February 6, 2020 Reference No. 11189480

Mr. Shane Kelly
10194549 Canada
377 Cadillac Avenue South
Oshawa ON L1H 6A1

Dear Mr. Kelly:

Re: Traffic Impact Study for Proposed Development Project
Township of the Leeds and the Thousand Islands, Lansdowne Ontario

1. Introduction

A development project is proposed for Lansdowne, Ontario in the Township of Leeds and the Thousand Islands (Township). The site location is shown on Figure 1, attached. The site is approximately 2.5 km north of the Highway 401. The proposed development is located between Railway Street and County Road 2 (CR2) on both sides of County Road 3 (CR3).

2. Existing Conditions

2.1 Existing Road Network

CR2 is a two-lane arterial road that connects to Gananoque to the west and Brockville to the east. The posted speed limit is 60 km/h within approximately 230m of the intersection with CR3. Elsewhere, the posted speed limit is 80 km/h.

CR3 is a north/south two-lane arterial road. CR3 extends north and south of Lansdowne and connects to Highway 401 approximately 3km south of Lansdowne. The posted speed limit in the urban area is 50 km/h and increases to 80 km/h approximately 320m south of the railway line.

The intersection of CR2/CR3 is a skewed intersection with an approximate 60 degree skew, which does not meet TAC standards. The northbound and southbound lanes are directly opposite each other, which is a safety concern. The north/south lane position could lead to head-on collisions and the headlights of on-coming drivers could reduce visibility for the drivers on the opposite approach. The gas station access is located less than 5m from the intersection on the north approach and is over 30m wide. The access does not meet MTO access guidelines and the location and width of the access is a safety concern.

Railway Street is a two lane local road between Prince Street and CR2 that is parallel to the railway line in our study area. The posted speed is 50 km/h.

King Street (County Road 34) operates as a two-lane arterial road west of Prince Street. East of Prince street, King Street is a westbound one-way street between Prince Street and Centre Street. King Street

continues east of Centre Street as a two-way road that ends in a cul-de-sac approximately 350m further east.

The existing lane arrangements are shown in Figure 2, attached.

2.2 Transit and Active Transportation

There are currently no transit options located in the Lansdowne urban area or the surrounding area.

There are no existing sidewalks in the vicinity of the proposed development nor any cycling facilities. Sidewalks are located along Prince Street, north of the rail line and along King Street, west of Prince Street.

2.3 Traffic Data

A traffic count was conducted at the following intersections on October 23, 2019:

- CR2/CR3 (Prince Street and Reynolds Road)
- CR34 (King Street)/CR3 (Prince Street)
- CR3 (Prince Street)/Railway Street.

The traffic count data is provided in Appendix A. The peak hours were identified as:

- 8:30 AM – 9:30 AM
- 4:30 PM – 5:30 PM

The turning movement volumes for existing conditions are shown in Figure 3, attached nad the detailed count sheets are provide in Appendix

2.4 Traffic Operations

The study intersections were analysed using the traffic engineering software, Synchro Version 10 and the methodologies published in the Highway Capacity Manual 6th Edition (HCM). The level of service (LOS) is used to measure how well an intersection operates. LOS is defined in terms of average control delay per vehicle according to HCM criteria. LOS are expressed in a range from "A" through "F," with "A" being the highest LOS, and "F" representing the lowest LOS. Table 2-1 presents the thresholds for LOS "A" through "F" for unsignalised intersections.

Table 2-1 Level of Service Criteria

Level of Service	Unsignalised
	Delay (seconds)
A	< 10
B	10 to 15
C	15 to 25

Level of Service	Unsignalised
	Delay (seconds)
D	25 to 35
E	35 to 50
F	> 50

Due to the unusual configuration of the intersection at King Street and Prince Street with the stop control on two of the four perpendicular approaches, the intersection operations could not be analysed using HCM 6th Edition in Synchro 10. Instead, all-way stop control was analysed at this intersection because it best represents the existing situation and provides a worst case scenario in terms of delay.

The results of the traffic operations analysis for the existing intersections are provided Table 2-2. Detailed Synchro analysis output reports are provided in Appendix B.

Table 2-2 Traffic operations analysis results – Existing conditions (2019)

Intersection Approach	Control Type	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
CR2/CR3 (Prince Street and Reynolds Road)					
Eastbound	Free	3.0	-	3.8	-
Westbound	Free	2.3	-	1.6	-
Northbound	Stop	10.7	B	12.3	B
Southbound	Stop	10.4	B	11.1	B
Railway Street / Prince Street					
Westbound	Stop	9.2	A	9.8	A
Northbound	Free	0	-	0	-
Southbound	Free	1.0	-	1.6	-
Prince Street / King Street					
Eastbound	Stop	7.5	A	8.3	A
Northbound	Stop	7.9	A	7.7	A
Southbound	Stop	7.5	A	7.6	A

All intersection approaches operate with a LOS ‘A’ or LOS ‘B’ in the AM and PM peak hours.

3. Future Conditions

3.1 Proposed Development

The site plans for the east and west sections of the development are shown in Figure 4 and Figure 5, attached. It is expected that construction will begin in 2022 with full buildout expected to occur by 2032. The proposed development will contain the following land uses:

- 147 single family homes

- 2 mid-rise apartment buildings (110 units)
- 131 room hotel
- 110 unit retirement/nursing home
- 100,000 sf. recreation centre with small restaurant or concessions
- 50,000 sf indoor go-kart track with arcade and bowling facilities
- 176,000 sf (approximate) general industrial park
- 50,000 sf (approximate) retail plaza

On the east side of Prince Street, there will be two new access roads leading to the subdivision and mid-rise apartments with one driveway access to the retail plaza. One of the access roads to the east of Prince Street will be opposite the new access road to the development on the west side of Prince Street, thus forming a new four-way intersection. Another residential subdivision is proposed with direct access to Railway Street and a new hotel and retirement home is planned with an access driveway to CR2. The four new stop-controlled intersections for the development are shown in Figure 6, attached.

Pedestrian facilities are proposed as part of the development along the new streets and on the east side of Prince Street adjacent to the development. A new pedestrian link from the hotel through the residential subdivision will connect with Prince Street.

3.2 Trip Generation

The trips associated with the new development were estimated based on trip generation rates from the Land Use Codes (LUC) shown in **Error! Reference source not found.** from the Institute of Transportation Engineers' (ITE) Trip Generation Manual, 10th Edition. The land use code related to the Specialty Retail Centre is available from the ITE Trip Generation Manual, 9th Edition and previous editions. There is no appropriate land use code in the ITE Manual for a municipal recreation centre with two ice pads and two soccer fields. We acquired recent data (2017) from a similar sized municipal recreation complex in Sudbury.

Table 3-1-1 Land Use Codes for Development Site

Development Component	ITE Land Use	
	LUC	Description
Detached Houses	210	Single-Family Detached Housing | Includes all single-family detached homes on individual lots. A typical site is a suburban subdivision.
Multi-Unit Dwellings	221	Multifamily Housing (Mid-Rise) | Includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have between three and 10 floors.
Hotel	310	Hotel | A place of lodging that provides sleeping accommodations and supporting facilities such as restaurants, cocktail lounges, meeting and

Development Component	ITE Land Use	
	LUC	Description
		banquet rooms or convention facilities, limited recreational facilities (pool, fitness room), and/or other retail and service shops.
Retirement Home	620	Nursing Home | A nursing home is any facility whose primary function is to provide care for persons who are unable to care for themselves. Examples of such facilities include rest homes and chronic care and convalescent homes. Skilled nurses and nursing aides are present 24 hours a day at these sites. Nursing homes are occupied by residents who do little or no driving; traffic is primarily generated by employees, visitors, and deliveries.
Recreation Centre	Count Data	Count data acquired from the Countryside Sports Complex, a dual ice pad arena in Sudbury with a snack shop and pro shop.
Go-Kart Track	435	Multi-purpose Recreation Facility | Contains two or more of the following land uses combined at one site: miniature golf, batting cages, video arcade, bumper boats, go-carts, and golf driving range. Refreshment areas may also be provided.
Industrial Park	130	Industrial Park | Contains a number of industrial or related facilities. It is characterized by a mix of manufacturing, service, and warehouse facilities with a wide variation in the proportion of each type of use from one location to another. Many industrial parks contain highly diversified facilities—some with a large number of small businesses and others with one or two dominant industries.
Commercial	826	Specialty Retail Center | Small strip shopping centers containing a variety of retail shops that typically specialize in apparel, hard goods, serves such as real estate, investment, dance studios, florists, and small restaurants.

The trips generated by the site were calculated for the AM and PM peak hours and the results are presented in **Error! Reference source not found.** and **Error! Reference source not found.**.

Table 3-2 Peak Hour (AM) Trip Generation

ITE Land Use			AM					
Building	Variable	Quantity	Method	Enter	Exit	Total	Enter	Exit
Detached Houses	Unit	31	T=0.71(X)+4.8	25%	75%	27	7	20
		116				87	22	65
Multi-Unit Dwellings	Unit	110	Ln(T) = 0.98 Ln(X) - 0.98	26%	74%	38	10	28
Hotel	Room	131	T=0.50(X) - 5.34	59%	41%	60	35	25
Retirement Home	Bed	110	Weighted Average Rate (0.17)	72%	28%	19	13	5
Recreation Centre	# Ice pads	2	-	66%	34%	15	10	5
Go-Kart Track	1000 sf GFA	50	Not open in AM	0	0	0	0	0

ITE Land Use			AM					
Building	Variable	Quantity	Method	Enter	Exit	Total	Enter	Exit
Industrial Park	1000 sf GFA	176	Weighted Average Rate (0.40)	81%	19%	70	57	13
Retail Plaza	1000 sf GFA	50	Weighted Average Rate (0.996)	62%	38%	50	31	19
Total						366	185	181

Table 3-3 Peak Hour (PM) Trip Generation

ITE Land Use			PM					
Building	Variable	Quantity	Method	Enter	Exit	Total	Enter	Exit
Detached Houses	Unit	31	T=0.71(X)+4.8	25%	75%	33	21	12
		116				117	74	43
Multi-Unit Dwellings	Unit	110	Ln(T) = 0.96 Ln(X) - 0.63	61%	39%	49	30	19
Hotel	Room	131	T=0.75(X) - 26.02	51%	49%	72	37	35
Retirement Home	Bed	110	Weighted Average Rate (0.22)	33%	67%	24	8	16
Recreation Centre	# Ice pads	2	-	38%	62%	65	25	40
Go-Kart Track	1000 sf GFA	50	Weighted Average Rate (3.58)	55%	45%	179	98	81
Industrial Park	1000 sf GFA	176	Weighted Average Rate (0.40)	21%	79%	70	15	56
Retail Plaza	1000 sf GFA	50	Weighted Average Rate (2.71)	48%	52%	136	65	70
Total						745	372	373

The development will generate a total of 366 trips in the AM peak hour and 745 trips in the PM peak hour.

3.3 Trip Distribution and Assignment

Vehicular trips to and from the site were added to the road network according to the distribution shown in Figure 7, attached. In general, the trips were distributed according to the existing turning volumes observed. Arrival trips were generally assumed to have the reverse travel pattern from departure trips.

3.4 Growth

Background traffic growth is related to residential and commercial growth in the Township and is non-site related traffic. For this study, the background traffic growth rate is based on the Average Daily Traffic (ADT) volumes between 2002 and 2018 for Prince Street between Railway Street and CR2 provided by United Counties of Leeds and Grenville (County) and shown in Table 3-4. A compounded growth rate of

1.2 percent per year was used to estimate the background traffic growth. The background traffic volumes for 2032 are shown in Figure 8, attached.

Table 3-4 Average Daily Traffic for Prince Street, Lansdowne

Year	Average Daily Traffic (ADT)
2002	3170
2005	3120
2011	3260
2016	3200
2018	3333

4. Traffic Operations Analysis

We analysed the background traffic conditions and the total traffic conditions for the AM and PM peak hours for the anticipated full build-out year of 2032. The results of the capacity analysis are shown in Table 4-1 and in **Error! Reference source not found.**. The detailed analysis reports are included in Attachment A.

Table 4-1 Traffic operations analysis results – Background traffic (2032)

Intersection Approach	Control Type	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
CR2/CR3 (Prince Street and Reynolds Road)					
Eastbound	Free	3.1	-	3.8	-
Westbound	Free	2.3	-	1.7	-
Northbound	Stop	11.2	B	13.4	B
Southbound	Stop	10.8	B	11.7	B
Railway Street/Prince Street					
Westbound	Stop	9.4	A	10.2	B
Northbound	Free	0	-	0	-
Southbound	Free	1.0	-	1.6	-
Prince Street/King Street					
Eastbound	Stop	7.7	A	8.0	A
Northbound	Stop	8.1	A	8.6	A
Southbound	Stop	7.7	A	7.8	A

All intersection approaches are expected to operate with a LOS ‘A’ or LOS ‘B’ in the AM and PM peak hours.

