

# Memo



To: Anthony Pipolo - Nufusion & Associates  
From: Mike Walters - Dillon Consulting Limited  
cc: Tim Kooistra - Dillon Consulting Limited  
Date: October 13, 2023  
Subject: 1460 Lauzon Road Residential Development – TIS Addendum  
Our File: 22-3402

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## 1.0 Introduction

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Dillon Consulting Limited (Dillon) has been retained by Nufusion & Associates to develop a transportation impact study (TIS) addendum for the 1460 Lauzon Road residential development in the city of Windsor. This proposed development is located on the southeast corner of the Lauzon Line/McHugh Avenue and Lauzon Road intersection. This addendum was developed to support the original TIS that Dillon prepared in September 2022 and should be reviewed in concert with that TIS.

Compared to the TIS prepared in September 2022, this addendum includes the following items (in response to comments received from City of Windsor staff):

- Provide access recommendations to determine the sufficiency of the right-of-way along Lauzon Road in order to accommodate a sidewalk along the street;
- Determine the need for a land conveyance along Lauzon Road to accommodate a sidewalk on Lauzon Road within the right-of-way;
- Determine the impact on the site buildings using a daylight triangle at the Lauzon Road and McHugh Street intersection;
- Provide revisions to reinforce the right-turn out movement at the McHugh Street driveway;
- Complete a sightline assessment at the McHugh Street driveway to identify potential sightline obstructions for motorists performing the outbound right-turn movement;
- Based on available traffic data, determine future operations at the Lauzon Road and Spitfire Way intersection; and,
- Complete a parking justification to support the provision of fewer parking spaces on site.

## 1.1 Proposed Development

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The current concept plan (as seen in Appendix A) proposes two (2) 7-storey buildings and one (1) 6-storey building. A total of 291 residential dwellings with 363 vehicle spaces are proposed. The driveway locations and arrangement have remained the same as what was included in the September 2022 TIS.

## 2.0

# Access Recommendations

The McHugh Street driveway is proposed to be channelized and would only permit the right-out movement, while the Lauzon Road driveway is a full-movement driveway.

Dillon confirmed the sufficiency of the existing right-of-way to accommodate a potential sidewalk along Lauzon Road. The required driveway arrangements are summarized in Table 1 and are provided in Appendix A.

Table 1: Driveway Requirements

Driveway	Requirements
McHugh Street	4.5 metres wide channelized driveway 15.5 metre outside radius 11.0 metre inside radius
Lauzon Road	9.0 metres wide driveway behind the sidewalk (in accordance with City standard) 2.0 metre driveway flare between road edge and sidewalk (in accordance with City standard)

## 3.0

# Daylight Triangle Assessment

As per the City of Windsor's bylaw NO. 250-2004, a 6 metre by 6 metre daylight triangle is required on the southeast corner of the McHugh Street/Lauzon Line and Lauzon Road intersection. A 6 metre by 6 metre daylight triangle is now shown on the current concept plan (located in Appendix A). No obstructions will be present within the daylight triangle.

## 4.0

# Sightline Assessment

A sightline assessment was undertaken for the proposed McHugh Street right-out driveway. This assessment referenced requirements outlined in TAC's *Geometric Design Guide for Canadian Roads* (June 2017).

Table 2 outlines the required sight distance for the proposed right-out movement at the McHugh Street driveway.

Table 2: TAC Intersection Sight Distance

Design Speed	Case	Intersection Sight Distance
60 km/h	Case B2 – Right Turn from Minor Road	110 metres

The driver decision point was located 4.4 metres back from the south curb on McHugh Street. The required sight distance is measured from the decision point west along the centre of the eastbound approach lane, until the measurement reaches 110 metres. The measurement along the centre of the travel lane is not along a straight line as it follows the horizontal curve on McHugh Street.

Currently, McHugh Street does not have a raised median and grades are 3% or less. Therefore, no time gap adjustments were applied to either lengthen or shorten the required sight distance.

Figure 1 displays the sightline area for a vehicle exiting the McHugh Street driveway.

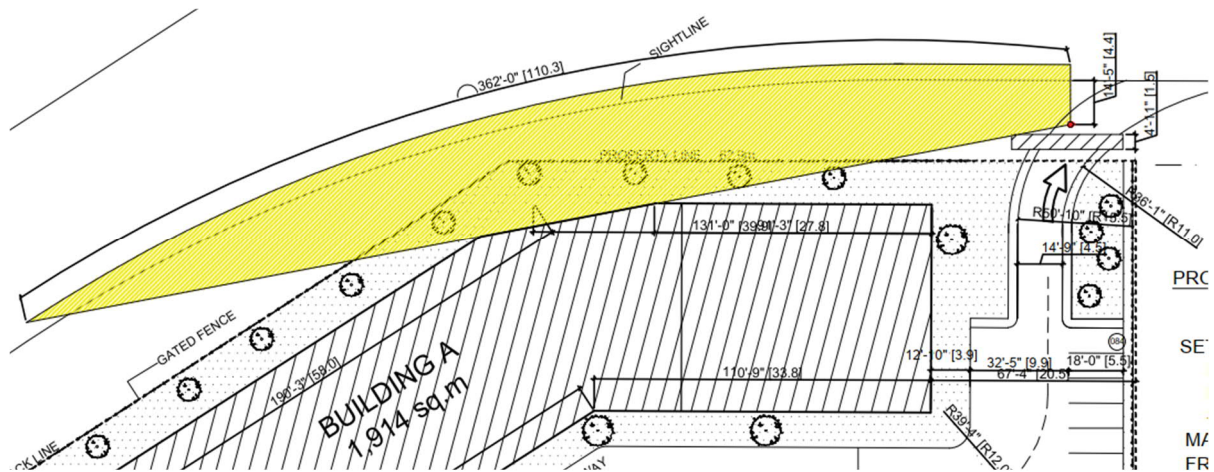


Figure 1: Sightline Assessment Results

Based on the sightline assessment, a portion of Building 'A' would have originally blocked a driver's sightline when turning right at the McHugh Street driveway. As a result, a portion of Building 'A' was modified so that the building is outside the identified sightline area.

## 5.0 Intersection Operations

### 5.1 Traffic Volumes

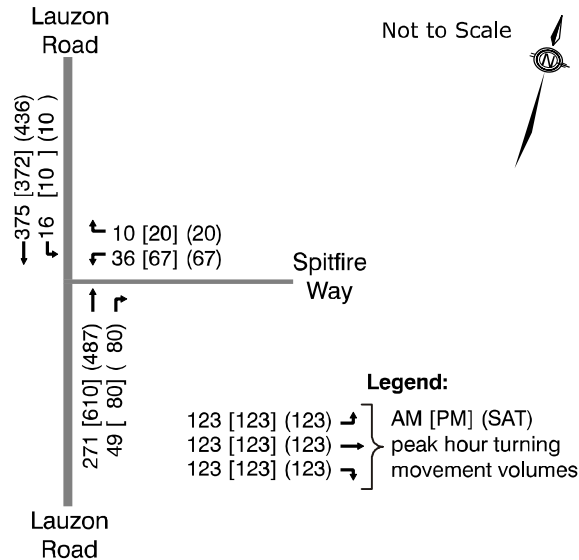
Turning movement count (TMC) and traffic signal timing data was provided by the City of Windsor for the Lauzon Road and Spitfire Way intersection. The raw traffic data can be found in Appendix B.

This TMC was not conducted during a Saturday; therefore, the existing Saturday peak hour volumes were estimated. For the analysis, the existing Saturday inbound and outbound volumes to/from Spitfire Way were assumed to be the same as what was collected during the weekday PM peak hour. The Saturday northbound and southbound through movements were estimated by relying on traffic data previously estimated along Lauzon Road to the north of Spitfire Way.

The 2022 traffic data was adjusted to be representative of 2023 data by applying a 1.0% per annum compounded growth rate to all movements at the intersection.

**5.1.1 Existing (2023) Traffic Volumes**

Figure 2 shows the existing (2023) traffic volumes at the Lauzon Road and Spitfire Way intersection.



**Figure 2: Existing (2023) Traffic Volumes**

**5.1.2 Background Development Traffic Volumes**

The same four background developments that were discussed in the original TIS were included in this addendum’s future background analysis. It should be noted that some of these developments are currently in the process of being built, and some of the existing traffic volumes collected at the Lauzon Road and Spitfire Way intersection may include some trips generated by these background developments. However, in order to allow the subsequent findings to be more conservative, no adjustments to the background development traffic volumes were made. Figure 3 and Figure 4 summarize the volumes generated by four various background developments in both 2025 and 2030.

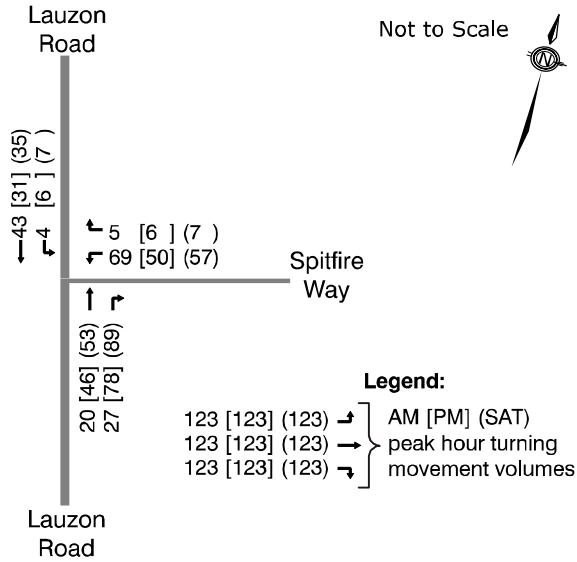


Figure 3: 2025 Background Development Traffic Volumes

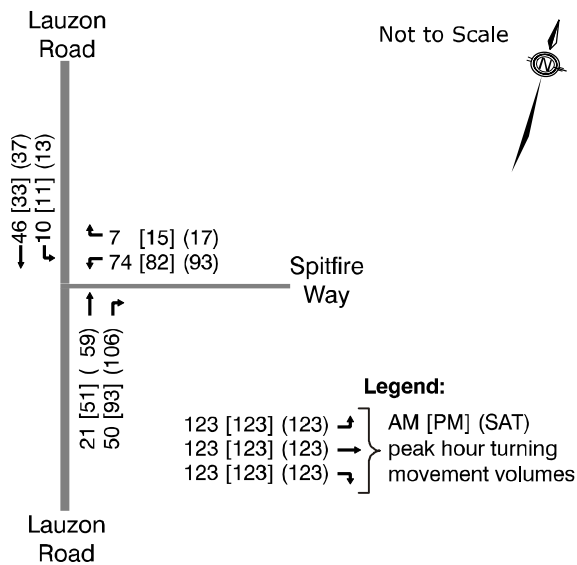


Figure 4: 2030 Background Development Traffic Volumes

### 5.1.3 Future Background Traffic Volumes

Figure 5 and Figure 6 show the future background volumes in 2025 and 2030, respectively, at the Lauzon Road and Spitfire Way intersection.

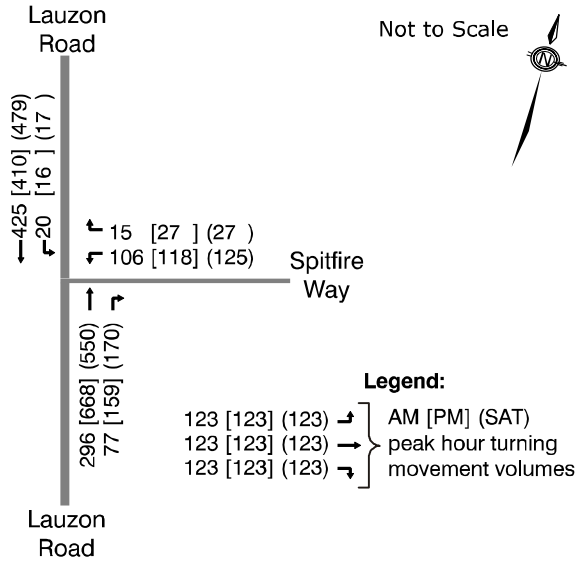


Figure 5: Future (2025) Background Traffic Volumes

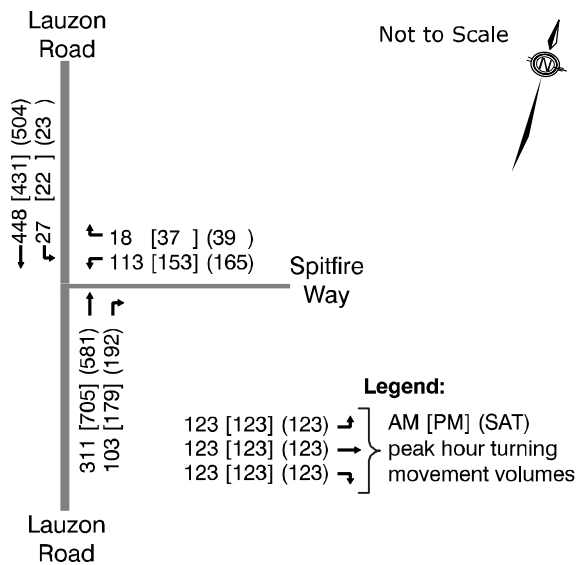


Figure 6: Future (2030) Background Traffic Volumes

### 5.1.4 Trip Generation

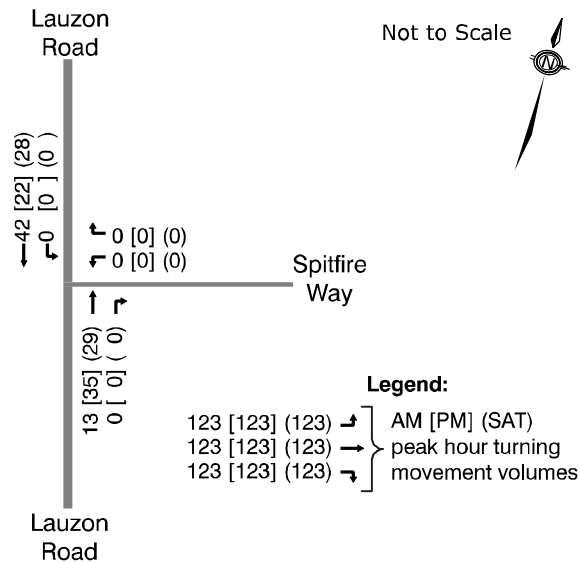
Table 3 summarizes the number of vehicle trips anticipated to be generated by the proposed residential development, noting that 291 dwelling units are proposed.

