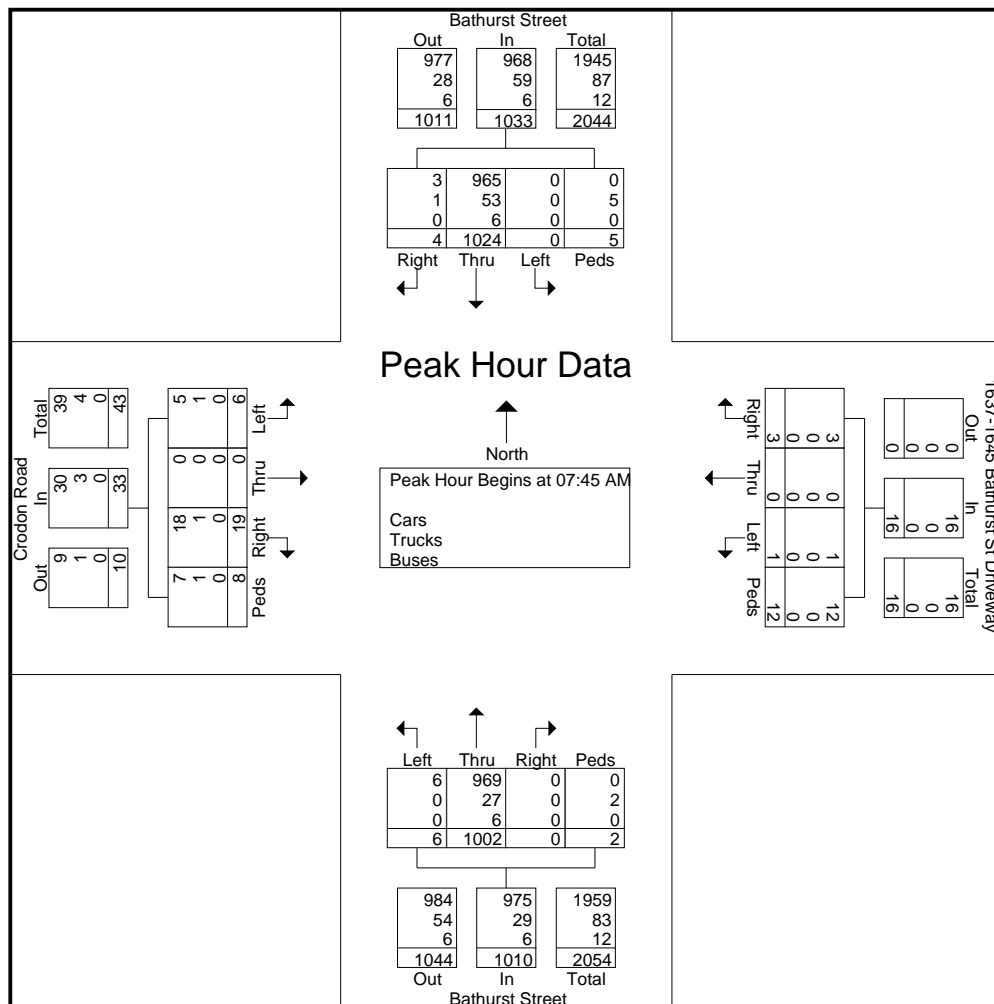
File Name : Bathurst&Croydon-MERGED-AM

Site Code : 18105005

Start Date : 18/07/2017

Page No : 2

	Bathurst Street Southbound					1637-1645 Bathurst St Driveway Westbound					Bathurst Street Northbound					Croydon Road Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	0	238	0	2	240	1	0	3	7	11	0	239	0	0	239	0	0	1	3	4	494
08:00 AM	0	268	0	1	269	0	0	0	0	0	2	242	0	1	245	3	0	5	3	11	525
08:15 AM	0	252	0	2	254	0	0	0	2	2	2	247	0	0	249	1	0	8	0	9	514
08:30 AM	0	266	4	0	270	0	0	0	3	3	2	274	0	1	277	2	0	5	2	9	559
Total Volume	0	1024	4	5	1033	1	0	3	12	16	6	1002	0	2	1010	6	0	19	8	33	2092
% App. Total	0	99.1	0.4	0.5		6.2	0	18.8	75		0.6	99.2	0	0.2		18.2	0	57.6	24.2		
PHF	.000	.955	.250	.625	.956	.250	.000	.250	.429	.364	.750	.914	.000	.500	.912	.500	.000	.594	.667	.750	.936
Cars	0	965	3	0	968	1	0	3	12	16	6	969	0	0	975	5	0	18	7	30	1989
% Cars	0	94.2	75.0	0	93.7	100	0	100	100	100	100	96.7	0	0	96.5	83.3	0	94.7	87.5	90.9	95.1
Trucks	0	53	1	5	59	0	0	0	0	0	0	27	0	2	29	1	0	1	1	3	91
% Trucks	0	5.2	25.0	100	5.7	0	0	0	0	0	0	2.7	0	100	2.9	16.7	0	5.3	12.5	9.1	4.3
Buses	0	6	0	0	6	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	12
% Buses	0	0.6	0	0	0.6	0	0	0	0	0	0	0.6	0	0	0.6	0	0	0	0	0	0.6