Table 4-2 Traffic operations analysis results – Total traffic (2032)

Intersection Approach	Control Type	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
CR2/CR3 (Prince Street and Reynolds Road)					
Eastbound	Free	4.4	-	5.5	-
Westbound	Free	4.0	-	4.0	-
Northbound	Stop	15.0	C	147.4	F
Southbound	Stop	15.1	C	113.1	F
Railway Street/Prince Street					
Westbound	Stop	9.9	A	11.2	B
Northbound	Free	0	-	0	-
Southbound	Free	0.9	-	1.3	-
Prince Street/King Street					
Eastbound	Stop	7.8	A	8.3	A
Northbound	Stop	8.3	A	9.2	A
Southbound	Stop	7.9	A	8.4	A
Dev Access 4/Dev Access 1/Prince Street					
Eastbound	Stop	9.9	A	12.3	B
Westbound	Stop	12.3	B	20.9	C
Northbound	Free	2.2	-	2.5	-
Southbound	Free	0.1	-	0.3	-
Development Access 2/Prince Street					
Westbound	Stop	12.0	B	17.7	C
Northbound	Free	0	-	0	-
Southbound	Free	0.2	-	0.3	-
CR2/Dev Access 3					
Eastbound	Free	4.1	-	2.6	-
Westbound	Free	0	-	0	-
Southbound	Stop	8.7	A	8.8	A

In the AM peak hour, all intersections are expected to operate with an acceptable LOS. In the PM peak hour, the intersections also operate well except for the CR2/CR3 (Prince Street and Reynolds Road) intersection where the southbound and northbound approaches have a LOS ‘F’.

It is suggested that the County provide geometric improvements to the intersection to meet the TAC standards. These improvements should address the skewed approaches on CR2 and the opposite facing approaches on CR3. Until the geometric improvements are built, the intersection should operate as an all-way stop despite the fact that the intersection does not meet the all-way stop minimum volume warrant. The required total vehicle volume of 500 vehicles on all intersection approaches is likely to be met in the peak hour periods but not for eight hours of a typical day.

The results of the capacity analysis for the all-way stop controlled intersection are shown in Table 4-3. The LOS is acceptable for all approaches with an improvement from a LOS 'F' to a LOS 'C' for the northbound and southbound approaches.

Table 4-3 Traffic operations analysis results with all-way stop – Total traffic (2032)

Intersection Approach	Control Type	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
CR2/CR3 (Prince Street and Reynolds Road)					
Eastbound	Stop	9.4	A	14.7	B
Westbound	Stop	9.1	A	12.2	B
Northbound	Stop	9.4	A	17.7	C
Southbound	Stop	9.8	A	18.9	C

5. Conclusions

Based on the results of the intersection capacity analyses for the build-out year of 2032, it was determined most intersections within in the study area can adequately accommodate the site traffic in the AM and PM peak hours. At the CR2/CR3 (Prince Street and Reynolds Road) there are significant delays for the northbound and southbound approaches.

It is recommended that the County provide geometric improvements to the intersection to meet the TAC standards. These improvements should address the skewed approaches on CR2 and the opposite facing approaches on CR3. Until the geometric improvements are built, the intersection should operate as an all-way stop.

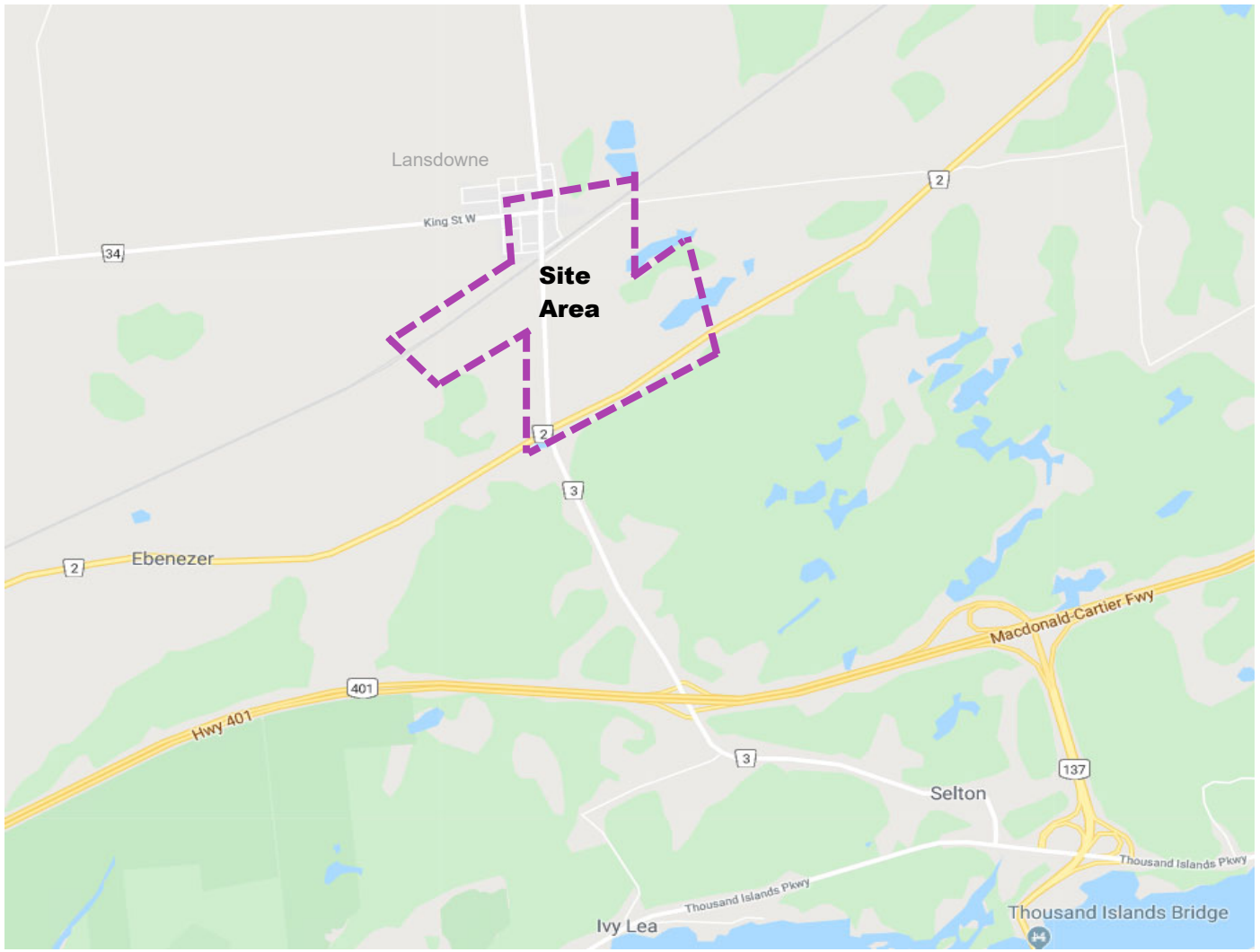
Should you have any questions on the above, please do not hesitate to contact us.

Sincerely,

GHD

Vanessa Skelton, P. Eng.

Figures



Township of the Leeds and the Thousand Islands
Lansdowne Development Traffic Impact Study

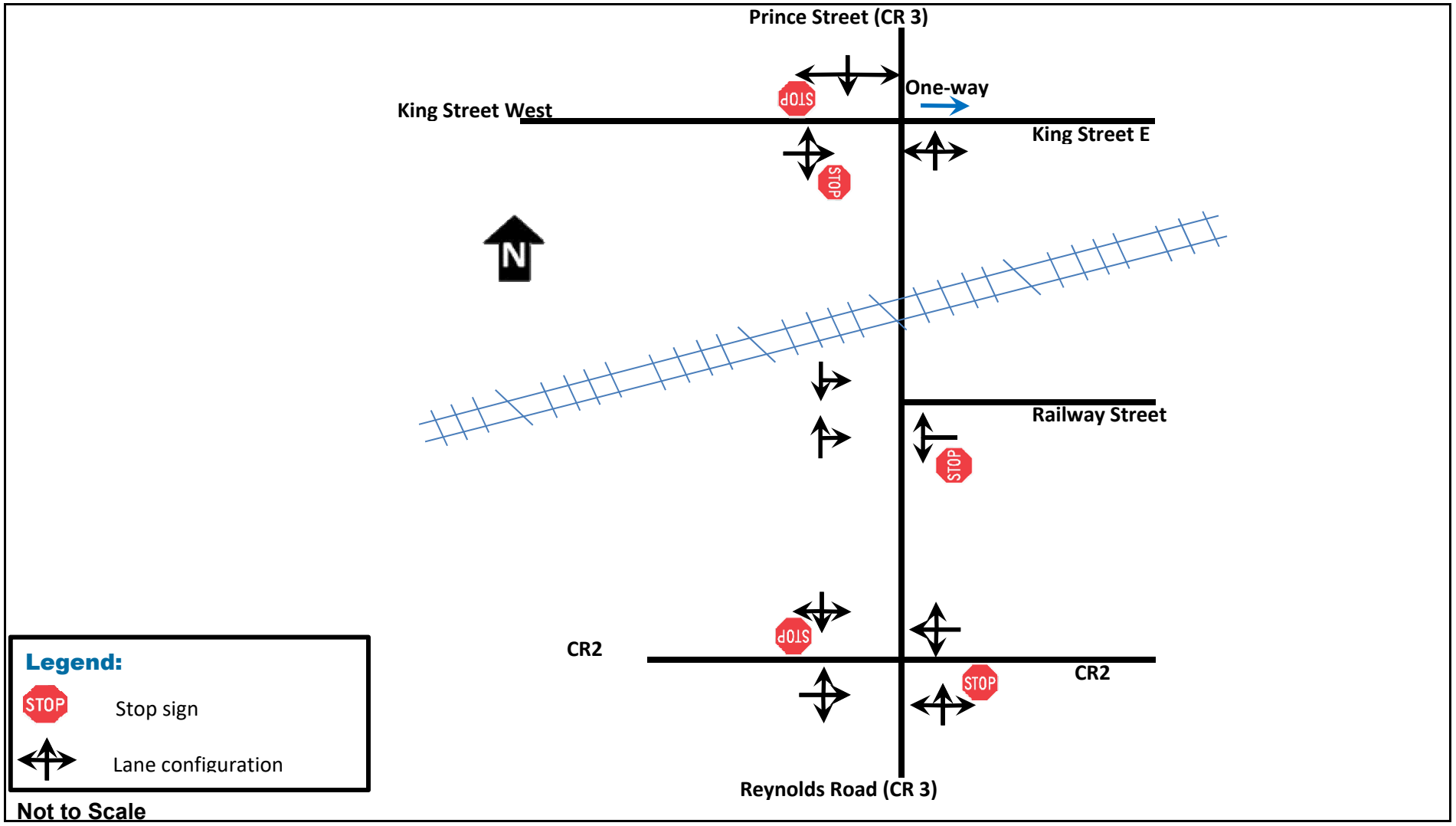
11189480

January 2020

Proposed Study Area (source: Google Earth, 2019)