**Table 3: Trip Generation**

Development	AM peak hour			PM peak hour			Saturday peak hour		
	In	Out	Total	In	Out	Total	In	Out	Total
<b>SITE-GENERATED TRIPS</b>									
<i>Apartments (ITE Land Use Code 221)</i>									
% in/out, trip generation rate	23%	77%	0.37	61%	39%	0.39	51%	49%	0.39
Site trips (291 units)	25	83	108	69	44	113	58	55	113
<b>TOTAL GROSS SITE TRIPS</b>	<b>25</b>	<b>83</b>	<b>108</b>	<b>69</b>	<b>44</b>	<b>113</b>	<b>58</b>	<b>55</b>	<b>113</b>

The proposed residential development at 1460 Lauzon Road is now forecast to generate 108 vehicle trips in the weekday AM peak hour (25 inbound, 83 outbound), 113 vehicle trips in the weekday PM peak hour (69 inbound, 44 outbound), and 113 vehicle trips during the Saturday mid-day peak hour (58 inbound, 55 outbound).

These trips were assigned and distributed in the same manner as the originally submitted TIS. Figure 7 shows how these site-generated trips were assigned through the Lauzon Road and Spitfire Way intersection.



**Figure 7: Site-Generated Trips**

**5.1.5 Total Future Traffic Volumes**

Figure 8 and Figure 9 show the total future volumes in 2025 and 2030 at the Lauzon Road and Spitfire Way intersection.

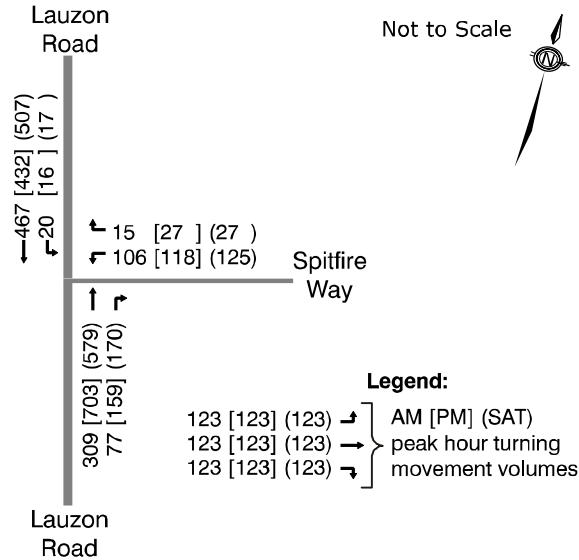


Figure 8: Total Future (2025) Traffic Volumes

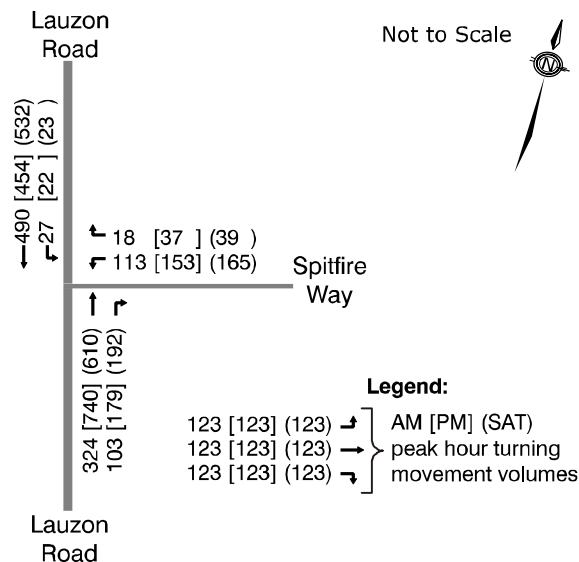


Figure 9: Total Future (2030) Traffic Volumes

5.2

## Lauzon Road and Spitfire Way - Intersection Operations

Intersection operations at the Lauzon Road and Spitfire Way signalized intersection were determined based on the methodology outlined in the *Highway Capacity Manual* (HCM) and facilitated using Synchro analysis software. The signalized intersection analyses are based on existing lane configurations, traffic signal phasing and timings (as provided by the City of Windsor) present during the AM, PM and Saturday peak hours. Currently, the Lauzon Road and Spitfire Way intersection operates in



an actuated coordinated manner with a 50-second cycle length in the AM peak hour, and a 53-second cycle length in the PM peak hour and the Saturday mid-day peak hour.

The overall level of service<sup>1</sup> and average vehicle delay have been noted. Also, for each movement, the volume-to-capacity ratio, level of service, average delay and 95<sup>th</sup> percentile queue have been identified. The Synchro analysis worksheets are provided in Appendix C. The results were reviewed to identify any critical movements, defined as follows:

- Any through lane/movement with a v/c ratio of 0.85 or higher;
- Any exclusive turning lane/movement with a v/c ratio of 1.00 or higher;
- Any movement at a signalized intersection operating at LOS F; or
- Any turning movement with a 95<sup>th</sup> percentile queue exceeding the available storage.

Table 4 summarizes the operations at the Lauzon Road and Spitfire Way intersection.

**Table 4: Lauzon Road and Spitfire Way Signalized Intersection Operations**

Movement	Weekday AM Peak Hour				Weekday PM Peak Hour				Saturday Mid-Day peak hour			
	v/c	LOS	Delay (s/veh)	95 <sup>th</sup> %ile queue (m)	v/c	LOS	Delay (s/veh)	95 <sup>th</sup> %ile queue (m)	v/c	LOS	Delay (s/veh)	95 <sup>th</sup> %ile queue (m)
<b>Existing (2023) Signalized Intersection Operations</b>												
WBL	0.14	B	15.7	7	0.21	B	18.0	12	0.21	B	18.0	12
WBR	0.04	A	7.6	2	0.06	A	7.5	4	0.06	A	7.5	4
NBTR	0.16	A	4.3	15	0.26	A	4.6	33	0.22	A	4.4	26
SBTL	0.21	A	4.9	20	0.15	A	4.5	19	0.18	A	4.6	22
Overall	—	A	5.2	—	—	A	5.4	—	—	A	5.3	—
<b>Future Background (2025) Signalized Intersection Operations</b>												
WBL	0.38	B	18.8	16	0.34	B	19.4	18	0.36	B	19.6	19
WBR	0.06	A	6.9	3	0.08	A	6.8	4	0.08	A	6.7	4
NBTR	0.21	A	4.9	16	0.36	A	5.7	39	0.31	A	5.3	32
SBTL	0.27	A	6.0	23	0.20	A	5.5	21	0.23	A	5.7	25
Overall	—	A	7.1	—	—	A	6.8	—	—	A	6.7	—
<b>Total Future (2025) Signalized Intersection Operations</b>												
WBL	0.38	B	18.8	16	0.34	B	19.4	18	0.36	B	19.6	19
WBR	0.06	A	6.9	3	0.08	A	6.8	4	0.08	A	6.7	4
NBTR	0.22	A	5.0	17	0.37	A	5.9	42	0.32	A	5.4	34
SBTL	0.29	A	6.2	25	0.21	A	5.5	22	0.24	A	5.7	26
Overall	—	A	7.1	—	—	A	6.9	—	—	A	6.8	—

<sup>1</sup> Level of Service (LOS), applied to an intersection, is a measure qualifying the amount of delay experienced by motorists, expressed either for specific turning movements or for the intersection as a whole. A more detailed explanation of LOS is provided in *Appendix D*.

Movement	Weekday AM Peak Hour				Weekday PM Peak Hour				Saturday Mid-Day peak hour			
	v/c	LOS	Delay (s/veh)	95 <sup>th</sup> %ile queue (m)	v/c	LOS	Delay (s/veh)	95 <sup>th</sup> %ile queue (m)	v/c	LOS	Delay (s/veh)	95 <sup>th</sup> %ile queue (m)
Future Background (2030) Signalized Intersection Operations												
WBL	0.40	B	19.0	16	0.42	C	20.2	23	0.44	C	20.5	25
WBR	0.07	A	6.5	3	0.10	A	6.1	5	0.10	A	6.0	5
NBTR	0.24	A	4.8	17	0.39	A	6.2	43	0.34	A	5.7	34
SBTL	0.29	A	6.3	25	0.22	A	5.9	22	0.25	A	6.1	26
Overall	—	A	7.1	—	—	A	7.5	—	—	A	7.5	—
Total Future (2030) Signalized Intersection Operations												
WBL	0.40	B	19.0	16	0.42	C	20.2	23	0.44	C	20.5	25
WBR	0.07	A	6.5	3	0.10	A	6.1	5	0.10	A	6.0	5
NBTR	0.25	A	4.9	18	0.40	A	6.4	45	0.35	A	5.9	36
SBTL	0.32	A	6.4	27	0.23	A	5.9	24	0.26	A	6.2	28
Overall	—	A	7.2	—	—	A	7.6	—	—	A	7.5	—

The Lauzon Road and Spitfire Way intersection is projected to operate at an acceptable level of service through to the 2030 horizon, both with and without the subject residential development in place. During the three peak hours, all movements are projected to operate at LOS C or better with minimal queues and delays projected. In addition, the intersection is projected to continue operating at LOS A overall during the weekday AM, PM and Saturday mid-day peak hours.

## 6.0 Parking Requirements

As seen in Appendix A, the updated concept plan now proposes 363 parking spaces. Based on the proposed residential land use, the Windsor Zoning By-Law requires 1.25 parking spaces per dwelling unit. Since 291 dwelling units are proposed, 363 parking spaces (291 X 1.25 = 363) are required. As the number of parking spaces now equals the By-Law requirement, no parking justification study is required.

## 7.0 Summary

Dillon Consulting Limited (Dillon) has been retained by Nufusion & Associates to prepare a TIS addendum for the proposed residential development at 1460 Lauzon Road in the city of Windsor. This addendum was developed to support the original TIS prepared in September 2022.

Based on the sightline assessment, a portion of Building 'A' would have originally blocked a driver's view when turning right at the McHugh Street driveway. As a result, a portion of Building 'A' was modified so no portion of the building is located within the identified sightline.

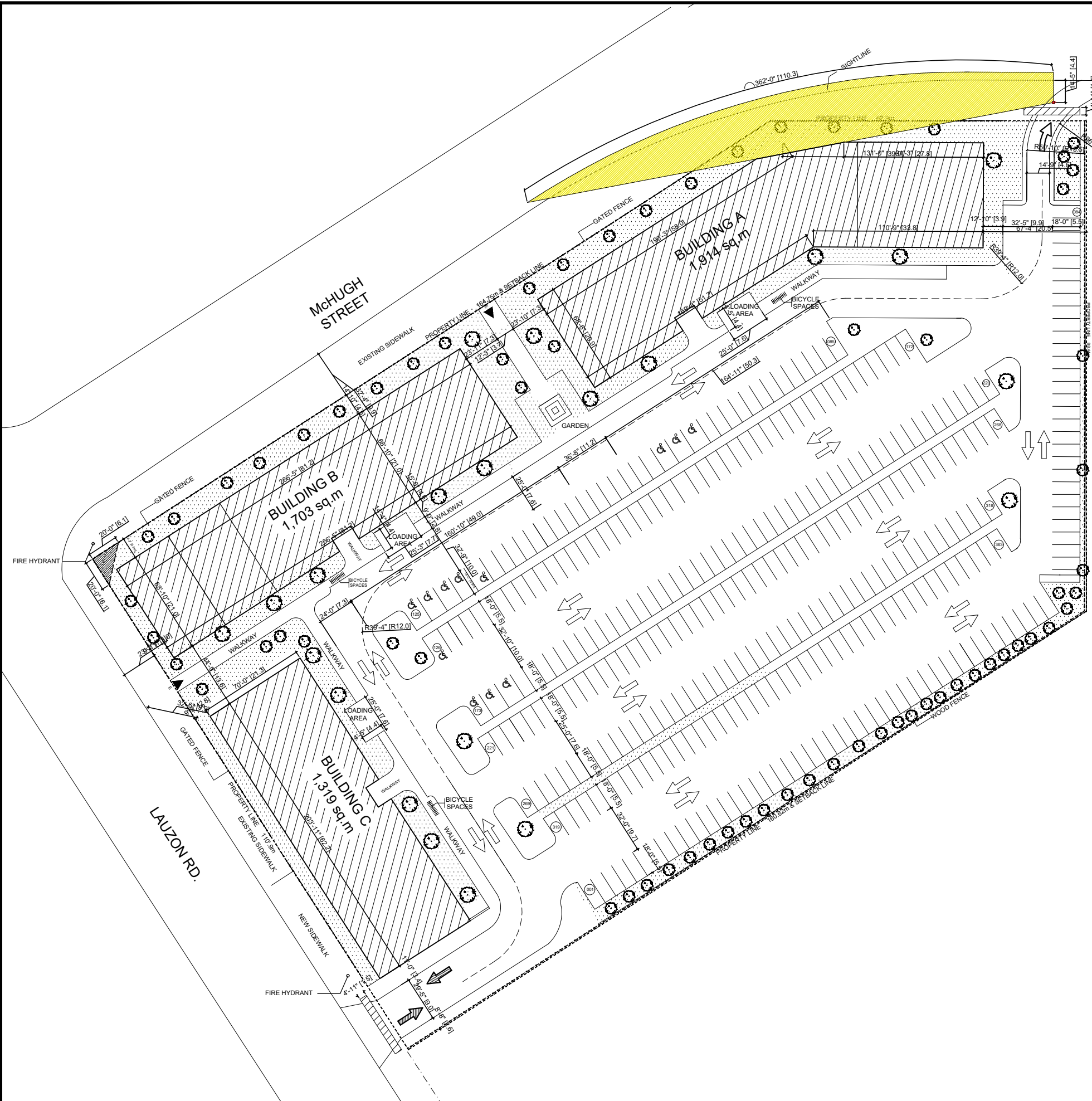
The Lauzon Road and Spitfire Way signalized intersection will operate in an acceptable manner through to the 2030 horizon both with and without the subject residential development in place. During the three time periods, all movements are projected to operate at LOS C or better with minimal queuing and delays. In addition, the intersection will continue to operate at LOS A overall A through to the 2030 horizon year.

Since the site now proposes to provide the required number of parking spaces according to the City's Zoning By-Law, a parking justification study is no longer required.