LEA CONSULTING LTD

625 Cochrane Drive 9th Floor
Markham, Ontario, L3R 9R9

Project No.: 18105

Location: Bathurst St / Croydon Rd

Weather: Clear

Surveyor(s): May Yue & Belinda Wong

File Name : Bathurst&Croydon-MERGED-PM

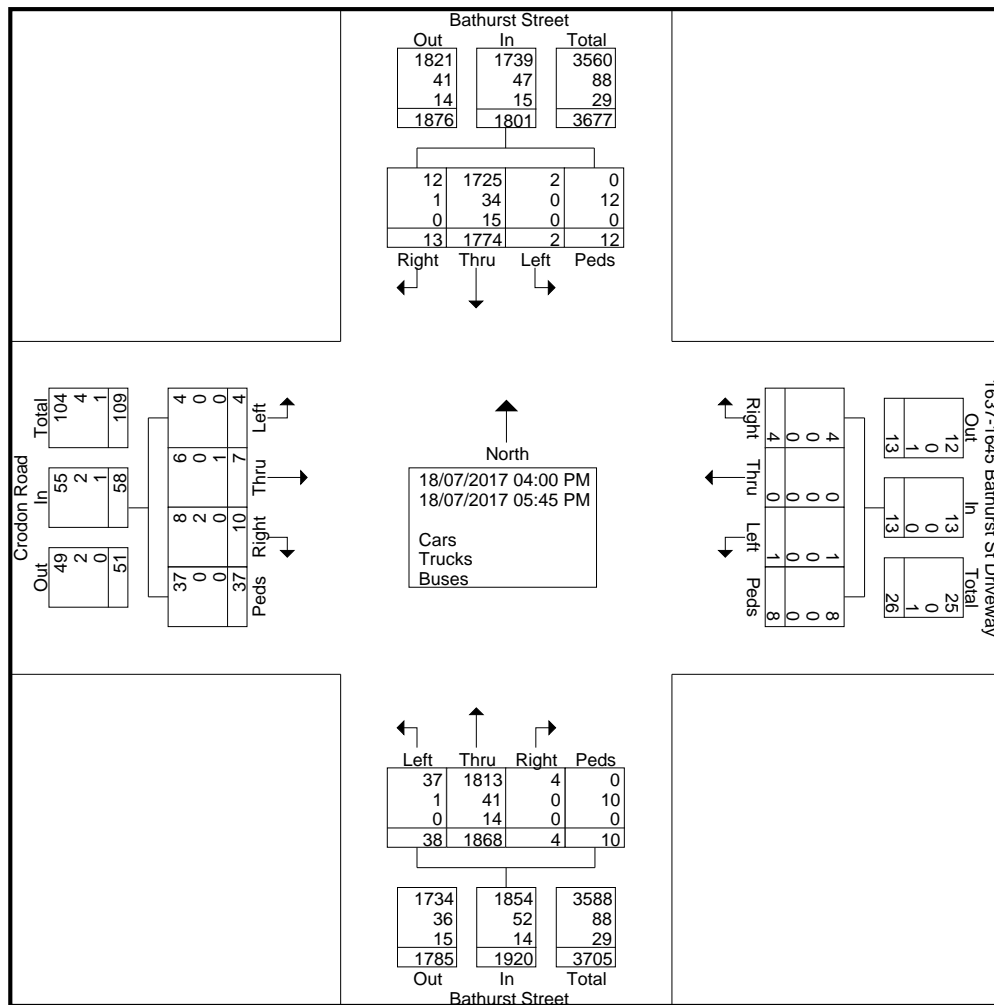
Site Code : 18105005

Start Date : 18/07/2017

Page No : 1

Groups Printed- Cars - Trucks - Buses

	Bathurst Street Southbound					1637-1645 Bathurst St Driveway Westbound					Bathurst Street Northbound					Crodon Road Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
04:00 PM	0	176	1	0	177	0	0	0	1	1	21	201	1	4	227	0	0	1	2	3	408
04:15 PM	0	187	5	2	194	0	0	4	0	4	5	259	1	0	265	2	0	2	3	7	470
04:30 PM	0	229	0	0	229	1	0	0	2	3	3	255	0	0	258	0	0	3	2	5	495
04:45 PM	0	195	2	3	200	0	0	0	2	2	3	230	0	2	235	0	0	1	4	5	442
Total	0	787	8	5	800	1	0	4	5	10	32	945	2	6	985	2	0	7	11	20	1815
05:00 PM	0	245	1	0	246	0	0	0	1	1	0	246	0	1	247	1	0	0	4	5	499