Source: Map data ©2019 Google

FIGURE 1



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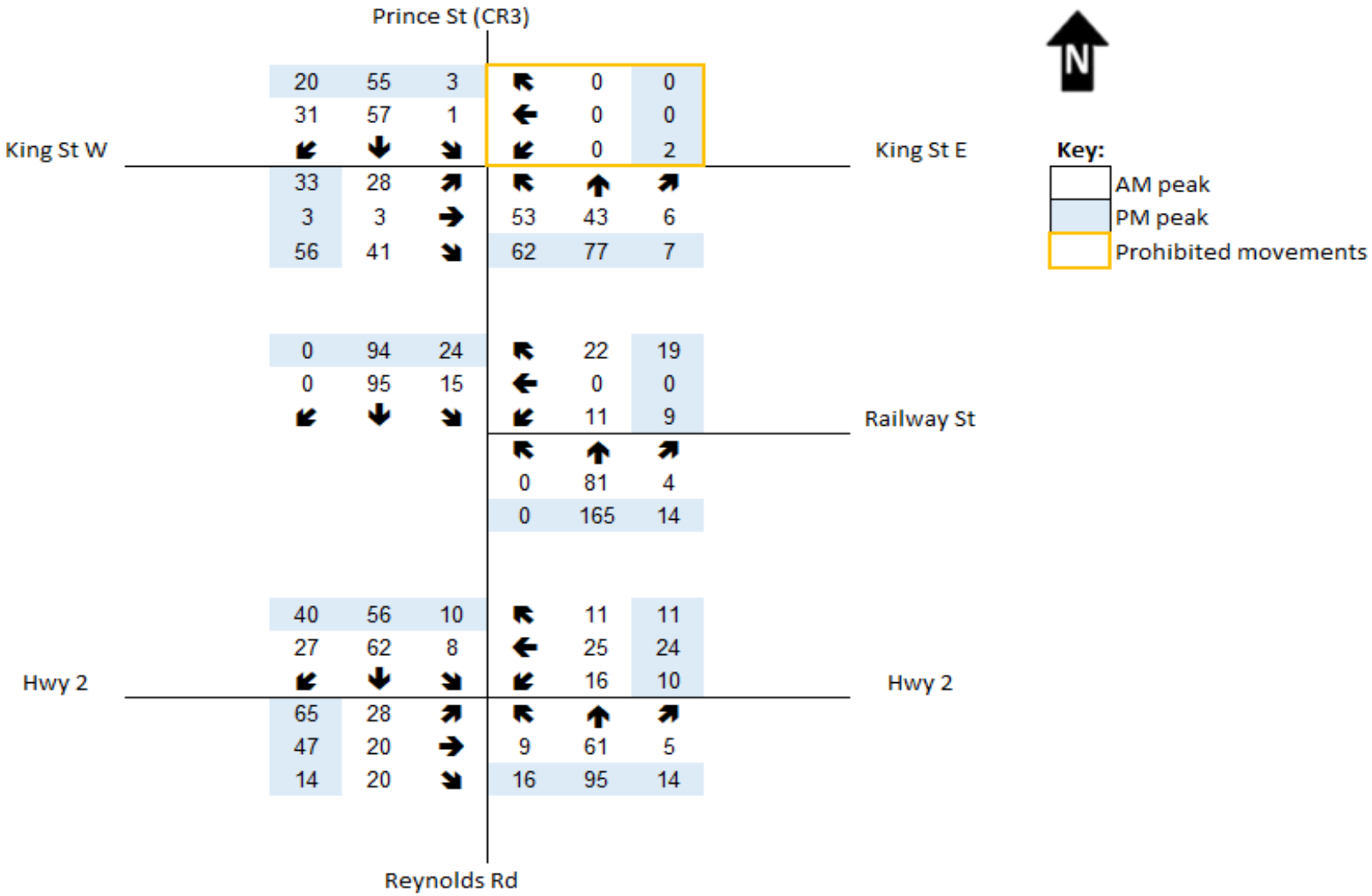
Lansdowne Development Traffic Impact Study

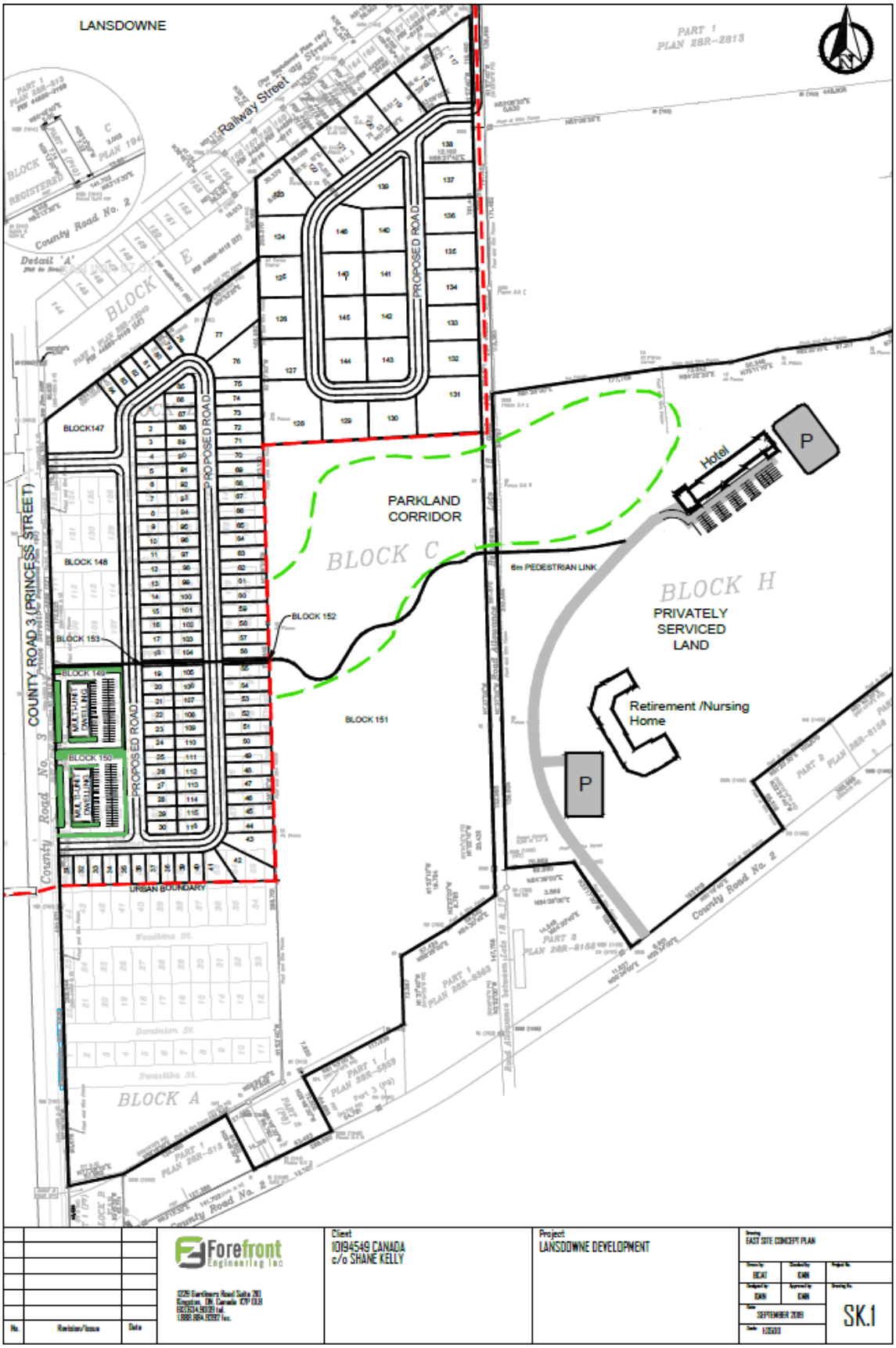
11189480

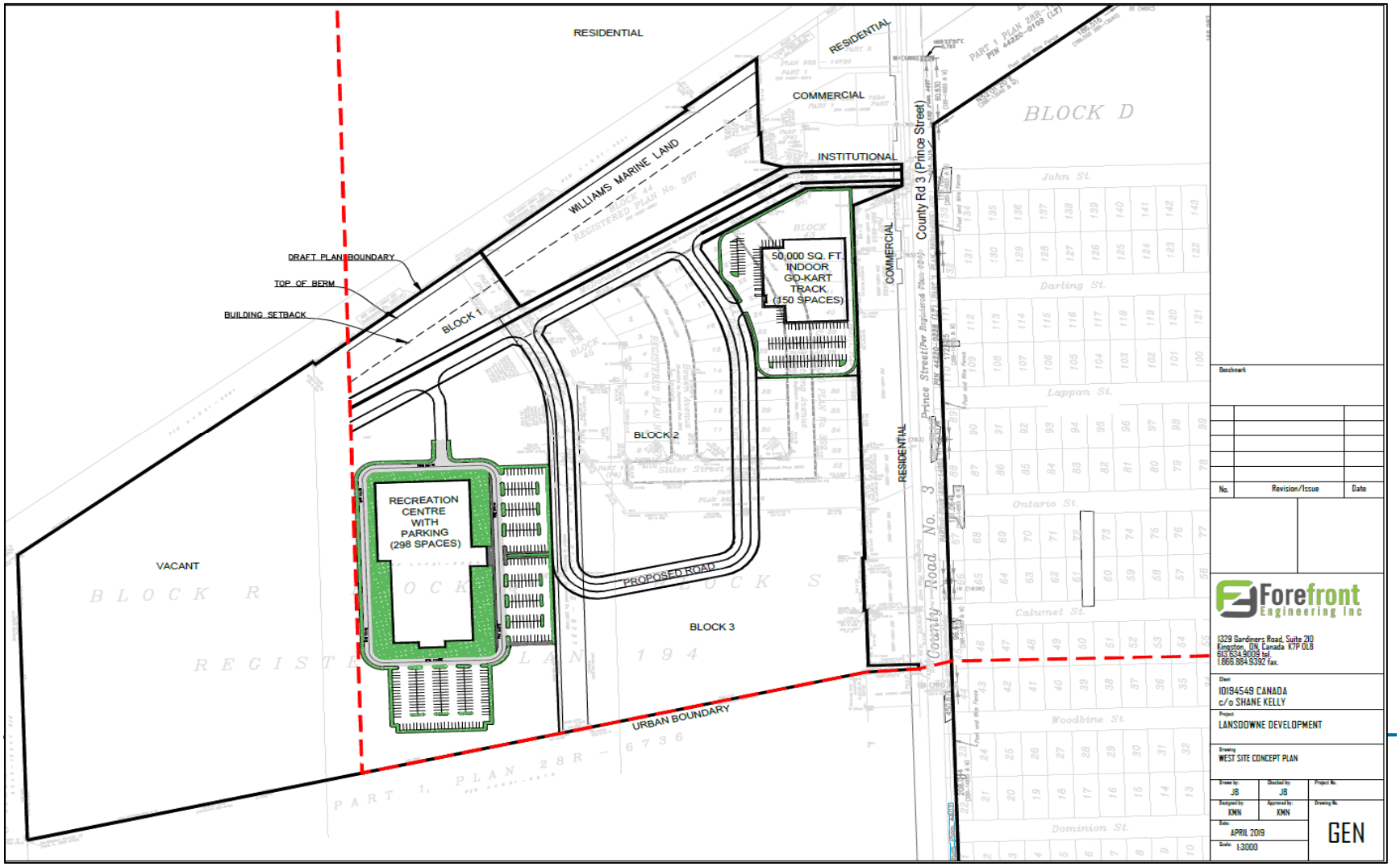
January 2020

2019 EXISTING ROAD NETWORK LAYOUT

FIGURE 2

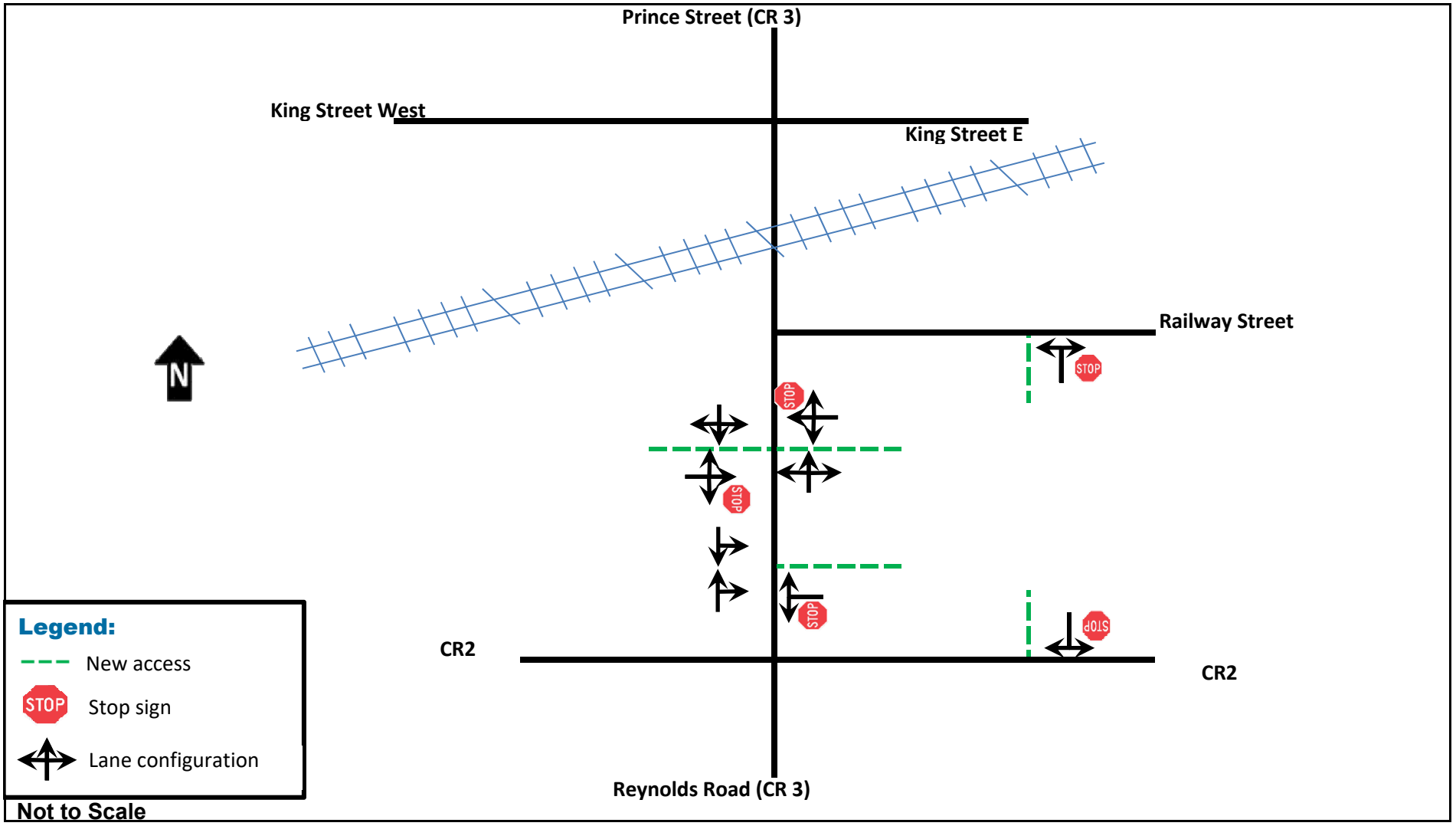

Prince St (CR3)
King St W
King St E
Railway St
Hwy 2
Hwy 2
Reynolds Rd
N
Key:
AM peak
PM peak
Prohibited movements
20 55 3 0 0
31 57 1 0 0
0 2
33 28
3 3 53 43 6
56 41 62 77 7
0 94 24 22 19
0 95 15 0 0
11 9
0 81 4
0 165 14
40 56 10 11 11
27 62 8 25 24
16 10
65 28
47 20 9 61 5
14 20 16 95 14