# Appendix A

## Concept Plan



PROPOSED ZONING RD 3.3

SET BACK	REQUIRED
FRONT YARD DEPTH =	0m
REAR YARD DEPTH =	0m
SIDE YARD DEPTH =	0m
MAIN BUILDING HEIGHT	< 30m
FRONTAGE	> 45m
COVERAGE	< 35%
LANDSCAPE OPEN	> 35%

PROPOSAL AREA

ARE LOT	= 233,620 sqft (21,704 sq.m)
SET BACK	
FRONT YARD DEPTH =	AS SHOWN LAUZON ROAD (2.8m)
REAR YARD DEPTH =	AS SHOWN (21.2m)
EXTERIOR SIDE YARD DEPTH	AS SHOWN McHUGH ST. (3.5m)
INTERIOR SIDE YARD DEPTH	AS SHOWN (17.4m)
MAIN BUILDING HEIGHT =	21.70m (71'-03"ft = 7 storeys)

CLASSIFICATION OF BUILDING  
 GROUP C ANY HEIGHT ANY AREA SPRINKLERED 3.2.242

AREA (BUILD UP AREA)		
BUILDING A	1st-6th @	20,600 sqft ( 1,914 sq.m)
	7th	17,800 sq.f ( 1,654 sq.m)
SUBTOTAL (7 FLOORS)		141,400 sq.f ( 13,136sq.m)
BUILDING B	1st-5th@	18,336 sqft ( 1,703 sq.m)
	6th	15,556 sq.f ( 1,445 sq.m)
	7th	12,910 sq.f ( 1,199 sq.m)
SUBTOTAL (7 FLOORS)		120,146 sq.f ( 11,162 sq.m)
BUILDING C	6th @	14,200 sqft ( 1,319 sq.m)
SUBTOTAL (6 FLOORS)		85,200 sq.f ( 7,915 sq.m)

TOTAL FOR ALL FLOORS.....346,746 sqft (32,214sq.m)

COVERAGE	27%
LANDSCAPE OPEN	36.3%

ESTIMATE UNIT PER BUILDING

<b>BUILDING A ( 7 STOREYS )</b>	
1st FLOOR	16 X 1 = 16 UNITS
2nd - 5th FLOOR	19 X 4 = 76 UNITS
6th FLOOR	14 X 1 = 14 UNITS
7th FLOOR	10 X 1 = 10 UNITS
SUB - TOTAL	116 UNITS
<b>BUILDING B ( 7 STOREYS )</b>	
1st FLOOR	14 X 1 = 14 UNITS
2nd - 5th FLOOR	16 X 4 = 64 UNITS
6th FLOOR	14 X 1 = 14 UNITS
7th FLOOR	12 X 1 = 12 UNITS
SUB- TOTAL	104 UNITS
<b>BUILDING C ( 6 STOREYS )</b>	
1st FLOOR	11 X 1 = 11 UNITS
2nd - 6th FLOOR	12 X 5 = 60 UNITS
SUB- TOTAL	71 UNITS
<b>TOTAL</b>	<b>291 UNITS</b>

REQUIRED PARKING  
 291 X 1.25 = 363 PARKING SPACE

PROVIDED SURFACE PARKING SPACE  
 291x 1.25 = 363 PARKING SPACE

KEY PLAN

- GENERAL NOTES:
- 1) DO NOT SCALE DRAWINGS.
  - 2) VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AS REQUIRED PRIOR TO BIDDING AND COMMENCEMENT OF WORK.
  - 3) COORDINATE ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS PRIOR TO COMMENCEMENT OF WORK.
  - 4) SHOULD ANY CONFLICTS AND/OR DISCREPANCIES ARISE, NOTIFY THE ARCHITECT / ENGINEER IMMEDIATELY, IN WRITING PRIOR TO PROCEEDING WITH ANY WORK.
  - 5) ALL WORK SHALL COMPLY OR EXCEED THE REQUIREMENTS OF THE ONTARIO BUILDING CODE, FIRE CODE, PLUMBING CODE, ELECTRICAL CODE AND LOCAL BY-LAWS.

DATE	NO.	ISSUED FOR
20 SEPT. '23		REZONING APP.
23 JULY '23		REZONING APP.
JULY '22		REZONING APP.

The Architect noted above has exercised responsible control with respect to design activities. The architect's seal number is the architect's BCAN.

**PROJECT**  
**NEW GATED LAUZON CONDOMINIUM DEVELOPMENT**  
 1460 LAUZON RD  
 WINDSOR, ON

**DWG. TITLE**  
 CONCEPTUAL SITE PLAN

DATE	: DEC. 2018
SCALE	: AS NOTED
DESIGNED BY :	
DRAWN BY :	
CHECKED BY :	
APPROVED BY :	
PROJECT NO. :	
DWG. NO.	

SP-1R2

# Appendix B

## Turning Movement Count Data



## Project #22-074 - City of Windsor

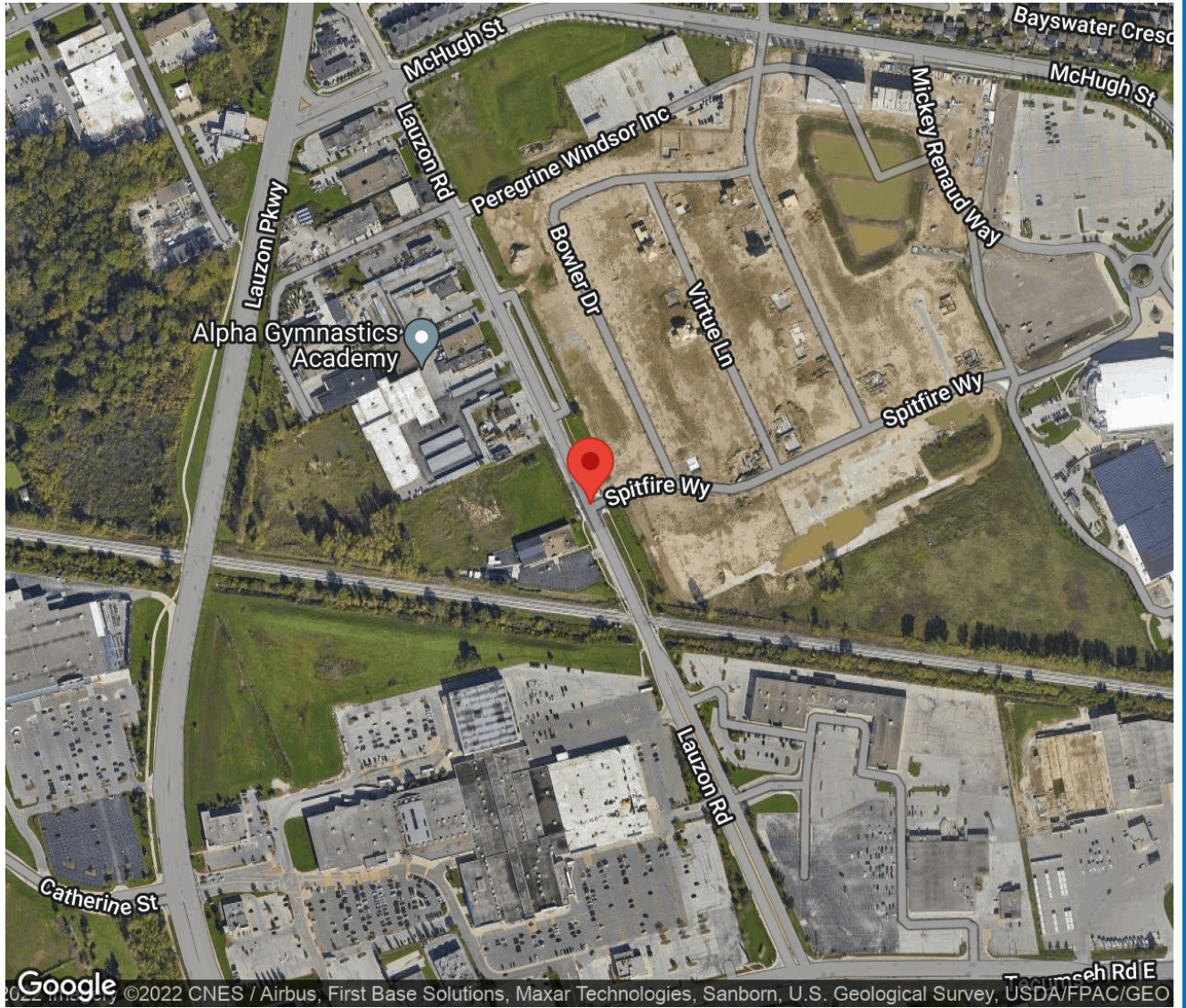
### Intersection Count Report

**Intersection:** LAUZON ROAD & SPITFIRES WAY  
**Municipality:** Windsor  
**Count Date:** Wednesday, Sep 14, 2022  
**Site Code:** 2207400001  
**Count Categories:** Cars, Medium Trucks, Heavy Trucks, Peds, Bicycles  
**Count Period:** 07:00-10:00, 11:00-14:00, 15:00-18:00  
**Weather:** Clear  
**Comments:**



## Traffic Count Map

Intersection: LAUZON ROAD & SPITFIRES WAY  
Site Code: 2207400001  
Municipality: Windsor  
Count Date: Sep 14, 2022





## Traffic Count Summary

Intersection: LAUZON ROAD & SPITFIRES WAY  
 Site Code: 2207400001  
 Municipality: Windsor  
 Count Date: Sep 14, 2022

### LAUZON ROAD - Traffic Summary

Hour	North Approach Totals						South Approach Totals						Total
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
<b>07:00 - 08:00</b>	14	316	0	0	330	1	0	250	60	0	310	2	640
<b>08:00 - 09:00</b>	15	316	0	0	331	0	0	267	33	0	300	1	631
<b>09:00 - 10:00</b>	22	328	0	0	350	1	0	282	30	0	312	0	662
BREAK													
<b>11:00 - 12:00</b>	17	348	0	0	365	0	0	373	44	0	417	4	782
<b>12:00 - 13:00</b>	11	348	0	0	359	0	0	421	56	0	477	2	836
<b>13:00 - 14:00</b>	9	310	0	0	319	5	0	407	52	0	459	1	778
BREAK													
<b>15:00 - 16:00</b>	11	362	0	0	373	1	0	483	68	0	551	7	924
<b>16:00 - 17:00</b>	10	368	0	0	378	0	0	604	79	0	683	5	1061
<b>17:00 - 18:00</b>	10	302	0	0	312	0	0	627	82	1	710	6	1022
<b>GRAND TOTAL</b>	<b>119</b>	<b>2998</b>	<b>0</b>	<b>0</b>	<b>3117</b>	<b>8</b>	<b>0</b>	<b>3714</b>	<b>504</b>	<b>1</b>	<b>4219</b>	<b>28</b>	<b>7336</b>





## Traffic Count Data

Intersection: LAUZON ROAD & SPITFIRES WAY  
 Site Code: 2207400001  
 Municipality: Windsor  
 Count Date: Sep 14, 2022

### North Approach - LAUZON ROAD

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds	
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total		
07:00	5	52	0	0	57	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0	1	
07:15	1	56	0	0	57	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	1	0
07:30	5	74	0	0	79	0	1	0	0	1	0	3	0	0	3	0	0	0	0	0	0	0
07:45	3	121	0	0	124	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0
08:00	2	84	0	0	86	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0	0	0
08:15	5	78	0	0	83	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	0	0
08:30	3	65	0	0	68	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0	0	0
08:45	2	75	0	0	77	1	0	0	0	1	1	3	0	0	4	0	0	0	0	0	0	0
09:00	3	73	0	0	76	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	0	0
09:15	6	82	0	0	88	1	1	0	0	2	1	3	0	0	4	0	0	0	0	0	0	1
09:30	4	79	0	0	83	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0
09:45	7	83	0	0	90	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0
<b>SUBTOTAL</b>	46	922	0	0	968	2	12	0	0	14	3	25	0	0	28	0	1	0	0	1	2	



## Traffic Count Data

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 Count Date: Sep 14, 2022

### North Approach - LAUZON ROAD

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
11:00	3	76	0	0	79	0	0	0	0	0	1	2	0	0	3	1	0	0	0	1	0
11:15	1	93	0	0	94	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0
11:30	6	74	0	0	80	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	0
11:45	4	96	0	0	100	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0
12:00	2	73	0	0	75	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0
12:15	2	76	0	0	78	0	3	0	0	3	1	1	0	0	2	0	0	0	0	0	0
12:30	2	89	0	0	91	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0
12:45	4	96	0	0	100	0	3	0	0	3	0	2	0	0	2	0	0	0	0	0	0
13:00	2	81	0	0	83	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	2
13:15	2	76	0	0	78	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	1
13:30	2	72	0	0	74	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
13:45	1	72	0	0	73	0	2	0	0	2	0	3	0	0	3	0	0	0	0	0	1
<b>SUBTOTAL</b>	31	974	0	0	1005	0	14	0	0	14	5	18	0	0	23	1	0	0	0	1	5



## Traffic Count Data

Intersection: LAUZON ROAD & SPITFIRES WAY  
 Site Code: 2207400001  
 Municipality: Windsor  
 Count Date: Sep 14, 2022

### North Approach - LAUZON ROAD

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
15:00	4	97	0	0	101	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0
15:15	1	91	0	0	92	0	0	0	0	0	1	1	0	0	2	0	1	0	0	1	0
15:30	1	73	0	0	74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45	3	92	0	0	95	0	2	0	0	2	1	1	0	0	2	0	1	0	0	1	1
16:00	2	100	0	0	102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	2	83	0	0	85	0	1	0	0	1	1	1	0	0	2	0	1	0	0	1	0
16:30	2	89	0	0	91	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	3	93	0	0	96	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	1	81	0	0	82	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	0
17:15	2	83	0	0	85	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	0
17:30	4	68	0	0	72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	1	68	0	0	69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>SUBTOTAL</b>	26	1018	0	0	1044	0	8	0	0	8	5	3	0	0	8	0	3	0	0	3	1
<b>GRAND TOTAL</b>	103	2914	0	0	3017	2	34	0	0	36	13	46	0	0	59	1	4	0	0	5	8



## Traffic Count Data

Intersection: LAUZON ROAD & SPITFIRES WAY  
 Site Code: 2207400001  
 Municipality: Windsor  
 Count Date: Sep 14, 2022