05:15 PM	0	222	0	3	225	0	0	0	1	1	4	211	0	0	215	1	0	2	11	14	455
05:30 PM	1	270	1	4	276	0	0	0	1	1	2	256	1	3	262	0	7	0	5	12	551
05:45 PM	1	250	3	0	254	0	0	0	0	0	0	210	1	0	211	0	0	1	6	7	472
Total	2	987	5	7	1001	0	0	0	3	3	6	923	2	4	935	2	7	3	26	38	1977
Grand Total	2	1774	13	12	1801	1	0	4	8	13	38	1868	4	10	1920	4	7	10	37	58	3792
Apprch %	0.1	98.5	0.7	0.7		7.7	0	30.8	61.5		2	97.3	0.2	0.5		6.9	12.1	17.2	63.8		
Total %	0.1	46.8	0.3	0.3	47.5	0	0	0.1	0.2	0.3	1	49.3	0.1	0.3	50.6	0.1	0.2	0.3	1	1.5	
Cars	2	1725	12	0	1739	1	0	4	8	13	37	1813	4	0	1854	4	6	8	37	55	3661
% Cars	100	97.2	92.3	0	96.6	100	0	100	100	100	97.4	97.1	100	0	96.6	100	85.7	80	100	94.8	96.5
Trucks	0	34	1	12	47	0	0	0	0	0	1	41	0	10	52	0	0	2	0	2	101
% Trucks	0	1.9	7.7	100	2.6	0	0	0	0	0	2.6	2.2	0	100	2.7	0	0	20	0	3.4	2.7
Buses	0	15	0	0	15	0	0	0	0	0	0	14	0	0	14	0	1	0	0	1	30
% Buses	0	0.8	0	0	0.8	0	0	0	0	0	0	0.7	0	0	0.7	0	14.3	0	0	1.7	0.8