LANSDOWNE
Railway Street
PROPOSED ROAD
BLOCK147
BLOCK 148
BLOCK 153
BLOCK 149
BLOCK 150
BLOCK 152
BLOCK 151
COUNTY ROAD 3 (PRINCESS STREET)
County Road No. 3
URBAN BOUNDARY
PARKLAND CORRIDOR
BLOCK C
BLOCK A
BLOCK H
PRIVATELY SERVICED LAND
6m PEDESTRIAN LINK
Hotel
P
Retirement /Nursing Home
County Road No. 2
PART 1 PLAN 28R-2813
Forefront Engineering Inc
Client
10194549 CANADA
c/o SHANE KELLY
Project
LANSDOWNE DEVELOPMENT
EAST SITE CONCEPT PLAN
SEPTEMBER 2019
SK.1



WEST SITE CONCEPT PLAN

FIGURE 5



Township of the Leeds and the Thousand Islands
Lansdowne Development Traffic Impact Study

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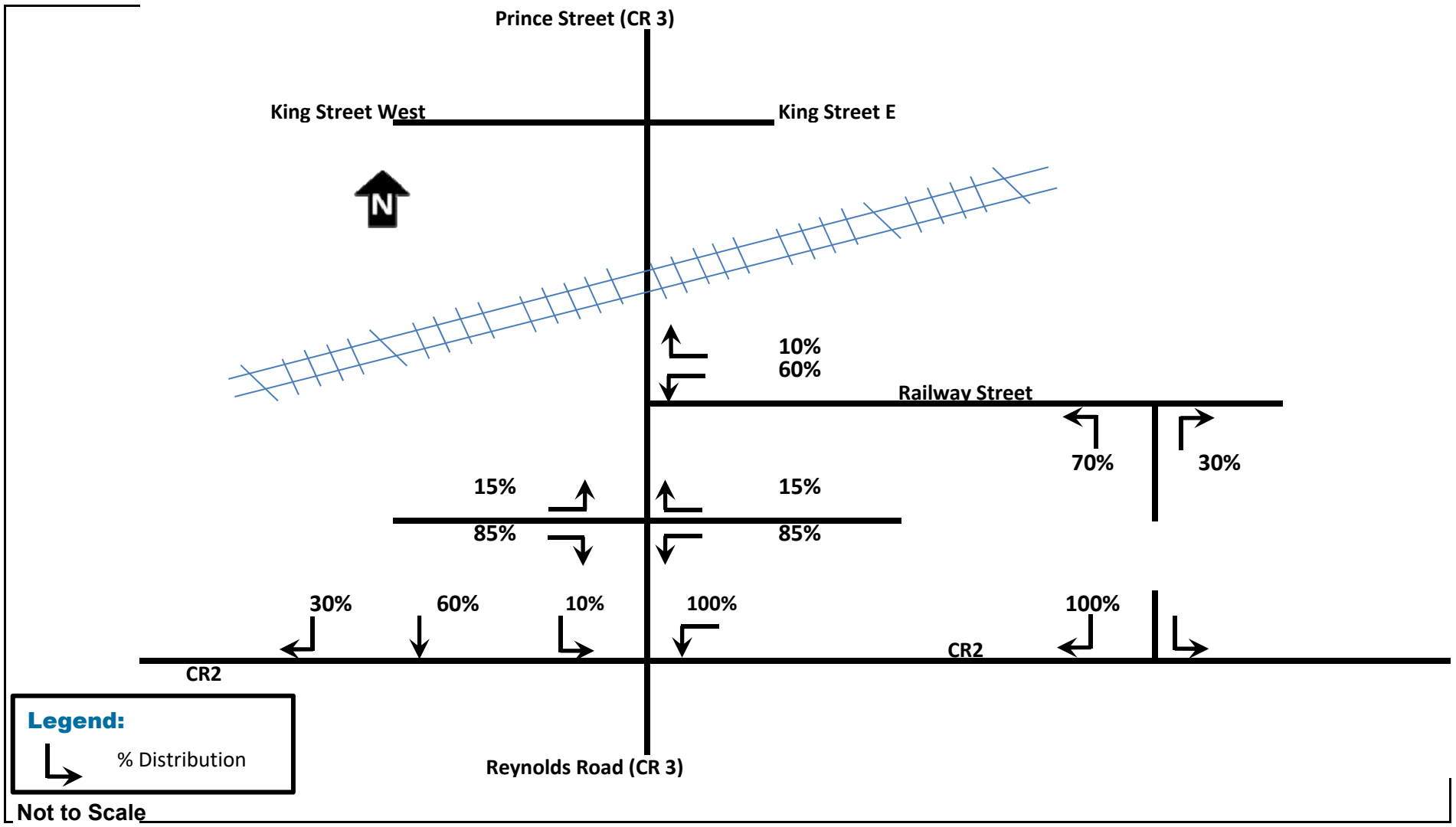
January 2020

NEW INTERSECTIONS

FIGURE 6



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Lansdowne Development Traffic Impact Study

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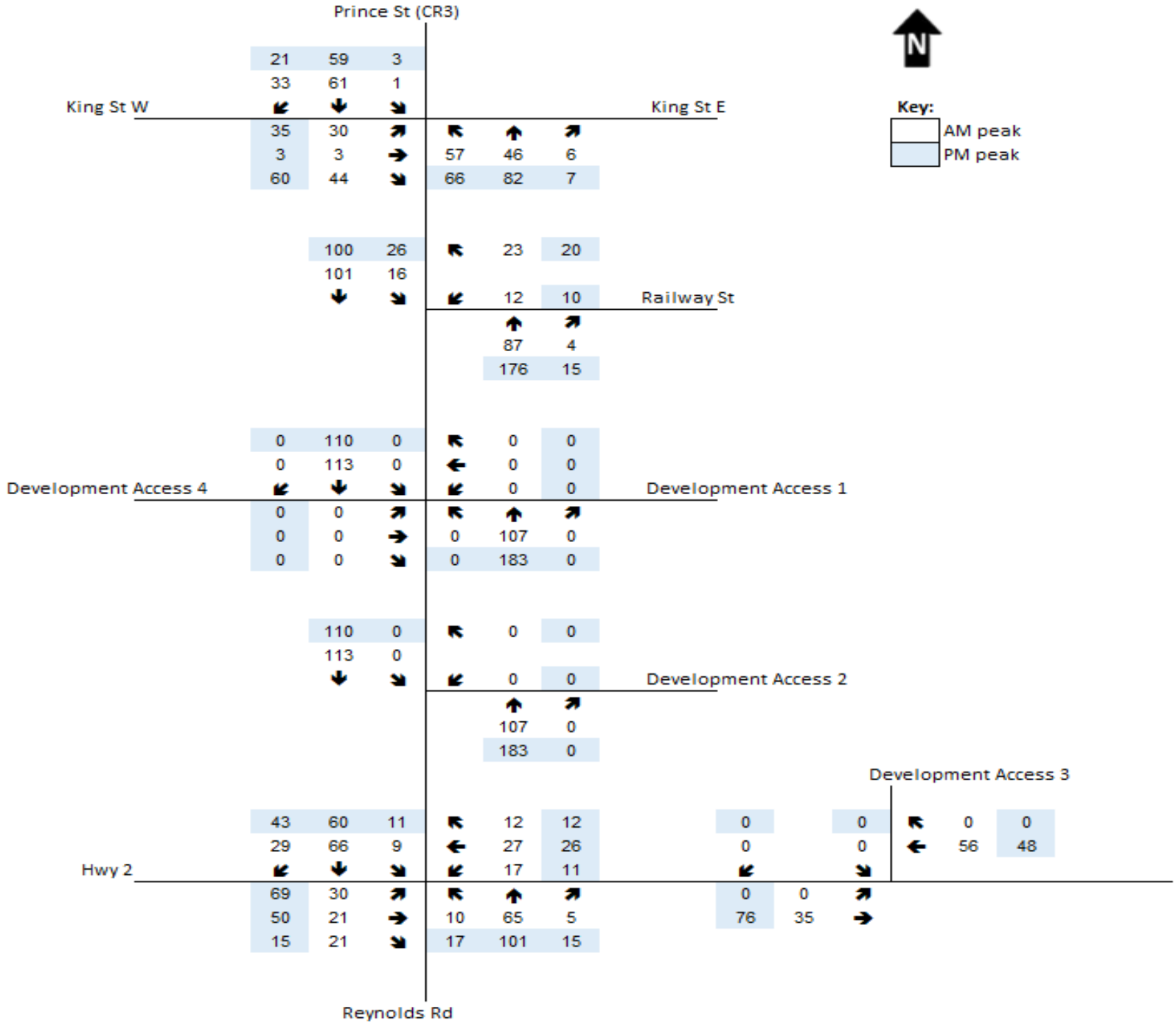
January 2020