### South Approach - LAUZON ROAD

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	0	37	8	0	45	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	0
07:15	0	46	20	0	66	0	2	0	0	2	0	4	0	0	4	0	0	0	0	0	1
07:30	0	71	18	0	89	0	0	0	0	0	0	5	0	0	5	0	1	0	0	1	1
07:45	0	81	13	0	94	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
08:00	0	41	10	0	51	0	0	1	0	1	0	3	1	0	4	0	0	0	0	0	0
08:15	0	63	6	0	69	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0
08:30	0	75	5	0	80	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0
08:45	0	79	10	0	89	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	1
09:00	0	64	8	0	72	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0
09:15	0	74	7	0	81	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	0
09:30	0	64	9	0	73	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	0
09:45	0	71	5	0	76	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0
<b>SUBTOTAL</b>	0	766	119	0	885	0	5	1	0	6	0	27	2	0	29	0	1	1	0	2	3



## Traffic Count Data

Intersection: LAUZON ROAD & SPITFIRES WAY  
 Site Code: 2207400001  
 Municipality: Windsor  
 Count Date: Sep 14, 2022

### South Approach - LAUZON ROAD

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
11:00	0	77	12	0	89	0	1	1	0	2	0	1	0	0	1	0	0	0	0	0	1
11:15	0	85	7	0	92	0	1	1	0	2	0	4	0	0	4	0	0	0	0	0	0
11:30	0	98	4	0	102	0	2	1	0	3	0	1	0	0	1	0	1	1	0	2	1
11:45	0	98	15	0	113	0	1	0	0	1	0	3	0	0	3	0	0	2	0	2	2
12:00	0	104	12	0	116	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
12:15	0	101	14	0	115	0	3	1	0	4	0	2	0	0	2	0	0	0	0	0	1
12:30	0	105	17	0	122	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0	0
12:45	0	98	11	0	109	0	3	0	0	3	0	2	0	0	2	0	0	0	0	0	1
13:00	0	97	16	0	113	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15	0	88	10	0	98	0	0	1	0	1	0	1	1	0	2	0	0	0	0	0	0
13:30	0	99	13	0	112	0	1	1	0	2	0	2	0	0	2	0	0	0	0	0	1
13:45	0	115	10	0	125	0	1	0	0	1	0	3	0	0	3	0	0	0	0	0	0
<b>SUBTOTAL</b>	0	1165	141	0	1306	0	16	7	0	23	0	19	1	0	20	0	1	3	0	4	7



## Traffic Count Data

Intersection: LAUZON ROAD & SPITFIRES WAY  
 Site Code: 2207400001  
 Municipality: Windsor  
 Count Date: Sep 14, 2022

### South Approach - LAUZON ROAD

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
15:00	0	114	9	0	123	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0
15:15	0	132	18	0	150	0	1	0	0	1	0	1	0	0	1	0	0	1	0	1	0
15:30	0	107	21	0	128	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
15:45	0	125	18	0	143	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	5
16:00	0	150	14	0	164	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	149	22	0	171	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
16:30	0	157	18	0	175	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
16:45	0	145	25	0	170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
17:00	0	143	21	1	165	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	4
17:15	0	182	25	0	207	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	152	21	0	173	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
17:45	0	148	13	0	161	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
<b>SUBTOTAL</b>	0	1704	225	1	1930	0	6	1	0	7	0	3	1	0	4	0	1	2	0	3	18
<b>GRAND TOTAL</b>	0	3635	485	1	4121	0	27	9	0	36	0	49	4	0	53	0	3	6	0	9	28





## Traffic Count Data

Intersection: LAUZON ROAD & SPITFIRES WAY  
 Site Code: 2207400001  
 Municipality: Windsor  
 Count Date: Sep 14, 2022

### East Approach - SPITFIRES WAY

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
07:00	4	0	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15	10	0	0	0	10	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
07:30	16	0	3	0	19	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
07:45	13	0	5	0	18	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1
08:00	1	0	0	0	1	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	1
08:15	1	0	1	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
08:30	5	0	2	0	7	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0
08:45	4	0	2	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	5	0	4	0	9	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
09:15	5	0	3	0	8	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
09:30	10	0	4	0	14	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
09:45	8	0	8	0	16	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
<b>SUBTOTAL</b>	82	0	33	0	115	2	0	0	0	2	7	0	1	0	8	3	0	0	0	3	4



## Traffic Count Data

Intersection: LAUZON ROAD & SPITFIRES WAY  
 Site Code: 2207400001  
 Municipality: Windsor  
 Count Date: Sep 14, 2022

### East Approach - SPITFIRES WAY

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
11:00	5	0	4	0	9	0	0	1	0	1	1	0	0	0	1	3	0	0	0	3	1
11:15	11	0	1	0	12	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
11:30	22	0	3	0	25	1	0	0	0	1	1	0	0	0	1	1	0	0	0	1	0
11:45	16	0	3	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:00	12	0	2	0	14	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
12:15	10	0	1	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	6	0	2	0	8	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
12:45	6	0	1	0	7	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0
13:00	16	0	2	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
13:15	4	0	3	0	7	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	1
13:30	7	0	0	0	7	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
13:45	7	0	1	0	8	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0
<b>SUBTOTAL</b>	122	0	23	0	145	6	0	2	0	8	7	0	0	0	7	4	0	0	0	4	5



## Traffic Count Data

Intersection: LAUZON ROAD & SPITFIRES WAY  
 Site Code: 2207400001  
 Municipality: Windsor  
 Count Date: Sep 14, 2022

### East Approach - SPITFIRES WAY

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
15:00	22	0	1	0	23	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
15:15	19	0	1	0	20	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
15:30	10	0	2	0	12	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2
15:45	17	0	3	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
16:00	23	0	8	0	31	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
16:15	13	0	6	0	19	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
16:30	16	0	5	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	11	0	1	0	12	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
17:00	15	0	2	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
17:15	15	0	1	0	16	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
17:30	12	0	2	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
17:45	5	0	0	0	5	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
<b>SUBTOTAL</b>	178	0	32	0	210	2	0	0	0	2	5	0	0	0	5	1	0	0	0	1	8
<b>GRAND TOTAL</b>	382	0	88	0	470	10	0	2	0	12	19	0	1	0	20	8	0	0	0	8	17

## Peak Hour Diagram

### Specified Period

From: 07:00:00  
To: 10:00:00

### One Hour Peak

From: 07:30:00  
To: 08:30:00

**Intersection:** LAUZON ROAD & SPITFIRES WAY  
**Site Code:** 2207400001  
**Count Date:** Sep 14, 2022

**Weather conditions:** Clear

**\*\* Unsignalized Intersection \*\***

**Major Road:** LAUZON ROAD runs N/S

### North Approach

	Out	In	Total
	372	265	637
MT	3	1	4
HT	12	11	23
	0	1	1
<b>Totals</b>	<b>387</b>	<b>278</b>	<b>665</b>

### LAUZON ROAD

	0	0	0
HT	11	1	0
MT	3	0	0
	357	15	0
<b>Totals</b>	<b>371</b>	<b>16</b>	<b>0</b>

Peds: 0



Peds: 0

Peds: 2

Peds: 1

<b>Totals</b>	<b>268</b>	<b>49</b>	<b>0</b>
	256	47	0
MT	1	1	0
HT	10	1	0
	1	0	0

### LAUZON ROAD

### East Approach

	Out	In	Total
	40	62	102
MT	2	1	3
HT	3	2	5
	1	0	1
<b>Totals</b>	<b>46</b>	<b>65</b>	<b>111</b>

### SPITFIRES WAY

Totals		MT	HT	
<b>0</b>	0	0	0	0
<b>10</b>	9	0	1	0
<b>36</b>	31	2	2	1

### South Approach

	Out	In	Total
	303	388	691
MT	2	5	7
HT	11	13	24
	1	1	2
<b>Totals</b>	<b>317</b>	<b>407</b>	<b>724</b>

- Cars

MT - Medium Trucks

HT - Heavy Trucks

- Bicycles

### Comments



## Peak Hour Summary

Intersection: LAUZON ROAD & SPITFIRES WAY  
 Site Code: 2207400001  
 Count Date: Sep 14, 2022  
 Period: 07:00 - 10:00

### Peak Hour Data (07:30 - 08:30)

Start Time	North Approach LAUZON ROAD						South Approach LAUZON ROAD						East Approach SPITFIRES WAY						West Approach						Total Vehicles
	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	
07:30	5	78		0	0	83		77	18	0	1	95	17		3	0	0	20					0		198
07:45	3	124		0	0	127		82	13	0	0	95	15		5	0	1	20					0		242
08:00	2	88		0	0	90		44	12	0	0	56	2		1	0	1	3					0		149
08:15	6	81		0	0	87		65	6	0	0	71	2		1	0	0	3					0		161
<b>Grand Total</b>	<b>16</b>	<b>371</b>		<b>0</b>	<b>0</b>	<b>387</b>		<b>268</b>	<b>49</b>	<b>0</b>	<b>1</b>	<b>317</b>	<b>36</b>		<b>10</b>	<b>0</b>	<b>2</b>	<b>46</b>					<b>0</b>	<b>0</b>	<b>750</b>
Approach %	4.1	95.9		0	-	-	84.5	15.5	0	-	-	78.3		21.7	0	-	-					-	-	-	
Totals %	2.1	49.5		0	51.6	-	35.7	6.5	0	42.3	-	4.8		1.3	0	6.1	-					0	-	-	
<b>PHF</b>	<b>0.67</b>	<b>0.75</b>		<b>0</b>	<b>0.76</b>	-	<b>0.82</b>	<b>0.68</b>	<b>0</b>	<b>0.83</b>	-	<b>0.53</b>		<b>0.5</b>	<b>0</b>	<b>0.58</b>	-					<b>0</b>	<b>0.77</b>	-	
Cars	15	357		0	372	-	256	47	0	303	-	31		9	0	40	-					0	0	715	
% Cars	93.8	96.2		0	96.1	-	95.5	95.9	0	95.6	-	86.1		90	0	87	-					0	0	95.3	
Medium Trucks	0	3		0	3	-	1	1	0	2	-	2		0	0	2	-					0	0	7	
% Medium Trucks	0	0.8		0	0.8	-	0.4	2	0	0.6	-	5.6		0	0	4.3	-					0	0	0.9	
Heavy Trucks	1	11		0	12	-	10	1	0	11	-	2		1	0	3	-					0	0	26	
% Heavy Trucks	6.3	3		0	3.1	-	3.7	2	0	3.5	-	5.6		10	0	6.5	-					0	0	3.5	
Bicycles	0	0		0	0	-	1	0	0	1	-	1		0	0	1	-					0	0	2	
% Bicycles	0	0		0	0	-	0.4	0	0	0.3	-	2.8		0	0	2.2	-					0	0	0.3	
Peds					0	-				1	-					2	-					0	-	3	
% Peds					0	-				33.3	-					66.7	-					0	-	-	

## Peak Hour Diagram

### Specified Period

From: 11:00:00  
To: 14:00:00

### One Hour Peak

From: 11:45:00  
To: 12:45:00

**Intersection:** LAUZON ROAD & SPITFIRES WAY  
**Site Code:** 2207400001  
**Count Date:** Sep 14, 2022

**Weather conditions:** Clear

**\*\* Unsignalized Intersection \*\***

**Major Road:** LAUZON ROAD runs N/S

### North Approach

	Out	In	Total
	344	416	760
MT	4	7	11
HT	9	5	14
	0	0	0
<b>Totals</b>	<b>357</b>	<b>428</b>	<b>785</b>

### LAUZON ROAD

	0	0	0
HT	7	2	0
MT	4	0	0
	334	10	0
<b>Totals</b>	<b>345</b>	<b>12</b>	<b>0</b>



Peds: 0



Peds: 0

Peds: 1

Peds: 3

<b>Totals</b>	<b>420</b>	<b>62</b>	<b>0</b>
	408	58	0
MT	7	2	0
HT	5	0	0
	0	2	0

### LAUZON ROAD

### East Approach

	Out	In	Total
	52	68	120
MT	2	2	4
HT	1	2	3
	0	2	2
<b>Totals</b>	<b>55</b>	<b>74</b>	<b>129</b>

### SPITFIRES WAY

Totals		MT	HT	
<b>0</b>	0	0	0	0
<b>8</b>	8	0	0	0
<b>47</b>	44	2	1	0

### South Approach

	Out	In	Total
	466	378	844
MT	9	6	15
HT	5	8	13
	2	0	2
<b>Totals</b>	<b>482</b>	<b>392</b>	<b>874</b>

- Cars

MT - Medium Trucks

HT - Heavy Trucks

- Bicycles

### Comments



## Peak Hour Summary

Intersection: LAUZON ROAD & SPITFIRES WAY  
 Site Code: 2207400001  
 Count Date: Sep 14, 2022  
 Period: 11:00 - 14:00

### Peak Hour Data (11:45 - 12:45)

Start Time	North Approach LAUZON ROAD						South Approach LAUZON ROAD						East Approach SPITFIRES WAY						West Approach						Total Vehicles
	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	
11:45	5	98		0	0	103		102	17	0	2	119	16		3	0	1	19					0		241
12:00	2	76		0	0	78		105	12	0	0	117	13		2	0	0	15					0		210
12:15	3	80		0	0	83		106	15	0	1	121	10		1	0	0	11					0		215
12:30	2	91		0	0	93		107	18	0	0	125	8		2	0	0	10					0		228
<b>Grand Total</b>	<b>12</b>	<b>345</b>	<b>0</b>	<b>0</b>	<b>357</b>	<b>420</b>	<b>62</b>	<b>0</b>	<b>3</b>	<b>482</b>	<b>47</b>	<b>8</b>	<b>0</b>	<b>1</b>	<b>55</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>894</b>					
Approach %	3.4	96.6	0	-	87.1	12.9	0	-	85.5	14.5	0	-	-	-	-	-	-	-	-						
Totals %	1.3	38.6	0	39.9	47	6.9	0	53.9	5.3	0.9	0	6.2	-	-	-	-	-	-	0						
<b>PHF</b>	<b>0.6</b>	<b>0.88</b>	<b>0</b>	<b>0.87</b>	<b>0.98</b>	<b>0.86</b>	<b>0</b>	<b>0.96</b>	<b>0.73</b>	<b>0.67</b>	<b>0</b>	<b>0.72</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.93</b>						
Cars	10	334	0	344	408	58	0	466	44	8	0	52	-	-	-	-	-	-	862						
% Cars	83.3	96.8	0	96.4	97.1	93.5	0	96.7	93.6	100	0	94.5	-	-	-	-	-	-	96.4						
Medium Trucks	0	4	0	4	7	2	0	9	2	0	0	2	-	-	-	-	-	-	15						
% Medium Trucks	0	1.2	0	1.1	1.7	3.2	0	1.9	4.3	0	0	3.6	-	-	-	-	-	-	1.7						
Heavy Trucks	2	7	0	9	5	0	0	5	1	0	0	1	-	-	-	-	-	-	15						
% Heavy Trucks	16.7	2	0	2.5	1.2	0	0	1	2.1	0	0	1.8	-	-	-	-	-	-	1.7						
Bicycles	0	0	0	0	0	2	0	2	0	0	0	0	-	-	-	-	-	-	2						
% Bicycles	0	0	0	0	0	3.2	0	0.4	0	0	0	0	-	-	-	-	-	-	0.2						
Peds				0	-				3	-				1	-				0	-	4				
% Peds				0	-				75	-				25	-				0	-	-				