LEA CONSULTING LTD

625 Cochrane Drive 9th Floor
Markham, Ontario, L3R 9R9

Project No.: 18105

Location: Bathurst St / Croydon Rd

Weather: Clear

Surveyor(s): May Yue & Belinda Wong

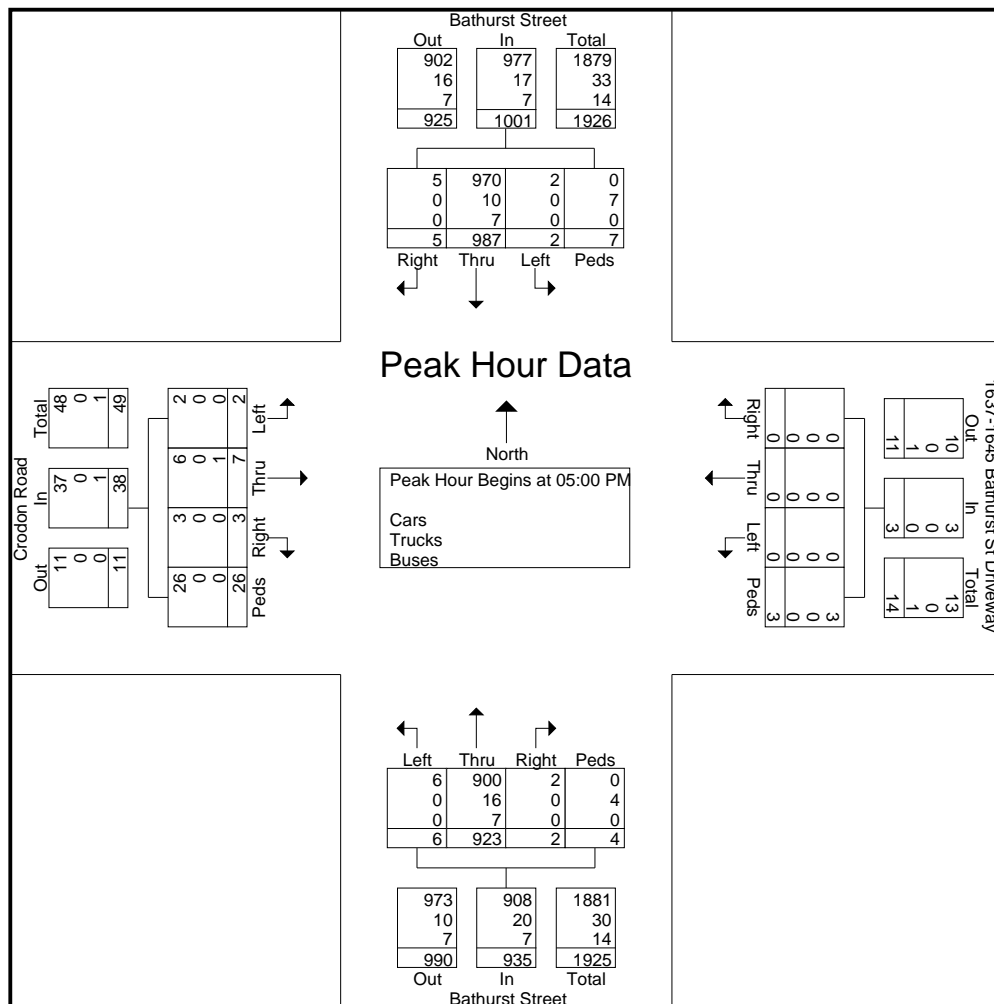
File Name : Bathurst&Croydon-MERGED-PM

Site Code : 18105005

Start Date : 18/07/2017

Page No : 2

	Bathurst Street Southbound					1637-1645 Bathurst St Driveway Westbound					Bathurst Street Northbound					Croydon Road Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	245	1	0	246	0	0	0	1	1	0	246	0	1	247	1	0	0	4	5	499
05:15 PM	0	222	0	3	225	0	0	0	1	1	4	211	0	0	215	1	0	2	11	14	455
05:30 PM	1	270	1	4	276	0	0	0	1	1	2	256	1	3	262	0	7	0	5	12	551
05:45 PM	1	250	3	0	254	0	0	0	0	0	0	210	1	0	211	0	0	1	6	7	472
Total Volume	2	987	5	7	1001	0	0	0	3	3	6	923	2	4	935	2	7	3	26	38	1977
% App. Total	0.2	98.6	0.5	0.7		0	0	0	100		0.6	98.7	0.2	0.4		5.3	18.4	7.9	68.4		
PHF	.500	.914	.417	.438	.907	.000	.000	.000	.750	.750	.375	.901	.500	.333	.892	.500	.250	.375	.591	.679	.897
Cars	2	970	5	0	977	0	0	0	3	3	6	900	2	0	908	2	6	3	26	37	1925
% Cars	100	98.3	100	0	97.6	0	0	0	100	100	100	97.5	100	0	97.1	100	85.7	100	100	97.4	97.4
Trucks	0	10	0	7	17	0	0	0	0	0	0	16	0	4	20	0	0	0	0	0	37
% Trucks	0	1.0	0	100	1.7	0	0	0	0	0	0	1.7	0	100	2.1	0	0	0	0	0	1.9
Buses	0	7	0	0	7	0	0	0	0	0	0	7	0	0	7	0	1	0	0	1	15
% Buses	0	0.7	0	0	0.7	0	0	0	0	0	0	0.8	0	0	0.7	0	14.3	0	0	2.6	0.8