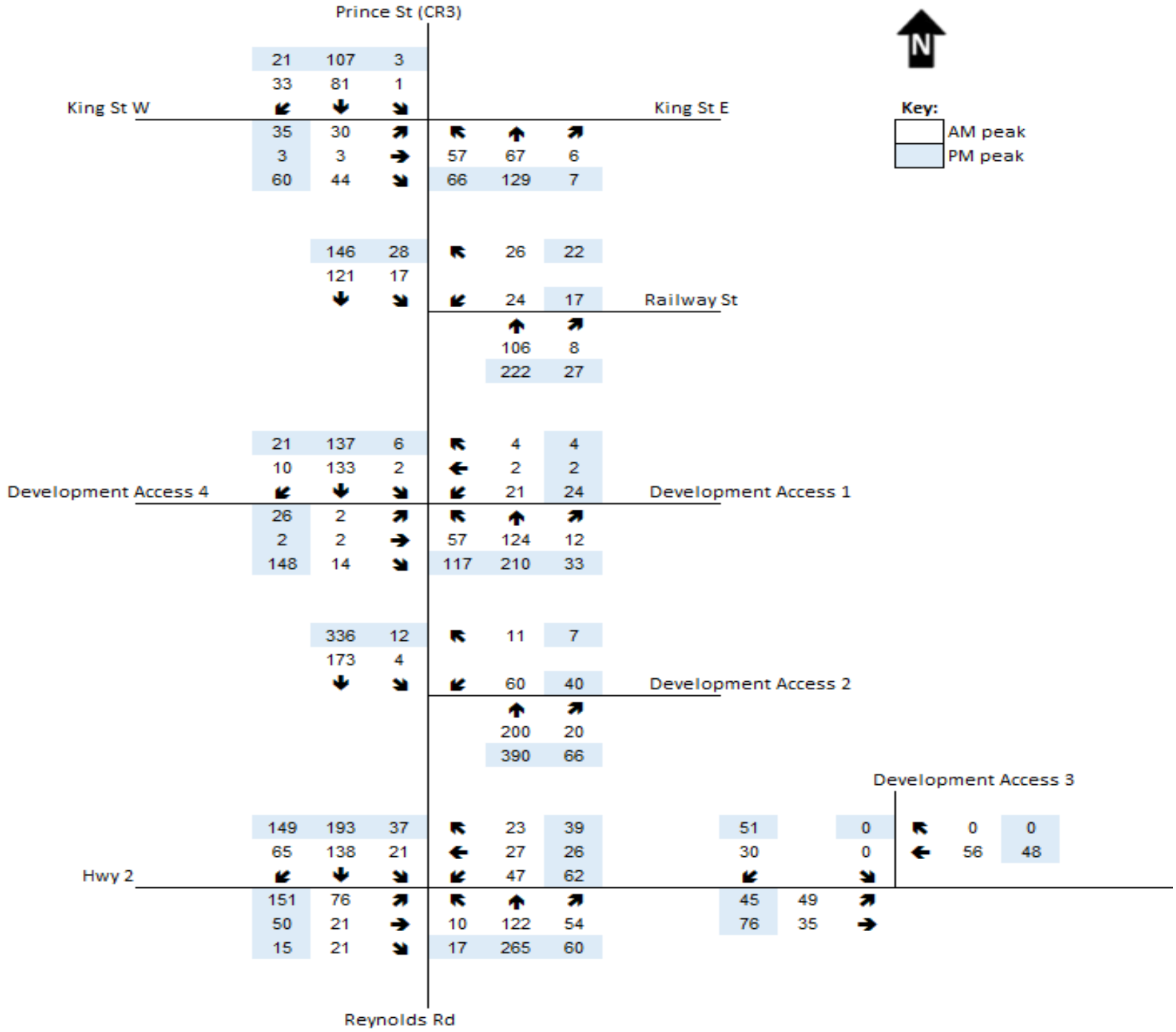
DEPARTURE TRIP DISTRIBUTION

FIGURE 7



2032 BACKGROUND TRAFFIC VOLUMES

FIGURE 8



2032 TOTAL TRAFFIC VOLUMES

FIGURE 9

Appendices

Appendix A
Traffic Count Data

ACCURATE TRUSTED TRAFFIC DATA

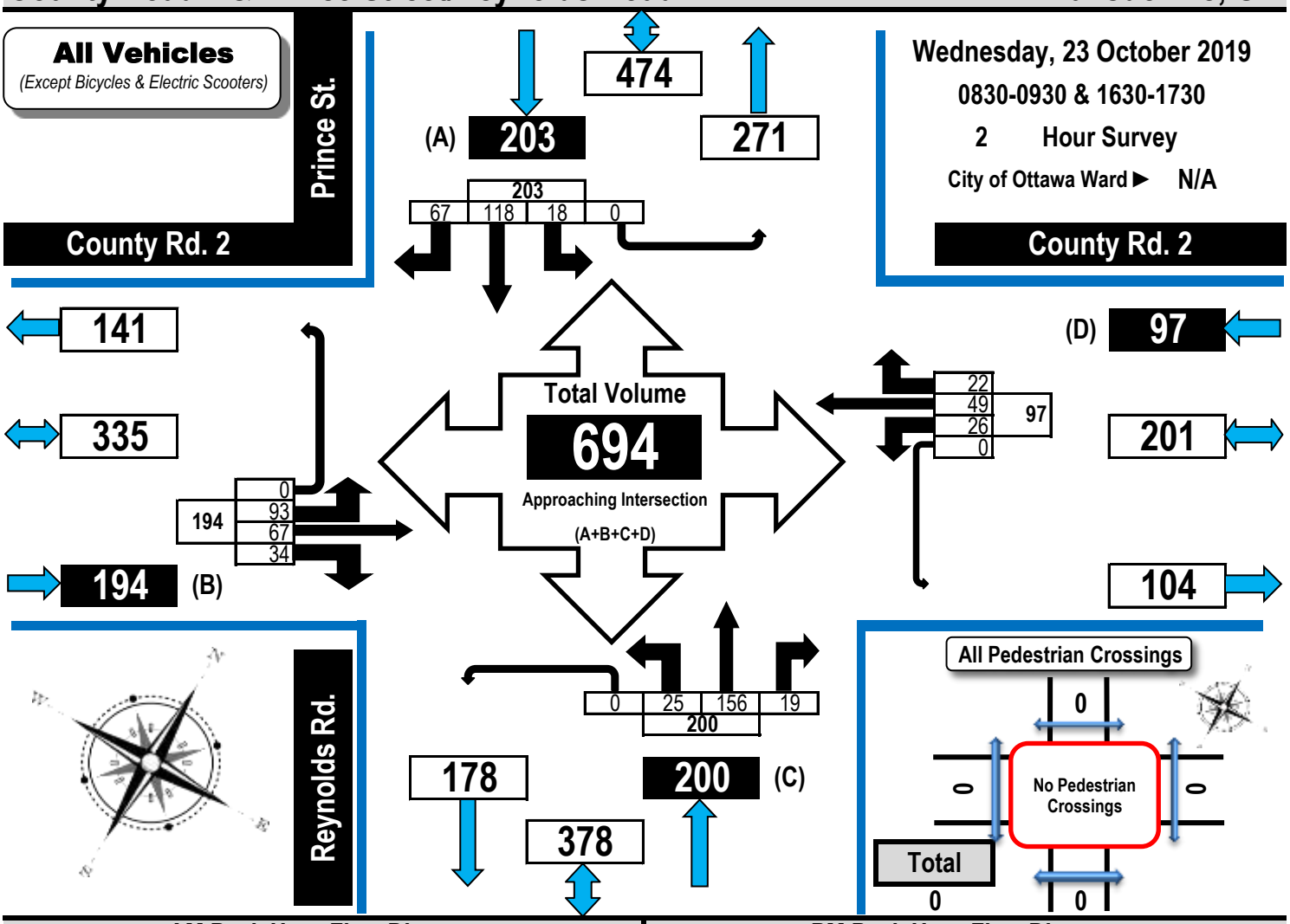
Turning Movement Count
Summary, AM and PM Peak Hour Flow Diagrams

Automobiles, Taxis, Light Trucks, Vans, SUV's, Motorcycles, Heavy Trucks, Buses, and School Buses

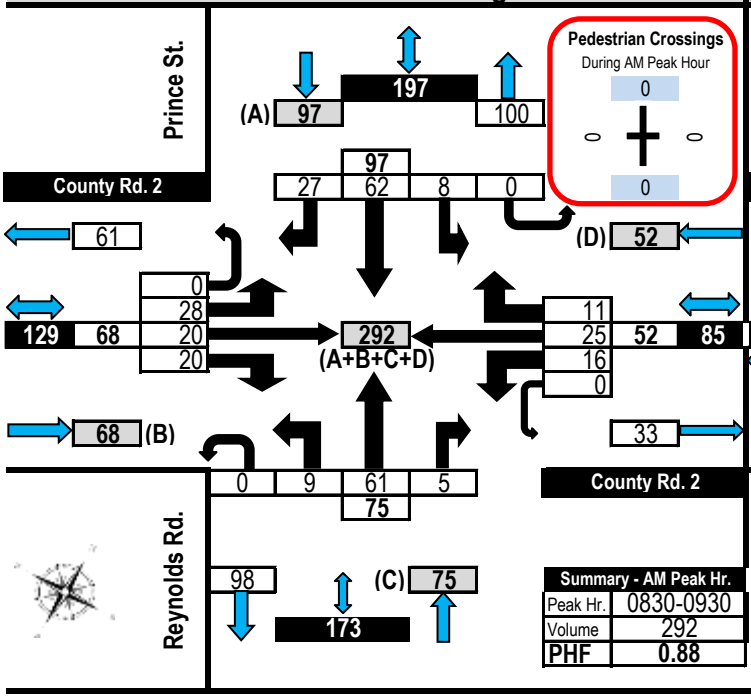
County Road 2 & Prince Street/Reynolds Road — Lansdowne, ON

All Vehicles
(Except Bicycles & Electric Scooters)

Wednesday, 23 October 2019
0830-0930 & 1630-1730
2 Hour Survey
City of Ottawa Ward ► N/A

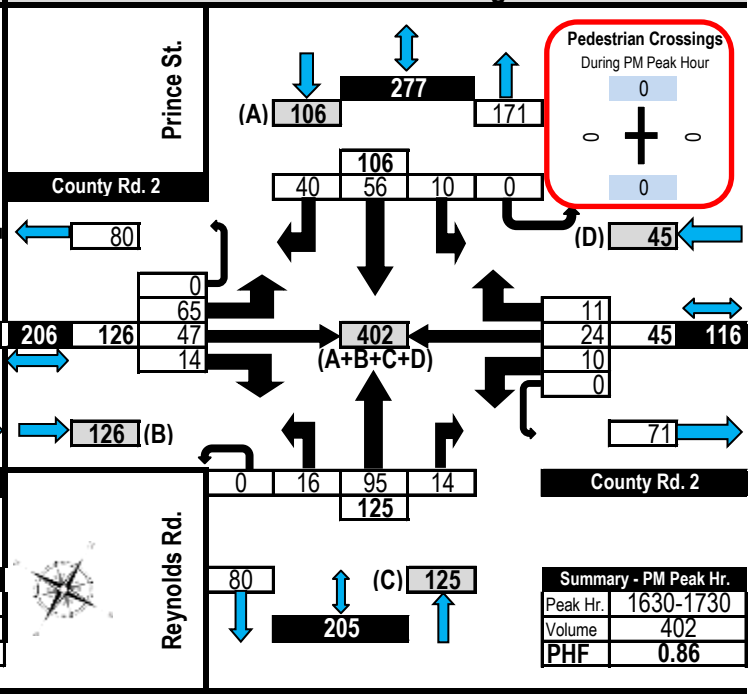


AM Peak Hour Flow Diagram



Summary - AM Peak Hr.	
Peak Hr.	0830-0930
Volume	292
PHF	0.88

PM Peak Hour Flow Diagram



Summary - PM Peak Hr.	
Peak Hr.	1630-1730
Volume	402
PHF	0.86

ACCURATE TRUSTED TRAFFIC DATA

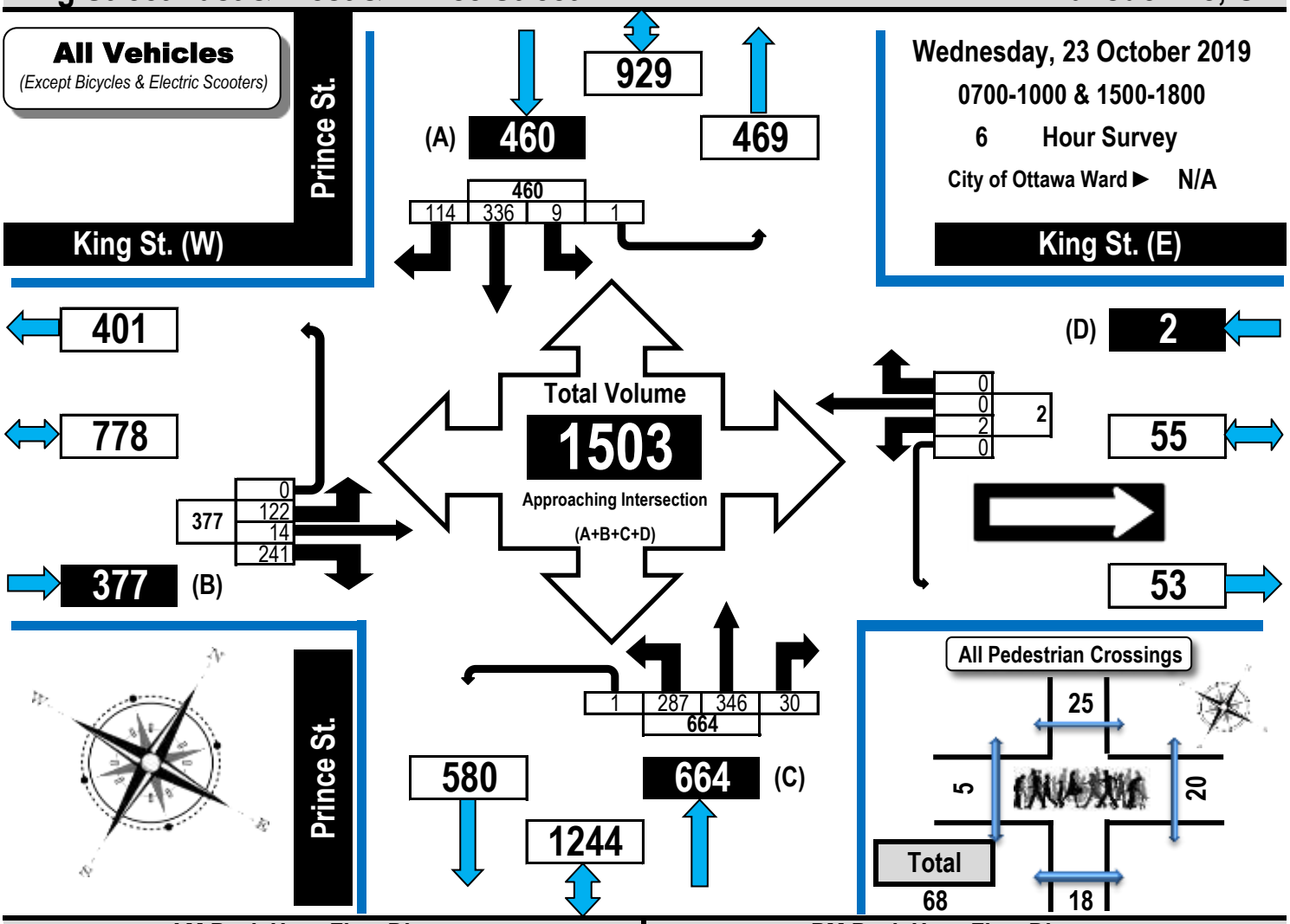
Turning Movement Count
Summary, AM and PM Peak Hour Flow Diagrams