## Peak Hour Diagram

### Specified Period

From: 15:00:00  
To: 18:00:00

### One Hour Peak

From: 16:00:00  
To: 17:00:00

**Intersection:** LAUZON ROAD & SPITFIRES WAY  
**Site Code:** 2207400001  
**Count Date:** Sep 14, 2022

**Weather conditions:** Clear

**\*\* Unsignalized Intersection \*\***

**Major Road:** LAUZON ROAD runs N/S

### North Approach

	Out	In	Total
	374	621	995
MT	1	3	4
HT	2	0	2
	1	0	1
<b>Totals</b>	<b>378</b>	<b>624</b>	<b>1002</b>

### LAUZON ROAD

	1	0	0
HT	1	1	0
MT	1	0	0
	365	9	0
<b>Totals</b>	<b>368</b>	<b>10</b>	<b>0</b>



Peds: 0



Peds: 0

Peds: 0

Peds: 5

<b>Totals</b>	<b>604</b>	<b>79</b>	<b>0</b>
	601	79	0
MT	3	0	0
HT	0	0	0
	0	0	0

### LAUZON ROAD

### East Approach

	Out	In	Total
	83	88	171
MT	0	0	0
HT	2	1	3
	1	0	1
<b>Totals</b>	<b>86</b>	<b>89</b>	<b>175</b>

### SPITFIRES WAY

Totals		MT	HT	
<b>0</b>	0	0	0	0
<b>20</b>	20	0	0	0
<b>66</b>	63	0	2	1

### South Approach

	Out	In	Total
	680	428	1108
MT	3	1	4
HT	0	3	3
	0	2	2
<b>Totals</b>	<b>683</b>	<b>434</b>	<b>1117</b>

- Cars

MT - Medium Trucks

HT - Heavy Trucks

- Bicycles

### Comments



## Peak Hour Summary

Intersection: LAUZON ROAD & SPITFIRES WAY  
 Site Code: 2207400001  
 Count Date: Sep 14, 2022  
 Period: 15:00 - 18:00

### Peak Hour Data (16:00 - 17:00)

Start Time	North Approach LAUZON ROAD						South Approach LAUZON ROAD						East Approach SPITFIRES WAY						West Approach						Total Vehicles	
	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total	←	↑	→	↻	Peds	Total		
16:00	2	100		0	0	102		150	14	0	0	164	24		8	0	0	32					0		298	
16:15	3	86		0	0	89		150	22	0	0	172	14		6	0	0	20					0		281	
16:30	2	89		0	0	91		159	18	0	2	177	16		5	0	0	21					0		289	
16:45	3	93		0	0	96		145	25	0	3	170	12		1	0	0	13					0		279	
<b>Grand Total</b>	<b>10</b>	<b>368</b>		<b>0</b>	<b>0</b>	<b>378</b>		<b>604</b>	<b>79</b>	<b>0</b>	<b>5</b>	<b>683</b>	<b>66</b>		<b>20</b>	<b>0</b>	<b>0</b>	<b>86</b>					<b>0</b>	<b>0</b>	<b>1147</b>	
Approach %	2.6	97.4		0	-			88.4	11.6	0	-		76.7		23.3	0	-									
Totals %	0.9	32.1		0	33			52.7	6.9	0	59.5		5.8		1.7	0	7.5									
<b>PHF</b>	<b>0.83</b>	<b>0.92</b>		<b>0</b>	<b>0.93</b>			<b>0.95</b>	<b>0.79</b>	<b>0</b>	<b>0.96</b>		<b>0.69</b>		<b>0.63</b>	<b>0</b>	<b>0.67</b>						<b>0</b>	<b>0.96</b>		
Cars	9	365		0	374			601	79	0	680		63	20	0	83							0		1137	
% Cars	90	99.2		0	98.9			99.5	100	0	99.6		95.5	100	0	96.5							0		99.1	
Medium Trucks	0	1		0	1			3	0	0	3		0	0	0	0							0		4	
% Medium Trucks	0	0.3		0	0.3			0.5	0	0	0.4		0	0	0	0							0		0.3	
Heavy Trucks	1	1		0	2			0	0	0	0		2	0	0	2							0		4	
% Heavy Trucks	10	0.3		0	0.5			0	0	0	0		3	0	0	2.3							0		0.3	
Bicycles	0	1		0	1			0	0	0	0		1	0	0	1							0		2	
% Bicycles	0	0.3		0	0.3			0	0	0	0		1.5	0	0	1.2							0		0.2	
Peds					0	-					5	-					0	-					0	-	5	
% Peds					0	-					100	-					0	-					0	-		

# Appendix C

## Synchro Analysis Worksheets

Lanes, Volumes, Timings  
105: Lauzon Road & Spitfire Way

AM Peak Hour  
2023 Existing Conditions



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	36	10	271	49	16	375
Future Volume (vph)	36	10	271	49	16	375
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	25.0	0.0		0.0	0.0	
Storage Lanes	1	1		0	0	
Taper Length (m)	30.0				30.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	1.00		1.00			1.00
Frt		0.850	0.977			
Flt Protected	0.950					0.998
Satd. Flow (prot)	1722	1484	3427	0	0	3532
Flt Permitted	0.950					0.934
Satd. Flow (perm)	1720	1484	3427	0	0	3306
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		13	51			
Link Speed (k/h)	50		50			50
Link Distance (m)	177.3		508.6			95.7
Travel Time (s)	12.8		36.6			6.9
Confl. Peds. (#/hr)	1			2	2	
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles (%)	6%	10%	4%	2%	6%	3%
Adj. Flow (vph)	47	13	352	64	21	487
Shared Lane Traffic (%)						
Lane Group Flow (vph)	47	13	416	0	0	508
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	3.0		3.0			3.0
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	25	15		15	25	
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	4		2			6
Permitted Phases		4			6	
Detector Phase	4	4	2		6	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	10.0		10.0	10.0
Minimum Split (s)	19.0	19.0	21.0		21.0	21.0
Total Split (s)	24.0	24.0	26.0		26.0	26.0
Total Split (%)	48.0%	48.0%	52.0%		52.0%	52.0%
Maximum Green (s)	19.0	19.0	21.0		21.0	21.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	5.0	5.0	5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						

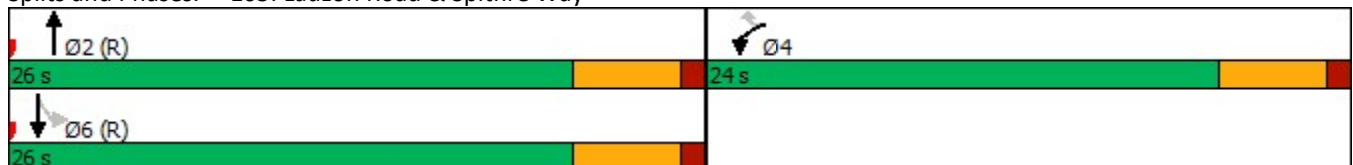


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	C-Max		C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0			
Flash Dont Walk (s)	11.0	11.0	7.0			
Pedestrian Calls (#/hr)	1	1	2			
Act Effct Green (s)	10.0	10.0	37.2			37.2
Actuated g/C Ratio	0.20	0.20	0.74			0.74
v/c Ratio	0.14	0.04	0.16			0.21
Control Delay	15.7	7.6	4.3			4.9
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	15.7	7.6	4.3			4.9
LOS	B	A	A			A
Approach Delay	14.0		4.3			4.9
Approach LOS	B		A			A
Queue Length 50th (m)	3.9	0.0	5.7			8.4
Queue Length 95th (m)	6.8	2.1	14.6			20.2
Internal Link Dist (m)	153.3		484.6			71.7
Turn Bay Length (m)	25.0					
Base Capacity (vph)	654	571	2562			2459
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.07	0.02	0.16			0.21

Intersection Summary

Area Type: Other  
 Cycle Length: 50  
 Actuated Cycle Length: 50  
 Offset: 18 (36%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 40  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.21  
 Intersection Signal Delay: 5.2  
 Intersection LOS: A  
 Intersection Capacity Utilization 37.1%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 105: Lauzon Road & Spitfire Way



Lanes, Volumes, Timings  
 105: Lauzon Road & Spitfire Way

PM Peak Hour  
 2023 Existing Conditions



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	67	20	610	80	10	372
Future Volume (vph)	67	20	610	80	10	372
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	25.0	0.0		0.0	0.0	
Storage Lanes	1	1		0	0	
Taper Length (m)	30.0				30.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	1.00					
Frt		0.850	0.983			
Flt Protected	0.950					0.999
Satd. Flow (prot)	1772	1633	3588	0	0	3637
Flt Permitted	0.950					0.939
Satd. Flow (perm)	1764	1633	3588	0	0	3419
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		21	35			
Link Speed (k/h)	50		50			50
Link Distance (m)	213.1		512.7			78.2
Travel Time (s)	15.3		36.9			5.6
Confl. Peds. (#/hr)	5					
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	0%	0%	0%	10%	0%
Adj. Flow (vph)	70	21	635	83	10	388
Shared Lane Traffic (%)						
Lane Group Flow (vph)	70	21	718	0	0	398
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	3.0		3.0			3.0
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	25	15		15	25	
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	4		2			6
Permitted Phases		4			6	
Detector Phase	4	4	2		6	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	10.0		10.0	10.0
Minimum Split (s)	19.0	19.0	21.0		21.0	21.0
Total Split (s)	24.0	24.0	29.0		29.0	29.0
Total Split (%)	45.3%	45.3%	54.7%		54.7%	54.7%
Maximum Green (s)	19.0	19.0	24.0		24.0	24.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	5.0	5.0	5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						

Lanes, Volumes, Timings  
 105: Lauzon Road & Spitfire Way

PM Peak Hour  
 2023 Existing Conditions

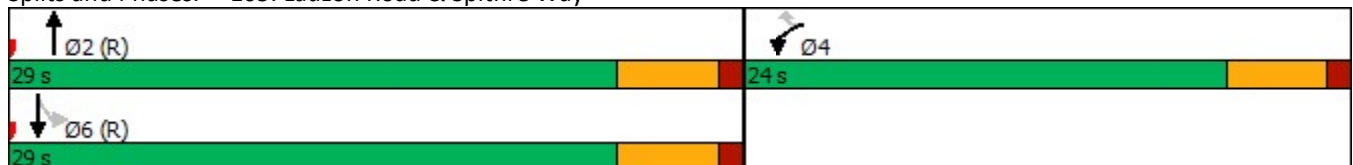


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Vehicle Extension (s)	4.0	4.0	4.0		4.0	4.0
Recall Mode	None	None	C-Max		C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0			
Flash Dont Walk (s)	11.0	11.0	7.0			
Pedestrian Calls (#/hr)	5	5	0			
Act Effct Green (s)	10.2	10.2	40.0			40.0
Actuated g/C Ratio	0.19	0.19	0.75			0.75
v/c Ratio	0.21	0.06	0.26			0.15
Control Delay	18.0	7.5	4.6			4.5
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	18.0	7.5	4.6			4.5
LOS	B	A	A			A
Approach Delay	15.6		4.6			4.5
Approach LOS	B		A			A
Queue Length 50th (m)	6.3	0.0	11.8			6.3
Queue Length 95th (m)	11.7	3.6	32.8			18.7
Internal Link Dist (m)	189.1		488.7			54.2
Turn Bay Length (m)	25.0					
Base Capacity (vph)	635	598	2717			2581
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.11	0.04	0.26			0.15

Intersection Summary

Area Type: Other  
 Cycle Length: 53  
 Actuated Cycle Length: 53  
 Offset: 20 (38%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 40  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.26  
 Intersection Signal Delay: 5.4  
 Intersection LOS: A  
 Intersection Capacity Utilization 34.4%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 105: Lauzon Road & Spitfire Way



Lanes, Volumes, Timings  
 105: Lauzon Road & Spitfire Way

Saturday Mid-day Peak Hour  
 2023 Existing Conditions



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	67	20	487	80	10	436
Future Volume (vph)	67	20	487	80	10	436
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	25.0	0.0		0.0	0.0	
Storage Lanes	1	1		0	0	
Taper Length (m)	30.0				30.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	1.00					
Fr <sub>t</sub>		0.850	0.979			
Fl <sub>t</sub> Protected	0.950					0.999
Satd. Flow (prot)	1772	1633	3573	0	0	3639
Fl <sub>t</sub> Permitted	0.950					0.944
Satd. Flow (perm)	1764	1633	3573	0	0	3438
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		21	45			
Link Speed (k/h)	50		50			50
Link Distance (m)	191.6		515.5			65.0
Travel Time (s)	13.8		37.1			4.7
Confl. Peds. (#/hr)	5					
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	0%	0%	0%	10%	0%
Adj. Flow (vph)	70	21	507	83	10	454
Shared Lane Traffic (%)						
Lane Group Flow (vph)	70	21	590	0	0	464
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	3.0		3.0			3.0
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	25	15		15	25	
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	4		2			6
Permitted Phases		4			6	
Detector Phase	4	4	2		6	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	10.0		10.0	10.0
Minimum Split (s)	19.0	19.0	21.0		21.0	21.0
Total Split (s)	24.0	24.0	29.0		29.0	29.0
Total Split (%)	45.3%	45.3%	54.7%		54.7%	54.7%
Maximum Green (s)	19.0	19.0	24.0		24.0	24.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	5.0	5.0	5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						