APPENDIX B

TTS Transit Trip Generation Rates

TTS 2011 TRANSIT AM INBOUND

Fri Jul 14 2017 15:33:32 GMT-0400 (Eastern Daylight Time) - Run Time: 2310ms

Cross Tabulation Query Form - Trip - 2011
Row: 2006 GTA zone of origin - gta06_orig
Column: Primary travel mode of trip - mode_prime

Filters:
(2006 GTA zone of origin - gta06_orig In 1 185 189
and
Start time of trip - start_time In 730-830
and
Trip purpose of origin - purp_orig In D E H L M O P S W 9
and
Primary travel mode of trip - mode_prime I G J
and
Type of dwelling unit - dwell_type In 2 3)

Trip 2011
Table:

	Transit excluding GO rail
174	18
185	154
189	23
TOTAL	195

TTS 2011 TRANSIT AM INBOUND

Fri Jul 14 2017 15:42:22 GMT-0400 (Eastern Daylight Time) - Run Time: 2875ms

Cross Tabulation Query Form - Trip - 2011
Row: 2006 GTA zone of origin - gta06_orig
Column: Primary travel mode of trip - mode_prime

Filters:
(2006 GTA zone of origin - gta06_orig In 1 185 189
and
Start time of trip - start_time In 1750-1850
and
Trip purpose of origin - purp_orig In D E H L M O P S W 9
and
Primary travel mode of trip - mode_prime I G J
and
Type of dwelling unit - dwell_type In 2 3)

Trip 2011
Table:

	Transit excluding GO rail
174	32
185	47
189	33
TOTAL	112

TTS 2011 TRANSIT AM OUTBOUND

Fri Jul 14 2017 15:44:20 GMT-0400 (Eastern Daylight Time) - Run Time: 2284ms

Cross Tabulation Query Form - Trip - 2011
Row: 2006 GTA zone of destination - gta06_dest
Column: Primary travel mode of trip - mode_prime

Filters:
(2006 GTA zone of destination - gta06_dest In 185 189
and
Start time of trip - start_time In 750-850
and
Trip purpose of origin - purp_orig In H O P 9
and
Primary travel mode of trip - mode_prime In E G J
and
Type of dwelling unit - dwell_type In 2 3)

Trip 2011
Table:

	Transit excluding GO rail
174	17
185	15
189	145
TOTAL	177

TTS 2011 TRANSIT AM OUTBOUND

Fri Jul 14 2017 15:45:04 GMT-0400 (Eastern Daylight Time) - Run Time: 2633ms

Cross Tabulation Query Form - Trip - 2011
Row: 2006 GTA zone of destination - gta06_dest
Column: Primary travel mode of trip - mode_prime

Filters:
(2006 GTA zone of destination - gta06_dest In 185 189
and
Start time of trip - start_time In 1750-1850
and
Trip purpose of origin - purp_orig In H O P 9
and
Primary travel mode of trip - mode_prime In E G J
and
Type of dwelling unit - dwell_type In 2 3)

Trip 2011
Table:

	Transit excluding GO rail
174	11
189	62
TOTAL	73

NUMBER OF UNITS

Fri Jul 14 2017 15:46:24 GMT-0400 (Eastern Daylight Time) - Run Time: 447ms

Cross Tabulation Query Form - Household - 2011
Row: 2006 GTA zone of household - gta06_hhld
Column: Type of dwelling unit - dwell_type

Filters:
(2006 GTA zone of household - gta06_hhld 185 189
and
Type of dwelling unit - dwell_type In 2 3)

Household 2011
Table:

	Apartment	Townhouse
174	334	18
185	960	79
189	192	0
TOTAL	1583	

TRIP RATES

	Weekday AM Peak Hour			Weekday PM Peak Hour		
	In	Out	Total	In	Out	Total
Trip Rate	0.11	0.12	0.23	0.05	0.07	0.12



APPENDIX C

Turning Path Diagrams