Automobiles, Taxis, Light Trucks, Vans, SUV's, Motorcycles, Heavy Trucks, Buses, and School Buses

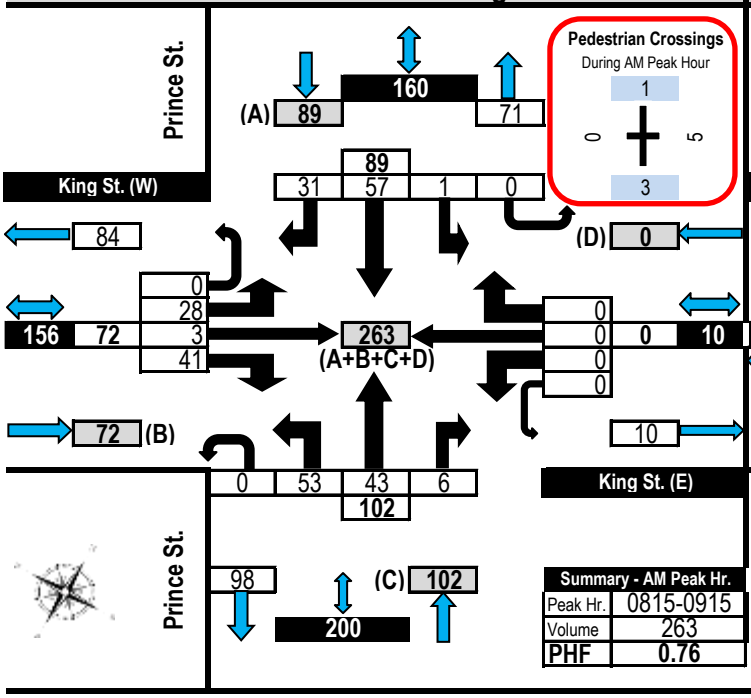
King Street East & West & Prince Street — Lansdowne, ON

All Vehicles
(Except Bicycles & Electric Scooters)

Wednesday, 23 October 2019
0700-1000 & 1500-1800
6 Hour Survey
City of Ottawa Ward ► N/A

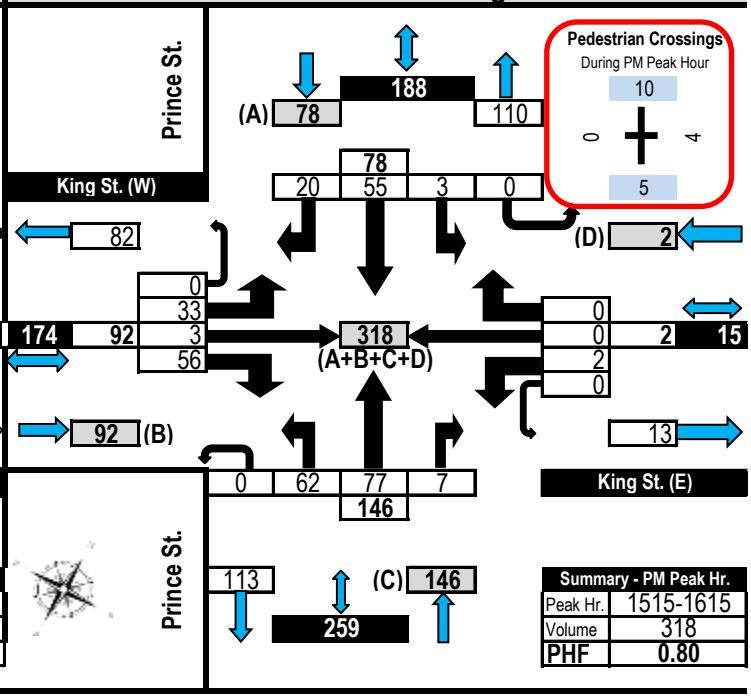


AM Peak Hour Flow Diagram



Summary - AM Peak Hr.	
Peak Hr.	0815-0915
Volume	263
PHF	0.76

PM Peak Hour Flow Diagram



Summary - PM Peak Hr.	
Peak Hr.	1515-1615
Volume	318
PHF	0.80

ACCURATE TRUSTED TRAFFIC DATA

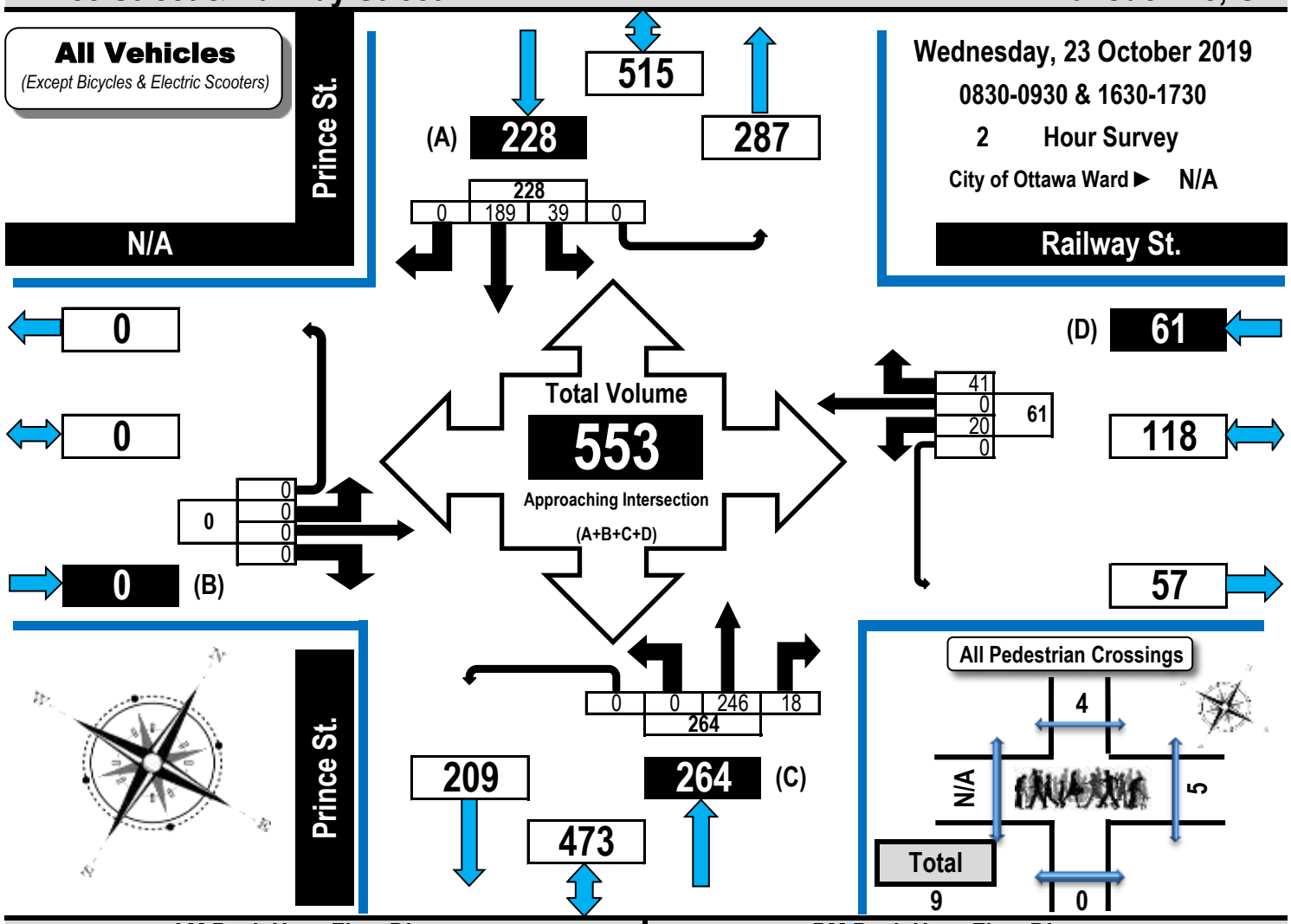
Turning Movement Count
Summary, AM and PM Peak Hour Flow Diagrams

Automobiles, Taxis, Light Trucks, Vans, SUV's, Motorcycles, Heavy Trucks, Buses, and School Buses

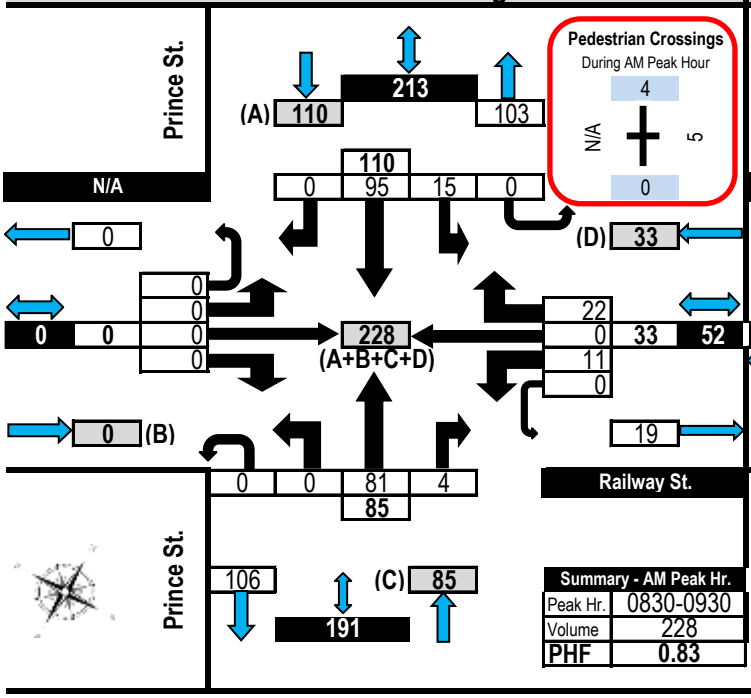
Prince Street & Railway Street — Lansdowne, ON

All Vehicles
(Except Bicycles & Electric Scooters)

Wednesday, 23 October 2019
0830-0930 & 1630-1730
2 Hour Survey
City of Ottawa Ward ► N/A

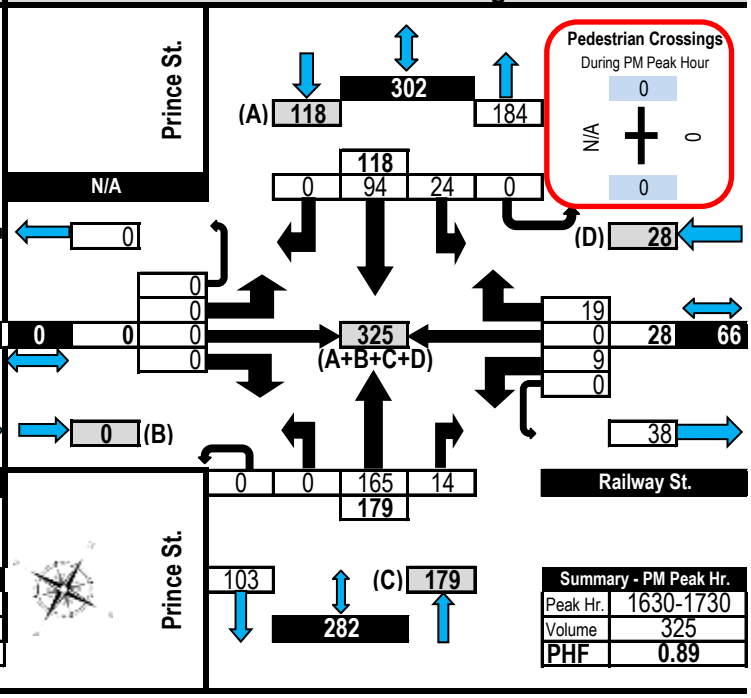


AM Peak Hour Flow Diagram



Summary - AM Peak Hr.	
Peak Hr.	0830-0930
Volume	228
PHF	0.83

PM Peak Hour Flow Diagram



Summary - PM Peak Hr.	
Peak Hr.	1630-1730
Volume	325
PHF	0.89

Appendix B
Detailed SYNCHRO Reports

Intersection	
Int Delay, s/veh	7.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	28	20	20	16	25	11	9	61	5	8	62	27
Future Vol, veh/h	28	20	20	16	25	11	9	61	5	8	62	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	22	22	17	27	12	10	66	5	9	67	29