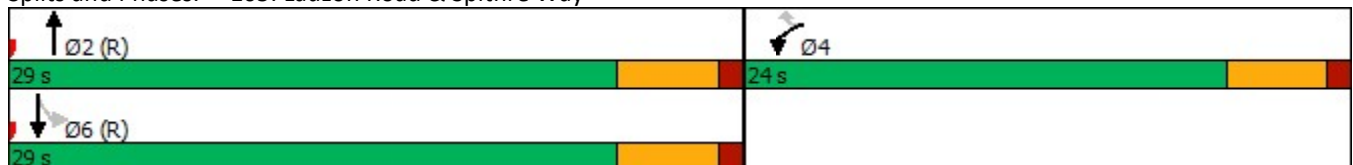


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Vehicle Extension (s)	4.0	4.0	4.0		4.0	4.0
Recall Mode	None	None	C-Max		C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0			
Flash Dont Walk (s)	11.0	11.0	7.0			
Pedestrian Calls (#/hr)	5	5	0			
Act Effct Green (s)	10.2	10.2	40.0			40.0
Actuated g/C Ratio	0.19	0.19	0.75			0.75
v/c Ratio	0.21	0.06	0.22			0.18
Control Delay	18.0	7.5	4.4			4.6
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	18.0	7.5	4.4			4.6
LOS	B	A	A			A
Approach Delay	15.6		4.4			4.6
Approach LOS	B		A			A
Queue Length 50th (m)	6.3	0.0	9.0			7.5
Queue Length 95th (m)	11.7	3.6	25.7			21.8
Internal Link Dist (m)	167.6		491.5			41.0
Turn Bay Length (m)	25.0					
Base Capacity (vph)	635	598	2709			2596
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.11	0.04	0.22			0.18

Intersection Summary

Area Type: Other  
 Cycle Length: 53  
 Actuated Cycle Length: 53  
 Offset: 20 (38%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 40  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.22  
 Intersection Signal Delay: 5.3  
 Intersection LOS: A  
 Intersection Capacity Utilization 34.2%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 105: Lauzon Road & Spitfire Way





Lanes, Volumes, Timings  
105: Lauzon Road & Spitfire Way

AM Peak Hour  
2025 Future Background Conditions



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	106	15	296	77	20	425
Future Volume (vph)	106	15	296	77	20	425
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	25.0	0.0		0.0	0.0	
Storage Lanes	1	1		0	0	
Taper Length (m)	30.0				30.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	1.00		1.00			1.00
Frt		0.850	0.969			
Flt Protected	0.950					0.998
Satd. Flow (prot)	1722	1484	3398	0	0	3532
Flt Permitted	0.950					0.926
Satd. Flow (perm)	1720	1484	3398	0	0	3277
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		19	80			
Link Speed (k/h)	50		50			50
Link Distance (m)	177.3		508.6			95.7
Travel Time (s)	12.8		36.6			6.9
Confl. Peds. (#/hr)	1			2	2	
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles (%)	6%	10%	4%	2%	6%	3%
Adj. Flow (vph)	138	19	384	100	26	552
Shared Lane Traffic (%)						
Lane Group Flow (vph)	138	19	484	0	0	578
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	3.0		3.0			3.0
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	25	15		15	25	
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	4		2			6
Permitted Phases		4			6	
Detector Phase	4	4	2		6	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	10.0		10.0	10.0
Minimum Split (s)	19.0	19.0	21.0		21.0	21.0
Total Split (s)	24.0	24.0	26.0		26.0	26.0
Total Split (%)	48.0%	48.0%	52.0%		52.0%	52.0%
Maximum Green (s)	19.0	19.0	21.0		21.0	21.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	5.0	5.0	5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						

Lanes, Volumes, Timings  
 105: Lauzon Road & Spitfire Way

AM Peak Hour  
 2025 Future Background Conditions



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	C-Max		C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0			
Flash Dont Walk (s)	11.0	11.0	7.0			
Pedestrian Calls (#/hr)	1	1	2			
Act Effct Green (s)	10.6	10.6	33.0			33.0
Actuated g/C Ratio	0.21	0.21	0.66			0.66
v/c Ratio	0.38	0.06	0.21			0.27
Control Delay	18.8	6.9	4.9			6.0
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	18.8	6.9	4.9			6.0
LOS	B	A	A			A
Approach Delay	17.4		4.9			6.0
Approach LOS	B		A			A
Queue Length 50th (m)	11.8	0.0	6.8			10.4
Queue Length 95th (m)	15.6	2.6	16.2			23.1
Internal Link Dist (m)	153.3		484.6			71.7
Turn Bay Length (m)	25.0					
Base Capacity (vph)	654	575	2271			2164
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.21	0.03	0.21			0.27

Intersection Summary












Area Type: Other  
 Cycle Length: 50  
 Actuated Cycle Length: 50  
 Offset: 18 (36%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 40  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.38  
 Intersection Signal Delay: 7.1  
 Intersection LOS: A  
 Intersection Capacity Utilization 41.5%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 105: Lauzon Road & Spitfire Way



Lanes, Volumes, Timings  
105: Lauzon Road & Spitfire Way

PM Peak Hour  
2025 Future Background Conditions

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	118	27	668	159	16	410
Future Volume (vph)	118	27	668	159	16	410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	25.0	0.0		0.0	0.0	
Storage Lanes	1	1		0	0	
Taper Length (m)	30.0				30.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	1.00					
Frt		0.850	0.971			
Flt Protected	0.950					0.998
Satd. Flow (prot)	1772	1633	3544	0	0	3629
Flt Permitted	0.950					0.919
Satd. Flow (perm)	1764	1633	3544	0	0	3342
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		28	72			
Link Speed (k/h)	50		50			50
Link Distance (m)	213.1		512.7			78.2
Travel Time (s)	15.3		36.9			5.6
Confl. Peds. (#/hr)	5					
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	0%	0%	0%	10%	0%
Adj. Flow (vph)	123	28	696	166	17	427
Shared Lane Traffic (%)						
Lane Group Flow (vph)	123	28	862	0	0	444
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	3.0		3.0			3.0
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	25	15		15	25	
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	4		2			6
Permitted Phases		4			6	
Detector Phase	4	4	2		6	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	10.0		10.0	10.0
Minimum Split (s)	19.0	19.0	21.0		21.0	21.0
Total Split (s)	24.0	24.0	29.0		29.0	29.0
Total Split (%)	45.3%	45.3%	54.7%		54.7%	54.7%
Maximum Green (s)	19.0	19.0	24.0		24.0	24.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	5.0	5.0	5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						

Lanes, Volumes, Timings  
 105: Lauzon Road & Spitfire Way

PM Peak Hour  
 2025 Future Background Conditions



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Vehicle Extension (s)	4.0	4.0	4.0		4.0	4.0
Recall Mode	None	None	C-Max		C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0			
Flash Dont Walk (s)	11.0	11.0	7.0			
Pedestrian Calls (#/hr)	5	5	0			
Act Effct Green (s)	10.8	10.8	35.8			35.8
Actuated g/C Ratio	0.20	0.20	0.68			0.68
v/c Ratio	0.34	0.08	0.36			0.20
Control Delay	19.4	6.8	5.7			5.5
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	19.4	6.8	5.7			5.5
LOS	B	A	A			A
Approach Delay	17.1		5.7			5.5
Approach LOS	B		A			A
Queue Length 50th (m)	11.1	0.0	15.8			7.9
Queue Length 95th (m)	18.4	4.2	39.4			21.1
Internal Link Dist (m)	189.1		488.7			54.2
Turn Bay Length (m)	25.0					
Base Capacity (vph)	635	603	2417			2257
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.19	0.05	0.36			0.20

Intersection Summary

Area Type: Other  
 Cycle Length: 53  
 Actuated Cycle Length: 53  
 Offset: 20 (38%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 40  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.36  
 Intersection Signal Delay: 6.8  
 Intersection LOS: A  
 Intersection Capacity Utilization 38.5%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 105: Lauzon Road & Spitfire Way



Lanes, Volumes, Timings  
 105: Lauzon Road & Spitfire Way

Saturday Mid-day Peak Hour  
 2025 Future Background Conditions



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	125	27	550	170	17	479
Future Volume (vph)	125	27	550	170	17	479
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	25.0	0.0		0.0	0.0	
Storage Lanes	1	1		0	0	
Taper Length (m)	30.0				30.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	1.00					
Frt		0.850	0.965			
Flt Protected	0.950					0.998
Satd. Flow (prot)	1772	1633	3522	0	0	3630
Flt Permitted	0.950					0.925
Satd. Flow (perm)	1764	1633	3522	0	0	3365
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		28	101			
Link Speed (k/h)	50		50			50
Link Distance (m)	191.6		515.5			65.0
Travel Time (s)	13.8		37.1			4.7
Confl. Peds. (#/hr)	5					
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	0%	0%	0%	10%	0%
Adj. Flow (vph)	130	28	573	177	18	499
Shared Lane Traffic (%)						
Lane Group Flow (vph)	130	28	750	0	0	517
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	3.0		3.0			3.0
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	25	15		15	25	
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	4		2			6
Permitted Phases		4			6	
Detector Phase	4	4	2		6	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	10.0		10.0	10.0
Minimum Split (s)	19.0	19.0	21.0		21.0	21.0
Total Split (s)	24.0	24.0	29.0		29.0	29.0
Total Split (%)	45.3%	45.3%	54.7%		54.7%	54.7%
Maximum Green (s)	19.0	19.0	24.0		24.0	24.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	5.0	5.0	5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						

Lanes, Volumes, Timings  
 105: Lauzon Road & Spitfire Way

Saturday Mid-day Peak Hour  
 2025 Future Background Conditions

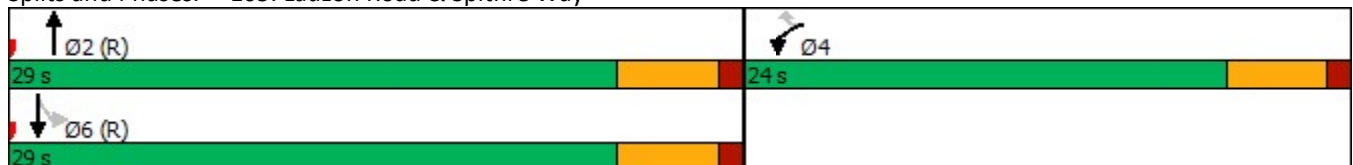


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Vehicle Extension (s)	4.0	4.0	4.0		4.0	4.0
Recall Mode	None	None	C-Max		C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0			
Flash Dont Walk (s)	11.0	11.0	7.0			
Pedestrian Calls (#/hr)	5	5	0			
Act Effct Green (s)	10.9	10.9	35.7			35.7
Actuated g/C Ratio	0.21	0.21	0.67			0.67
v/c Ratio	0.36	0.08	0.31			0.23
Control Delay	19.6	6.7	5.3			5.7
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	19.6	6.7	5.3			5.7
LOS	B	A	A			A
Approach Delay	17.3		5.3			5.7
Approach LOS	B		A			A
Queue Length 50th (m)	11.7	0.0	12.6			9.6
Queue Length 95th (m)	19.4	4.2	31.7			24.5
Internal Link Dist (m)	167.6		491.5			41.0
Turn Bay Length (m)	25.0					
Base Capacity (vph)	635	603	2402			2264
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.20	0.05	0.31			0.23

Intersection Summary

Area Type: Other  
 Cycle Length: 53  
 Actuated Cycle Length: 53  
 Offset: 20 (38%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 40  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.36  
 Intersection Signal Delay: 6.7  
 Intersection LOS: A  
 Intersection Capacity Utilization 40.9%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 105: Lauzon Road & Spitfire Way



Lanes, Volumes, Timings  
105: Lauzon Road & Spitfire Way

AM Peak Hour  
2025 Total Future Conditions



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	106	15	309	77	20	467
Future Volume (vph)	106	15	309	77	20	467
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	25.0	0.0		0.0	0.0	
Storage Lanes	1	1		0	0	
Taper Length (m)	30.0				30.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	1.00		1.00			1.00
Frt		0.850	0.970			
Flt Protected	0.950					0.998
Satd. Flow (prot)	1722	1484	3402	0	0	3532
Flt Permitted	0.950					0.927
Satd. Flow (perm)	1720	1484	3402	0	0	3281
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		19	76			
Link Speed (k/h)	50		50			50
Link Distance (m)	177.3		508.6			95.7
Travel Time (s)	12.8		36.6			6.9
Confl. Peds. (#/hr)	1			2	2	
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles (%)	6%	10%	4%	2%	6%	3%
Adj. Flow (vph)	138	19	401	100	26	606
Shared Lane Traffic (%)						
Lane Group Flow (vph)	138	19	501	0	0	632
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	3.0		3.0			3.0
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	25	15		15	25	
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	4		2			6
Permitted Phases		4			6	
Detector Phase	4	4	2		6	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	10.0		10.0	10.0
Minimum Split (s)	19.0	19.0	21.0		21.0	21.0
Total Split (s)	24.0	24.0	26.0		26.0	26.0
Total Split (%)	48.0%	48.0%	52.0%		52.0%	52.0%
Maximum Green (s)	19.0	19.0	21.0		21.0	21.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	5.0	5.0	5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						

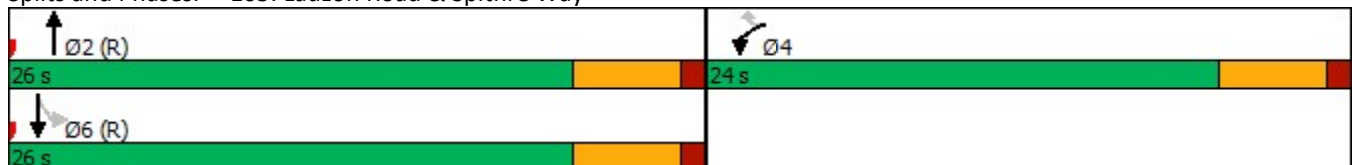


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	C-Max		C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0			
Flash Dont Walk (s)	11.0	11.0	7.0			
Pedestrian Calls (#/hr)	1	1	2			
Act Effct Green (s)	10.6	10.6	33.0			33.0
Actuated g/C Ratio	0.21	0.21	0.66			0.66
v/c Ratio	0.38	0.06	0.22			0.29
Control Delay	18.8	6.9	5.0			6.2
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	18.8	6.9	5.0			6.2
LOS	B	A	A			A
Approach Delay	17.4		5.0			6.2
Approach LOS	B		A			A
Queue Length 50th (m)	11.8	0.0	7.2			11.6
Queue Length 95th (m)	15.6	2.6	16.8			25.2
Internal Link Dist (m)	153.3		484.6			71.7
Turn Bay Length (m)	25.0					
Base Capacity (vph)	654	575	2272			2166
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.21	0.03	0.22			0.29

Intersection Summary

Area Type: Other  
 Cycle Length: 50  
 Actuated Cycle Length: 50  
 Offset: 18 (36%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 40  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.38  
 Intersection Signal Delay: 7.1  
 Intersection LOS: A  
 Intersection Capacity Utilization 42.6%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 105: Lauzon Road & Spitfire Way





Lanes, Volumes, Timings  
105: Lauzon Road & Spitfire Way

PM Peak Hour  
2025 Total Future Conditions



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	118	27	703	159	16	432
Future Volume (vph)	118	27	703	159	16	432
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	25.0	0.0		0.0	0.0	
Storage Lanes	1	1		0	0	
Taper Length (m)	30.0				30.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	1.00					
Frt		0.850	0.972			
Flt Protected	0.950					0.998
Satd. Flow (prot)	1772	1633	3548	0	0	3630
Flt Permitted	0.950					0.919
Satd. Flow (perm)	1764	1633	3548	0	0	3342
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		28	67			
Link Speed (k/h)	50		50			50
Link Distance (m)	213.1		512.7			78.2
Travel Time (s)	15.3		36.9			5.6
Confl. Peds. (#/hr)	5					
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	0%	0%	0%	10%	0%
Adj. Flow (vph)	123	28	732	166	17	450
Shared Lane Traffic (%)						
Lane Group Flow (vph)	123	28	898	0	0	467
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	3.0		3.0			3.0
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	25	15		15	25	
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	4		2			6
Permitted Phases		4			6	
Detector Phase	4	4	2		6	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	10.0		10.0	10.0
Minimum Split (s)	19.0	19.0	21.0		21.0	21.0
Total Split (s)	24.0	24.0	29.0		29.0	29.0
Total Split (%)	45.3%	45.3%	54.7%		54.7%	54.7%
Maximum Green (s)	19.0	19.0	24.0		24.0	24.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	5.0	5.0	5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						

Lanes, Volumes, Timings  
 105: Lauzon Road & Spitfire Way

PM Peak Hour  
 2025 Total Future Conditions



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Vehicle Extension (s)	4.0	4.0	4.0		4.0	4.0
Recall Mode	None	None	C-Max		C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0			
Flash Dont Walk (s)	11.0	11.0	7.0			
Pedestrian Calls (#/hr)	5	5	0			
Act Effct Green (s)	10.8	10.8	35.8			35.8
Actuated g/C Ratio	0.20	0.20	0.68			0.68
v/c Ratio	0.34	0.08	0.37			0.21
Control Delay	19.4	6.8	5.9			5.5
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	19.4	6.8	5.9			5.5
LOS	B	A	A			A
Approach Delay	17.1		5.9			5.5
Approach LOS	B		A			A
Queue Length 50th (m)	11.1	0.0	16.8			8.5
Queue Length 95th (m)	18.4	4.2	41.9			22.2
Internal Link Dist (m)	189.1		488.7			54.2
Turn Bay Length (m)	25.0					
Base Capacity (vph)	635	603	2418			2257
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.19	0.05	0.37			0.21

Intersection Summary

Area Type: Other  
 Cycle Length: 53  
 Actuated Cycle Length: 53  
 Offset: 20 (38%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 40  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.37  
 Intersection Signal Delay: 6.9  
 Intersection LOS: A  
 Intersection Capacity Utilization 39.5%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 105: Lauzon Road & Spitfire Way



Lanes, Volumes, Timings  
105: Lauzon Road & Spitfire Way

Saturday Mid-day Peak Hour  
2025 Total Future Conditions



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	125	27	579	170	17	507
Future Volume (vph)	125	27	579	170	17	507
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	25.0	0.0		0.0	0.0	
Storage Lanes	1	1		0	0	
Taper Length (m)	30.0				30.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	1.00					
Frt		0.850	0.966			
Flt Protected	0.950					0.998
Satd. Flow (prot)	1772	1633	3526	0	0	3631
Flt Permitted	0.950					0.926
Satd. Flow (perm)	1764	1633	3526	0	0	3369
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		28	94			
Link Speed (k/h)	50		50			50
Link Distance (m)	191.6		515.5			65.0
Travel Time (s)	13.8		37.1			4.7
Confl. Peds. (#/hr)	5					
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	0%	0%	0%	10%	0%
Adj. Flow (vph)	130	28	603	177	18	528
Shared Lane Traffic (%)						
Lane Group Flow (vph)	130	28	780	0	0	546
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	3.0		3.0			3.0
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	25	15		15	25	
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	4		2			6
Permitted Phases		4			6	
Detector Phase	4	4	2		6	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	10.0		10.0	10.0
Minimum Split (s)	19.0	19.0	21.0		21.0	21.0
Total Split (s)	24.0	24.0	29.0		29.0	29.0
Total Split (%)	45.3%	45.3%	54.7%		54.7%	54.7%
Maximum Green (s)	19.0	19.0	24.0		24.0	24.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	5.0	5.0	5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						

Lanes, Volumes, Timings  
 105: Lauzon Road & Spitfire Way

Saturday Mid-day Peak Hour  
 2025 Total Future Conditions

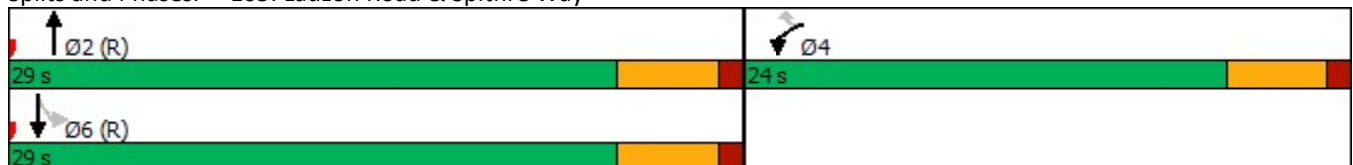


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Vehicle Extension (s)	4.0	4.0	4.0		4.0	4.0
Recall Mode	None	None	C-Max		C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0			
Flash Dont Walk (s)	11.0	11.0	7.0			
Pedestrian Calls (#/hr)	5	5	0			
Act Effct Green (s)	10.9	10.9	35.7			35.7
Actuated g/C Ratio	0.21	0.21	0.67			0.67
v/c Ratio	0.36	0.08	0.32			0.24
Control Delay	19.6	6.7	5.4			5.7
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	19.6	6.7	5.4			5.7
LOS	B	A	A			A
Approach Delay	17.3		5.4			5.7
Approach LOS	B		A			A
Queue Length 50th (m)	11.7	0.0	13.5			10.3
Queue Length 95th (m)	19.4	4.2	33.8			25.9
Internal Link Dist (m)	167.6		491.5			41.0
Turn Bay Length (m)	25.0					
Base Capacity (vph)	635	603	2403			2267
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.20	0.05	0.32			0.24

Intersection Summary

Area Type: Other  
 Cycle Length: 53  
 Actuated Cycle Length: 53  
 Offset: 20 (38%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 40  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.36  
 Intersection Signal Delay: 6.8  
 Intersection LOS: A  
 Intersection Capacity Utilization 41.6%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 105: Lauzon Road & Spitfire Way



Lanes, Volumes, Timings  
105: Lauzon Road & Spitfire Way

AM Peak Hour  
2030 Future Background Conditions



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	113	18	311	103	27	448
Future Volume (vph)	113	18	311	103	27	448
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	25.0	0.0		0.0	0.0	
Storage Lanes	1	1		0	0	
Taper Length (m)	30.0				30.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	1.00		0.99			1.00
Fr <sub>t</sub>		0.850	0.963			
Fl <sub>t</sub> Protected	0.950					0.997
Satd. Flow (prot)	1722	1484	3376	0	0	3527
Fl <sub>t</sub> Permitted	0.950					0.910
Satd. Flow (perm)	1720	1484	3376	0	0	3219
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		23	112			
Link Speed (k/h)	50		50			50
Link Distance (m)	177.3		508.6			95.7
Travel Time (s)	12.8		36.6			6.9
Confl. Peds. (#/hr)	1			2	2	
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles (%)	6%	10%	4%	2%	6%	3%
Adj. Flow (vph)	147	23	404	134	35	582
Shared Lane Traffic (%)						
Lane Group Flow (vph)	147	23	538	0	0	617
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	3.0		3.0			3.0
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	25	15		15	25	
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	4		2			6
Permitted Phases		4			6	
Detector Phase	4	4	2		6	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	10.0		10.0	10.0
Minimum Split (s)	19.0	19.0	21.0		21.0	21.0
Total Split (s)	24.0	24.0	26.0		26.0	26.0
Total Split (%)	48.0%	48.0%	52.0%		52.0%	52.0%
Maximum Green (s)	19.0	19.0	21.0		21.0	21.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	5.0	5.0	5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						

Lanes, Volumes, Timings  
 105: Lauzon Road & Spitfire Way

AM Peak Hour  
 2030 Future Background Conditions



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	C-Max		C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0			
Flash Dont Walk (s)	11.0	11.0	7.0			
Pedestrian Calls (#/hr)	1	1	2			
Act Effct Green (s)	10.7	10.7	32.9			32.9
Actuated g/C Ratio	0.21	0.21	0.66			0.66
v/c Ratio	0.40	0.07	0.24			0.29
Control Delay	19.0	6.5	4.8			6.3
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	19.0	6.5	4.8			6.3
LOS	B	A	A			A
Approach Delay	17.3		4.8			6.3
Approach LOS	B		A			A
Queue Length 50th (m)	12.5	0.0	7.4			11.6
Queue Length 95th (m)	16.4	2.8	16.9			24.7
Internal Link Dist (m)	153.3		484.6			71.7
Turn Bay Length (m)	25.0					
Base Capacity (vph)	654	578	2258			2116
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.22	0.04	0.24			0.29

Intersection Summary

Area Type: Other  
 Cycle Length: 50  
 Actuated Cycle Length: 50  
 Offset: 18 (36%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 40  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.40  
 Intersection Signal Delay: 7.1  
 Intersection LOS: A  
 Intersection Capacity Utilization 44.3%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 105: Lauzon Road & Spitfire Way



Lanes, Volumes, Timings  
105: Lauzon Road & Spitfire Way

PM Peak Hour  
2030 Future Background Conditions



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	153	37	705	179	22	431
Future Volume (vph)	153	37	705	179	22	431
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	25.0	0.0		0.0	0.0	
Storage Lanes	1	1		0	0	
Taper Length (m)	30.0				30.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	1.00					
Frt		0.850	0.970			
Flt Protected	0.950					0.998
Satd. Flow (prot)	1772	1633	3541	0	0	3625
Flt Permitted	0.950					0.900
Satd. Flow (perm)	1764	1633	3541	0	0	3269
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		39	77			
Link Speed (k/h)	50		50			50
Link Distance (m)	213.1		512.7			78.2
Travel Time (s)	15.3		36.9			5.6
Confl. Peds. (#/hr)	5					
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	0%	0%	0%	10%	0%
Adj. Flow (vph)	159	39	734	186	23	449
Shared Lane Traffic (%)						
Lane Group Flow (vph)	159	39	920	0	0	472
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	3.0		3.0			3.0
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	25	15		15	25	
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	4		2			6
Permitted Phases		4			6	
Detector Phase	4	4	2		6	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	10.0		10.0	10.0
Minimum Split (s)	19.0	19.0	21.0		21.0	21.0
Total Split (s)	24.0	24.0	29.0		29.0	29.0
Total Split (%)	45.3%	45.3%	54.7%		54.7%	54.7%
Maximum Green (s)	19.0	19.0	24.0		24.0	24.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	5.0	5.0	5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						

Lanes, Volumes, Timings  
 105: Lauzon Road & Spitfire Way

PM Peak Hour  
 2030 Future Background Conditions



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Vehicle Extension (s)	4.0	4.0	4.0		4.0	4.0
Recall Mode	None	None	C-Max		C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0			
Flash Dont Walk (s)	11.0	11.0	7.0			
Pedestrian Calls (#/hr)	5	5	0			
Act Effct Green (s)	11.4	11.4	35.2			35.2
Actuated g/C Ratio	0.22	0.22	0.66			0.66
v/c Ratio	0.42	0.10	0.39			0.22
Control Delay	20.2	6.1	6.2			5.9
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	20.2	6.1	6.2			5.9
LOS	C	A	A			A
Approach Delay	17.4		6.2			5.9
Approach LOS	B		A			A
Queue Length 50th (m)	14.2	0.0	18.6			9.3
Queue Length 95th (m)	23.0	4.9	42.7			22.4
Internal Link Dist (m)	189.1		488.7			54.2
Turn Bay Length (m)	25.0					
Base Capacity (vph)	635	610	2375			2168
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.25	0.06	0.39			0.22

Intersection Summary

Area Type: Other  
 Cycle Length: 53  
 Actuated Cycle Length: 53  
 Offset: 20 (38%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 40  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.42  
 Intersection Signal Delay: 7.5  
 Intersection LOS: A  
 Intersection Capacity Utilization 45.0%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 105: Lauzon Road & Spitfire Way





Lanes, Volumes, Timings  
 105: Lauzon Road & Spitfire Way

Saturday Mid-day Peak Hour  
 2030 Future Background Conditions



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	165	39	581	192	23	504
Future Volume (vph)	165	39	581	192	23	504
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	25.0	0.0		0.0	0.0	
Storage Lanes	1	1		0	0	
Taper Length (m)	30.0				30.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	1.00					
Frt		0.850	0.963			
Flt Protected	0.950					0.998
Satd. Flow (prot)	1772	1633	3515	0	0	3627
Flt Permitted	0.950					0.910
Satd. Flow (perm)	1764	1633	3515	0	0	3307
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		41	111			
Link Speed (k/h)	50		50			50
Link Distance (m)	191.6		515.5			65.0
Travel Time (s)	13.8		37.1			4.7
Confl. Peds. (#/hr)	5					
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	0%	0%	0%	10%	0%
Adj. Flow (vph)	172	41	605	200	24	525
Shared Lane Traffic (%)						
Lane Group Flow (vph)	172	41	805	0	0	549
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	3.0		3.0			3.0
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	25	15		15	25	
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	4		2			6
Permitted Phases		4			6	
Detector Phase	4	4	2		6	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	10.0		10.0	10.0
Minimum Split (s)	19.0	19.0	21.0		21.0	21.0
Total Split (s)	24.0	24.0	29.0		29.0	29.0
Total Split (%)	45.3%	45.3%	54.7%		54.7%	54.7%
Maximum Green (s)	19.0	19.0	24.0		24.0	24.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	5.0	5.0	5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						