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	39	0	0	44	0	0	208	166	33	196	171	33
Stage 1	-	-	-	-	-	-	93	93	-	67	67	-
Stage 2	-	-	-	-	-	-	115	73	-	129	104	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1571	-	-	1564	-	-	749	727	1041	763	722	1041
Stage 1	-	-	-	-	-	-	914	818	-	943	839	-
Stage 2	-	-	-	-	-	-	890	834	-	875	809	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1571	-	-	1564	-	-	658	704	1041	688	700	1041
Mov Cap-2 Maneuver	-	-	-	-	-	-	658	704	-	688	700	-
Stage 1	-	-	-	-	-	-	896	802	-	924	830	-
Stage 2	-	-	-	-	-	-	786	825	-	783	793	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3	2.3	10.7	10.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	713	1571	-	-	1564	-	-	769
HCM Lane V/C Ratio	0.114	0.019	-	-	0.011	-	-	0.137
HCM Control Delay (s)	10.7	7.3	0	-	7.3	0	-	10.4
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0	-	-	0.5

Intersection	
Int Delay, s/veh	1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	22	81	4	15	95
Future Vol, veh/h	11	22	81	4	15	95
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	24	88	4	16	103

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	225	90	0	0	92	0
Stage 1	90	-	-	-	-	-
Stage 2	135	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	763	968	-	-	1503	-
Stage 1	934	-	-	-	-	-
Stage 2	891	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	755	968	-	-	1503	-
Mov Cap-2 Maneuver	755	-	-	-	-	-
Stage 1	934	-	-	-	-	-
Stage 2	881	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	885	1503	-
HCM Lane V/C Ratio	-	-	0.041	0.011	-
HCM Control Delay (s)	-	-	9.2	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Intersection Delay, s/veh	7.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	3	41	0	0	0	53	43	6	1	57	31
Future Vol, veh/h	28	3	41	0	0	0	53	43	6	1	57	31
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	3	45	0	0	0	58	47	7	1	62	34
Number of Lanes	0	1	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.5	7.9	7.5
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	52%	39%	1%
Vol Thru, %	42%	4%	64%
Vol Right, %	6%	57%	35%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	102	72	89
LT Vol	53	28	1
Through Vol	43	3	57
RT Vol	6	41	31
Lane Flow Rate	111	78	97
Geometry Grp	1	1	1
Degree of Util (X)	0.13	0.088	0.106
Departure Headway (Hd)	4.215	4.025	3.95
Convergence, Y/N	Yes	Yes	Yes
Cap	845	875	899
Service Time	2.269	2.121	2.013
HCM Lane V/C Ratio	0.131	0.089	0.108
HCM Control Delay	7.9	7.5	7.5
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.4	0.3	0.4

Intersection	
Int Delay, s/veh	8.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	65	47	14	10	24	11	16	95	14	10	56	40
Future Vol, veh/h	65	47	14	10	24	11	16	95	14	10	56	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	71	51	15	11	26	12	17	103	15	11	61	43

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	38	0	0	66	0	0	307	261	59	314	262	32
Stage 1	-	-	-	-	-	-	201	201	-	54	54	-
Stage 2	-	-	-	-	-	-	106	60	-	260	208	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1572	-	-	1536	-	-	645	644	1007	639	643	1042
Stage 1	-	-	-	-	-	-	801	735	-	958	850	-
Stage 2	-	-	-	-	-	-	900	845	-	745	730	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1572	-	-	1536	-	-	548	609	1007	526	608	1042
Mov Cap-2 Maneuver	-	-	-	-	-	-	548	609	-	526	608	-
Stage 1	-	-	-	-	-	-	763	700	-	913	844	-
Stage 2	-	-	-	-	-	-	795	839	-	596	696	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.8	1.6	12.3	11.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	628	1572	-	-	1536	-	-	709
HCM Lane V/C Ratio	0.216	0.045	-	-	0.007	-	-	0.163
HCM Control Delay (s)	12.3	7.4	0	-	7.4	0	-	11.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.8	0.1	-	-	0	-	-	0.6

Intersection	
Int Delay, s/veh	1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	19	165	14	24	94
Future Vol, veh/h	9	19	165	14	24	94
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	21	179	15	26	102

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	341	187	0	0	194	0
Stage 1	187	-	-	-	-	-
Stage 2	154	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	655	855	-	-	1379	-
Stage 1	845	-	-	-	-	-
Stage 2	874	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	642	855	-	-	1379	-
Mov Cap-2 Maneuver	642	-	-	-	-	-
Stage 1	845	-	-	-	-	-
Stage 2	857	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	1.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	773	1379	-
HCM Lane V/C Ratio	-	-	0.039	0.019	-
HCM Control Delay (s)	-	-	9.8	7.7	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	3	56	0	0	0	62	77	7	3	55	20
Future Vol, veh/h	33	3	56	0	0	0	62	77	7	3	55	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	36	3	61	0	0	0	67	84	8	3	60	22
Number of Lanes	0	1	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.7	8.3	7.6
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	42%	36%	4%
Vol Thru, %	53%	3%	71%
Vol Right, %	5%	61%	26%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	146	92	78
LT Vol	62	33	3
Through Vol	77	3	55
RT Vol	7	56	20
Lane Flow Rate	159	100	85
Geometry Grp	1	1	1
Degree of Util (X)	0.187	0.116	0.096
Departure Headway (Hd)	4.231	4.18	4.086
Convergence, Y/N	Yes	Yes	Yes
Cap	839	863	862
Service Time	2.304	2.18	2.181
HCM Lane V/C Ratio	0.19	0.116	0.099
HCM Control Delay	8.3	7.7	7.6
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.7	0.4	0.3

Intersection	
Int Delay, s/veh	7.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	33	23	23	19	29	13	11	71	6	9	72	32
Future Vol, veh/h	33	23	23	19	29	13	11	71	6	9	72	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	36	25	25	21	32	14	12	77	7	10	78	35

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	46	0	0	50	0	0	248	198	38	233	203	39
Stage 1	-	-	-	-	-	-	110	110	-	81	81	-
Stage 2	-	-	-	-	-	-	138	88	-	152	122	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1562	-	-	1557	-	-	706	698	1034	722	693	1033
Stage 1	-	-	-	-	-	-	895	804	-	927	828	-
Stage 2	-	-	-	-	-	-	865	822	-	850	795	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1562	-	-	1557	-	-	604	671	1034	636	667	1033
Mov Cap-2 Maneuver	-	-	-	-	-	-	604	671	-	636	667	-
Stage 1	-	-	-	-	-	-	874	785	-	905	816	-
Stage 2	-	-	-	-	-	-	745	810	-	743	776	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.1	2.3	11.2	10.8
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	678	1562	-	-	1557	-	-	738
HCM Lane V/C Ratio	0.141	0.023	-	-	0.013	-	-	0.166
HCM Control Delay (s)	11.2	7.4	0	-	7.3	0	-	10.8
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.5	0.1	-	-	0	-	-	0.6

Intersection	
Int Delay, s/veh	1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	26	95	5	18	111
Future Vol, veh/h	13	26	95	5	18	111
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	28	103	5	20	121

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	267	106	0	0	108	0
Stage 1	106	-	-	-	-	-
Stage 2	161	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	722	948	-	-	1483	-
Stage 1	918	-	-	-	-	-
Stage 2	868	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	712	948	-	-	1483	-
Mov Cap-2 Maneuver	712	-	-	-	-	-
Stage 1	918	-	-	-	-	-
Stage 2	856	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.4	0	1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	854	1483	-
HCM Lane V/C Ratio	-	-	0.05	0.013	-
HCM Control Delay (s)	-	-	9.4	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	4	48	0	0	0	62	50	7	1	67	36
Future Vol, veh/h	33	4	48	0	0	0	62	50	7	1	67	36
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	36	4	52	0	0	0	67	54	8	1	73	39
Number of Lanes	0	1	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.7	8.1	7.7
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	52%	39%	1%
Vol Thru, %	42%	5%	64%
Vol Right, %	6%	56%	35%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	119	85	104
LT Vol	62	33	1
Through Vol	50	4	67
RT Vol	7	48	36
Lane Flow Rate	129	92	113
Geometry Grp	1	1	1
Degree of Util (X)	0.153	0.108	0.125
Departure Headway (Hd)	4.252	4.202	3.989
Convergence, Y/N	Yes	Yes	Yes
Cap	834	858	885
Service Time	2.326	2.202	2.075
HCM Lane V/C Ratio	0.155	0.107	0.128
HCM Control Delay	8.1	7.7	7.7
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	0.4	0.4

Intersection	
Int Delay, s/veh	8.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	76	55	16	12	28	13	19	111	16	12	65	47
Future Vol, veh/h	76	55	16	12	28	13	19	111	16	12	65	47
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	83	60	17	13	30	14	21	121	17	13	71	51

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	44	0	0	77	0	0	359	305	69	367	306	37
Stage 1	-	-	-	-	-	-	235	235	-	63	63	-
Stage 2	-	-	-	-	-	-	124	70	-	304	243	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1564	-	-	1522	-	-	596	608	994	589	608	1035
Stage 1	-	-	-	-	-	-	768	710	-	948	842	-
Stage 2	-	-	-	-	-	-	880	837	-	705	705	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1564	-	-	1522	-	-	488	569	994	461	569	1035
Mov Cap-2 Maneuver	-	-	-	-	-	-	488	569	-	461	569	-
Stage 1	-	-	-	-	-	-	725	670	-	895	834	-
Stage 2	-	-	-	-	-	-	759	829	-	536	666	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.8	1.7	13.4	11.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	584	1564	-	-	1522	-	-	668
HCM Lane V/C Ratio	0.272	0.053	-	-	0.009	-	-	0.202
HCM Control Delay (s)	13.4	7.4	0	-	7.4	0	-	11.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1.1	0.2	-	-	0	-	-	0.8

Intersection	
Int Delay, s/veh	1.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	22	193	16	28	110
Future Vol, veh/h	11	22	193	16	28	110
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	24	210	17	30	120

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	399	219	0	0	227	0
Stage 1	219	-	-	-	-	-
Stage 2	180	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	607	821	-	-	1341	-
Stage 1	817	-	-	-	-	-
Stage 2	851	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	592	821	-	-	1341	-
Mov Cap-2 Maneuver	592	-	-	-	-	-
Stage 1	817	-	-	-	-	-
Stage 2	831	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	1.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	727	1341	-
HCM Lane V/C Ratio	-	-	0.049	0.023	-
HCM Control Delay (s)	-	-	10.2	7.7	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	39	4	65	0	0	0	72	90	8	4	64	23
Future Vol, veh/h	39	4	65	0	0	0	72	90	8	4	64	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	42	4	71	0	0	0	78	98	9	4	70	25
Number of Lanes	0	1	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8	8.6	7.8
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	42%	36%	4%
Vol Thru, %	53%	4%	70%
Vol Right, %	5%	60%	25%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	170	108	91
LT Vol	72	39	4
Through Vol	90	4	64
RT Vol	8	65	23
Lane Flow Rate	185	117	99
Geometry Grp	1	1	1
Degree of Util (X)	0.219	0.139	0.117
Departure Headway (Hd)	4.273	4.277	4.252
Convergence, Y/N	Yes	Yes	Yes
Cap	826	843	847
Service Time	2.369	2.283	2.26
HCM Lane V/C Ratio	0.224	0.139	0.117
HCM Control Delay	8.6	8	7.8
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.8	0.5	0.4

Intersection	
Int Delay, s/veh	11.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	67	23	23	49	29	13	11	151	55	9	156	67
Future Vol, veh/h	67	23	23	49	29	13	11	151	55	9	156	67
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	73	25	25	53	32	14	12	164	60	10	170	73