Lanes, Volumes, Timings  
 105: Lauzon Road & Spitfire Way

Saturday Mid-day Peak Hour  
 2030 Future Background Conditions

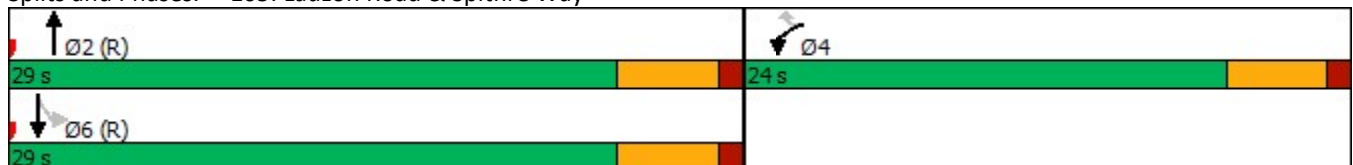


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Vehicle Extension (s)	4.0	4.0	4.0		4.0	4.0
Recall Mode	None	None	C-Max		C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0			
Flash Dont Walk (s)	11.0	11.0	7.0			
Pedestrian Calls (#/hr)	5	5	0			
Act Effct Green (s)	11.7	11.7	34.9			34.9
Actuated g/C Ratio	0.22	0.22	0.66			0.66
v/c Ratio	0.44	0.10	0.34			0.25
Control Delay	20.5	6.0	5.7			6.1
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	20.5	6.0	5.7			6.1
LOS	C	A	A			A
Approach Delay	17.7		5.7			6.1
Approach LOS	B		A			A
Queue Length 50th (m)	15.4	0.0	15.0			11.4
Queue Length 95th (m)	24.7	5.0	34.3			26.3
Internal Link Dist (m)	167.6		491.5			41.0
Turn Bay Length (m)	25.0					
Base Capacity (vph)	635	611	2355			2180
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.27	0.07	0.34			0.25

Intersection Summary

Area Type: Other  
 Cycle Length: 53  
 Actuated Cycle Length: 53  
 Offset: 20 (38%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 40  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.44  
 Intersection Signal Delay: 7.5  
 Intersection LOS: A  
 Intersection Capacity Utilization 48.3%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 105: Lauzon Road & Spitfire Way



Lanes, Volumes, Timings  
 105: Lauzon Road & Spitfire Way

AM Peak Hour  
 2030 Total Future Conditions



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	113	18	324	103	27	490
Future Volume (vph)	113	18	324	103	27	490
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	25.0	0.0		0.0	0.0	
Storage Lanes	1	1		0	0	
Taper Length (m)	30.0				30.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	1.00		0.99			1.00
Frt		0.850	0.964			
Flt Protected	0.950					0.997
Satd. Flow (prot)	1722	1484	3380	0	0	3528
Flt Permitted	0.950					0.912
Satd. Flow (perm)	1720	1484	3380	0	0	3227
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		23	105			
Link Speed (k/h)	50		50			50
Link Distance (m)	177.3		508.6			95.7
Travel Time (s)	12.8		36.6			6.9
Confl. Peds. (#/hr)	1			2	2	
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles (%)	6%	10%	4%	2%	6%	3%
Adj. Flow (vph)	147	23	421	134	35	636
Shared Lane Traffic (%)						
Lane Group Flow (vph)	147	23	555	0	0	671
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	3.0		3.0			3.0
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	25	15		15	25	
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	4		2			6
Permitted Phases		4			6	
Detector Phase	4	4	2		6	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	10.0		10.0	10.0
Minimum Split (s)	19.0	19.0	21.0		21.0	21.0
Total Split (s)	24.0	24.0	26.0		26.0	26.0
Total Split (%)	48.0%	48.0%	52.0%		52.0%	52.0%
Maximum Green (s)	19.0	19.0	21.0		21.0	21.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	5.0	5.0	5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	C-Max		C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0			
Flash Dont Walk (s)	11.0	11.0	7.0			
Pedestrian Calls (#/hr)	1	1	2			
Act Effct Green (s)	10.7	10.7	32.9			32.9
Actuated g/C Ratio	0.21	0.21	0.66			0.66
v/c Ratio	0.40	0.07	0.25			0.32
Control Delay	19.0	6.5	4.9			6.4
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	19.0	6.5	4.9			6.4
LOS	B	A	A			A
Approach Delay	17.3		4.9			6.4
Approach LOS	B		A			A
Queue Length 50th (m)	12.5	0.0	7.9			12.8
Queue Length 95th (m)	16.4	2.8	17.8			27.2
Internal Link Dist (m)	153.3		484.6			71.7
Turn Bay Length (m)	25.0					
Base Capacity (vph)	654	578	2258			2122
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.22	0.04	0.25			0.32

**Intersection Summary**

Area Type: Other  
 Cycle Length: 50  
 Actuated Cycle Length: 50  
 Offset: 18 (36%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 40  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.40  
 Intersection Signal Delay: 7.2  
 Intersection Capacity Utilization 45.8%  
 Analysis Period (min) 15  
 Intersection LOS: A  
 ICU Level of Service A

**Splits and Phases: 105: Lauzon Road & Spitfire Way**



Lanes, Volumes, Timings  
105: Lauzon Road & Spitfire Way

PM Peak Hour  
2030 Total Future Conditions



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	153	37	740	179	22	454
Future Volume (vph)	153	37	740	179	22	454
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	25.0	0.0		0.0	0.0	
Storage Lanes	1	1		0	0	
Taper Length (m)	30.0				30.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	1.00					
Frt		0.850	0.971			
Flt Protected	0.950					0.998
Satd. Flow (prot)	1772	1633	3544	0	0	3626
Flt Permitted	0.950					0.900
Satd. Flow (perm)	1764	1633	3544	0	0	3270
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		39	73			
Link Speed (k/h)	50		50			50
Link Distance (m)	213.1		512.7			78.2
Travel Time (s)	15.3		36.9			5.6
Confl. Peds. (#/hr)	5					
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	0%	0%	0%	10%	0%
Adj. Flow (vph)	159	39	771	186	23	473
Shared Lane Traffic (%)						
Lane Group Flow (vph)	159	39	957	0	0	496
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	3.0		3.0			3.0
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	25	15		15	25	
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	4		2			6
Permitted Phases		4			6	
Detector Phase	4	4	2		6	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	10.0		10.0	10.0
Minimum Split (s)	19.0	19.0	21.0		21.0	21.0
Total Split (s)	24.0	24.0	29.0		29.0	29.0
Total Split (%)	45.3%	45.3%	54.7%		54.7%	54.7%
Maximum Green (s)	19.0	19.0	24.0		24.0	24.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	5.0	5.0	5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						

Lanes, Volumes, Timings  
 105: Lauzon Road & Spitfire Way

PM Peak Hour  
 2030 Total Future Conditions

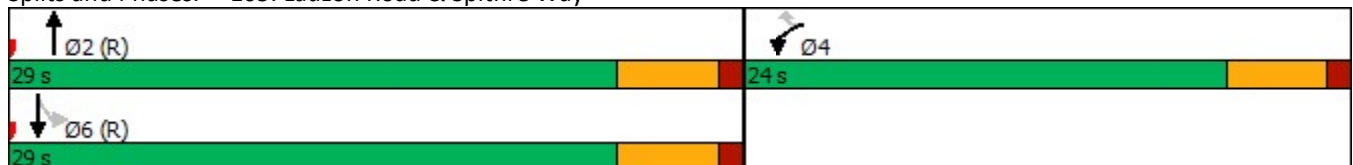


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Vehicle Extension (s)	4.0	4.0	4.0		4.0	4.0
Recall Mode	None	None	C-Max		C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0			
Flash Dont Walk (s)	11.0	11.0	7.0			
Pedestrian Calls (#/hr)	5	5	0			
Act Effct Green (s)	11.4	11.4	35.2			35.2
Actuated g/C Ratio	0.22	0.22	0.66			0.66
v/c Ratio	0.42	0.10	0.40			0.23
Control Delay	20.2	6.1	6.4			5.9
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	20.2	6.1	6.4			5.9
LOS	C	A	A			A
Approach Delay	17.4		6.4			5.9
Approach LOS	B		A			A
Queue Length 50th (m)	14.2	0.0	19.8			9.8
Queue Length 95th (m)	23.0	4.9	45.3			23.6
Internal Link Dist (m)	189.1		488.7			54.2
Turn Bay Length (m)	25.0					
Base Capacity (vph)	635	610	2375			2169
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.25	0.06	0.40			0.23

Intersection Summary

Area Type: Other  
 Cycle Length: 53  
 Actuated Cycle Length: 53  
 Offset: 20 (38%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 40  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.42  
 Intersection Signal Delay: 7.6  
 Intersection LOS: A  
 Intersection Capacity Utilization 45.6%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 105: Lauzon Road & Spitfire Way



Lanes, Volumes, Timings  
 105: Lauzon Road & Spitfire Way

Saturday Mid-day Peak Hour  
 2030 Total Future Conditions



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	165	39	610	192	23	532
Future Volume (vph)	165	39	610	192	23	532
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	25.0	0.0		0.0	0.0	
Storage Lanes	1	1		0	0	
Taper Length (m)	30.0				30.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Ped Bike Factor	1.00					
Fr <sub>t</sub>		0.850	0.964			
Fl <sub>t</sub> Protected	0.950					0.998
Satd. Flow (prot)	1772	1633	3519	0	0	3628
Fl <sub>t</sub> Permitted	0.950					0.911
Satd. Flow (perm)	1764	1633	3519	0	0	3312
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		41	104			
Link Speed (k/h)	50		50			50
Link Distance (m)	191.6		515.5			65.0
Travel Time (s)	13.8		37.1			4.7
Confl. Peds. (#/hr)	5					
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	0%	0%	0%	10%	0%
Adj. Flow (vph)	172	41	635	200	24	554
Shared Lane Traffic (%)						
Lane Group Flow (vph)	172	41	835	0	0	578
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.7		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	3.0		3.0			3.0
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	25	15		15	25	
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	4		2			6
Permitted Phases		4			6	
Detector Phase	4	4	2		6	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	10.0		10.0	10.0
Minimum Split (s)	19.0	19.0	21.0		21.0	21.0
Total Split (s)	24.0	24.0	29.0		29.0	29.0
Total Split (%)	45.3%	45.3%	54.7%		54.7%	54.7%
Maximum Green (s)	19.0	19.0	24.0		24.0	24.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0			0.0
Total Lost Time (s)	5.0	5.0	5.0			5.0
Lead/Lag						
Lead-Lag Optimize?						

Lanes, Volumes, Timings  
 105: Lauzon Road & Spitfire Way

Saturday Mid-day Peak Hour  
 2030 Total Future Conditions



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Vehicle Extension (s)	4.0	4.0	4.0		4.0	4.0
Recall Mode	None	None	C-Max		C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0			
Flash Dont Walk (s)	11.0	11.0	7.0			
Pedestrian Calls (#/hr)	5	5	0			
Act Effct Green (s)	11.7	11.7	34.9			34.9
Actuated g/C Ratio	0.22	0.22	0.66			0.66
v/c Ratio	0.44	0.10	0.35			0.26
Control Delay	20.5	6.0	5.9			6.2
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	20.5	6.0	5.9			6.2
LOS	C	A	A			A
Approach Delay	17.7		5.9			6.2
Approach LOS	B		A			A
Queue Length 50th (m)	15.4	0.0	16.0			12.1
Queue Length 95th (m)	24.7	5.0	36.4			27.8
Internal Link Dist (m)	167.6		491.5			41.0
Turn Bay Length (m)	25.0					
Base Capacity (vph)	635	611	2355			2183
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.27	0.07	0.35			0.26

Intersection Summary

Area Type: Other  
 Cycle Length: 53  
 Actuated Cycle Length: 53  
 Offset: 20 (38%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 40  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.44  
 Intersection Signal Delay: 7.5  
 Intersection LOS: A  
 Intersection Capacity Utilization 49.1%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 105: Lauzon Road & Spitfire Way





# Appendix D

## LOS Definitions

## LEVEL OF SERVICE<sup>1</sup>

Level of Service (LOS) is defined as a qualitative measure describing operational conditions within a traffic stream, and their perception by motorists and/or passengers. This concept was introduced in the 1965 *Highway Capacity Manual* as a criteria for interrupted flow conditions. The 2000 *Highway Capacity Manual* changed the basis for measuring Level of Service at intersections to control delay<sup>2</sup>.

Six Levels of Service are defined with LOS A representing the best operating conditions, and LOS F the worst (briefly described below). It should be noted that there is often significant variability in the amount of delay experienced by individual drivers.

- LOS A:** This Level of Service describes the highest quality of traffic flow and is referred to as free flow. The approach appears open, turning movements are easily made and drivers have freedom of operation. Control delay is less than 10 seconds/vehicle.
- LOS B:** This Level of Service is referred to as a stable flow. Drivers feel somewhat restricted and occasionally may have to wait to complete the minor movement. Control delay is 10-15 seconds/vehicle for unsignalized intersections and 10-20 seconds/vehicle for signalized intersections.
- LOS C:** At this level, the operation is stable. Drivers feel more restricted and may have to wait, with queues developing for short periods. Control delay is 15-25 seconds/vehicle at unsignalized intersections and 20-35 seconds/vehicle at signalized intersections.
- LOS D:** At this level, traffic is approaching unstable flow. The motorist experiences increasing restriction and instability of flow. There are substantial delays to approaching vehicles during short peaks within the peak period, but there are enough gaps to lower demand to permit occasional clearance of developing queues and prevent excessive back-ups. Control delay is 25-35 seconds/vehicle at unsignalized intersections and 35-55 seconds/vehicle at signalized intersections.
- LOS E:** At this level capacity occurs. Long queues of vehicles exist and delays to vehicles may extend. Control delay is 35-50 seconds/vehicle at unsignalized intersections and 55-80 seconds/vehicle at signalized intersections.
- LOS F:** At this Level of Service, the intersection has failed. Capacity of the intersection has been exceeded. Control delay exceeds 50 seconds/vehicle at unsignalized intersections and exceeds 80 seconds/vehicle at signalized intersections.

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<sup>1</sup> Transportation Research Board: *Highway Capacity Manual 1965, 2000*

<sup>2</sup> Control delay is defined as the component of delay that results when a control signal causes a lane group to reduce speed or to stop; it is measured by comparison with the uncontrolled condition.