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	46	0	0	50	0	0	451	336	38	441	341	39
Stage 1	-	-	-	-	-	-	184	184	-	145	145	-
Stage 2	-	-	-	-	-	-	267	152	-	296	196	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1562	-	-	1557	-	-	519	585	1034	527	581	1033
Stage 1	-	-	-	-	-	-	818	747	-	858	777	-
Stage 2	-	-	-	-	-	-	738	772	-	712	739	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1562	-	-	1557	-	-	343	538	1034	357	534	1033
Mov Cap-2 Maneuver	-	-	-	-	-	-	343	538	-	357	534	-
Stage 1	-	-	-	-	-	-	779	711	-	817	750	-
Stage 2	-	-	-	-	-	-	512	745	-	491	704	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.4	4	15	15.1
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	593	1562	-	-	1557	-	-	607
HCM Lane V/C Ratio	0.398	0.047	-	-	0.034	-	-	0.415
HCM Control Delay (s)	15	7.4	0	-	7.4	0	-	15.1
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	1.9	0.1	-	-	0.1	-	-	2

Intersection	
Int Delay, s/veh	2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	28	113	9	18	130
Future Vol, veh/h	25	28	113	9	18	130
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	30	123	10	20	141

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	309	128	0	0	133	0
Stage 1	128	-	-	-	-	-
Stage 2	181	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	683	922	-	-	1452	-
Stage 1	898	-	-	-	-	-
Stage 2	850	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	673	922	-	-	1452	-
Mov Cap-2 Maneuver	673	-	-	-	-	-
Stage 1	898	-	-	-	-	-
Stage 2	837	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	0.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	785	1452	-
HCM Lane V/C Ratio	-	-	0.073	0.013	-
HCM Control Delay (s)	-	-	9.9	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	4	48	0	0	0	62	71	7	1	87	36
Future Vol, veh/h	33	4	48	0	0	0	62	71	7	1	87	36
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	36	4	52	0	0	0	67	77	8	1	95	39
Number of Lanes	0	1	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.8	8.3	7.9
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	44%	39%	1%
Vol Thru, %	51%	5%	70%
Vol Right, %	5%	56%	29%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	140	85	124
LT Vol	62	33	1
Through Vol	71	4	87
RT Vol	7	48	36
Lane Flow Rate	152	92	135
Geometry Grp	1	1	1
Degree of Util (X)	0.18	0.11	0.151
Departure Headway (Hd)	4.259	4.3	4.04
Convergence, Y/N	Yes	Yes	Yes
Cap	831	839	872
Service Time	2.343	2.3	2.136
HCM Lane V/C Ratio	0.183	0.11	0.155
HCM Control Delay	8.3	7.8	7.9
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.7	0.4	0.5

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	2	14	21	2	4	57	134	12	2	143	10
Future Vol, veh/h	2	2	14	21	2	4	57	134	12	2	143	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	2	15	23	2	4	62	146	13	2	155	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	445	448	161	450	447	153	166	0	0	159	0	0
Stage 1	165	165	-	277	277	-	-	-	-	-	-	-
Stage 2	280	283	-	173	170	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	523	506	884	519	506	893	1412	-	-	1420	-	-
Stage 1	837	762	-	729	681	-	-	-	-	-	-	-
Stage 2	727	677	-	829	758	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	499	481	884	489	481	893	1412	-	-	1420	-	-
Mov Cap-2 Maneuver	499	481	-	489	481	-	-	-	-	-	-	-
Stage 1	797	760	-	694	648	-	-	-	-	-	-	-
Stage 2	686	645	-	811	756	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.9	12.3	2.2	0.1
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1412	-	-	750	523	1420	-	-
HCM Lane V/C Ratio	0.044	-	-	0.026	0.056	0.002	-	-
HCM Control Delay (s)	7.7	0	-	9.9	12.3	7.5	0	-
HCM Lane LOS	A	A	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.2	0	-	-

Intersection	
Int Delay, s/veh	1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	60	11	210	20	4	184
Future Vol, veh/h	60	11	210	20	4	184
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	65	12	228	22	4	200

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	447	239	0	0	250	0
Stage 1	239	-	-	-	-	-
Stage 2	208	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	569	800	-	-	1316	-
Stage 1	801	-	-	-	-	-
Stage 2	827	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	567	800	-	-	1316	-
Mov Cap-2 Maneuver	567	-	-	-	-	-
Stage 1	801	-	-	-	-	-
Stage 2	825	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	594	1316	-
HCM Lane V/C Ratio	-	-	0.13	0.003	-
HCM Control Delay (s)	-	-	12	7.7	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0	-

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	49	39	61	0	0	30
Future Vol, veh/h	49	39	61	0	0	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	53	42	66	0	0	33

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	66	0	-	0	214	66
Stage 1	-	-	-	-	66	-
Stage 2	-	-	-	-	148	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1536	-	-	-	774	998
Stage 1	-	-	-	-	957	-
Stage 2	-	-	-	-	880	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1536	-	-	-	747	998
Mov Cap-2 Maneuver	-	-	-	-	747	-
Stage 1	-	-	-	-	924	-
Stage 2	-	-	-	-	880	-

Approach	EB	WB	SB
HCM Control Delay, s	4.1	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1536	-	-	-	998
HCM Lane V/C Ratio	0.035	-	-	-	0.033
HCM Control Delay (s)	7.4	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Intersection	
Int Delay, s/veh	118.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	185	55	16	63	29	13	19	275	61	12	225	153
Future Vol, veh/h	185	55	16	63	29	13	19	275	61	12	225	153
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	201	60	17	68	32	14	21	299	66	13	245	166

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	46	0	0	77	0	0	852	653	69	828	654	39
Stage 1	-	-	-	-	-	-	471	471	-	175	175	-
Stage 2	-	-	-	-	-	-	381	182	-	653	479	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1562	-	-	1522	-	-	280	387	994	290	386	1033
Stage 1	-	-	-	-	-	-	573	560	-	827	754	-
Stage 2	-	-	-	-	-	-	641	749	-	456	555	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1562	-	-	1522	-	-	77	319	994	41	318	1033
Mov Cap-2 Maneuver	-	-	-	-	-	-	77	319	-	41	318	-
Stage 1	-	-	-	-	-	-	496	484	-	715	719	-
Stage 2	-	-	-	-	-	-	339	715	-	141	480	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	5.5	4.5	181.4	166.1
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	303	1562	-	-	1522	-	-	340
HCM Lane V/C Ratio	1.273	0.129	-	-	0.045	-	-	1.247
HCM Control Delay (s)	181.4	7.6	0	-	7.5	0	-	166.1
HCM Lane LOS	F	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	18.3	0.4	-	-	0.1	-	-	18.9

Intersection	
Int Delay, s/veh	1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	18	23	238	29	30	156
Future Vol, veh/h	18	23	238	29	30	156
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	25	259	32	33	170

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	511	275	0	0	291	0
Stage 1	275	-	-	-	-	-
Stage 2	236	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	523	764	-	-	1271	-
Stage 1	771	-	-	-	-	-
Stage 2	803	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	508	764	-	-	1271	-
Mov Cap-2 Maneuver	508	-	-	-	-	-
Stage 1	771	-	-	-	-	-
Stage 2	780	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.2	0	1.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	626	1271	-
HCM Lane V/C Ratio	-	-	0.071	0.026	-
HCM Control Delay (s)	-	-	11.2	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	39	4	65	0	0	0	72	137	8	4	112	23
Future Vol, veh/h	39	4	65	0	0	0	72	137	8	4	112	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	42	4	71	0	0	0	78	149	9	4	122	25
Number of Lanes	0	1	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.3	9.2	8.4
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	33%	36%	3%
Vol Thru, %	63%	4%	81%
Vol Right, %	4%	60%	17%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	217	108	139
LT Vol	72	39	4
Through Vol	137	4	112
RT Vol	8	65	23
Lane Flow Rate	236	117	151
Geometry Grp	1	1	1
Degree of Util (X)	0.289	0.147	0.183
Departure Headway (Hd)	4.413	4.506	4.368
Convergence, Y/N	Yes	Yes	Yes
Cap	816	797	822
Service Time	2.432	2.529	2.389
HCM Lane V/C Ratio	0.289	0.147	0.184
HCM Control Delay	9.2	8.3	8.4
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1.2	0.5	0.7

Intersection	
Int Delay, s/veh	5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	26	2	148	24	2	4	117	228	28	6	147	21
Future Vol, veh/h	26	2	148	24	2	4	117	228	28	6	147	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	2	161	26	2	4	127	248	30	7	160	23

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	706	718	172	784	714	263	183	0	0	278	0	0
Stage 1	186	186	-	517	517	-	-	-	-	-	-	-
Stage 2	520	532	-	267	197	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	351	355	872	311	357	776	1392	-	-	1285	-	-
Stage 1	816	746	-	541	534	-	-	-	-	-	-	-
Stage 2	539	526	-	738	738	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	317	315	872	230	317	776	1392	-	-	1285	-	-
Mov Cap-2 Maneuver	317	315	-	230	317	-	-	-	-	-	-	-
Stage 1	728	742	-	483	476	-	-	-	-	-	-	-
Stage 2	476	469	-	596	734	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.3	20.9	2.5	0.3
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1392	-	-	682	259	1285	-	-
HCM Lane V/C Ratio	0.091	-	-	0.281	0.126	0.005	-	-
HCM Control Delay (s)	7.8	0	-	12.3	20.9	7.8	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0.3	-	-	1.1	0.4	0	-	-

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	40	7	407	66	12	347
Future Vol, veh/h	40	7	407	66	12	347
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	43	8	442	72	13	377

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	881	478	0	0	514	0
Stage 1	478	-	-	-	-	-
Stage 2	403	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	317	587	-	-	1052	-
Stage 1	624	-	-	-	-	-
Stage 2	675	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	312	587	-	-	1052	-
Mov Cap-2 Maneuver	312	-	-	-	-	-
Stage 1	624	-	-	-	-	-
Stage 2	664	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.7	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	335	1052	-
HCM Lane V/C Ratio	-	-	0.152	0.012	-
HCM Control Delay (s)	-	-	17.7	8.5	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0	-

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	45	83	53	0	0	51
Future Vol, veh/h	45	83	53	0	0	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	49	90	58	0	0	55

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	58	0	-	0	246	58
Stage 1	-	-	-	-	58	-
Stage 2	-	-	-	-	188	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1546	-	-	-	742	1008
Stage 1	-	-	-	-	965	-
Stage 2	-	-	-	-	844	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1546	-	-	-	718	1008
Mov Cap-2 Maneuver	-	-	-	-	718	-
Stage 1	-	-	-	-	933	-
Stage 2	-	-	-	-	844	-

Approach	EB	WB	SB
HCM Control Delay, s	2.6	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1546	-	-	-	1008
HCM Lane V/C Ratio	0.032	-	-	-	0.055
HCM Control Delay (s)	7.4	0	-	-	8.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	76	21	21	47	27	23	10	122	54	21	138	65
Future Vol, veh/h	76	21	21	47	27	23	10	122	54	21	138	65
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	83	23	23	51	29	25	11	133	59	23	150	71
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.4	9.1	9.4	9.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	64%	48%	9%
Vol Thru, %	66%	18%	28%	62%
Vol Right, %	29%	18%	24%	29%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	186	118	97	224
LT Vol	10	76	47	21
Through Vol	122	21	27	138
RT Vol	54	21	23	65
Lane Flow Rate	202	128	105	243
Geometry Grp	1	1	1	1
Degree of Util (X)	0.261	0.183	0.149	0.312
Departure Headway (Hd)	4.652	5.123	5.092	4.613
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	766	695	698	774
Service Time	2.714	3.196	3.168	2.671
HCM Lane V/C Ratio	0.264	0.184	0.15	0.314
HCM Control Delay	9.4	9.4	9.1	9.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1	0.7	0.5	1.3

Intersection	
Intersection Delay, s/veh	16.9
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	151	50	15	62	26	39	17	265	60	37	193	149
Future Vol, veh/h	151	50	15	62	26	39	17	265	60	37	193	149
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	164	54	16	67	28	42	18	288	65	40	210	162
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14.7	12.2	17.7	18.9
HCM LOS	B	B	C	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	70%	49%	10%
Vol Thru, %	77%	23%	20%	51%
Vol Right, %	18%	7%	31%	39%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	342	216	127	379
LT Vol	17	151	62	37
Through Vol	265	50	26	193
RT Vol	60	15	39	149
Lane Flow Rate	372	235	138	412
Geometry Grp	1	1	1	1
Degree of Util (X)	0.607	0.433	0.259	0.653
Departure Headway (Hd)	5.88	6.634	6.744	5.703
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	613	542	531	634
Service Time	3.928	4.688	4.805	3.747
HCM Lane V/C Ratio	0.607	0.434	0.26	0.65
HCM Control Delay	17.7	14.7	12.2	18.9
HCM Lane LOS	C	B	B	C
HCM 95th-tile Q	4.1	2.2	1	4.8